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FOOD SCIENCE AND ENGINEERING

"Pandeshell": An Innovative Pandesal

Jhoan Villanueva, Tanauan School of Fisheries

(Adviser: Maricel Morante)

Abstract

INTRODUCTION

The researchers used powdered eggshell as an ingredient in baking pandesal. Eggshell is scientifically proven to have nutrients such as calcium other minerals and can be used as treatment for osteoporosis. Creative thinking and discovery combined with knowledge in baking helped the researchers transform a conventional bread into a novel product that could possibly be introduced into the market. Furthermore, this innovation conveys that even eggshell can be a useful ingredient in transforming typical products into inventive ones.

METHODS

The study applied experimental design to estimate the effect of an experimental treatment. The use of experimental research design is to manipulate and control tests in order to understand causal processes. Generally, one or more variables are manipulated to determine their effect on a dependent variable. The researcher considered 50 persons as respondents of the study. The researcher used a validated self-constructed questionnaire as main instrument in gathering data. Data gathered ranged from the correct measures of ingredients, respondents' satisfactions, and costing.

RESULTS

The research had three trials before coming up with perfect ingredients. These ingredients were: 200 grams bread flour/ APF; 50grams eggshell powder; 50 grams sugar; 5grams yeast; 1/2 teaspoon salt; 1piece egg; 80grams fresh milk; and 30 grams butter. Appearance, aroma, color, taste, and texture were rated very satisfactory after the third trial. One of the advantages of using eggshell flour in baking pandesal is that it can treat osteoporosis. The calcium in eggshell flour absorbs better than pure calcium carbonate, making it an effective calcium. Also, it is not hard to find since it is available in the market.

DISCUSSIONS

Trial 1 revealed that the appearance, aroma, color, taste, and texture of pandesal should be improved. In trial 2, there is already a significant improvement. Finally, in trial 3, everything worked well except for the texture. Thus, the study leads to the following conclusions: first, the appearance of the bread with eggshell powder is good. Second, the eggshell bread is rich in calcium.

KEYWORDS: Eggshell pandesal, baking, innovation

SUBMISSION ID: R04A-TANAUA-0042

**Acceptability and Commercial Potential of Malunggay (*Moringa oleifera*)-
Mangosteen (*Garciana mangostana*) Ice Cream**

Marianie Rose O. Sitoy, Student
(Adviser: Jomel Montero)

Abstract

INTRODUCTION

Ice creams are very demanding dessert, especially during summer season. However, some of the consumers cannot eat ice creams due to health-related problem like diabetes. Thus, to make ice cream healthy and suitable for any ages, this study developed ice cream using healthy ingredients such as Malunggay and Mangosteen. Since there were limited literature and studies conducted in commercializing healthy ice creams using fruit and vegetable, this study was conducted to evaluate the acceptability and commercial potential of Malunggay- Mangosteen ice cream.

METHODS

This study used the experimental research design specifically the parallel group design. A total of 63 food technology students from the Senior High School Department of San Miguel National Comprehensive High School participated in the sensory evaluation. Scorecard of Rangana (1977) and hedonic scale served as data gathering instrument. Data were treated by getting the mean and with the use one-way ANOVA.

RESULTS

Based on the overall result, the experimental product obtained an average of 6.85 which means suitable. The sensory attributes of the product in terms of appearance and texture both obtained an adjectival rating also of suitable. In addition, the flavor/taste and general acceptability both gained an adjectival rating of pleasing while the odor is good enough. It also shows that there is a significant difference between experimental and commercial product in terms of their sensory attributes.

DISCUSSIONS

Based on the overall result of the sensory evaluation, it revealed that the experimental product was suitable for the senses of the respondents. This implies that the overall sensory attributes of the product qualified to the expectation of the respondents. Furthermore, the significant difference of the sensory attributes between the experimental and commercial cream showed that the Malunggay-Mangosteen ice cream can race as commercial product implying that such ice cream has a commercial potential in the market.

KEYWORDS: Acceptability, Commercial Potential, Malunggay-Mangosteen, Ice Cream

SUBMISSION ID: R013-SURSUR-0157

Acceptability of Jackfruit (*Artocarpus heterophyllus*) Coffee

Carina D. Malibiran, Pedro Guevara Memorial National High School

Abstract

INTRODUCTION

Philippines is one of the blessed countries—many nutritious fruits can be found here because of its good climate. Jackfruit (*Artocarpus heterophyllus*) is one good example. The researcher pursued this study about jackfruit seeds as ingredient for coffee to reveal its usefulness in all aspects and to have nutritious alternative coffee with less acid content. Also, for the reason that coffee has been a usual hot and cold drink for everyone. It is almost a part of peoples' daily lives especially those who work at night.

METHODS

This study is an experimental research which aimed to determine the acceptability of jackfruit seeds into coffee. The three samples of jackfruit coffee underwent evaluation. Scorecards were reproduced and distributed to the sixty (60) respondents. After the evaluation of products, the data gathered were tallied, tabulated and statistically treated using the weighted mean, standard deviation and single factor analysis of variance (ANOVA). Then all the computed data were analyzed and interpreted.

RESULTS

As a result, the three groups of respondents agreed that the three samples of jackfruit coffee were "acceptable" in its sensory qualities. The remarks indicated that the appearance of the three samples of coffee were attractive, unique, neat and achieved the desired color; the aroma were appetizing, relaxing, strong; the body has a pleasurable mouthfeel, thickness and smooth inside the mouth; and the flavor were saccharine, saporous, and has a satisfying acrid and aftertaste.

DISCUSSIONS

The findings gathered led to the formulation of the following recommendations: (a) improve the three variants of coffee by using mechanical dryer for easy, convenient, longer shelf life and sanitary way of manufacturing jackfruit seeds into coffee; (b) since the variants of the jackfruit coffee were not completely dissolved in hot water; utilize a more advanced machine like a huge electric grinder to produce the finest texture of coffee; (c) conduct a test on the caffeine content and shelf life of the jackfruit coffee through the assistance of the Department of Science and Technology (DOST); and (d) develop the packaging presentation of the product to bring out its best appearance.

KEYWORDS: Acceptability, jackfruit, coffee, appearance, and flavor

SUBMISSION ID: R04A-LAGUNA-0090

Aerobic Plate Count on Salted and Flavored Eggs

Mariel Anne Gonzales, Kyandee Mae M. Real, & Reisha Mae P. Villanueva, Bucal
National High School

Abstract

INTRODUCTION

Filipinos are constantly finding innovations to improve parts of their everyday life. One of these innovations is adding flavoring agents to eggs to give them a new twist. More and more people are consuming eggs every day. But what if instead of giving them full bellies, they induce dangers to their health? That is what the researchers aim to discover in this study. People are already exposed to bacteria every day, and carelessness is one of their problems. This study aims to find out if these flavoring agents are safe to add to eggs or it is just causing these eggs to grow several bacteria and harm their health.

METHODS

Three hard boiled eggs were soaked in brine solution and the container was labeled as the controlled set up. Another three hard boiled eggs were soaked in adobo solution and the container was labeled experimental set up. Both set ups were kept in a refrigerator with a temperature of 10°C for seven days. Then, these were subjected to a procedure to determine whether or not the solutions promote or inhibit bacterial growth.

RESULTS

Results revealed that for the controlled set up, the average bacterial count was 17,000,000 while for the experimental set up, the average bacterial count was 14,000,000.

DISCUSSIONS

Result showed that more bacterial growth was observed in the controlled set-up than in the experimental set-up. This can be attributed to the anti-bacterial properties of garlic and pepper which are components of the adobo sauce.

KEYWORDS: Aerobic Plate Count, Salted Egg, Flavored Egg

SUBMISSION ID: R04A-CAVITP-1580

Averrhoa Bilimbi Fruit Extract as Spoilage Inhibitor for Selected Raw Fishes

Adler Sidney Alay-ay, Department of Education
(Adviser: Adelma Topacio)

Abstract

INTRODUCTION

This research investigated the potential of Averroes bilimbi fruit extract as spoilage inhibitor for milk fish, round scads, and Cichlid Fish.

METHODS

By utilizing true-experimental quantitative research design, the types of raw fishes and the amount of the Averroes bilimbi fruit extracts were manipulated by the researcher. ANOVA (Analysis of Variance) was administered in this study to determine the significant difference among the four treatments used.

RESULTS

The study only scoped the determination of raw fish shelf life when stored with Averroes bilimbi fruit extract. The average shelf-life of the raw fishes without spoilage inhibitor in a room temperature is 4 hours. Following are the average shelf-life of the raw fishes with Averroes bilimbi fruit extracts: milkfish- 7 hours and 32 minutes; round scads- 6 hours and 35 minutes; and cichlid fish- 7 hours and 30 minutes.

DISCUSSIONS

Results showed that the shelf life of selected raw fishes significantly extends as the amount of Averroes bilimbi fruit extract added is increased for storage. Indeed, Averroes bilimbi fruit extracts can be used as spoilage inhibitor for raw milk fish, round scads, and Cichlid fish.

KEYWORDS: Averroes bilimbi fruit, shelf-lives, spoilage time

SUBMISSION ID: R04A-DASMAR-0019

Development and Characterization of Banana (*Musa Acuminata*) Pseudostem Juice

Florey Anne Palabrica, Department of Education - LaPaz National High School

Abstract

INTRODUCTION

The PCPDM revealed that at least 19% of all the agricultural wastes of the Philippines came from banana production, which included banana pseudo stems. Banana pseudo stem is one of the underutilized by-products of banana farming. The aim of this study was to develop and characterize the juice from banana pseudo stems.

METHODS

Sample collection was done a day prior to extraction. Pseudo stem samples were peeled off, blanched, extracted, formulated with various sugar concentrations, hot-filled, and pasteurized. Samples were then stored for analysis at two storage conditions: ambient and chilled. The first analysis involved the determination of the most preferred formulation through sensorial evaluation among the three formulations prepared. The second one involved the monitoring of the characteristics of the most preferred formulation for 7-day storage period through physio-chemical, microbiological, and sensorial analyses. The last analysis was the determination of the general acceptability of the juice through sensorial evaluation.

RESULTS

The MPF was found to be the sample with 12% sugar. The pH and the TA of the banana pseudo stem juice after 7 days of storage at chilled and ambient conditions ranged from 7.73 to 7.09 and 4.90, and 0.0705% to 0.2267% and 1.9627%, respectively. The TSS of the samples remained constant at 12°Brix during the duration of storage. The microbial load gradually increased from 48 CFU/mL to 2.9×10^5 CFU/mL and 1.2×10^5 CFU/mL for those stored at chilled and ambient conditions, respectively. The over-all acceptability test showed that juices stored at chilled condition acquired higher degree of liking with "Like Moderately" compared to juices stored at ambient condition.

DISCUSSIONS

There was a significant difference in the pH values of the samples stored at different storage conditions. The decline in pH was primarily associated with the production of gallic and oxidation of tannic acids. The rise in TA was due to the increase in concentration of weakly ionized acids and their salts during storage. The MPF caused the TSS of the sample to project the same value since the amount of sugar naturally present in the sample is low. The TPC of the samples were higher compared to the standard maximum bacterial load anticipated implies juices stored at chilled and ambient conditions were spoiled after three and one day of storage, respectively. Lastly, consumer testing revealed that 52% of the consumers would buy the product if it is conveniently available.

KEYWORDS: Banana pseudo stem, pseudo stem juice, physio-chemical, microbiological, consumer acceptability

SUBMISSION ID: R006-ILOILC-0004

Dimocarpus longan (Longan) Seed: A Potential Alternative Source of Flour for Diabetes Retardation

Rica Mae Bawag, Amadeo National High School

Abstract

INTRODUCTION

Non-consumption of fruit seeds, which are often treated as having no potential usage contributes to 60% of the total agricultural wastes as stated by Food and Agricultural Organization. *Dimocarpus longan* seeds is one of these wastes constituents and have not been a subject for research studies because of its alleged toxicity. To address this problem, *Dimocarpus longan* (Longan) seeds were utilized to produce flour which is potentially beneficial in diabetes retardation since its nutrition composition is highly similar to the commercially available flour, making it a possible source of nutrient resource health food and possess curative properties, mainly antioxidative, brought about by the presence of gallic and ellagic acid. The emergence of diabetes has alarmed the medical field; thus, this study attempts to directly affect the elevating number of diabetics with the provision of an alternative source of flour aiming to slow down the advancement of the disease, indirectly affecting waste management positively.

METHODS

Experimental method of research was used in this study. The longan seeds were placed in a double boiler to degrade the tannin and saponin content. It was dried using a microwave oven before it was pulverized. It was subjected to different tests such as gravimetric to determine the ash and moisture content, acid hydrolysis for fat, Kjeldahl for protein, Lane & Eynon for total sugar, and proximate analysis for the carbohydrate content. The gathered data were analyzed using one-way analysis of variance (ANOVA), to compare the chemical components of longan seed flour with rice and flaxseed flour. Scheffe was used as a post-hoc test.

RESULTS

The study was able to utilize *Dimocarpus longan* (Longan) seeds into flour. The suitable percentage level of chemical components presents in the flour, which are 5.7g protein, 68.3g total carbohydrate, 2.5g total fat, 6.7g total sugar, 22.1 moisture and 1.4g ash, was revealed by the chemical analysis. The statistical treatment revealed that there is a significant difference among the chemical components present in longan seed, rice and flaxseed flour.

DISCUSSIONS

The results of the study showed that the flour produced out of *Dimocarpus longan* (Longan) seeds has a suitable percentage level of protein, total carbohydrate, total fat and total reducing sugar, in comparison with rice and flaxseed flour which are both prescribed flour consumption that would result to diabetes retardation.

KEYWORDS: Longan seeds, flour, diabetes, diabetic retardation, antioxidative

SUBMISSION ID: R04A-CAVITP-1263

Evaluation and Acceptability of Localized Tomato Jam for Ternate Community Livelihood

Paolo Leysico, Ternate National High School

Abstract

INTRODUCTION

Tomato should be consumed for protect human health, raise healthy young generation for the future and to improve the quality of life. Aside from health benefits, tomato jam and marmalade will surely be appreciated by everyone in terms of flavor, taste and aroma. This research was aimed to investigate the predictability of the best quality jam and development of new products from tomatoes and find out the level of acceptability in the town of Ternate, Cavite. For the objectives, tomato jam's sensory evaluation was undertaken using a consumer-type panel. Jams were evaluated for preference for purchase, color, acceptability of sugar and acid contents, intensity of tomato flavor and overall acceptance.

METHODS

The researcher used the descriptive experimental research design to describe the phenomenon of academic dishonesty in the place of study. The respondents of the study were the 50 selected students from Senior High School Department and certain teachers. Using a researcher-made instrument, the data gathered were treated with appropriate statistical tools such as percentage and weighted mean.

RESULTS

An indication of 90% of tomato jams that were prepared from blends of tomatoes at different ratios were perfectly acceptable. Tomato jams made from different fruit ratios and the control were examined for their proximate composition, mineral contents as well as sensory and attributes. A preliminary exploration of the data revealed that there were differences in response to jam parameters based on age and gender. Further data analysis of the jam will determine a baseline jam recipe to be used for the production of a jam with tomato and other fruits.

DISCUSSIONS

The results were encouraging that is why these tomato jams should be localized so it can help in the development of Ternate Livelihood Program. The tomato jams can be reproduced by popularizing these small-scale processing technologies and micro-level strategies for supporting livelihoods, employment, and income generation of the community in Ternate, Cavite. Small scale tomato processing technologies and micro-level strategies for livelihood and employment shall be further popularized by governmental or nongovernmental organizations.

KEYWORDS: Localized Tomato Jam, Product Development,

SUBMISSION ID: R04A-CAVITP-0263

Formulation of Sweet and Spicy Banana (Musa Acuminate) Chips

Christine Bernadette Achame, Student

Abstract

INTRODUCTION

The formulation of Sweet and Spicy Banana (Musa acuminate) Chips was conducted to formulate a food product using the added spicy variant of banana chips. Banana chips are under-ripe bananas that are cut into slice dipped in syrup solution, dried under the sun or by artificial means, fried and eaten as snack food or dessert. These can be sold both in the local and export markets (Business Diary Philippines, 2018). Sweet and Spicy Banana Chips is a combination of two distinct flavors loved by Filipinos the sweet and spicy flavor. Fresh chili was used as an additional flavoring to the usually sweetened banana chips. This study was conducted to determine the acceptable and preferable sample for the production of sweet and spicy banana chips.

METHODS

The following were the formulated combinations made from banana chips with an added chili ingredient: sample one (3 teaspoons fresh chili), and sample two (4 teaspoons fresh chili). The color, flavor/odor, and texture were the sensory attributes of sweet and spicy banana chips and they were evaluated using a paired comparison test. The general acceptability was determined using 9-point hedonic scale. Paired preference test was also conducted in order to assess both samples and indicate which one preferred by the ten (10) sensory evaluation panelists.

RESULTS

Results revealed that the varying amount of fresh chili significantly affects the sensory attributes in terms of color, flavor/odor and texture of sweet and spicy banana chips. It shows that the two samples prepared were acceptable and described as "like very much" by the ten (10) sensory evaluation panelists. It also revealed that sample two (2) was the most preferable combination of spiciness which has a greater amount of fresh chili compared to sample one (1). Therefore, sample two (2) with 4 teaspoons of fresh chili was recommended for the production of sweet and spicy banana chips.

DISCUSSIONS

The newly formulated product was an additional snack variety of banana chips. Sweet and spicy banana chips will also help farmers to have an additional source of income instead of putting unused bananas into the trash. The study somehow serves as a reference for those who are willing to start a business with a lesser capital requirement. Aside from that, it offers maximum utilization, especially during access production.

KEYWORDS: Musa acuminate, spicy, sensory evaluation, sensory attributes

SUBMISSION ID: R011-COMPOS-0006

Galunggong (Decapterus Punctatus) Fish Bone as Chips With Malunggay Leaves

Ace Rasil T. Bayobo, Department of Education - Calamba City
(Adviser: Mirachel Batolena)

Abstract

INTRODUCTION

Galunggong is the most affordable fish in the Philippines. Philippine seas are also abundant in this. However, what we do not know is that its bones are also valuable. We just throw fish bone away or give them to our animals because fish bones are not usually eaten. People do not know that it has high mineral contents, this can be well-suitable as a natural calcium source. Doctors and scientists have discovered and made vitamin supplement from it. In this investigatory project, galunggong fish bone was used as an alternative chip that contain high calcium and phosphorus which help the bones healthy especially for those who are lactose intolerant.

METHODS

The fish bone of galunggong was simply cooked for an hour, sun-dried, grinded and pulverized then made it into chips in the way of frying. This simple process turned the waste material of galunggong fish bones into a healthy fish bone chips.

RESULTS

Results showed that Galunggong Fish bone Chips with Malunggay Leaves had a grand mean of 4.88 and with a qualitative description of "Strongly Liked" while Commercially Available Chips had a grand mean of 4.19 and with a qualitative description of "Liked". It showed that Galunggong fish bone chip is highly accepted by the respondents in terms of taste, odor and texture. Respondents agreed and accepted the Galunggong fish bone with malunggay leaves as an alternative chip. Thus, they will be eating healthier chips that contain more calcium and phosphorus.

DISCUSSIONS

The degree of liking of the panelist for the fishbone chips on appearance, taste, aroma/odor and overall acceptability was evaluated with the used of 5 Points Likert's Scale. The evaluation result showed that galunggong fishbone chips with malunggay leaves had a grand total mean score of 4.88 with an adjective description of "Strongly Liked" while commercial available chips have a grand total mean score of 4.19 with an adjective description of "Liked". The result showed that there is a general acceptability of galunggong fishbone chips with malunggay leaves as an alternative chip for children that is healthier enough than commercially available chips.

KEYWORDS: Galunggong, calcium, junk food, lactose intolerant, phosphorus, fry cook, sun dry

SUBMISSION ID: R04A-CALAMB-0018

Gumamela (*Hibiscus Syriacus*) as Guamela Shake

Kristine Louise G. Sipriaso, Department of Education - Calamba City
(Adviser: Mirachel Batolena)

Abstract

INTRODUCTION

Gumamela is a flower used in many places around the world for herbal medicinal purposes. Also known as the hibiscus, China rose or shoe flower, gumamela is used as an expectorant, diuretic, anti-infectious, anti-inflammatory and more. It is also useful in making herbal tea. Shake is one of the refreshers that children mostly liked. In this investigatory project, gumamela petals made into a nutritious and healthy gumamela shake for children to lessen the intake of preserved and with unhealthy ingredients in some available powdered shake.

METHODS

In the simple process, the gumamela was simply collected then mixed with the other ingredients such as ice, evaporated milk, and sugar in order to produce a gumamela shake. The product assessed by ten respondents in terms of taste, appearance, odor or aroma and the overall acceptability. This study used a 5-Point Likert Scale to assess the gumamela product.

RESULTS

Gumamela shake was tested together with the commercially available powdered shake. As the result, the respondents highly accepted the gumamela shake with the grand mean of 4.85 with an adjective description of strongly liked in terms of appearance, taste, odor or aroma and the overall acceptability.

DISCUSSIONS

Gumamela shake is affordable, natural and nutritious shake that is good for the health of children. Respondents agreed and accepted the gumamela shake in terms of its taste, odor and texture.

KEYWORDS: Gumamela, shake, powdered shake, nutritious, affordable

SUBMISSION ID: R04A-CALAMB-0009

Jackfruit (*Artocarpus Heterophyllus*) Seeds as Flour for Polvoron

Alec Russel T. Bayobo, Department of Education - Calamba City

(Adviser: Mirachel Batolena)

Abstract

INTRODUCTION

Jackfruit is a typical type of fruit found anywhere in the Philippines. We eat it ripe, and even make delicious dishes such as "ginataang langka". Sweets and candies are another type of product from jackfruit. But as for the seeds, some cook it and eat it as is. Some make cookies out of jackfruit seeds but most often, we throw it away. Another is polvoron, which is considered as one of the favorite snacks of both young and adults. There are several variants or flavors making this delicacy but despite various flavors, an ordinary all-purpose flour remains to be the main ingredient.

METHODS

Jackfruit seeds, to know its other uses, were used as the subject of the study. From being seeds to delicious delicacy as polvoron. In making the product, jackfruit seeds were collected, washed, cleaned and cooked. After cooking, jackfruit seeds were peeled, dried then cooked in a pan without an oil. Roasted seeds were pulverized with the use of mortar and pestle then sifted to make a fine flour. In the next phase, ground and fine jackfruit seeds were mixed together with some ingredients to make it as polvoron. After the mixture, the product was molded and ready to wrap.

RESULTS

The sample product was then subjected to different survey by respondents' assessments based on its appearance, taste and general acceptability compared to our ordinary all-purpose flour polvoron in the market. The data gathered were analyzed using a 5-Point Likert Scale. As the results, jackfruit seeds as polvoron got a highly accepted ratings. The respondents agreed and accepted the Jackfruit seeds polvoron as another kind of snack with essential nutrients added.

DISCUSSIONS

Jackfruit seed polvoron is highly accepted by the respondents compared to commercially available polvoron from the respondents' assessment on all the indicators namely taste, appearance, aroma and overall acceptability. Jackfruit seed polvoron is another proof that even something that are sometimes disregarded can turn into new food product.

KEYWORDS: Jackfruit seeds, flour, polvoron, delicacy, mixture, riboflavin, nutritious

SUBMISSION ID: R04A-CALAMB-0010

Natural Antioxidant Activity of Origanum Vulgare Extract on Chicken Nuggets

Janice Lee, Teacher

Abstract

INTRODUCTION

Recent studies have shown that the consumers' demand for health-promoting food products containing bioactive principles isolated from plant materials is increasing. It is well-known that natural antioxidants extracted from herbs and spices (oregano, rosemary, sage, thyme etc.) have high antioxidant activity and are used in many food applications (Nakitani,2000). Oregano extracts were found to have scavenging activity against super oxide anions and inhibitory action on low density lipoprotein oxidation (Khaled et al.,2015). Hence, this study was aimed to assess the antioxidative property of oregano extract in chicken nuggets.

METHODS

There were four treatments of chicken meat nuggets prepared with varying concentration of oregano leaf extract: (1) Control without any antioxidant, (2) T1- oregano leaf extract at 1%, (3) T2- oregano leaf extract at 2% and (4) T3- oregano leaf extract at 3%. About 800g chicken nuggets in each zip lock pouches were packed for further study. The evaluation of organoleptic properties and peroxide value were done at interval of 0, 15, 30, 45 and 60 days of frozen storage. The samples were brought to SGS Philippines for its peroxide value analysis, while the organoleptic properties were evaluated by twenty-five (25) students from Bachelor of Science in Food Technology, Laguna State Polytechnic University (LSPU)- Los Banos Campos.

RESULTS

Based from the data gathered, it was found out the Treatment 1 with 1% oregano extract were preferred by the evaluators in terms of its color. The odor of chicken nuggets with increasing concentration were moderately liked by the evaluators. On the other hand, the taste of chicken nuggets with higher concentration (3% oregano extract) were favored by the evaluators. However, in terms of its juiciness, tenderness and overall acceptability, all the treatments with increasing concentration were still favored by evaluators.

In terms of its peroxide value, it was found out that there is an increasing peroxide value in the control from day 30 to day 60 of frozen storage and gradual increase in the peroxide value in treatment 1 to treatment 3 with increasing concentrations of oregano extract.

Moreover, significant differences were found between the color, odor, taste, tenderness, juiciness and overall acceptability of chicken nuggets with an increasing number of storage, however, no significant differences were observed in its organoleptic properties between treatments with increasing concentration of oregano extract.

DISCUSSIONS

The results demonstrated that the use of 1 to 3% of oregano extract in chicken nuggets is effective in extending the shelf-life of chicken nuggets. However, it is important also to evaluate the shelf-life of chicken nuggets beyond 60 days using the same concentration of oregano and test for its TBARS (Thiobarbituric acid reactive substances).

KEYWORDS: chicken nuggets, oregano extract, organoleptic properties, peroxide value

SUBMISSION ID: R04A-CALAMB-0287

**Nutritional Properties of Jam Made from Cacao (*Theobroma cacao* L.)
Mucilage as a Novel Nutraceutical Product**

Anilov Scottie A. Asufre, Barobo National High School
(Adviser: Jessah Chris Eve Peñaflorida)

Abstract

INTRODUCTION

One of the major unutilized by- products is cacao mucilage. Cacao mucilage is rich in sugar, vitamins, protein, fats, and minerals. This can be made into jam without the addition of sugar as preservative. Cooking raw cacao mucilage to jam and retain its important nutritional properties could make the product nutraceutical. To determine the nutraceutical potential of the cacao mucilage jam, the nutritional properties of jam from cacao mucilage were determined. Comparison of raw cacao mucilage and jam was conducted to determine the retention or increase rate of their nutritional properties.

METHODS

Shelf life of jam was evaluated 17 months through observation of the appearance of molds done in subjective manner using magnifying glass. Samples were submitted to the Food Development Centre (FDC) of National Food Authority (NFA) at FTI Complex, Taguig City for the Nutritional Analyses such as total sugar (as invert sugar) content, vitamin C content, crude fat content, and crude protein content.

RESULTS

Results revealed that for 17 months the processed product was still free from molds. The absence of molds depicted that the shelf life of jam product was still good. This means that the mucilage from seeds of cacao could be developed into processed product with long shelf life. The nutritional properties showed that the total sugar in raw cacao mucilage was very high compared to the jam with only 19.58 percent retention. Vitamin C on the other hand was lower in raw (1.83 g/ 100g) than in jam (10 g/ 100 g) with a dramatic increase of 555 percent. Crude fat and crude protein had retention rates of 5.37 percent and 20.56 percent, respectively.

DISCUSSIONS

Mucilage from cacao is under- utilized thus efforts should go toward its utilization will be considered. Making cacao mucilage into jam has strong economic advantage, health benefits and environmental potential thus expanding the utilization of these crops will be an incentive for farmers to cultivate them.

KEYWORDS: Nutritional properties, cacao mucilage, jam, *Theobroma cacao* L., Nutraceutical

SUBMISSION ID: R013-SURSUR-0144

Peanut (*Arachis Hypogaea*) With Cacao (*Theobroma Cacao*) as Alternative for Chocolate-Milk Drink

Chelsy Eunice V. Alcaraz, Department of Education - Calamba City
(Adviser: Mirachel Batolena)

Abstract

INTRODUCTION

Chocolate drink either milk drink is too expensive to buy particularly for those individuals who are in poverty situation. All we know is that chocolate or milk drink is one of the most important nutritious drinks that all children need in order to achieve a healthy mind and body. Nevertheless, due to a high price of chocolate or milk drink, they could not afford to have it. Therefore, a child's health condition is in highly risk of being undernourished. In this investigatory project, peanut or arachis hypogea was used as alternative chocolate milk drink.

METHODS

The arachis hypogea or also known as peanut, together with the cacao or *Theobroma cacao*, were heated within 15-20 minutes until it became brown in color. The heated peanuts and cacao were grinded and turns into fined appearance and ready to serve and to be on packed. This simple process turns into a healthy chocolate drink. The samples produced were then subjected to different survey by respondents' assessments based on the level of acceptability on its appearance, taste, aroma, and over all acceptability. The data gathered were analyzed using 5-Point Likert Scale.

RESULTS

Results showed that chocolate milk drink from peanut with cacao had a grand mean of 4.82 and with a qualitative description of "Strongly Agree" while Commercially Available Chocolate milk drink had a grand mean of 4.19 and with a qualitative description of "Agree". Based on the results, it showed that chocolate milk drink from peanut with cacao is highly accepted by the respondents in terms of taste, odor/aroma and texture. Respondents agreed and accepted the peanut with cacao seeds as an alternative chocolate drink.

DISCUSSIONS

In this investigation, the peanut and cacao seeds were the main materials. After heating, grinding, pulverizing, and mixing of peanut and cacao seeds in making of chocolate milk drink, it became an alternative chocolate drinks for children. The level of acceptability of the respondents were tested by the used of 5-Point Likert scale and Self -Test. Result showed that the product from the investigation as peanut and cacao seeds as alternative chocolate milk drink was mostly liked in terms of its characteristics in appearance, taste and odor. Thus, it is proved that arachis hypogea or also known as peanut with the cacao or also known as cacao can be as an alternative chocolate milk drink.

KEYWORDS: Alternative, chocolate-milk drink, supplement, cacao seeds, peanut, grinding, heating

SUBMISSION ID: R04A-CALAMB-0014

Peanut Con Jackfruit Seeds Chocolate Bar

Vicky Banuelos, Ascenders Asia International Researchers Club

Abstract

INTRODUCTION

To satisfy craving for chocolate will become harder this time for people who love it. The demand for this mouth-watering treat leads to exceed of production of cocoa beans as the primary ingredient. Due to much consumption of chocolate, the possibility of its shortage might be encountered. Other source of chocolate aside of cocoa beans should be developed. Fruit and seeds are usually consumed directly as food but can also be processed into dried fruit, fruit juice, canned fruit, frozen fruit, jam, alcoholic beverages, etc. These are usually perishable but its shelf life can be extended by means of preservation and making it into some by-products. These products may contribute to the country's economy and may help in improving way of living. The researcher noticed that jackfruit is abundant in the locality and most of the time, the seeds are not used properly though it contains high amount of nutrients.

METHODS

Developmental research design was used to determine the acceptability of the project. The product was tasted and evaluated by twenty students and twenty individuals who love chocolate. Purposive sampling was used to determine the acceptability of the products. Gathering data from selected area of application was also done to know the possible innovation that can be added to this study. The availability of the main ingredient of this study was also considered.

RESULTS

This study was conducted to evaluate and determine the acceptability of Peanut Con Jackfruit Seeds Chocolate Bar as to appearance, aroma, taste, texture, and nutritive value using score card in gathering data. According to the statistical measurement executed in this study, the summary is as follows: The Peanut Con Jackfruit Seed Chocolate Bar was done from the preparation of the needed tool, equipment, utensils, materials and ingredients, fermentation of the jackfruit seeds, drying of the seeds, roasting both peanut and jackfruit seeds, peeling, powdering/creaming of both seeds, cooking the combined ingredients, molding the chocolate into bar, testing the product, to its packaging.

DISCUSSIONS

The researcher concluded that the product was able to meet its desired criteria. It was also concluded that based on the results through the survey conducted, it was proven that the acceptability level of peanut con jackfruit seed chocolate bar has no significant difference in terms of its appearance, aroma, taste, and texture as these were rated "Highly Acceptable" by both groups of respondents.

KEYWORDS: Peanut, Jackfruit, Chocolate

SUBMISSION ID: R04A-LAGUNA-0245

Pili (Canarium Ovatum) Peel Extract as Milk Tea

Jenny P. Agara, Bula National High School

(Adviser: Edmel Delmiguez)

Abstract

INTRODUCTION

Bicol (Region V) accounts for 82 percent of national pili production, the bulk of which comes from Sorsogon, hence, the province has been dubbed as "commodity champion" for pili. The processed pili kernel is delicious, thus, it can be used in the production of many food products. It is also a source of edible oil of excellent quality for pharmaceuticals, cosmetics, and for salad dressing. The pulp of pili is used as vegetable, pickle, flour, puree, sauce, and feeds for swine. The shell is used as fuel, growing medium for orchids and anthuriums, and crafted as fashion accessories. So, the researchers conducted this to discover new products from pili as the main ingredient.

METHODS

This study employed experimental research design to determine the acceptability of pili peel extract as a tea. Survey questionnaires were given to different respondents.

RESULTS

The researchers compared the commercialized milk tea to their own product which is pili peel extract as milk tea. The researchers identified the acceptability of pili peel extract as milk tea, its level of satisfaction and the recommendations to be done in making pili peel extract as milk tea. The choices of the respondents were tallied and computed fairly. The result showed that 20 of the respondents in Bula National High School said that the pili peel extract as milk tea is accepted. In terms of deliciousness, the respondents said that it is highly accepted. For the presentation of product, the respondents said that it is highly accepted, presentable, and attractive. The researchers used the T-Test for the Statistical tool for the computation to interpret data.

DISCUSSIONS

Pili peel (Canarium ovatum) tea is an experimental study which aim to determine the effectiveness of Pili peel making a tea product. Pili contains high protein nutrient content that can really help people maintain healthy bodies. Pili peel tea reached the expectation of its acceptability as a quality product with regards to the taste, presentation and quality.

KEYWORDS: Pili (Canarium ovatum), peel extract, Milk tea

SUBMISSION ID: R005-CAMSUR-0088

Production of Fish-Malunggay (Moringa Oleifera) Kropek

Gilbert Gumanit, Student

Abstract

INTRODUCTION

Production of Fish-Malunggay (*Moringa oleifera*) Kropek was conducted to develop and formulate a snack food product using the combination of fish and malunggay. Locally, fish kropek (cracker) is widely distributed and consumed in the Philippines wherein Filipinos are used to have it as snacks. This newly formulated snack food promotes a healthy and nutritious variant of fish kropek with a combination of malunggay.

METHODS

The following were the formulated combinations made from fish-malunggay kropek: (1) sample one (200 g fish + 5 g malunggay) and (2) sample two (200 g fish + 10 g malunggay). The color, flavor, and texture which were the sensory attributes of fish - malunggay kropek were evaluated using a paired comparison test. The general acceptability was determined using 9-points hedonic scale. Paired preference test was also conducted in order to assess both samples and indicate which one preferred by the ten (10) sensory evaluation panelists.

RESULTS

Results revealed that the varying amount of malunggay significantly affects the sensory attributes in terms of color, flavor/odor and texture of fish-malunggay kropek. It showed that the two samples prepared were acceptable and described as "like extremely" by the ten (10) sensory evaluation panelists. It also revealed that sample one (1) was the most preferable combination of fish and malunggay ingredient which has a less amount of malunggay compared to sample two (2). Therefore, sample one (1) with 200g fish + 5g malunggay was recommended for the production of fish-malunggay kropek.

DISCUSSIONS

The added combination of malunggay to the production of fish kropek was positively developed and creates a new kropek variant. This study will encourage farmers and even households to have and additional income by planting more malunggay trees in order to utilize it for this purpose. The study somehow serves as a reference for those who are willing to start a business with a lesser capital requirement. Aside from that, it offers maximum utilization, especially during access production.

KEYWORDS: *Moringa oleifera*, kropek, sensory evaluation, sensory attributes

SUBMISSION ID: R011-COMPOS-0005

Sensory Acceptability of Localized Squash Graham Product

Charles Noriel Cabana, Ternate National high School

Abstract

INTRODUCTION

Well-liked by Filipinos, young and old alike, are cakes of different flavors. Baking cake has been considered a product which results from the final test of a chef's art and expertise. Cakes are products that are plenty and oftentimes being served in the table as pastry of any celebration. Different flavors are made to suit individual taste and nutrients are added to further enhance the nutritional value of the cake and could add up to offer benefits to the people, like the adding of squash to the cake as attempted in this study. The purpose of this study was to find out the level of acceptability This research study aimed to ascertain the sensory acceptability of squash (*Cucurbita Maxima*) of varied quantities in baking cake as to appearance, taste, color, texture and general acceptability.

METHODS

This study utilized quasi-experimental research to determine the acceptability level of squash cake among respondents as to general acceptability, appearance, taste, color and texture. Quasi-experimental research is an experimental study used to estimate the causal impact of an intervention on its target population. A panel of 50 evaluators, purposely picked, from the Ternate National Senior High School Department served as respondents. A modified sensory evaluation score sheet anchored on Five-Point Hedonic Scale was used by the respondents to assess the finished products. Means, Percentage and Scheffe Test were utilized as the statistical tools.

RESULTS

As a whole, results disclosed that baked cakes with no grated squash and 240 grams grated squash were moderately liked by the respondents while those baked cakes with 480 grams grated squash and 700 grams grated squash were liked very much by the respondents. There were significant differences in the level of acceptability of the different treatments as to appearance, taste, color, texture as well as general acceptability.

DISCUSSIONS

For commercial reasons, bakers who produce cakes may consider using squash as one of the flavors or ingredients to promote healthy pastries. It should also highlight that the cake product be sold at an affordable price. This research study may be replicated by other researchers who might be interested to further look into the essentials of baking a cake with squash as main ingredient utilizing other sets of respondents and variables that would further validate the results of this study. A further investigation to determine the shelf-life of the produce is also recommended.

KEYWORDS: Cake, Sensory, Acceptability, Squash,

SUBMISSION ID: R04A-CAVITP-0698

**Training Needs of Senior High Students in Technical Vocational
Livelihood Track Major in Food Processing in Pantay National High
School**

Juvy P. Gomez, Philippine Association of Food Technologist

Abstract

INTRODUCTION

The Technical Vocational Livelihood is one of the tracks offered in Senior High School. The Senior High School program aims to prepare our students for human work force. Although TVL track plays important role to preparing our students, but there is a limited information and competencies needed that can only be learned through actual work setting. To meet the training needs of senior high students, the specific question shall be sought: What is the skill requirement of the food processing industry?

METHODS

The quantitative and qualitative methodology was applied to collect data. A survey was carried out involving practitioners in the food industry. A total of ten practitioners were selected as respondents for the study. An adopted closed and open survey questionnaire was used to elicit information from the respondents. The survey questionnaire was structured into five distinctive parts to collect information on (I) basic competencies in food processing, (ii) common competencies in food processing, (iii) core competencies in food processing, (iv) other needed competencies and (v) attitude towards work of food handlers.

RESULTS

The findings of the evaluation showed that most of food handlers are not yet competent and there are gaps in the skills and knowledge in terms on basic and common competencies and few of the food handlers are not yet competent in the skills and knowledge in terms of core competencies in food processing qualification. The findings also confirmed that majority of the respondents suggested for additional competencies that need to be learned in school such as basic fundamentals of food processing, food safety and standards in operation. Also the respondents suggested the right attitude that the food handler needs to possess towards work such as honesty, discipline, dedication, respect, cooperation, quality first mind-set, sense of responsibility, takes accountability and focus on work. The negative attitude to be avoided by the food handlers towards work such as job discrimination, neglect on protocols, laziness, lack of self-confidence, rudeness, tardiness and absenteeism.

DISCUSSIONS

The result implies the need for additional training. There are key areas in which practice is needed and additional information or skills should be gained in school. There is also a need for further enrichment of the competencies on the subjects in food processing to be taught in the school. The result also confirms the need for the improvement of attitude toward works.

KEYWORDS: juvypgomez

SUBMISSION ID: R04A-RIZALP-0024

Tropical Medley Energy Bar

Ma. Hannah Pedronan, Looc Integrated School

Abstract

INTRODUCTION

Poor nutrition continues to be a persistent problem among Filipino children. Incidence of poor nutrition is prevalent in the underprivileged sector of both rural and urban communities. A diet that lacks essential nutrients often results in being underweight. Through the advancements in the field of human nutrition, nutrient deficiencies in children and adolescents can now be easily treated. Finding cost-effective ways are also feasible through the available knowledge in nutritional qualities of relevant foods and ingredients that satisfies the lack of vital food components in the daily diet of children and adolescents. In the public school setting, simply feeding underweight children through the school's feeding program is insufficient. This study attempts to explore the possibility of weight management by formulating a recipe of ready-to-eat therapeutic food made from an assembly of inexpensive, local, and highly nutritious ingredients.

METHODS

This study is a Science Investigatory Project, which falls under life science. To evaluate the product, a sensory evaluation assessment using the 5-point Likert scale was used to assess the energy bar. The respondents were selected through random sampling and the computed percentage were determined to interpret the overall acceptability of the product.

RESULTS

The final product was evaluated through sensory evaluation and the overall acceptability of the product was also assessed. In terms of appearance, the 45% strongly agreed and 55% agreed that the product was visually appealing. In terms of color, 60% strongly agreed that the color and assembly of ingredients in the energy bar was pleasing to the eye. For aroma, 70% of the respondents strongly agreed that energy bar had a pleasing aroma. In terms of texture, 60% agreed that the texture of the product coordinates with visual perception. As for overall acceptability, 70% of the respondents strongly agreed that the energy bar was highly acceptable product to eat.

DISCUSSIONS

Based on the acceptability test conducted, the product, Tropical Medley Energy Bar was highly acceptable in terms of appearance, color, aroma, and texture. All respondents agreed that this product indeed could provide the necessary energy needed by an individual to perform his/her tasks within a day due to its high calorie content.

KEYWORDS: Tropical Medley Energy Bar

SUBMISSION ID: R04A-CALAMB-0256

Ube (Discorea Alata) Cookies Fortified With Omega 3

Kim Philip T. Indico, Department of Education - Calamba City
(Adviser: Mirachel Batolena)

Abstract

INTRODUCTION

Ube is the most widely distributed yam in tropical countries. In the Philippines, ube is a backyard and commercial crop. It ranks fourth to cassava in terms of area planted with root crops. Like sweet potato, ube is also considered as a famine crop because it is use as a staple food in the absence of rice and corn. The study was focused on processing of Ube cookies fortified with Omega- 3 to become healthier and for ube to become productive. Sensory attributes and general acceptability were also determined.

METHODS

The process was very simple. Butter, white sugar, brown sugar and omega 3 oil were mixed using a mixer. With those dry ingredients, eggs were added gradually. Lastly, the mixture was frozen overnight. On the process of baking, the researchers scoped a desired size of the cookie and placed it in the baking pan then baked in a pre-heat oven over 350 degree Fahrenheit for 10 minutes. The products were then subjected to assess by respondents.

RESULTS

The gathered data were used the 5-Point Likert's Scale that assessed the texture, taste, aroma, and flavor of the ube cookies. The results of evaluation showed that unfortified and fortified ube cookies did not differ significantly in terms of color, texture, odor and flavor. The ube cookies fortified with omega-3 possessed a slightly pronounced fish odor and fish flavor. Likewise, general acceptability was described as like very much and did not differ significantly at any level of significance.

DISCUSSIONS

Based from the results of the study, the following conclusion were made: baked product is an ideal medium for omega-3 because the carbon dioxide released during proofing and baking processes protect the oil from oxidation while it is exposed to higher heat temperature. Sensory evaluation revealed that ubi cookies containing omega-3 versus the commercial unfortified cookies showed similar ratings for color, texture, odor/aroma and flavor. The fortified cookies possess a slightly to moderately pronounced fish odor and fish flavor. Acceptability level of fortified and unfortified cookies did not significantly differ which described as liked very much.

KEYWORDS: ubi, root crop, cookies, fortified, unfortified, omega 3

SUBMISSION ID: R04A-CALAMB-0017

GEOGRAPHY

Development and Evaluation of the Effectiveness of Grade 8 Modules in Geography/Map Reading

Raizy De Rojas, Tagaytay City Science National High School

Abstract

INTRODUCTION

The aim of the study is to develop and evaluate the effectiveness of Grade 8 Modules in Geography/Map Reading. Development of modules that focus on specific lessons in Grade 8 Araling Panlipunan is expected to provide reinforcement, clarification, practice, review and retention of lesson among students and further facilitate learning history and other related concepts in social studies. It was conducted from June to August of school year 2018-2019.

METHODS

Descriptive Research Design was used in the study, specifically descriptive survey, in which a survey was utilized to gather data for interpretation. The researchers developed modules that focused on geography and map reading skills aligned to the learning competencies of Grade 8 Araling Panlipunan for the First Quarter. It was administered to Grade 8 Araling Panlipunan students. They were asked to fill up 5-point Likert Scale Evaluation which was divided in four descriptors, namely effectiveness, appeal, efficiency and general satisfaction with the module.

RESULTS

The results revealed strong agreement to the effectiveness of the module. As to the appeal of the module, the students had a neutral response. For the efficiency of the module, they had a very strong agreement that the module was intended for practice and review, however, they agree that the module was developed as a tool for retention, reinforcement and clarification. Strong agreement was given to the over-all satisfaction with the module. This implies that the developed modules were highly effective.

DISCUSSIONS

Development of modules on geography and map reading skills that is appropriate to the learning competencies of Grade 8 Araling Panlipunan would be of great help to aid learning among students. Similar module for other grade level could be developed and evaluated. The result may also be correlated to the learning outcome assessment of students in Araling Panlipunan.

KEYWORDS: Development, Evaluation, Module in Geography/Map Reading Skills

SUBMISSION ID: R04A-CAVITP-0696

GEOLOGY

**Quake-sense: Pendulum and Ultrasonic Sensor-equipped Earthquake
Alarm with Liquid Crystal Display and Global System for Mobile
Communication Module version 2.0**

Allelou Nelenie Custodio & Justenne Queen Gonzales, School Hilkih Bisa, Cavite
National Science High School

Abstract

INTRODUCTION

An earthquake is an unpredictable natural disaster. People who lived in countries that experience earthquakes regularly should be prepared or at least be given a warning before significant ground shaking starts, because they may be unaware of the threat that follows them. Even though earthquakes have happened in the past, they will inevitably repeat themselves at some point in the future (NERC, 2018). This study was an improved version of a previous research. This device detects both primary and secondary waves. After detecting the seismic waves, it could warn people by emitting very loud sounds and notify larger number of people by transmitting information via text messages and LCD display.

METHODS

The device was designed, constructed and programmed. It was programmed using an Arduino programming software. Using PHIVOLCS' earthquake simulator, the researchers were able to calibrate the magnitude readings. The device's accuracy in measuring the magnitude of an earthquake, transmitting information through LCD, SMS, and its capability in alarming were tested at Diliman, Quezon City. The percentage of accuracy was determined by getting the number of success divided by the total of trials, and then the result will be multiplied by one hundred.

RESULTS

The results showed no significant difference between the magnitude readings of PHIVOLCS and Quake-sense. The results showed that the device is capable of detecting the horizontal and vertical movements of an earthquake. It is also capable in alarming people with the use of voice alarm whenever the magnitude detected by the device was greater than or equal to three. The device showed 100% accuracy in terms of sending information through SMS using the GSM, and displaying information through LCD. The results were gathered and proven using the t- test. This implies that the device is efficient in determining the magnitude of an earthquake and notifying larger number of people using the GSM, LCD, and its alarm system.

DISCUSSIONS

Based on the results, Quake-sense was capable of giving an alarm whenever an earthquake is detected and giving accurate information based on the readings. However, this requires a strong mobile signal in order to send the message with no delay. The device is also efficient in notifying people when the magnitude readings are violent and evacuation is a must. Thus, it could help people to respond accordingly to the situation and avoid mindless panic.

KEYWORDS: earthquake simulator, Arduino,

SUBMISSION ID: R04A-CAVITP-0435

HEALTH AND SCIENCE

Simple Nutrient Addition Program (SNAP) Hydroponics in Enhancing the Gulayan sa Paaralan

Katleya Khrisna Casale, Marissa Ramos, & Mary Jane Espiritu, Department of Education

Abstract

INTRODUCTION

One of the main issues teachers and students had to deal with in implementing agriculture in the schools is the vulnerability of vegetable crops to weeds, insects, pests, and diseases as well as the space restriction that leads to poor agricultural practice.

In Hulo National High School, the implementation of agriculture is difficult not only for the vulnerabilities of crops to insects and the type of soil, which is not suited for sustainable crop production, but also due to soil erosion caused by improper drainage system.

Among the alternative agricultural systems, the researchers find that SNAP Hydroponics appears to be a popular and acceptable solution to address these problems wherein Simple Nutrient Addition Program (SNAP) Hydroponics is a simple, non-circulating low-cost production system for producing vegetables that make use recyclable waste materials and a locally developed, inexpensive and a highly buffered nutrient solution. The study tends to measure the effectiveness of the SNAP Hydroponics in enhancing the Gulayan sa Paaralan using plastic and styrofoam container.

METHODS

A descriptive research method was used, a type of research method that is mainly concerned with describing the nature or condition of the details in the present situation. Twenty Grade 10 students utilized the SNAP Hydroponics and described the growth of the crops in terms of size and appearance using an observation tool. We gathered the data and used frequency to determine the effectiveness of SNAP Hydroponics in terms of size and appearance and the Independent T-test to identify the significant difference on using plastic and Styrofoam container.

RESULTS

The findings revealed that crops grown in SNAP Hydroponics solution are healthier in terms of size and appearance than the crops grown in the school soil. Thus, it can be concluded that SNAP Hydroponics can be an alternative solution for the school to sustain the Gulayan Sa Paaralan Program despite having a lot of factors leading to poor agricultural practice and crop production.

DISCUSSIONS

The results show that the Simple Nutrient Addition Program (SNAP) Hydroponics could be one of the better alternatives for vegetable production. Aside from its growing effects on crops, it is also an agri-friendly solution because ninety percent of the materials needed to set this up are recyclable, there is no need for cultivation, it has no harmful chemicals, easy to control pests and diseases, and has low manpower requirements.

KEYWORDS: Simple Nutrient Addition Program, hydroponics, effectiveness

SUBMISSION ID: R04A-RIZALP-0013

Project HEALTH (Help Everyone to have Active Life to become Healthy)

Violeta Espiritu, Department of Education

Abstract

INTRODUCTION

Eating a balanced diet is vital for good health and well being. Food provides our bodies with energy, protein, essential fats, vitamins and minerals to live, grow, and function properly. Pupils need these essential nutrients to be able to perform well in the school. Thus, programs and projects that will improve pupils' nutritional status are proposed and implemented. Based from the result of the evaluation of clinic teacher in Tambo Munti Kulit Elementary School, it was noted that 13 or 7.74% out of 168 pupils were undernourished. Furthermore, these 13 undernourished pupils were identified as wasted and severely wasted. Due to the situation, it was agreed by the CI Team to help the pupils to be nourished individuals, they were to be the focus of Project HEALTH.

METHODS

Project HEALTH aimed to reduce the number of nutritionally deficient pupils for at least 75% of 13 under nourished to become nourished pupils by the end of December 2018. The team utilized different interventions such as using fresh and nutritious fruits and vegetables from Gulayan sa Paaralan to support Supplementary Feeding (snacks/lunch), intensified monitoring of School Based Feeding Program, and selling of nutritious foods in school. Another factor is indulging the pupils to regular exercises like walking, dancing, and etc.

RESULTS

The results showed a great success of the program, 10 pupils or 76.92% from 13 under nourished pupils had improved their nutritional status. This exceeded the 75% expected target.

DISCUSSIONS

Utilizing Gulayan sa Paaralan, giving supplementary feeding (snacks), implementing the School Based Feeding Program, and selling of nutritious foods in school contributed to the success of the project. Another factor that contributed to this achievement is the awareness of the parents on their children's nutritional status. After the study, it was suggested to continue the implementation of Project HEALTH in the next school year.

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KEYWORDS: Improving nutritional status through good eating habits and enough exercise.

SUBMISSION ID: R04A-CAVITP-1459

Project HOPE, Health of Pupils Enhanced: An Intervention Program to Help Improve the Nutritional Level of Undernourished Pupils of Carlos S. Batino Sr. Elementary School

Sheila Marie M. Marasigan, Department of Education

Abstract

INTRODUCTION

Early malnutrition can unfavorably affect the physical, mental, and social aspects of a child's health, which leads to underweight, stunted growth and depressed immunity and mortality. Better nutrition provides them with better resistance to diseases which would keep them from attending school. School feeding programs could help supplement the problem for malnourished children through providing them with healthy meals. Carlos S. Batino Sr. Elementary School caters migrant families from different parts of the country. One of the main problem of the school was high prevalence of severely wasted and wasted pupils. Based on the baseline nutritional status report, 28 pupils or 3% of the total enrolment are severely wasted and wasted. In response to this, Project HOPE (Health of Pupils Enhanced) was developed to address the problem of the school. The utilization of the school's Gulayan sa Paaralan Nutrition Education to support the School Based Feeding Program was emphasized.

METHODS

The experimental method of research was used in this action research. It is experimental in the sense that is case study format using a developmental design. It was utilized in this research because nutritional progress of research pupils under the school based feeding program under this study was being monitored. Developmental research is focused on the progressive changes that occur as an organism develops (Devin Kowalczyk).

RESULTS

After gathering all the data, the research showed that by utilizing the school's Gulayan sa Paaralan and Nutrition Education to support the School Based Feeding Program at Carlos S. Batino Sr. Elementary School, improved the nutritional level of the pupils is very significant. The academic performance was improved and the absenteeism was lessened.

DISCUSSIONS

There is a need to capacitate school-based feeding coordinators on proper food handling, food safety, and basic nutrition concepts to promote change in serving healthy school meals utilizing school garden produce and to encourage children's lifelong healthy eating habits. The impact of feeding programs varies widely depending on how it is designed, implemented, and evaluated. The core of implementing feeding program among schools is for the holistic productivity of the nation. While it is important to note the benefits that can be derived from it, its success depends upon the pupils involved.

KEYWORDS: wasted, Undernourished, holistic

SUBMISSION ID: R04A-CAVITP-1416

Physical Activity Program to the Overweight Students Thru "Zumbawas Timbang"

Rosie Rogado

Abstract

INTRODUCTION

The fundamental cause of obesity and overweight is an energy imbalance between calories consumed and calories expended. Globally, there has been an increased intake of energy-dense foods that are high in fat; and an increase in physical inactivity due to the increasingly sedentary nature of many forms of work, changing modes of transportation, and increasing urbanization. Based on the observation on the nutritional status from previous to present, the number of overweight students remains constant. In fact, there is a program for those students classified as wasted and severely wasted and that is the feeding program conducted by the TLE Department, but there is no existing program for those students classified as overweight.

METHODS

Supposedly, the participants of this research are 31 overweight students of Sta. Catalina Integrated National High School, Majayjay Laguna. But out of those students, only 23 of them consistently participated in the program because of their personal reasons. Each students that undergo the program was given a parents permit to ensure that their parents are aware on what is the program all about. If their daughter/son has medical problems based on their medical history, they are not obliged to do the activities.

The results of this research were answered using the Mean Percentage.

RESULTS

The initial recorded weight of the students on June compared to the recorded weight four months after shows that the weight of 17 out of the 23 overweight students had increased from 1.27% to 15.00%. In the final assessment conducted on the month of January 2019, 95.65% of the overweight students had decreased weight compared to the first month (October).

DISCUSSIONS

Based on the data presented, the conclusions had been derived upon the implementation of the physical activity program "ZUMBAwas TIMBANG" that had been useful for the overweight students of Sta Catalina INHS-Junior.

KEYWORDS: OVERWEIGHT, ZUMBA, OBESITY, PHYSICAL ACTIVITY, NUTRITIONAL STATUS

SUBMISSION ID: R04A-LAGUNA-0266

**"Cleanliness is Next to Godliness" Waste management as perceived by
CNHS - SHS TVL (CSS) Students for academic year 2018-2019**

Numbela, Princess Shairyn G
(Adviser: Ruel Arcon)

Abstract

INTRODUCTION

Cleanliness is one of the most controversial issues throughout the day. Why is this considered to be the faces of the new generation? Cleanliness reflected a lot of impact to everyone's lives because as long as individual do not have discipline to make their surroundings clean, everyone is possible to get sick. This study is to give warning that mishandling of waste is a serious topic on how or what will be going to happen if our earth surrounded by garbage and trash. Just remember the coming of the new generation our sons/ daughters and grandchildren will be affected.

METHODS

In this mixed methods both questionnaire and quantitative research were used. A Likert type was used to validate data. The researchers administered the research questionnaire to G11-TVL (CSS) Students of CNHS-SHS Dept. last November 2019. After collecting of data, it was interpreted and analyzed.

RESULTS

The analysis of the data revealed that the level of awareness of the respondents on waste management program on separating plastic bottles from paper, cans, and other garbage to use it again and collecting all biodegradable waste to be used as fertilizer is "important". While throwing the peel of candies in non-biodegradable bin and using plastic bottles and pieces of tear colored paper to make attractive artworks are "moderately important". Lastly, bringing out the garbage only when hear the garbage truck coming/or in prescribe time is "slightly important". The respondents considered that separation of plastic bottles from paper, cans, and other garbage to use it again and collecting of biodegradable trash to be used as a fertilizer to soil as "Agree". They consider throwing the peel of candies in non-biodegradable bin bringing out of garbage only when hear the garbage truck coming/or in prescribe time, and also the question that using plastic bottles and pieces of tear colored papers to make attractive artworks as "Undecided".

DISCUSSIONS

G11-TVL (CSS) Students are aware about the importance of cleanliness but the level of their compliance did not meet the highest understanding on how important cleanliness is.

KEYWORDS: environmental awareness, health

SUBMISSION ID: R04A-CAVITC-0014

Diabetest: Paper- Based Microfluidics Test for the Amount of Glucose and Ketone Present in the Newly Excreted Urine

Jhea Angel D. Delgado, Tagaytay City Science National High School
(Adviser: Mark Anthony Rellores)

Abstract

INTRODUCTION

Despite the tremendous advancement in the medical field, millions of people living with diabetes are not aware of their own body condition as stated by National Diabetes Statistics Report. In type 1 Diabetes, the body resort in burning fats to produce energy resulting to a high concentration of ketone in the urine while type 2 is simply the presence of glucose.

METHODS

Out of the different research design, the control group design was performed in which there was one control group and one experimental group observed. The researcher utilized the glucose oxidase method since it was proven to be the most glucose concentration sensitive. Using Legal's Test and Glucose Oxidation Method the study was able to produce a paper-based microfluidics testing strip.

RESULTS

Results showed that 0.01% of glucose in one Liter of urine can be determined using the product while ketone can be detected once it exceeded 0.6 mmol/L. On the other hand, the theoretical ketone detected in the colorimetric table is between 4.0-6.0 mmol/L while the laboratory results showed 4.67mmol/L, both lies in the same range of being positively moderated. Hexokinase method indicated 124 mg/100 mL while the testing strip exhibited 120-125 mg/100 mL.

DISCUSSIONS

After several solution enhancements, the injected liquid to the stiff paper was then tested via a sample of a newly excreted urine from both Type 1 and Type 2 patients. The results from the colorimetric table were compared to test center analysis. From the obtained results and certificates released by various laboratories inside and outside the Philippines giving proof of the product's analysis passing and accuracy, the researcher now concludes that the produced strips are effective in giving pre-diagnosis for diabetes.

KEYWORDS: Keywords: Diabetes, glucose oxidase, hexokinase, ketone, microfluidics

SUBMISSION ID: R04A-CAVTP-0365

**Eating Habits of Grade 11 Stem Students and Their Academic Performance
in Integrated Science IV at Tagaytay City Science National High School:
Basis for School-Based Nutrition Program**

Mark Anthony Rellores, Tagaytay City Science National High School

Abstract

INTRODUCTION

Food has been the primary concern of mankind in its physical environment all throughout recorded history. People must eat to live and what they eat will affect in a high degree their ability to keep well. As Robinson and Lawler stated, "You are what you eat". Those words are significantly true because healthy eating gives us that beautiful outward glow that comes from being healthy on the inside. Healthy eating is a part of human life as it keeps good cognitive processes. There is a correlation between nutrition and cognition; this relationship has been highly under-researched, but there exist many studies that look at the nutritional benefits of many food substances as they affect learning and brain function. Our schools play vital role in preparing and sustaining our students' potential learning abilities by supplying nutritious snacks during school days.

METHODS

This study employed descriptive-correlational research analyzing the respondents' academic performance in Integrated Science IV, the distinctive eating habits and relationship between the eating habits to academic performance in Integrated Science IV. A self-administered questionnaire was used in conducting the study.

RESULTS

The study revealed that most of the students (36.28%) in terms of academic performance in Science IV are proficient and 15.93% are approaching proficiency. Based on the response of the students, healthy eating habits is often practiced (4x-5x a week). Furthermore, respondents sometimes (3x a week) practiced negative eating habit. This study highlighted the relationship between the eating habits of the respondents and their academic performance in Integrated Science IV and as a result, there is high positive correlation between eating habits of Grade 11 STEM students and their academic performance in Integrated Science IV according on the computed value which is 0.722.

DISCUSSIONS

Majority of the respondents are Proficient (P) in Science IV. Students at this level have developed the fundamental knowledge, skills and core understandings. Respondents confirmed that based on the distinctive eating habits they often practice healthy eating habits, while on the other hand they sometimes do the negative eating habits. This is a good indicator that the respondents who are in the young generation have great value in healthy eating habits. This study shows that there is significant relationship exists between students' eating habits and academic performance in Integrated Science IV.

KEYWORDS: Eating Habits, Academic Performance, Integrated Science IV, Nutrition, Cognition

SUBMISSION ID: R04A-CAVTP-0735

Acceptability of Ipil-Ipil (*Leucaena glauca*) Seeds as Purgative Extender to Polvoron: A Sensory Analysis

Vanie M. Dapar, Student
(Adviser: Jomel Montero)

Abstract

INTRODUCTION

Millions of children worldwide are suffering from intestinal parasitic worms. In the Philippines, the government spends millions of budgets for purgative medicine to help school children eliminate their intestinal parasitic worms. However, several school children find its taste unpleasant. As result, most them refuse to take it. In this perspective, this study developed a purgative snack using Ipil-Ipil (*Leucaena glauca*) seeds (deworming agent) as a purgative extender to polvoron. Since there were few studies investigated the potential of herbal plants as purgative food extender, this study was conducted to evaluate the acceptability of Ipil-Ipil (*Leucaena glauca*) seeds as a purgative extender to polvoron.

METHODS

This study utilized the experimental research design using the parallel group design. A total of 24 pupil-respondents from Magroyong Elementary School who participated in the sensory evaluation. The scorecard of Rangana (1977) and hedonic scale were utilized as data gathering instruments. Data were subjected to statistical analysis such as mean and one-way ANOVA.

RESULTS

Results revealed that the level of acceptability of the sensory attributes of Ipil-Ipil seed polvoron is high with an average weighted mean of 9.81. The data further showed that there is a significant difference between the experimental and the commercial product in terms of the sensory attributes, except for odor and appearance.

DISCUSSIONS

The results implied that the Ipil-Ipil seed polvoron was acceptable to the senses of the respondents. It further showed that there is a significant difference in the texture, taste, and general acceptability of the product which implies that it can level to the sensory characteristics of a commercial polvoron. However, the odor and appearance of the developed product have no significant difference with the commercial one. This implies that there is a need to enhance the odor and appearance of the developed product to make it more competitive to the commercial polvoron.

KEYWORDS: Acceptability, Ipil-Ipil Seeds, Purgative Extender, Polvoron, Sensory Analysis

SUBMISSION ID: R013-SURSUR-0155

Acceptability of Lancole Ointment as Organic Mosquito Repellent

Claire P. Juguiad, Pinaripad National High School
(Adviser: Elaine May Gonzales)

Abstract

INTRODUCTION

Lancole Ointment is a product innovation from locally abundant *Lantara camara* (commonly known as Bangbangsit), *Cimbopogocitratus* (lemon grass), and oil from *Cocus nuficera* (coconut). The experiment emerged from the community's need for an affordable and readily available mosquito repellent that people can easily prepare in their homes without using sophisticated equipment. It was also conducted in response to Philippine's alarming trend of fatalities brought about by mosquitoes that cause dengue and other mosquito-borne illnesses. It is guaranteed purely organic and environment friendly.

METHODS

Experimental design under laboratory condition was employed in this study. The innovation has undergone three phases—phase 1 involved conceptualization where extensive review of related literature was done to discover plants with mosquito-repelling properties; phase 2 involved product formulation by decocting varying amounts of fresh and pounded *Lantara camara* leaves and lemon grass in coconut oil; and phase 3 involved product testing by exposing chosen 12 volunteers in a mosquito-infested area at Pinaripad National High School, Aglipay, Quirino for three hours. The volunteer-respondents answered a structure questionnaire to rate the efficiency of the following treatments: Treatment 0 (commercial mosquito repellent); Treatment 1 (150 g coconut oil, 20 g *Lantara camara* leaves, and 25 g lemon grass); and Treatment 2 (150 g coconut oil, 30 g *Lantara camara* leaves, and 25 g lemon grass).

RESULTS

The researcher used a commercial mosquito repellent as control treatment (Treatment 1) with a rating of highly acceptable. Treatment 2 gained an unacceptable rating in terms of scent (with a mean score of 2.42), acceptable comfort (3.00), acceptable efficiency mosquito bite protection (3.08), and an overall acceptable rating of 2.83. Similarly, Treatment 3 also gained an overall acceptable rating of 2.58 but with much lesser rating in terms of scent (2.08), acceptable comfort (2.58), and acceptable efficiency (3.08).

DISCUSSIONS

As the toxicity of *Lantara camara* is not yet clearly determined, the product can only be applied externally and users must discontinue using when irritation appears. Patience and stringent efforts should be exerted to explore the plants used in this study for their potential medicinal utility and development into healthcare products for the betterment of animals and humans.

KEYWORDS: *Lantara camara*, *Cimbopogocitratu*, *Cocus nuficera*, Lancole Ointment

SUBMISSION ID: R002-QUIRIN-0097

Analyzing the Effects of Graphic Messages on the Consumption Level of Cigarette Users

Jenelyn P. Fullo, Labas Senior High School
(Adviser: Margie Monderin)

Abstract

INTRODUCTION

After the implementation of the Republic Act No. 10643 or The Graphic Health Warnings Law, some health related groups expect a decrease of the number of smokers through the presence of the said law. However, based on the researcher's observation, not all smokers could easily adapt such implementation especially because the templates for the graphic messages are new to the eyes of the public. Thus, this research is studied to discover the effects of the existing new graphic messages to the consumption level of smokers that was strongly supported by sensory semantic theory together with different local and foreign studies.

METHODS

A quantitative research was used in the study. Using a descriptive research design, the researcher conducted the study on the selected barangays in City of Santa Rosa Laguna. Forty male and forty female smokers with different ages and length of cigarette usage responded to a set of structured questionnaires. The answers of the respondents were measured through the use of the weighted mean and interpreted using the descriptive analysis.

RESULTS

Most of the respondents responded accordingly on how the graphic messages affected their cigarette consumption level. The graphic messages were released to the public in the year 2016 and this demanded every tobacco company to place this in each cigarette pack. After this was released, the smokers became aware that these cigarette graphic messages were enforced to unveil the detrimental outcome of smoking to a persons' health. The graphic messages last longer on the mind of a smoker rather than the text warnings only that is why it is easier for them to recall the warnings. The smokers were also concerned with their environment such as the persons who can inhale the smoke of the cigarette they are using. As a result, they became attached to the graphic messages and more cautious. This signified that the implementation of the R.A. No. 10643 was a good start to convince smokers to refrain from smoking.

DISCUSSIONS

The results illustrated that the graphic messages affect the smokers when it comes to their cigarette consumption level but this is not yet enough. The Department of Health (DOH) and other health related groups are recommended to strengthen more its campaign about raising the awareness on the adverse effects of smoking towards a persons' health through ensuring that all the smokers will be aware about the existence of the new graphic messages.

KEYWORDS: graphic messages, smokers, consumption level, effects, R.A. No. 10643

SUBMISSION ID: R04A-STAROS-0089

Anorexia Nervosa: Its Effect on Anselmo A. Sandoval Memorial National High School's Grade 12 Students Academic Performances

Gleziel Manalo, Anselmo A. Sandoval Memorial National High School

Abstract

INTRODUCTION

Eating disorder is a complex disorder influenced by other factors. It is generally believed that a combination of biological, psychological and environment abnormalities contribute to the development of eating disorders. There are three kinds of eating disorder: Binge-eating disorder, Bulimia Nervosa and the most common among the three, Anorexia Nervosa, which is, the focus of this research study. People displaying symptoms of Anorexia Nervosa have been observed by historians and psychologists to be approximately 10-25 years old, normally students.

METHODS

The research is quantitative in nature. The researchers used two set of questionnaires. The first set is to identify students who have tendencies toward Anorexia Nervosa while the second set is to determine the common and mostly occurring effects of the said disorder in a student's Academic Performance. The researchers used probability sampling with stratified random sampling. The Grade 12 students were stratified according to their sections, drawing 20 students each. Out of 260 students, 64 were identified to have strong tendencies towards Anorexia Nervosa and in order to identify the significant difference between the Academic Performance of those who have tendencies and those who does not, another 64 random students from the other group were drawn for comparison. The researchers collected the General Weighted Average of the students who belongs to the two sample group and analyzed using independent t-test.

RESULTS

Out of the 260 successful questionnaires, 24.62% qualified the assessment of having strong tendency towards developing Anorexia Nervosa. Running the second set of questionnaires, the effects of the disorder on their academic performances are then enumerated which are, confusion, dizziness and being lazy because of lack of energy. The researchers also collected every respondents average in order to compare the level of academic performance of those who have strong tendency towards the disorder to the average of those who does not. With the general mean average of 82.70 and 85.73, respectively and with the computed p-value = 0.00 using 0.05 level of significance, the researchers rejected the null hypothesis. Thus, there is a significant different between the academic performance of students who have strong tendency towards Anorexia Nervosa and to those who does not. Furthermore, statistically shows that the student that are not at risk of Anorexia Nervosa have a good academic performance.

DISCUSSIONS

The significant difference between the academic performance of an Anorexic person and a person who does not have Anorexia as the result, demonstrates the need for a convenient way to deal with the possible increase in number of Anorexic persons, specifically students, the reason why the researchers have come up with an idea of creating an offline mobile application that mainly talks about everything regarding the said disorder.

KEYWORDS: Anorexia Nervosa

SUBMISSION ID: R04A-BATANP-1370

Antibacterial Wound Dressing Using Gamma-Irradiated PVP-Carrageenan Hydrogel Blend with Silver Nanoparticles

Comentan, Theodore Dave T., Fugaban, Aliyah Jane G., Lim, Ruth Danniele C.,
Mejia, Francesca Laine B., Ramos, & Abigail Lian C., Pasig City Science High
School

(Adviser: Rowena Angela Raymundo)

Abstract

INTRODUCTION

Burns are the leading cause of morbidity prolonging hospitalization, disability and disfigurement (WHO). It is a global health problem, estimating 180,000 deaths per year. Wounds can be acute, traumatic, or chronic, it can become infected and slow the healing process. With this, the researchers proposed to develop an antibacterial gamma-irradiated hydrogel wound dressing using PVP-Carrageenan hydrogel blend synthesized with Silver Nanoparticles to be temporarily used as an instant medicinal application on the skin to prevent further infection and risks. This project also aimed to develop the currently available hydrogel wound dressing which lack an antibacterial property.

METHODS

The researchers prepared the hydrogels by using a tantamount of 6% Polyvinyl-Pyrrolidone (PVP), 1.5% Kappa-Carrageenan (KC), 2.5% Polyethylene Glycol (PEG), and Silver Nitrate (AgNO₃) solutions of different concentrations (1000 ppm and 1500 ppm). The AgNO₃ solution mixed with PVP and KC were left overnight, afterwards PEG was added along with the final volume. The hydrogels were then gamma-irradiated to allow for the synthesis of silver nanoparticles and underwent the Disk Diffusion Method to test its effectivity against gram-positive *Staphylococcus aureus* and gram-negative *Escherichia coli*.

RESULTS

Both concentrations of 1500 ppm and 1000 ppm were proven effective in its inhibitory activity, completely inhibiting the growth of the harmful organisms, both the gram-positive and gram-negative bacteria. These samples also proved to have a mild to moderate reactivity rating with the 1000 ppm concentration sample having the Moderate reactivity rating which proved that the samples are extensive in its inhibitory activity not only in the covered wound but also 5-10 mm outside the affected area to prevent the growth of harmful bacteria. Overall, the antibacterial wound dressing lives up to its name and proves to be an effective wound dressing.

DISCUSSIONS

The results showed that the Silver Nanoparticles added to the hydrogel blend makes for an effective antibacterial hydrogel wound dressing. The researchers also suggested to future researchers that: (1) The use of other materials (iota-carrageenan, carboxymethylcellulose, chitosan, etc.) be explored, and (2) the hydrogel blends be characterized in its mechanical properties.

KEYWORDS: gamma-irradiation, hydrogel, kappa-carrageenan, silver nanoparticles, e. coli

SUBMISSION ID: NCR1-PASIGC-0020

Antidiabetic Potential of Duhat (*Syzygium Cumini*) Bark Tea

Claire Antonette N. Nacario & John Carlo B. Calabia, San Jose National High School

(Adviser: June Kathleen Mandayo)

Abstract

INTRODUCTION

For years, diabetes is one of the major prevalent lifestyle diseases that has affected the lives of Filipinos. With Type 2 Diabetes (T2D) as the most common, more than 3.2 million Filipinos were estimated to have diabetes at, more unfortunately, lower age ranges. By the end of 2030, there would be over 700 million diabetics in the Philippines. Despite the advent of technology and modern medication for diabetes, problems on treatment such cost, side effects and duration of treatment still persist. Considering the ability of duhat bark, seeds and fruit extract to lower blood pressure, this study aimed to determine the potential of local duhat bark extract in treating diabetes.

METHODS

Local variety of duhat bark pieces were gathered, cleansed, dried, powdered and packaged into tea bags. Sample duhat tea powder was subjected to phytochemical analysis to identify presence of toxins and possible anti-diabetic components at the Analytical Services Laboratory at the Institute of Chemistry, University of the Philippines Los Banos, Laguna. For characterizing the tea product, an evaluation survey was also conducted. Twenty-five sample and diverse respondents were asked to evaluate the product in terms of taste, aroma, consistency, appearance and presentation.

RESULTS

According to the phytochemical analysis, the component in focus—alkaloids—are absent. However, literature has confirmed the presence of natural anti-oxidants in herbal plants such as tannins, flavonoids and vitamins C and E. On the other hand, the survey evaluation resulted to a mean score of 3.3 on the taste at 1.31 standard deviation. In terms of aroma, the mean score was computed to be 3.08 at 1.24 standard deviation. A mean score 1.44 at 0.87 standard deviation was computed for consistency, 3.46 on appearance with standard deviation of 1; and 4.6 on presentation at 0.76 standard deviation. Thus, results reflected that the powdered duhat bark as tea is satisfactory in terms of presentation, satisfactory in terms of taste, aroma and appearance and poor in terms of consistency.

DISCUSSIONS

The results showed a negative result in terms of the presence of alkaloids. However, the product posed a satisfactory response from evaluators which emphasizes the probable acceptability of the product. This indicates the need for further reassessment. Phytochemical analysis can still be redone to identify presence of other possible anti-diabetic components.

KEYWORDS: duhat, tea, duhat bark, antidiabetic

SUBMISSION ID: R04A-SANPAB-0046

Anti-Fungal Effect of Citronella (Cymbopogon Winterianus)

Anna Marie Umali, Enna Teresita Fulgencio, & Francis John Mapalad, Paharang
Integrated School
(Adviser: Rosalie Ronquillo)

Abstract

INTRODUCTION

Essential oil has been scientifically proven that it contains antifungal properties. One of this is the citronella that fights off a number of common fungal complaints in the human body. Since an essential oil is safe to treat any fungal, this citronella ointment is the proven to possess antifungal qualities, hence it can be used as treatment. Nowadays, cases of fungal infections are very rampant. However, commercialized anti-fungal ointments remained to be very expensive. This prompted the researcher to formulate an ointment that can cure external fungal problems and provide a natural and affordable remedy and minimize or reduce the cases of fungal infections

METHODS

The researchers used the experimental research design. Experimental design is a blueprint of the procedure that enables the researchers to test the hypothesis by valid conclusions about relationships between independent and dependent variables (Key, James P.) This suits the study as we experimented to formulate an ointment using citronella to cure the fungal diseases. The subjects of the study were persons with superficial fungal infections. To produce reliable and accurate results, the researchers decided to have twenty-four subjects with superficial fungal infections consisting of 15 students and 9 adults. The fungal diseases assessed were tinea versicolor and ringworm.

RESULTS

The ointments have different resulting color and smell based on the quantity of citronella oil used. They have the same texture since the same base was used. The citronella ointment can cure mild to severe fungal infections like tinea versicolor and ringworm. Further, using the 50:50 concentrations, 100 % of the respondents were cured after applying the ointment both in once a day and twice a day frequency. Results indicated that citronella ointment in 80:20 concentration, applied twice a day is effective. However, the 50:50 concentration applied once a day, is more effective and it cured the fungal infection in 5 days. When applied twice a day, the 50:50 concentration manifest a more rapid healing property.

DISCUSSIONS

The citronella ointment is more effective with a 50:50 concentrations and works faster on severe fungal infections like ringworm. The ointment can be used as an alternative to commercial anti-fungal ointments because it is cheaper but offers the same effectivity.

KEYWORDS: Anti-fungal, Essential Oil, Citronella oil

SUBMISSION ID: R04A-BATANC-0009

Anti-mitotic Property of Piper betle crude ethanolic extract using Allium cepa Assay

Kyle Zenric Christian Jabat, Pasig City Science High School
(Adviser: Maria Teresa Beloy)

Abstract

INTRODUCTION

In the Philippines, 7 adults die every hour and 8 children die daily because of cancer (Dizon, 2017). Cancer is a known disease that is caused by the uncontrollable division of cells also known as mitosis. It is a cell division that occurs predominantly in our body and can possibly produce mutations which can lead to uncontrollable cell division and eventually, can lead to cancer (Fajardo et al., 2017). For this reason, the researcher came up with the idea of using the anti-mitotic properties of Piper betle which contains a multitude of bio phenolics such as hydroxychavicol, eugenol, chavibetol, and piperols (Gundala and Aneja, 2014). These compounds have been found to inhibit mitosis.

METHODS

After the ethanolic crude extraction, the researcher used Allium cepa Assay which has two parts: its Macroscopic and Microscopic analysis. Three treatments were used: 720 $\mu\text{g/l}$, 360 $\mu\text{g/l}$ and 180 $\mu\text{g/l}$ for the Allium cepa Assay. The cells were observed during the different phases of cell division. Data was analyzed using analysis of variance (ANOVA) in one-way classification analysis using the Statistical Package for the Social Sciences, a software used to edit statistics data.

RESULTS

The different concentrations of the plant extract showed varying levels of anti-mitotic activities. The highest concentration 720 $\mu\text{g/ml}$ Piper betle crude ethanolic extract completely inhibited mitosis, thus having anti-mitotic property. While the other concentrations, 180 $\mu\text{g/l}$ and 360 $\mu\text{g/ml}$ Piper betle crude ethanolic extract exhibits moderate and little anti-mitotic activities, respectively. The results in the Macroscopic show that 0 $\mu\text{g/ml}$ concentration has the longest root length. While growth rate of the roots decreased when 360 $\mu\text{g/ml}$ concentration was used. The growth rate further decreased in the 720 $\mu\text{g/ml}$ concentration. While in the microscopic test, the mitotic index, in the concentrations of 100% and 25% showed that there is no significant difference to the negative control, while the 50% showed that there is a significant difference to the negative control.

DISCUSSIONS

Based on the gathered data, Piper betle generally inhibited mitotic division. Thus, it has an anti-mitotic property and supports the research study regarding its significant antiproliferative activity on prostate cancer cells. Further investigation on the other phytochemical properties of the plant is recommended to explore its possibility of being an anti-cancer agent and its other uses in the field of medicine.

KEYWORDS: Betel (Piper betle) leaves, cancer, mitosis, Allium cepa, anti-proliferative, antimitotic, phytochemical

SUBMISSION ID: NCR1-PASIGC-0016

Antioxidant and Cytotoxic Activity of the Black Sea Cucumber (*Holothuria atra*) Body Wall Methanolic Extract through Multiple in vitro Assays: Its Possible Implication in Cancer Management

Allizon Jannie G. De Castro, John Lloyd L. Felisilda, & Levi Jann V. Miranda,
Negros Occidental High School
(Adviser: Russell Gorre)

Abstract

INTRODUCTION

Even in recent times, there is still no known cure for cancer which is still one of the leading causes of morbidity around the world. A lot of interventions were made and a lot of natural anticancer agents are explored to end the preponderance of the disease. Still, a definite cure is not found. To solve the problem, the researchers evaluated in this study the antioxidant and cytotoxic activity of the sea cucumber (*Holothuria atra*) in which its medicinal value is attributed to the presence of bioactive agents with promising biological and pharmacological properties. The saponins and phenolics content were also determined qualitatively and quantitatively.

METHODS

The sea cucumbers were collected from the coast of Sagay, Negros Occidental and its body wall extract was obtained through methanolic extraction. Next, the bioactive components of the extract, specifically its saponin and phenolics content were determined through foam test, ferric chloride test, Folin-Ciocalteu and gravimetric method. Its antioxidant activity was tested through DPPH (diphenyl-2-picryl hydrazyl) and Hydrogen Peroxide (H₂O₂) Assays. Then, its cytotoxicity was tested to the brine shrimp nauplii, *S. cerevisiae* cells through Brine Shrimp Lethality Assay and Methylene Blue Reduction Assay, respectively. It was also tested to the mung beans through Seed Viability test using the following concentrations: 500 ppm, 1000 ppm, 2500 ppm and 5000 ppm.

RESULTS

The *H. atra* body wall methanolic extract scavenged 95.93% and 91.40% of DPPH and H₂O₂ radicals respectively. The extract also produced a dose dependent cytotoxicity effect to brine shrimp nauplii and yeast cells with an LC₅₀ of 629.63 ppm and 274.07 ppm respectively. As mentioned by Meyer et al. (1982), LC₅₀ value of less than 1000 µg/mL is toxic. Thus, it is considered to be toxic. Moreover, it inhibited the germination of the mung bean seeds as compared to the control group.

DISCUSSIONS

The cytotoxicity of the *H. atra* methanolic extract may be due to the presence of saponins (1.43%) and phenols (0.18 mg) which were obtained by phytochemical tests. Thus, the body wall methanolic extract of *H. atra* contains phenolic and saponins and exhibits antioxidant and cytotoxic activity which could be a promising source for anti-cancer drug breakthrough. Further in vitro studies were needed such as MTT assay, anti-metastatic assay using breast or colon carcinoma model may be evaluated to test its efficacy as potential anticancer agent.

KEYWORDS: antioxidant, cytotoxicity, DPPH, sea cucumber

SUBMISSION ID: R006-NEGROS-0010

Bioactive Components, Antioxidant, Anti-urolithiatic and Anti-inflammatory Activities of Brown Algae, *Sargassum binderi* Ethanolic Extract Using Multiple in Vitro Assays

Charito Radan III, Negros Occidental High School
(Adviser: Russell Gorre)

Abstract

INTRODUCTION

Kidney stone is the third most common problem of urinary tract in the world (Agarwal and Varma, 2014). Calcium oxalate monohydrate (COM) crystals are considered as major mediators in the formation of kidney stones. Since *Sargassum* species have the ability to inhibit the formation of calcium oxalate through the its phytochemicals, this motivated the researcher to determine the antioxidant, antiurolithiatic, anti-inflammatory activities of *Sargassum binderi* ethanolic extract, abundant in the province of Neg. Occ., Philippines.

METHODS

The extract of *S. binderi* was obtained through ethanolic extraction while its bioactive compounds and antioxidant activity were determined by qualitative and quantitative phytochemical analysis, Gas Chromatography and DPPH Assay respectively. Afterwards, varying treatments were prepared with varying concentrations (500ppm, 1000ppm, 1500ppm and 2000ppm) of *S. binderi* extract and Potassium citrate solution (+ control) and used in nucleation, growth, aggregation and protein denaturation assays.

RESULTS

Based on the result, the *S. binderi* ethanolic extract contains bioactive compounds such as alkaloids, flavonoids, terpenoids, tannins, saponins, sulfated polysaccharide, α -tocopherol, α -Tocopherol quinone, arachidonic acid and squalene. The said extract was able to scavenge 7.8659-49.3230% of DPPH radicals, showed antiurolithiatic activity on CaOx particles, and inhibited the protein denaturation in a concentration- dependent manner. Moreover, DMRT at 0.05 α revealed that the ethanolic extract at higher concentrations is comparable to the + control.

DISCUSSIONS

Based on the results, Alkaloids, flavonoids, terpenoids, tannins, saponins disaggregated the suspension of mucoproteins, the promoters of crystallization (Gurocak et al. 2006). *S. binderi* ethanolic extract contains sulfated polysaccharide, inhibiting the formation of Ox crystals (Melo et al., 2013). Lastly, α -tocopherol, α -Tocopherolquinone, arachidonic acid and squalene increase the intestinal absorption of Ox and the clearance of Ox in kidneys (Naya et al., 2002). These are also known to have anti-inflammatory activities (Singh and Jialal, 2004). Some studies show that treatments with antioxidants and free-radical scavengers, found in *S. binderi* extract, reduce Ox/CaOx crystal-induced injuries (Bashir et al., 2009; Vanachayangkul et al. 2010). Therefore, the results of this study can be used in developing a new and possibly more efficient way to treat urolithiasis and inflammation.

KEYWORDS: *Sargassum binderi*, Calcium oxalate, growth, nucleation, aggregation, percent inhibition

SUBMISSION ID: R006-NEGROS-0009

Bioactivity of Lunas Bagon (*Piper* sp.) and Himag (*Lunasia* sp.) against Staphylococcal Strains

Ryan Paul Vales, Department of Education - Tagbina National High School

Abstract

INTRODUCTION

Antibiotic resistance has become a global crisis as multiple antibiotics have lost potency to major bacterial strains. Apparently, there is a pressing need of sourcing out novel compounds for antibiotic development. This study aimed to investigate the antibacterial activity of plants used in folkloric medicine in Surigao del Sur--- Lunas Bagon (*Piper* sp.) and Himag (*Lunasia* sp.).

METHODS

Ethanollic stem extracts of Lunas Bagon and Himag were subjected to phytochemical screening and antibacterial testing against *Staphylococcus aureus* BIOTECH 1582 and Methicillin-Resistant *S. aureus* (MRSA). Filter Paper Disc Diffusion Assay was also conducted. For each strains, there were four treatments— Lunas Bagon extract, Himag extract, positive control (commercial antibiotic), and negative control (distilled water). Each treatment was done in three replicates and trials. The zones of inhibition (ZOI) were measured after 24 hours of incubation.

RESULTS

For *S. aureus*, the following ZOI were recorded: Lunas Bagon (12.44 mm, partially active), Himag (13.56 mm, partially active), Penicillin G (32.00 mm, very active), and distilled water (6.00 mm, inactive). The following ZOI were observed for MRSA: Lunas Bagon (6.00, inactive), Himag (14.22 mm, partially active), Vancomycin (23.67 mm, active), and distilled water (6.00 mm, inactive). ANOVA and Post Hoc test revealed that Lunas Bagon and Himag have similar potency against *S. aureus*; they have higher ZOI than the negative control but the positive control still is the most potent substance among all treatments. For MRSA, ANOVA revealed that different treatments have different potency and Post Hoc test showed that Himag is more potent than Lunas Bagon and distilled water but it showed lesser potency to MRSA when compared to vancomycin. The bioactivity exhibited by Lunas Bagon and Himag could be attributed to the phytochemicals present in them. Lunas Bagon were found to contain alkaloids and saponins while Himag contained flavonoids, saponins and tannins.

DISCUSSIONS

The results demonstrated that both plants exhibited bioactivity to *S. aureus* BIOTECH 1582; but only Himag showed bioactivity against a more resistant strain—MRSA. When compared to penicillin and vancomycin, the plants showed lesser potency to the bacterial strains. Nevertheless, the plants, particularly Himag, showed potential of becoming a novel source of antibiotic for drug-resistant bacteria; hence, the need of isolation and specific identification of the plant's bioactive compounds.

KEYWORDS: antibiotic, *Lunasia* sp., MRSA, *Piper* sp., *Staphylococcus aureus*

SUBMISSION ID: R013-SURSUR-0093

**Body Mass Index and Academic Performance of Grade 12 Students,
TMCSHS, SY 2017-2018**

Ma. Gretchen Medianista, TMCSHS

Abstract

INTRODUCTION

Adolescents, where senior high school students belong, are vulnerable to issues related to Body Mass Index (BMI) and they are at risk for suffering underweight and obesity's negative effects like poor academic performance. Investigating school achievements for the underweight and overweight students is important and may provide valuable insight into constructive changes required for a responsive school environment. This research will also ease the unscientific belief that the overweight and underweight students would not do well in the academic program in school compared to the normal weight students.

METHODS

A cross sectional study design was used while convenient and random sampling of 174 students from the 700 Grade 12 enrollees of Trece Martires City Senior High School was applied for the collection of the data. Anthropometric measurements were also conducted while learning achievement was determined from their general average on the first semester of school year 2017-2018.

RESULTS

Statistically, using the Chi-Squared Computation wherein $5.10 < 23.21$, Body Mass Index has no significant relationship with the academic performance of the senior high school students. Therefore, for 174 students, academic performance does not depend on Body Mass Index of the students.

DISCUSSIONS

The study did not find significant relationship between BMI and academic performance for the students in TMCSHS. The results demonstrated the need for further studies among students from other levels such as elementary, junior and college for comparison of results. The data also suggest future research in other anthropometric variables and other factors that could be associated with the academic performance of the students.

KEYWORDS: Body Mass Index (BMI), underweight, normal weight, overweight, academic performance, students

SUBMISSION ID: R04A-CAVITP-0344

Bos Taurus Bovine as an Organic Dual Purpose Incense Againsts Aedes Aegypti

Leann Charity A. Cruz, Imus National High School
(Adviser: Ailyn J. Madrona)

Abstract

INTRODUCTION

Dengue virus (DENV) came from specific type of mosquito called Yellow Fever Mosquito (*Aedes Aegypti*). As the fastest spreading vector-borne disease in the world, it is one of the most common disease in tropical countries such as the Philippines. In fact, more than 10,000 cases of dengue in the first six weeks of 2018 were recorded with a mortality rate of 0.46 percent (DOH, 2018). It is also a substantial economic burden, with aggregate direct medical cost of \$344,542,000 (Am J Trop Med Hyg., 2015). In the Philippines, liquid and solid mosquito-repellant are one of the popular means to decrease population of mosquito indoors. However, these market products tend to have unpleasant fumes and may produce gaseous pollutants. (Koo et al., 1994; Koureas et al., 2012). Traditional solid mosquito-repellents tend to have organic filler, binders, and fire retardants that become residue after combustion. These turn into volatile organic compounds (VOC) (Wang et al., 2018) and particulate matters (PM) which irritate the lower respiratory system. Studies have shown that VOC's, polycyclic aromatic hydrocarbons (PAH's), and aldehydes compose most of the pollutants produced from combustion of solid incense (Lee et al., 2006; Wang et al., 2007; Wang et al., 2018). This study aims to develop incense from *Bos Taurus* bovine that can repel mosquitoes, especially *A. Aegypti*. to help those devastated by calamities, for them not to use harmful commercial products, that is not eco-friendly.

METHODS

INHS Main's Laboratory was the experimental site. Cow pats were collected from cows that ate grass and grain. Smell-screening and comparative qualitative test was done to determine the potency of the developed incense.

RESULTS

The combustion product of the incense was able to kill mosquitoes compared to commercial incense. From the smell-screening test, the fumes from the developed incense did not cause any irritability to animals and humans. The incense exhibited no irritating smell to human subjects.

DISCUSSIONS

Invention of organic mosquito incense from scratch is a must. It can help specially those devastated from calamities and those that live in the provinces where people tend to use harmful mosquito coils just to combat the insects. It is important to know that mosquitoes are nuisance and a public-health threat to the current generation, those insects killed more humans than most of human murderers did.

KEYWORDS: Dengue virus, *Bos Taurus* Bovine, Organic Dual Purpose, Incense Againsts *Aedes Aegypti*

SUBMISSION ID: R04A-IMUSC1-0035

Effect of Water Hyacinth (*Eichhornia Crassipes*) Leaves Extract on the Total Cholesterol Level of Swiss Mice (*Mus Musculus*)

John Ritchie Dp. Quitevis, Mary Chrizze Lourene V. Gabrinao
(Adviser: Amor Castalone Habiling)

Abstract

INTRODUCTION

It was proclaimed that our body always need a certain amount of cholesterol in order to function properly and having healthy levels of both types of lipoproteins is important. However, too much cholesterol or unbalanced ratio of HDL and LDL in the body can increase a person's risk of developing heart disease. Water hyacinth, on the other hand, is considered as the fastest growing aquatic plant in the world and highly problematic invasive species paralyzing fishes and blocking waterways. However, the presence of bioactive components of Water Hyacinth convinced the present researchers on the potential of Water Hyacinth leaves extract on medical purpose.

METHODS

Water Hyacinth (*Eichhornia crassipes*) leaves were collected in the locality, macerated, extracted, distilled and underwent phytochemical analysis, and bioassay before inducing to the 12 Swiss mice. The 12 Swiss mice (*Mus musculus*) were assigned randomly into Group A, B, C as the experimental groups and D for the negative control group and acclimatized for 7 days. Blood samples were taken at the tip of the tail to test the total cholesterol level using cholesterol meter. The data gathered were used as the baseline. Within thirty (30) days, the Swiss mice were fed with 3grams fried pork rinds (chicharon) to increase the total cholesterol. Blood samples were taken and the total cholesterol level were measured before and after the treatment. The plant extract was induced through intravenous injection. The data gathered in the experimentation were treated statistically.

RESULTS

The result showed that there is a significant difference in the cholesterol level of Swiss Mice (*Mus musculus*) before and after the induced Water Hyacinth leaves extract. It also revealed that there is a significant difference on the cholesterol level among the experimental groups A, B, C, and the untreated control group after the induced Water Hyacinth (*Eichhornia crassipes*) leaves extract. Tukey pairwise revealed that the Swiss mice in Group B and C had obtained the lowest cholesterol level after the treatment as compared with Group A and the negative control group.

DISCUSSIONS

Based on the result, it can be gleaned that Water Hyacinth has the ability to lower the total cholesterol level of Swiss mice. The result of this study can provide information for pharmaceutical companies to conduct further studies that may lead to the development of cheaper but comparable drugs in treating diseases related to total cholesterol

KEYWORDS: Water Hyacinth leaves extract, Swiss mice, total cholesterol level

SUBMISSION ID: R04A-RIZALP-0109

Effectiveness of Ararusep Seaweed (*Caulerpa lentillifera*) Extract for Lowering the Blood Sugar Level of Swiss Mice (*Mus musculus*)

Noelle Seth Malabayabas, Student

Abstract

INTRODUCTION

Diabetes prevalence has been rising more rapidly. According to WHO, almost 422 million of people were suffering as of 2014 and 1.6 million of deaths were reported on 2016. Nowadays, commercial insulin is used but rather it has side effects that are rare but they do occur. On the other hand, alternative insulin can be produced from organic means but hardly eaten by those not used to eat organic foods. In this study, the effectiveness of organic Ararusep seaweed (*Caulerpa lentillifera*) extract will be tested and to know what equipment is better in producing the alternative insulin and how the frequency and amount of feeding affects the blood sugar level.

METHODS

Several methods have been used in order to conduct the study. Thirteen swiss mice was used. Twelve is in experimental group and one in control group. Using the process of extraction, one-and-a-half-kilogram seaweed will be extracted using centrifuge machine and juicer. The extracted seaweeds were ingested to the mice to conclude the impact of using different amount at different frequency to the swiss mice. The data was gathered through quantitative and qualitative analyses. This study included experimental method to conclude the impact of ararusep seaweed in lowering the blood sugar level of swiss mice.

RESULTS

Ararusep seaweed's (*Caulerpa lentillifera*) effectiveness has been proven. Before ingestion of condensed milk, swiss mice reached its normal blood sugar level. Then after ingestion, swiss mice are said to be a hyperglycemic. After it has been fed at different amount at different frequency, it can be concluded that the frequency of feeding did not affect the blood sugar level as long as the amount of ararusep seaweed extract was the same, it can lower the blood sugar level. By getting the average difference summation of the blood sugar of the swiss mice, extract from centrifuge machine is said to be more effective equipment in extracting the ararusep seaweed. The alternative substitute insulin has a cheaper cost and more environmental friendly than the commercial insulin.

DISCUSSIONS

The results manifested that having an organic alternative insulin is necessary than those commercial insulins with side effect. Ararusep seaweed is effective in lowering the blood sugar level and centrifuge machine is better in producing alternative insulin and the frequency of feeding does not affect the blood sugar level as long the amount was the same.

KEYWORDS: Ararusep Seaweed, Centrifuge machine, Juicer, Blood Glucose Level

SUBMISSION ID: R04A-BATANC-0288

Effectivity of *Abelmoschus esculentus* (Okra) on *Oryctolagus cuniculus* (Albino rabbit) with Hyperlipidemia

Brendan Casamar, Kent Robert Pangilinan Arcala, & Neil Davidson Pasumbal,
Exhibitor

Abstract

INTRODUCTION

Filipinos love to eat and since we are naturally hospitable and gregarious, food is the basis of our social life. Because the feeling of fulfillment after eating rice, our staple ingredient, is relatively short-lived, we eat three meals a day and two snacks in between. Most Filipinos develop diseases because of eating unhealthy food. High cholesterol level is a common problem in this country. Cholesterol is a fat found in your blood. It is produced naturally in the body, but it can get through the food we eat. The LDL, Triglycerides, VLDL, and HDL are also considered as bad fat that develop in the body. The proposed solution of the researchers was to use okra as a lowering agent of the bad cholesterols. Okra is a type of plant that contains a lot of vitamins and minerals. It also contains fibers which can help to lower the blood levels and blood pressure of a person.

METHODS

The plant was extracted with the help of the consultant. The rabbits that were placed into a cage and going under a diet. The total number of trials/rabbits were 12. The rabbits were given pellet on the first 4 weeks of the experiment and lipid-induced pellets on the second 4 weeks of the experiment. Lastly, the rabbits were given the okra vegetable extract to hopefully and statistically lessen the said lipid levels in the blood.

RESULTS

In the experimentation, it showed that the okra plant is capable of lowering the bad cholesterol in our body due to the test done to the blood samples that were gathered from the test subjects, which are rabbits. This exhibits the presence of highly purposed vegetables in terms of low-cost medications. In these days, medications and medicines come up in a higher range of bills. With this information, the lessening of heart diseases caused by high cholesterol would be drastically decreasing as this process implements the neighborhoods.

DISCUSSIONS

The results showed that there is a significant decrease in bad cholesterol as the okra treatment was used. This showed a new innovation in the medical industry and also can be used as an alternative. It is proven that it can be used as treatment for people with hyperlipidemia that may lead to more severe diseases and illnesses such as heart diseases. The implementation of this information will be helpful to the less fortunate people due to the fact that okras are usually found in local stores and supermarkets.

KEYWORDS: Okra, Rabbit, Hyperlipidemia, Triglycerides, HDL, LDL, VLDL, Cholesterol

SUBMISSION ID: R04A-CAVTP-0994

Enhancing Vegetable Program in the School through PIE: (Planning, Implementation and Evaluation)

Jean Magsaysay, Department of Education - Batangas, Francisco G. Perez
Memorial National High School

Abstract

INTRODUCTION

The Department of Education continuously intensifies programs and projects that will address the malnutrition and vegetable production and consumption among its learners. The department issued Department of Education Order No.191 s. 2013 about the implementation of the Health and Nutrition Center (HNC- Funded Vegetable Program in the School assisted by the Department of Agriculture-Bureau of Plant Industry (DA- BPI). However, the school's achievement of the program was not continued. It seems that the school needs to revisit and plan an enhancement program to strengthen and intensify the program. This study will help the school to develop an enhancement program/activities for Vegetable Program in the School to support the Department of Education in promoting food security in schools and communities through self-help, food production activities and values among learners and application of agriculture as a life support system.

METHODS

The researcher utilized the descriptive qualitative-quantitative approach. Data from the school profile and the terminal report for the past three consecutive school years 2014 - 2015 to 2016 - 2017 of the Vegetable Program in the School were gathered and analyzed. An informal interview to 14 teachers, 20 students selected randomly from Grade 8 to Grade 10, and the 10 parents selected from the attendance was conducted to gather the challenges they experienced in the implementation of the program.

RESULTS

Based on the data analysis, the land area of the Vegetable Garden of the school increases in size yearly similar with the number of crops planted. Traditional gardening was implemented with school nursery, medicinal garden and crop museum. The harvested vegetables served as supplementary for feeding program and as ingredients for cooking some recipes in the Cookery classes of Grade 9 and Grade 10 students. The GPP of the school serves also as the laboratory of learning for the students and the teachers.

DISCUSSIONS

The designed Enhancement Plan for the Vegetable Program of Francisco G. Perez Memorial National High School served as the implementing guidelines of the sustainability of the program. Thus, further evaluation is recommended to improve the program.

KEYWORDS: enhancement plan, vegetable program, planning, implementation, evaluation

SUBMISSION ID: R04A-BATANP-2247/ R04A-BATANC-0204

Evaluation of the Antithrombotic Property of *Daucus carota* L. (Carrot) Extract

Alecks Francheska C. Dy, Gecille Marie A. Reyes, & Jersey Randel M. Atalin,
Cavite National Science High School

Abstract

INTRODUCTION

Platelets are cells that come from the bone marrow which play an important role in the body, specifically, in aiding open wounds along with other blood cells. These platelets stick together to form a clot which is called an aggregation (Berry & Levy, n.d). However, too much blood clot can lead to clogging in the veins and later on, results to other diseases or even death (Healthline, 2018). On the other hand, there are anticoagulant agents that can help to prevent thrombosis.

To address this problem, the research study aimed to prove the potentiality of carrots as anticoagulant agent.

METHODS

Daucus carota L. or Carrots were gathered and air-dried for one week. These were soaked in ethanol and were extracted in different concentrations (50%, 25%, 12.5%, 6.25%). Drops of extract were added to the platelet concentrate. Using a phase contrast microscope, the platelet concentration was observed. A spectrophotometer was also used to measure the transmittance of light on the concentrations which showed the number of aggregates that form for each replicates. Aspirin was utilized as a positive control to show if there are significant differences in antiplatelet activity between the control and carrot extract.

RESULTS

Result showed the values of transmittance of extract concentration and positive control aspirin. The higher the transmittance, the lesser the number of aggregates is. The results showed that the 12.5% concentration of the extract has shown antithrombotic activity having the highest transmittance value even higher than the highest concentration of the positive control aspirin which is 50% with a transmittance of 68.97. Results of the statistical analysis using one-way ANOVA testing and Post HOC analysis revealed that there is significant difference between the extract concentrations and the control positive. Thus, it also showed that carrots have higher potential as anticoagulant agent.

DISCUSSIONS

The results suggested that *Daucus carota* L. (Carrot) has the potential as an antithrombotic agent wherein there is a decrease on the number of aggregates. Thus, this study can be use in the field of medicine to discover other alternative solutions against thrombosis.

KEYWORDS: anticoagulant, thrombosis, platelet aggregation

SUBMISSION ID: R04A-CAVITP-0196

Gumamela Flower: A Healthful Drink

Joy Bayona, TCSNHS

Abstract

INTRODUCTION

Nowadays, healthy drink is a bit expensive because of lesser source. The production of fruits has declined because of the abrupt change in climate, as well as the process of producing such becomes inconsistent because of the modernity of its material. The supply of raw materials either becomes less or has changed in some manners. Due to these reasons, this research has been conducted. There must be a need to search for an alternative, which would cost cheaper and is abundant in our locality.

METHODS

Several method designs were used. In this research, three trials had been done after the product has been successfully produced. The procedures such as gathering fresh and clean gumamela flower, juice extraction, fermentation and packaging of the final output were completed to come up with the desired product. The researcher asked 10 respondents of different ages that have a sufficient knowledge regarding juices, its uses and its characteristics. To evaluate the product, the researcher carefully chose nutrition teachers to ensure that the sample product would be healthful and be appealing to the public.

RESULTS

The researcher came up to know that the process used in producing a healthful drink out of gumamela as a raw material has a great appeal to the public. Not only that, it may also help relieve painful menstruation, internal inflammatory conditions and other kin problems since it contains a lot of nutrients such as protein, calcium, phosphorus, niacin, vitamin C and many more.

DISCUSSIONS

In a world full of unhealthy food products, it is very important that we find our own alternative way of producing healthful foods and drinks. Many of us do not even check the label when we buy food in the groceries or sometimes do not mind researching about the food we take in to our body. Not all cheap products are good and vice versa. It just takes a careful, concerned and innovative individual to have and promote a healthy living.

KEYWORDS: health is wealth

SUBMISSION ID: R04A-CAVITP-1086

**Hand Hygiene Practices of Selected Senior High School Students of
Batangas State University**

Dexter James C. Godoy, Loryjoi U. Hernandez, Michael Jetro P. Hernandez, &
Princess Aline L. Hiwatig, Batangas State University
(Adviser: Jed Tolentino)

Abstract

INTRODUCTION

The health of an individual plays a vital role in how he or she survives in the world. Health promotion is an effective tool for the raise of global health. In line with health promotion, practicing proper hygiene is also one that societies must take note of. Through knowing the hand hygiene practices of selected Senior High School students of Batangas State University due to the university's noticeable absence of well-functioning comfort rooms and hygiene areas, the researchers were able to formulate keys to help raise the advancement of health promotion, starting from small areas of societies such as universities.

METHODS

The study assessed the level of awareness and compliance of the respondents about hand hygiene. The data were gathered and analyzed regarding the level of awareness and compliance about hand hygiene of Senior High School students of Batangas State University. The data gathering instrument that was used in the study was a self-constructed survey questionnaire. The total population size of the Senior High School students of Batangas State University is 437. Using the Slovin's formula, the researchers obtained a sample size of 220 students. The data was tallied and analyzed.

RESULTS

The results showed that the level of awareness of the respondents regarding hand hygiene and its practices in terms of description was interpreted as highly informed while the level of awareness in terms of outcome was interpreted as informed. The compliance of the respondents about hand hygiene techniques was interpreted as to a great extent. Also, the results showed that there was no significant relationship between the demographic profile of the respondents, in terms of their age, year level, and socio-economic status, and their level of awareness regarding hand hygiene practices in both description and outcome while there is significant relationship between level of awareness of respondents about hand hygiene and compliance of the respondents regarding hand hygiene techniques. Based on the results, the proposed material was an infographic presenting significant information about hand hygiene.

DISCUSSIONS

How much they know about the importance and the possible outcomes of hand hygiene greatly affects the extent to which they comply with the techniques related to it. The level of awareness of the respondents regarding hand hygiene and its practices truly influences their compliance on hand hygiene techniques.

KEYWORDS: health, health promotion, hygiene, hand hygiene, hand hygiene techniques

SUBMISSION ID: R04A-BATANC-0180

**HEALTHIER OPTIONS: Sensory Evaluation, Nutrition Analysis, and
Consumer Acceptability of Red Velvet Apple (Diospyros Blancoi) Ice
Cream**

Hazel S. Elic, Pantay Integrated High School
(Adviser: Bayani T. Vicencio)

Abstract

INTRODUCTION

Filipinos are known for having sweet tooth. The utilization of the Red Velvet Apple, locally known as "Mabolo", which is readily available and abundant in the community, could be a nutritious alternative to the usual flavors available commercially. This study explored the potential of Mabolo as a nutritious, affordable, and viable livelihood among the residents of Pantay Matanda, Tanauan City.

METHODS

A descriptive method design was used in this study to determine the sensory evaluation, nutrition analysis, and consumer acceptability of Mabolo. A total of 80 evaluators, randomly selected from parents, faculty members and students of Pantay Integrated High School, were utilized as respondents. A modified sensory evaluation score sheet anchored in a nine-point Likert Hedonic Scale was used by the respondents to evaluate the finished product. Frequency count and weighted mean were utilized as the statistical tool to analyze the gathered data.

RESULTS

The result of the study showed that the taste has an average mean of 7.99 which is second to the highest in terms of acceptability. The lowest rating is texture which has a mean of 7.64 which also results to like strongly. Respondents found Mabolo pulp's texture fibrous, almost melting in the mouth and it has an after taste that lingers in the throat. The researchers also consulted a Nutritionist Dietician and assessed that one pint of the Mabolo ice cream has 1185 calories, 47g protein, 61g fat and 111g carbohydrates which vouch for its healthy content.

DISCUSSIONS

The results proved that Mabolo is a viable ingredient in making ice cream. The variables in this study which are appearance, taste, color, aroma and texture as well as the general acceptability have proven to be acceptable among target consumers and the said ice cream is perceived as a potential livelihood among residents of Pantay Matanda, Tanauan City.

KEYWORDS: Health and Wellness, Sensory Evaluation, Nutrition Analysis, Consumer Acceptability

SUBMISSION ID: R04A-TANAUA-0117

Hypoglycemic Effect of Aratilis (*Muntingia calabura* Linn.) Leaves, Roots, and Fruits Extract on Female Diabetic Albino Mice (*Rattus albus*)

Jove Omamos, Student

Abstract

INTRODUCTION

Diabetes has become one of the leading causes of death in the Philippines. It requires a lifetime medication to avoid severe complications of diabetes, which costs a lot of medical expenses. However, Aratilis extracts might help solve the problem. This study generally aimed to compare the hypoglycemic effect of extracts of Aratilis leaves, roots and fruits in lowering the blood glucose of diabetic female mice. Specifically, the study was conducted to determine: (1) the amount of decrement in the blood glucose of the female mice after each treatment; (2) compare the mean decrement in the blood glucose of female mice as affected by different treatments; and (3) most effective treatment in lowering the blood glucose of female mice.

METHODS

The female mice were acclimatized for seven days. Aratilis leaves and roots were extracted through decoction while the Aratilis fruits were extracted through squeezing using a juicer. To induce high glucose level on the mice, 1.6 mL of diabetes inducer was used. The assigned treatments were given to each group through directly dropping the extracts to the mice's mouth once a day for three consecutive days. The glucose level of the animals before and after the consumption of Aratilis extracts were measured using glucose meter and were compared with the control groups.

RESULTS

Findings revealed that the extracts of Aratilis leaves, roots and fruits can lower blood glucose level especially the leaves extracts which exhibit a comparable hypoglycemic property with the commercial product.

DISCUSSIONS

The results revealed that Aratilis Leaves had the highest mean decrement that is comparable with the commercial treatment therefore for future studies, the researcher recommend the use of various extraction methods to further evaluate the efficiency of the Aratilis plant extracts in lowering blood glucose level. Investigating the hypoglycemic effect of varied concentrations of Aratilis leaves extracts is also recommended since it was found out to be the most effective part of Aratilis in lowering blood glucose. Replication of the study can also be performed for more reliability of results.

KEYWORDS: Aratilis, diabetes, muntingia, health, science, glucose meter, albino mice, veterinarian

SUBMISSION ID: R04A-CAVTP-0001

**Insulin Mimetic Ability of Hagonoy (Chromolaena Odorata) Against
Induced Diabetic Swiss Mice (Mus Musculus)**

Rojz Jaeron C. Atienza, amor.habiling@deped.gov.ph
(Adviser: Amor Habiling)

Abstract

INTRODUCTION

Diabetes is one of the widespread diseases in the world today. Compared to communicable diseases such as malaria and cholera, diabetes is a disease that links with one's lifestyle or the way how people live their life. It is also associated with other lifestyle diseases like overweight and obesity. Currently, diabetic people rely on insulin and synthetic drugs for treatment. However, expensive price of these pharmaceutical drugs motivated many researchers to determine and evaluate the antidiabetic potential and insulin mimetic ability of some plants that can serve as a cheaper alternative treatment for diabetes. This investigatory project aims to determine the insulin mimetic ability of Hagonoy (*Chromolaena odorata*) leaves extract against Induced Diabetic Swiss Mice (*Mus musculus*).

METHODS

The experimental design employed in this study was a five-group parallel design wherein a positive, negative control and three (3) treatments were manipulated. Each treatment was replicated three times for a total of 15 experimental units. The assigning of replications to the experimental units was done at Complete Randomized Design (CRD). The plant material was gathered from the locality and extracted through decoction. Three (3) sets of Hagonoy leaves extract solution with 5%, 3% and 1% percentage by volume were prepared by the researcher. The solutions were induced through intravenous injection. Fifteen (15) Swiss mice were assigned into 5 groups and were acclimatized for 7 days and put into 30 days diet dysregulation that aimed to increase the blood glucose level. The blood samples were collected and glucose level was measured before and after the treatment using a glucometer. The gathered data were treated statistically using Paired T-test and ANOVA.

RESULTS

The results revealed that there is no significant difference in the fasting glucose level after the induced insulin mimetic treatment of Hagonoy (*Chromolaena odorata*) aqueous leaves extract and the insulin mimetic commercial drug metformin. It also showed that there is a significant difference on the fasting glucose level after the induced insulin mimetic treatment of Hagonoy (*Chromolaena odorata*) aqueous leaves extract and the negative control (untreated)

DISCUSSIONS

Hagonoy is considered as one of the invasive plants and a noxious weed for it has characteristics that are harmful to human, animals and to the environment. The detection of insulin mimetic ability of Hagonoy can lead to the development of pharmaceutical drugs.

KEYWORDS: *Chromolaena odorata*, decoction, phytochemicals, diabetes

SUBMISSION ID: R04A-RIZALP-0107

**Making Skin Moisturizer Out of Rambutan Seeds (*Nephelium lappaceum*)
and Virgin Coconut Oil (*Cocos nucifera*)**

Krystel M. Macalalad & Jam Madeleine S. Sulit, PSTMIS
(Adviser: Geralyn R. Castro)

Abstract

INTRODUCTION

Many people right now are experiencing dry skin, especially people who live in hot areas. So the researchers decided to make a project entitled 'Making Skin Moisturizer Out of Rambutan Seeds (*Nephelium lappaceum*) and Virgin Coconut Oil (*Cocos nucifera*)'.

METHODS

The researchers used 20 fresh rambutan seeds and 30 ml of virgin coconut oil. First, they peeled the skin of the rambutan seeds. Then, pulverized the seeds partially. After that, put 30 ml of virgin coconut oil. Stirred it until it was mixed with the seeds. Then, it was pulverized again. Extraction was also done and last, it was stored for 12 hours before using it.

RESULTS

As the researchers went on with experiments, they first used 50 ml of water, same number of rambutan seeds and procedure, but it spoiled and smelled bad. That is when the researchers decided to use virgin coconut oil as preservative. It did not spoil, not like with water.

DISCUSSIONS

The research can help achieve a nourished and healthy skin for rambutan seeds contain a high amount of water which keeps our skin hydrated. It also has antioxidants that is known to reduce cholesterol. Rambutan seeds do not only benefit our skin, but also our health. Coconut oil is naturally good for the skin. Researchers aimed to promote this project mostly with those people that have dry skin. It can help them gain back their nourished skin like what they were used to. The researchers are not only striving for people who have skin problems but also to those who wants to avoid skin problems.

KEYWORDS: Skin Moisturizer, Rambutan Seeds, Virgin Coconut Oil

SUBMISSION ID: R04A-BATANC-0122

Obesity among Banaba West National High School Adolescents

April L. Asilo, Arvid Rey P. Magbuhat, Justine M. Aranas, Kimberly Naylo,
Rodelyn M. Cunag, & Shiela Mae A. Aguda, Banaba West National High School
(Adviser: Marian De Mesa)

Abstract

INTRODUCTION

Worldwide, obesity has been a problem. Among the Asian countries, studies revealed that though they had the lowest prevalence of overweight and obese, there were records of increase in recent years. In the Philippines, obesity had been a great problem as well, as there are tendencies of developing health complications later in life. Among adolescents, this could be a factor for being bullied. In Batangas City, street foods had become a great source of culturally accepted inexpensive, convenient and appealing food but unhealthy and potentially with higher health risks among adolescents. Hence, for these reasons why the researchers decided to work on this study. First, to identify the factors contributory to obesity among the high school adolescents in Banaba West National High School. Second, to determine the respondents' perceived consequences of obesity. Finally, to propose activities that may help them cope with these problems.

METHODS

This study made use of the descriptive quantitative research design. Participants The total population of thirty-eight (38) or 100% of the adolescent-respondents from Banaba West National High School participated in this study. An adapted questionnaire Dador, et.al. (2010) was used as its main instrument. Simple interviews were conducted for clarifications.

RESULTS

Results showed that there was a predominance of female obese students with the age range of 14-15, respectively. Of the seven (7) factors identified, "food preferences", "food preparations" and "frequency of eating" appeared as the most common causes of their obesity. In terms of consequences, majority agreed that they were physically. From the interviews, it was noted that most of the respondents "easily become tired or felt fatigued" and "had sleep difficulties". Despite these challenges, they tried overcoming this by ignoring them when being teased though hurt within.

DISCUSSIONS

Results implied that being obese does not only pose health problems. It may affect them psychologically, especially in terms of bullying. As suicidal attempts become alarming and adolescents at present have the tendency to easily give up, it is but necessary that proposed activities be given to alleviate the situation which may even lead to death. With the cited implications, health symposiums may be attended by the concerned. The school counselor may conduct at least a bi-annual seminar and counseling sessions for them to remain well-adjusted.

KEYWORDS: Obesity, Obese Adolescents, Batangas City

SUBMISSION ID: R04A-BATANC-0183

Project (ALL) Amplified Leadership and Linkages to Implement WASH in Schools

Alex M. Asis

Abstract

INTRODUCTION

In 2016, the Department of Education (Department of Education) in the Philippines issued Order No. 10, s. 2016 - Policy and Guidelines for the Comprehensive Water, Sanitation and Hygiene in Schools Program. Children have right to basic facilities such as school toilets, safe drinking water, clean surroundings and basic information on hygiene. Water, sanitation and hygiene in schools creates an enabling environment which secures children's dignity, safety, health and attendance in classes. Cabacungan Elementary School has inadequate supply of water, inappropriate practice of personal hygiene and sanitation, no hand washing and tooth brushing facilities.

METHODS

This study had utilized the descriptive designs. Descriptive is used to describe the parent's participation level using mean and mean percentage scores. It also employed quasi-experimental to compare the pre and post activity. A significant difference was also employed in the percentage of the recipients in the pre-activity and post activity. Purposive sampling was used to identify the recipients' actual practices. A total of 85 parents and 159 pupils (76 males and 83 females) were chosen.

RESULTS

It revealed the increase of percentage in the number of parent's participation during post implementation compared to the pre implementation of Project ALL. Stakeholder involvement means working with people and using the resources as they are and helping them to work together to realize agreed ends and goals (Bartle, 2007).

The table above shows some indicators with poor health and sanitation practices before the implementation of the WASH in School. The actual average percentage of hand washing in different activities is only 40 or 25. 15% out of 159 learners. It signifies that there were only few children who cleaned and washed their hands. While for the tooth brushing activity, there were only 46 or 28.93% who brushed their teeth after eating daily.

DISCUSSIONS

The table reflects more than 50% increase in the mean percentage on hand washing activity compare to the pre-implementation of WASH in school. The average percentage of 63.53% for hand washing and 99.05% for tooth brushing tells us that health and sanitation practices of pupils were improved after the implementation of WASH in school. Its shows further that this result has a great impact to the children's practices. The researchers found that pupils with good health and sanitation practices have high participation in learning process.

KEYWORDS: Sanitation, Hygiene, Amplified, Linkages and Hand washing & Toothbrushing

SUBMISSION ID: R013-SURSUR-0316

Project Paspas Kaon: An Intervention in Reducing Wasted and Severely Wasted Pupils

Clarisse M. Pormiento, Merla V. Urbiztondo, & Maria Flordeliz V. Valles, LPT

Abstract

INTRODUCTION

School Feeding Programs are considered to be a sound investment in education. Anent to this, the school launched Project PaspasKaon which aims to decrease the number wasted and severely wasted learners enrolled for this school year.

This study sought to determine the effectiveness of Project Paspas Kaon as an intervention to lessen the number of the wasted and the severely wasted pupils of Gamut Central Elementary School for the school year 2018-2019 and if there is a significant change on the Body Mass Index (BMI) of the recipients before and after the 120 days.

The data showed that the significant change in the Body Mass Index of the recipients after the 120 days of implementation proved that Project PaspasKaon not only decreased the number of wasted and severely wasted but it also produced better performing learners.

METHODS

A. Participants and/or Other Sources of Data and Information

The respondents for this research were the 30 pupils who are recognized as Wasted and Severely Wasted pupils.

Data Gathering Methods

The first weighing last June 21, 2018 and the Body Mass Index (BMI) was utilized to determine who among the Kindergarten to Grade Six pupils belong to the Wasted and the Severely Wasted group. After 120 days of the SBFP Implementation aligned with the school's Project PaspasKaon, second weighing was done.

Data Analysis

The researchers used Paired T-test in getting the statistical analysis.

RESULTS

As a result of the Project Paspas Kaon: Intervention, there is a significant change of the result after its implementation. Previous result before the implementation of Project Paspas Kaon resulted to 30 undernourished children with a mean score of 12.5500 compared to only four (4) undernourished children with a mean score of 14.9733 after the implementation. With a p-value of 0.00 as compared to the level of significance which is 0.05, it reveals that there is a significant change on the health status of the respondents and an increase on their Body Mass Index.

DISCUSSIONS

The researchers presented the data gathered in this study for the purpose of descriptive and statistical analysis and interpretation of findings. The discussion of the topics is presented in the following subheadings: Body Mass Indexes of the Wasted and Severely Wasted Pupils Before the Program Intervention; Body Mass Indexes of the Wasted and Severely Wasted Pupils After the Program Intervention; and Significant Change on the Body Mass Indexes Before and After the Project Paspas Kaon Intervention.

KEYWORDS: PROJECT PASPAS KAON: REDUCING WASTED AND SEVERELY WASTED PUPILS

SUBMISSION ID: R013-SURSUR-0154

**Reel versus Real: Perception of Selected Public Secondary Teachers on
using Online Reference versus Registered Doctor's Consultations regarding
Health Concerns**

Allyssa Asentista, Trece Martires City Senior High School

Abstract

INTRODUCTION

Teachers play an important role in nurturing the cognitive skills of every individual. This profession, however, is highly stressful and oftentimes causes diseases and health concerns. Teachers in the millennial era are exposed in using technology and tend to make use of it when searching for signs and symptoms regarding health concerns. The researchers primarily aimed to determine the perception of teachers regarding consulting online reference versus seeking help from registered doctors about their health concerns.

METHODS

The researchers used descriptive case study method of research by utilizing interviews and focus group discussion to gather. It is a qualitative approach that focused on the description and identification of currently existing phenomena. Three (3) participants of the study who were classified as public secondary teachers were selected by the used of purposive sampling. The study was conducted in Trece Martires City Senior High School and data was collected by the means of naturalistic approach.

RESULTS

This study aimed to determine the perception of selected public secondary teachers regarding consulting online references versus seeking help from registered doctors and how these perceptions help them on handling their health conditions. Based on the semi-structured interview conducted with the three (3) participants, the researchers found out that registered doctors are more health and medication literate and trusted in giving proper diagnosis and treatment. Furthermore, registered doctors help the teachers on handling their health conditions by giving valid information, appropriate diagnosis and treatment and quality assurance for drug prescribing.

DISCUSSIONS

The results showed that the teachers handle their own health conditions by seeking consultations from registered doctors. Therefore, registered doctors are more reliable and trusted in diagnosing and drug prescribing compared to online references. The results will be a great help on giving information and guidance for other teachers on where they should seek regarding to their health concerns.

KEYWORDS: perceptions, public secondary teachers, registered doctors, online references

SUBMISSION ID: R04A-CAVTP-0579

Science Investigatory Project in Vegetable Herbs Food Powder

Catherine Magno, Teacher I

Abstract

INTRODUCTION

This study aimed to search for alternative ways of utilizing the common backyard plants like Spinach, Lettuce, Basil, Celery and Malunggay so that it won't be placed into waste. Secondly, to make a different and simple preparation of it right in one's home aside from usual capsule and tablet forms, which currently dominate in the market. Lastly, to promote awareness and inspire people to study and search for benefits on vegetables and agricultural produce that will satisfy humans' nutritional needs that are friendly to the pocket. In this study, the researchers explored infinite ways and makes use of accessible resources to satisfy the longings for health and wellness.

METHODS

Several researches and procedures were done to acquire the study of Vegetable Powder. Actual propagation of vegetables like Spinach, Lettuce, Basil, Celery and Malunggay was made to ensure the freshness of harvest. A series of trial and error was made wherein an exact time of harvest must be observed and storage in a well ventilated room must be followed. Three rooms in the house were chosen for the experiment. The preparation of Vegetable Powder was done in a step by step process. First, the researcher gathered the fresh vegetables. Then, the researcher hung them upside down inside the ventilated room using clothes pin without exposing them to sunlight. Third, dried leaves were collected using the brown paper bag, pounded and blended until it became powder and lastly, powdered vegetable were sealed in a container for consumption. Vegetable powder were used to combine in a tea, vegetable meal soup, bread, cookies, juices and shakes.

RESULTS

The results showed consistent data that the Spinach, Lettuce, Basil, Celery and Malunggay leaves dry up well when stored in a ventilated room without the direct exposure of sunlight and it is easier to pound in order to be made an all-natural food powder. Recommended procedures have to be done to achieve the desired result of the study.

DISCUSSIONS

The results of research showed that the time must be an important consideration in harvesting and picking of Spinach, Lettuce, Basil, Celery and Malunggay leaves. The importance of the environment-appropriate circulating air as a room for storage perfected the dying and falling of leaves after a week. The complete falling and natural way of drying the leaves helps in pounding the leaves easily. It resulted to good quality of powder for food consumption. The researcher found out that the high temperature affected the growth of Spinach and Lettuce.

KEYWORDS: pulverizing process, propagation, consumption

SUBMISSION ID: R04A-CAVTP-1274

Sex Education and Its Effects to Junior and Senior High School Students

Gabrielle Ailen Beatriz Nepomuceno, Student, Gallanosa National High School

Abstract

INTRODUCTION

It has been widely reported in research and by the media that the number of teens getting pregnant are getting higher each year. Related literature and studies suggest that one of the reasons why the numbers are increasing is the lack of knowledge on sex. In the Philippines, sex education has been integrated to different subjects in the K-12 curriculum. This study aimed to identify the perspective on sex education and its effects on students, determine the importance of sex education in the locale of the study, and to provide recommendations to make it more vital. This study is very timely and necessary because of the striking number of teens getting pregnant, engaging in pre-marital sex, and suffering from major sex-related issues.

METHODS

This qualitative study was conducted on 12 junior and 6 senior high school students of Gallanosa National High School through purposeful sampling. Data were collected through in-depth unstructured interviews, and valid reliable survey questionnaires consisting of three sections: the awareness of students on sex education, importance of sex education, and recommendations on how to make sex education more vital. Collected data were analyzed using discourse analysis.

RESULTS

Many respondents agreed that they appreciate sex education because it was introduced to them, but still disappointed on how it was carried out. Results showed that most of the students are aware of sex education, but they do not find it vital. They are also not satisfied with the current status of teaching sex education and its content because it is very limited. Most of the respondents said that they learned most of their sex education from their peers, not from the school or teachers. Moreover, most of the students did not learn enough from sex education that will help them in avoiding untoward problems and incidents involving sex and sex-related issues.

DISCUSSIONS

The findings indicated that students' awareness on sex education is still lacking. It is also necessary to do certain actions to make sex education vital in schools to ensure lower rates of teens suffering from major sex-related issues. The results demonstrated a need to reform the current sex education curricula and to make it as a separate subject rather than incorporating it with other major subjects to ensure focused learning. Moreover, providing more trainings on teachers to enrich the kind of education they give about sex and other sex-related topics is highly suggested.

KEYWORDS: sex education, effects, high school, teenage pregnancy

SUBMISSION ID: R005-SORSOP-0017

Stress Coping Strategies among Senior High School Students

Rose Melee A. Sorillano & Nellia Marie B. Aguda, Banaba West National High School

(Adviser: Marian De Mesa)

Abstract

INTRODUCTION

Teen stress levels at present had been higher than adult stress levels during the past ten years. Here in Philippines, studies noted that Filipino students, experience stress due to pressures brought about by personal factors, academic matters, family situations, financial aspects and peers. In Batangas City, students face a number of challenges that may cause them to feel stressed. In some instances, students executed procrastination, which reflect a perennial struggle with self-control, along with an inability to predict how to face the future. These are parts of the major reasons why the researchers wanted to identify the causes of stress experienced by senior high school students in Banaba West National High School; how they can cope with it and what proposed interventions may be extended to assist them with their stress difficulties.

METHODS

Research Design

This study made use of the descriptive quantitative type. Participants

The current population of senior high school students in Banaba West National High School is ninety-five. From this number, ninety participated in the study.

Instrument

A self-made questionnaire was the main instrument used in the study. Follow-up interviews were likewise conducted to support and clarify the participants' responses to a number of items. Data collected were then tallied, tabulated and analyzed.

RESULTS

Majority of the respondents were female, aged 17 and belonged to intact type of families. From the factors contributory to stress which had been grouped into five, namely: personal, family, emotional, financial and social factors. Results revealed that emotional factors were seen as the major causes of stress, particularly, the item pertaining to the "feeling of being sad due to the burdens they were experiencing". In terms of coping strategies, most of the student-respondents noted that they managed the stress difficulties faced through the following: "sharing problems with their friends and guidance counselor", "finding ways to relax and somehow temporarily forget their problems" and "praying to God for guidance".

DISCUSSIONS

Results implied that most of the senior high school students feel stressed and as a consequence, they try to use varying strategies to stay well-adjusted in life. It is great to know that friends and counselors can assist in such cases. To alleviate the problems experienced, student-respondents may opt to attend to the proposed interventions presented in the study, develop a strong faith in God and find time to be happy.

KEYWORDS: Stress Coping Strategies, Stress, Senior High School, Batangas City

SUBMISSION ID: R04A-BATANC-0187

**Stress Management among Senior High School Students of Callejon
National High School**

Franchisezka Kyla P. Convento, Callejon NHS
(Adviser: Morlan Pasia)

Abstract

INTRODUCTION

The government of the Philippines recently implemented RA 10533 also known as the Enhanced Basic Education Act, a law adding two more years in high school with specialized subject courses referred as Senior High School. It coincides with adolescence, the period of great creativity, energy and new ideas and skills. However, at this stage, there are also some issues, problems and challenges that they encounter. Thus, this study aimed to determine the stress management among senior high school students.

METHODS

The study made use of descriptive method design with the questionnaire as the main data gathering instrument. The respondents of the study were 57 senior high school students of Callejon National High School randomly chosen. Data were interpreted using the following statistical tools: weighted mean, frequency, percentage, and rank.

RESULTS

The research found out that examination pressure, parent's expectation, peer attitude, teacher's personality and physical changes got the highest responses as causes or sources of stress among senior high school students. Moreover, headaches, mood changes and tapping are the common effects of stress. Meanwhile, the respondents agreed in participating on the different stress management activities. Furthermore, a number of suggested activities in order to cope up with stress were offered by the respondents.

DISCUSSIONS

The results demonstrated that students really need time for themselves in order to cope up and manage their stress in the most proper way. Implementing different activities will help the senior high school students lessen depression and avoid suicidal tendencies and enable them to enjoy and experience high school life to the fullest.

KEYWORDS: Stress, Senior High School, Activities

SUBMISSION ID: R04A-QUEZON-0045

Students' Demographics and Socialization as Correlates of Their Mental Health

Jeffrey Lucero, Congressional Integrated High School

Abstract

INTRODUCTION

Mental health refers to a person's emotional, psychological, and social well-being. It affects how a person thinks, feels, and acts on things around him or her. It likewise helps in determining how one reacts with stress, deals with other people, and decides on what role he or she is going to do in his or her life. It is essential that we value our mental health in every stage of our life. Nevertheless, one cannot avoid experiencing mental health problems that can potentially affect our mood, thoughts, and behavior. According to MentalHealth.gov (2017), many factors could contribute to the presence of mental health problem in a person. These includes biological factors, life experiences, and family history of mental health problems. This research endeavors to explore the factors that influence the mental health state of senior high school students. The findings herein can serve as a basis in developing the appropriate mental health program that is, as well, suitable in addressing the needs of the learners.

METHODS

This study utilized descriptive-correlational research design through the survey method. It was participated by 962 senior high school students from Congressional Integrated High School. Using Beck's Depression Inventory and a self-developed questionnaire, the participants' mental health state and level of socialization, respectively, were determined.

RESULTS

Most of the participants are 17-year old female Grade 11 STEM students belonging to low income earning families. Majority of them live with their immediate family members and currently do not engage in any form of vices. Family is considered as the most influential agent to the participants' socialization. The participants generally have normal mental health state but there are some who report experiencing mild mood disturbance and borderline and moderate forms of depression. Sex is found to be associated to the mental health state of the participants. Socializing through the different agents of socialization significantly improves the mental health state of the participants.

DISCUSSIONS

A health program on mental health for the students may be implemented. The focus of the mental health program should be on gender difference and the importance of socialization in promoting mental health.

KEYWORDS: Mental Health, Senior High School, Health, Health Promotion, Depression

SUBMISSION ID: R04A-DASMAR-0028

Tannins From Citrus Limon L. (Lemon) Pulp Extract as an Active Component in the Ointment Against Staphylococcus Aureus

Yvonne Chloe Bayan, Kristinne Erika Millamina, & Rolan John Tigcal, Exhibitor

Abstract

INTRODUCTION

Staphylococcus aureus skin infections have always been a problem. Since we live in a tropical country, Filipinos are more prone to these diseases. A lot of ointments are out in the market as of now. However, these medicines are not reachable or are too expensive for people who live in places that are more prone - squatters' area. News also came out last 2016 stating that this bacterium became highly resistant to antibiotic. This study will not only open more doors for cure but it'll also be beneficial for people who can't afford expensive cure.

METHODS

2.3 kilograms of lemon pulp extract was extracted from 8 kilograms of lemon fruit. Two kilograms were used in extraction and 300 grams was allotted for phytochemical analysis. Two kilograms of lemon pulp extract was soaked in 95% ethanol for 48 hours, concentrated in a rotary evaporator at 60Â°C for two hours, then, it was further evaporated using water bath at 60Â°C until it was semi-solid. The extract was mixed with a base ointment. The ointment and Staphylococcus aureus was used in antibacterial assay. Different concentrations of lemon pulp extract ointment (20%, 15%, 10%), ethanol, and Terramycin (control) were used in the assay. After 24 hours, the zone of inhibition was measured.

RESULTS

The lemon ointment that had the highest zone of inhibition is the 20% concentration that inhibited 39 mm. Second, the control that inhibited 22 mm. Third, the 15% concentration that inhibited 20 mm. Fourth is the 10% concentration that inhibited 17 mm. Lastly, the ethanol that was not able to inhibit anything.

DISCUSSIONS

The study was able to prove the antibacterial activity of lemon against Staphylococcus aureus. The 20% concentration exhibited a significant difference compared to the control. It was able to inhibit more than the control. In the raw data, the 15% concentration had one set- up where it had a lower zone of inhibition compared to 10% concentration. Since the study only had one trial, conducting more will help in a more accurate result. This study is a good advancement in the field of medicine since it was able to prove the ability of lemon.

KEYWORDS: ointment, lemon, Staphylococcus aureus

SUBMISSION ID: R04A-CAVTP-0333

The Effectiveness of Coumarin from *Intsia bijuga* as an Anticoagulant to Laboratory Human Blood Samples

Julius Lorenz R. Vasquez, Joy R. Alforque, Maria Katrina M. Hontanosas, &
Sheryn Iris S. Mendoza, Pasig City Science High School
(Adviser: Rowena Angela Raymundo)

Abstract

INTRODUCTION

Laboratory testing is essential in providing quality healthcare. Most errors happen during the pre-analytical phase of laboratory tests. This includes those which are greatly associated with blood, blood clotting, and anticoagulants (Finnegan, 2016). Coumarin is an anticoagulant which can be found in the Ipil plant, one of the most abundant plants in the Philippines. Hence, this project proposes to use coumarin from Ipil leaves as an alternative anticoagulant to laboratory human blood samples.

METHODS

The researchers extracted coumarin from Ipil leaves collected from the Cainta Plant Nursery. The leaves have undergone ethanolic crude extraction and produced 17.0 g of semi-solid extract. The extract was obtained to be analyzed directly by HPLC-UV to obtain pure coumarin extract. The extract was combined with the blood samples and then the samples were subjected for Prothrombin Time (PT), Partial Thromboplastin Time (PTT), International Normalized Ratio (INR), and Percentage Activity using an anti-coagulation analyzer at St. Ignatius de Loyola Health Care Services.

RESULTS

The experimentation was performed to evaluate the anticoagulant property of Ipil leaves. The four blood samples were tested in four different assays namely the PT, Percentage Activity, PTT, and INR. The results of the PT test showed that the higher volume of the extract results to a quicker rate of coagulation. The results of the Percentage Activity are inversely proportional to the results in the PT. Finally, in the PTT test and the INR, the results showed that 0.2 mL is the most effective amount of extract in slowing down the coagulation time of blood. However, the 0.5 mL and 0.7 mL of extracts mixed with blood, though tested twice, showed no result.

DISCUSSIONS

With the given data and results, Ipil leaves have been proven as an effective anticoagulant. Ethanolic crude extract from Ipil leaves that contain an anticoagulant component, particularly coumarin, is effective in delaying blood coagulation. However, there is a difference in the efficiency of different concentrations of Ipil leaves extract on blood samples.

KEYWORDS: *Intsia bijuga*, Ipil, Coumarin, Anticoagulant

SUBMISSION ID: NCR1-PASIGC-0014

Turmeric and Apple Cider Vinegar as Weight Reducer Agents in Golden Hamster (*Mesocricetus Auratus*)

Ryan Cutamora, Angelo Levardo Loyola Senior High School

Abstract

INTRODUCTION

Effective body weight regulation poses a solution for people suffering from obesity and such is the aim of this study— to determine a potential weight-reducing agent. In this research, the potentiality of turmeric, apple cider vinegar (ACV), and the combination of these as weight-reducing agents in golden hamsters was examined for one week.

METHODS

Turmeric underwent grinding, extraction, and sieving while ACV was mixed with a specific amount of hot water; then both went through the addition of 75% warm water for turmeric and 94% for ACV to obtain the desired solutions. Experimental, parallel group design was employed to the study wherein there were three experimental groups that were drank by the hamsters. Each drinking solution had three repetitions. Initial weighing was done before the observation and controlling of their weight while the post-weighing was conducted after a week has passed, and another week was reserved to repeat the procedure of the study. The gathered measured weight of the hamsters was treated by means of Paired Sample T-test and One-way Analysis of Variance (ANOVA).

RESULTS

Findings showed that the three drinking solutions do not reduce the weight of the hamsters in one week. Moreover, there is no significant difference on the weight of the golden hamster in the three different groups.

DISCUSSIONS

Thus, any drinking solution is not a potential weight-reducing agent since it does not affect the weight of the hamsters in seven days. For further improvements of the study, it is recommended to use higher concentration of turmeric and apple cider vinegar, add a control group for only water, and as much as possible, balance the drinking solutions by utilizing homemade apple cider vinegar just like how turmeric was prepared and used.

KEYWORDS: turmeric, apple cider vinegar, weight reduction, golden hamsters

SUBMISSION ID: R04A-CAVITP-1715

Utilization and Phytochemical Analysis of Crowfoot Grass (Eleusine Indica)

Godwin Gabriel Monzon, Laguna Senior High School

Abstract

INTRODUCTION

Paragis with a scientific name *Eleusine indica* commonly known as crowfoot grass, dog's tail or wire grass is pulling some attention from herbal or alternative medicine consumers due to its discovered health benefits. According to the 'The Healthy Hack,' a website sharing health care hacks, boiling parts of Paragis (stem, leaves, roots) can cure pain and several illnesses such as cancer, ovarian cyst, mioma, kidney problems, arthritis, diabetes, wounds, parasitism, urinary tract infection (UTI), hypertension, fever, sprain, dysentery and even dandruff. Though various websites have already posted about it and many people are declaring the positive health benefits of this specific type of grass, such proofs and evidences are sufficient enough, thus needs further studies about this plant, to assure its safety and effectivity.

METHODS

To prepare the Paragis sample for the phytochemical analysis, it went through different processes and procedures. The sample was cut, air dried and grinded. The dilute solution from the grinded materials was macerated to dissolve the remaining soluble matter. The mixture was strained, pressed, filtered and was left to evaporate on a rotary evaporator to reduce the volume of solvents. The process of crude extraction follows which prepares the sample for the phytochemical analysis. Comparison between the phytochemicals present in paragis and phytochemicals used for remedies further deepens the analysis. For verification, it was submitted to the International Rice and Research Institute (IRRI).

RESULTS

After the phytochemical analysis, it was discovered that three phytochemicals are present in Paragis -- saponins, tannins and cardiac glycosides. Each of the present phytochemicals has its own share of positive health benefits to its potential takers. However, negative side effects could still affect its users if taken with too much dosage. Regardless of the negative side effects, the data gathered from the phytochemical screening still proves that Paragis does have health benefits which makes the hypothesis true and accepted.

DISCUSSIONS

The researcher concluded that Paragis (*Eleusine indica*) do have phytochemicals that are capable of bringing positive health benefits to its takers but can also cause negative impacts due to its side effects that can be brought up by over dosage of the medication.

KEYWORDS: phytochemical analysis, crowfoot grass

SUBMISSION ID: R04A-LAGUNA-0037

**Wound Healing Properties of Saba Banana (*Musa acuminata* x *balbisiana*)
Leaf Sheaths Extract on Male Albino Rats (*Rattus albus*)**

Gwen Francine Lucero, Student

Abstract

INTRODUCTION

The study entitled "Wound Healing Properties of Saba banana (*Musa acuminata* x *balbisiana*) Leaf Sheaths Extracts on Male Albino Rats (*Albinus Rattus*)" was conducted in the JICA Laboratory of Trece Martires City National High School, Trece Martires City, Cavite from September to December 2017.

The researchers came up with the idea of making alternative treatment on wounds out of saba banana leaf sheath extracts from the fact that tropical countries like the Philippines have abundant banana trees where most of the leaf sheaths turn into wastes.

METHODS

The extracts used in the study were taken from the saba banana leaf sheaths and its effectiveness on the wound of male albino rats was compared with the commercial product. Moreover, the effectiveness of the treatments was compared in terms of the morphological changes on wounds which include: 1.) redness and swelling, scab formation, 2.) scar formation, and 3.) regrowth of fur. One kilogram of scraped saba banana leaf sheaths were collected and extracted through squeezing the leaf sheaths thoroughly with a clean cloth. The healing effects of the extracts were compared with the commercial product through using male albino rats as the laboratory animal.

RESULTS

The data revealed that the effect of using banana leaf sheath extracts and the commercial product in wound healing has no significant difference in terms of redness and swelling of wounds, scar formation and regrowth of fur. In terms of scab formation, saba banana leaf sheath extracts surpassed the commercial product as revealed by the significant statistical difference between them.

DISCUSSIONS

These results implied that saba banana leaf sheath extracts can be an alternative treatment for wounds based on the parameters evaluated in the study. The researchers recommend further investigations to evaluate the effectiveness of varied concentrations of saba banana leaf sheath extracts in the wound healing process.

KEYWORDS: saba banana, leaf sheath extracts, male albino rats, wound healing parameters

SUBMISSION ID: R04A-CAVITP-0006

HEALTH SERVICES MANAGEMENT

**A Phenomenological Study of the Lived Experiences of Hospital Staff in
"Code White" on New Year's Celebration**

Jose Aldrin Reyes, Trece Martires City Senior High School

Abstract

INTRODUCTION

Hospitals worldwide deliver important information in a short period of time using Hospital Color Codes. Code white, a color code used by foreign hospitals, are assigned to different situations which include violent patients, respiratory arrests, and terror attacks. However, Philippine hospitals assigned code white to mass or national events that may result to emergency situations may occur. Some good examples of these situations are the Black Nazarene Event and New Year's Eve celebration. However, there is a shortage of studies published that focused about the experience of Filipino hospital staff when Code White alert is raised.

METHODS

The population of the study was hospital staff in the Philippines who were in duty when code white was raised during the New Year's Eve celebration and then a purposive sampling was used to select participants who are well-informed about the phenomenon. Five hospital staffs were interviewed using a semi-structured, in-depth interview. The participants were interviewed in their offices and with their permission, were audio-recorded. The data and personal information gathered from the participants will be kept confidential and will only be used for research purposes only.

RESULTS

The data from the study were gathered by the researchers by means of reading and analysis of the transcript of the interviews with the participants. This leads into a several themes namely Immediate response of the Hospital staff to the patients; and Coping mechanism of Hospital staff to the different issues that arose. As an outcome, different ways of responding to the patients were stated in which the responses were all related to the traits of the hospital staff. It was revealed that being patient and having a good mind set are the characteristics that a hospital staff must have especially when assigned in an emergency room. Meanwhile on the Coping mechanism of Hospital staff, it was revealed that controlling the situation and encouraging other staff are one of their trained responses in terms of coping up with issues.

DISCUSSIONS

There results revealed the different immediate response of the Hospital Staff to the patients and on how they cope up with the different issues that arose from the Code White. Interview with the participants revealed that in terms of facing the call of duty, it is needed to act as a professional, to have a presence of mind, focus, be confident, and the most important is to always smile.

KEYWORDS: Hospital Codes, Code White, Immediate response, Coping with different issues

SUBMISSION ID: R04A-CAVITP-0715

**An Assessment on the Status and Effectiveness of Project BULUS at
Calumpang Elementary School**

Josielyn Atienza, Department of Education

Abstract

INTRODUCTION

Project Busog Lusog or Project BULUS is significant to our school because it aims to eradicate the wasted and severely wasted learners at Calumpang Elementary School by helping those children whose nutritional status are nearing the baseline. It is important to the learners because the nutritional and health condition of a child are influential to their learning and on how they perform in school.

Through this study, the researcher will be able to assess the effectiveness of Project BULUS in the performance of pupils of Calumpang Elementary School whose nutritional status are nearing the baseline.

METHODS

Qualitative approach using a descriptive survey was adopted to assess the status of Project BULUS at Calumpang Elementary School. Descriptive survey design suited this study because in the research allows the researcher gathered information, summarized, presented and interpreted for the purpose of clarification.

This study concentrated mainly on pupils of Calumpang Elementary School whose nutritional status are nearing the baseline. Parents, teachers, children were used to respond the issues in generating the data.

RESULTS

From the study conducted, it was shown that beneficiaries of this Project BULUS raised their academic performance after the implementation from below average to average, and average to above average performance. It was also revealed that 12 out of 12 or 100% of the beneficiaries improved their health status. From the study conducted, it was also found out that pupils who undergo the feeding program improved their attendance status in school.

DISCUSSIONS

The result revealed that 3 Out of 12 or 25% of the beneficiaries raised their academic performance after the implementation of the project from below average to average, 6 or 50% remains in the average level and 3 or 25 % have raised to above average performance. This means to say that the implementation of the project greatly affects their academic performance, as well as their attendance in school. Effectiveness of Project Busog Lusog or Project BULUS in Calumpang Elementary School can be improved through proper implementation of the program, cooperation and support of the parents of the beneficiaries and School head is expected to monitor the feeding activities and program implementation on a daily basis.

KEYWORDS: assessment, effectiveness, beneficiary, baseline, nutritional status

SUBMISSION ID: R04A-BATANP-1375

**Assessment of Health-Seeking Behavior among the Deped Employees
From a Public School District in the Division of Cavite: Basis for Project
Health**

Diana Topacio, Department of Education - Division of Cavite

Abstract

INTRODUCTION

Teachers as effective human forces in development and evolution of our society should be given proper health education, so they will know how to take good care of themselves. However, most teachers do not give time on understanding their body system and pay less attention on their health condition. This study aimed to assess the number of teachers who had health-seeking behaviors.

METHODS

This study used survey research design. It involved 624 Department of Education (Department of Education) employees from District of Rosario, Cavite. Interviews, vital signs assessments, physical assessments and medical laboratory results were used to gather the data.

RESULTS

Results revealed that out of 624 employees, 322 (51.60%) were found to have health seeking behaviors. Among the illnesses recorded were hypertension, heart diseases, pulmonary tuberculosis, urinary tract infection, error of refraction, and diabetes. Common ailments recorded were sore throat, common colds, headache, toothache, minor wounds, and cough.

DISCUSSIONS

The results of the study showed that Department of Education employees differed in their approaches in attending to their existing medical conditions. Most of the respondents have sought online consultations, took alternative medicines and/or over-the-counter medications, followed cultural beliefs, and expressed that their self-care needs were the least of their priorities. The reasons for their health seeking behavior were lack of time, heavy workload, and financial constraints.

KEYWORDS: Health services, health-seeking behavior, teachers' health, health education

SUBMISSION ID: R04A-CAVITP-1248

Case Analysis on Dietary Health Issues

Neil Jarryl Almuete, Department of Education

Abstract

INTRODUCTION

The foods you choose to eat can have a direct impact on your ability to enjoy life to its fullest. Perhaps the most obvious positive effect of food is the pleasurable feeling you get from eating a good - tasting meal. It might be a plate of grilled chicken, corn - on - the - cob, fresh vine - ripened tomatoes, and a baked potato, or a steaming dish of spaghetti topped with a zesty tomato sauce. Your diet can have long - term effects on your health as well. Diet plays a major role in promoting and maintaining good health, preventing some chronic diseases and treating others, and speeding recovery from injuries.

METHODS

Using the descriptive-survey method and frequency count and percentage, findings revealed that, in general, the respondents encountered personal problems relating to the food management. Eighty male and female STEM students responded to the survey questionnaire. Physical aspects identify the students' ability to perform actively with the help of the suggested food preference. Assessment of the mental aspects of students provides a development in choosing the right food preference, giving them the knowledge to enhance their mind in a healthy way. Emotional aspects help in improvement of the mood which is also entrusted in the choice of their food preference.

RESULTS

In the results of the survey on the case analysis on dietary health issues in terms of students' profile on the physical aspects, mental aspects and emotional aspects, the research hypothesis has been accepted due to lack of significance in the study which is observable on how they answered the questions, majority of the questions being answered are "moderately agree".

DISCUSSIONS

The results indicated that the students need continuous development in order to enhance the students' food management. Study must not only be studied on the STEM students, but as well as the other strand and tracks that are having problems in food management.

KEYWORDS: dietary, health issues

SUBMISSION ID: R001-URDANE-0014

Dental Care and Maintenance in UCNHS

Aaron John Flores, Department of Education

Abstract

INTRODUCTION

The National Monitoring and Evaluation Dental Survey management by DOH in 2011, 87% of Filipinos tolerate jag deterioration, or 83 million populate in the Philippines supported on the population of that year. "Statistics show that 77% or more than 7 out of 10 [of Filipinos] have never even been to a dentist." In this study, the researchers investigated how the students of Urdaneta City National High school (UCNHS) took care of their oral health and how they maintain good oral hygiene to reduce the risks of oral and gum diseases.

METHODS

A multiple methods design was used. Using a grounded theory approach, the researchers conducted focus groups with Urdaneta City National High school (UCNHS) students. One hundred and fifty junior high schools on Regular classes, Science Classes, and Journalism Classes and One hundred senior high schools in the Science, Technology, Engineering, and Mathematics (STEM) responded to a set of semi-structured questions.

RESULTS

Most students of Urdaneta City National High School (UCNHS) seldom visit their dentists even when needed. The result can be related to the respondents' family income wherein they cannot afford to make dental checkups because of financial problems. Students oral hygiene's results that Students of Urdaneta City National High School (UCNHS) brush their teeth three times a day.

DISCUSSIONS

The results demonstrated the problems and difficulties encountered by the senior and junior high school students towards the dental care and maintenance. The problems and difficulties are categorized into dental check-up, oral health, and oral hygiene.

Keywords: oral health, dental care, oral hygiene, dental check-up

KEYWORDS: Dental Care, Dental Equipment Maintenance

SUBMISSION ID: R001-URDANE-0017

Gulayan sa Paaralan Program: An Effective Support to the School-Based Feeding Program in San Marcelino Elementary School

Arlene D. Rance, Nancy A. Asis, & Ronaille Bautista, Department of Education
Batangas Taysan District

Abstract

INTRODUCTION

Gulayan sa Paaralan Program is one of the most beneficial programs of the Department of Education that promotes food security in schools and communities through self-help activities and values among the learners and appreciation of agriculture as a life support system. This program primarily aims to improve the nutritional status of the school children all over the Philippines. This study aimed to document the effectiveness of "Gulayan sa Paaralan Program (GPP) in support to the School-Based Feeding Program recipients in San Marcelino Elementary.

METHODS

METHODS

The researcher used data sheet as a research tool to gather the data needed. The information gathered will be interpreted to identify the extent of utilization of the Gulayan sa Paaralan Project. The respondents of this study were the teacher/s assigned to the Gulayan Project and the advisers of the pupils who were diagnosed as undernourished.

RESULTS

The number of School-Based Feeding Program recipient, the wasted and severely wasted for every grade level, were lessened as compared from school year 2016-2017 to school year 2017-2018.

DISCUSSIONS

The total number of wasted and severely wasted this school year dramatically decreased from 47 to 32 undernourished pupils from its total enrolment. Generally, SBFP recipient diminished to 7%, that from 229 pupils as of last year 47 pupils were undernourished who underwent the school-based feeding program and now it dropped down to only 32 recipients out 223 pupils school year 2017-2018. This only proves that Gulayan sa Paaralan Program has worked out and has become effective support to the problems of undernourishment among the school children especially those who are beneficiaries of the said SBFP. This also means that undernourished pupils or the SBFP recipient have lessened and normal health status increases.

KEYWORDS: Nutritional status, beneficial, recipient, school garden, sustained, wasted

SUBMISSION ID: R04A-BATANP-0923

Health Issues on Internet Addiction: A Case Study

Jonathan Cula, Department of Education

Abstract

INTRODUCTION

Nowadays, the internet has made life a lot easier by making information more accessible to all and creating connections with different people around the world. However, it has also led to a lot of people to spend too much time in front of the computer. This problem can lead to internet addiction that has been affecting the lives of the people. So, the researchers conducted a study about the health issues on internet addiction.

METHODS

The researcher used descriptive type of research. It is the most appropriate method to use in order to answer the specific problems in this study. Further, this method of research involves the collection of data in order to test a hypothesis or to answer question covering the current status of the subject of study. With such characteristics, this method of research is the most appropriate to use in this study since it intends to describe the health issues concerning internet addiction.

RESULTS

Based on the given situations, researchers found out that 16 to 17 years old student of Urdaneta City National High School can be prone to Internet Addiction. Most of the respondents answered mobile phones when we asked them if what gadgets are they using. And the other answers were a laptop, computer, and I-pad/ Tablet. The number of hours spent using gadgets can also cause you to become an Internet Addict.

In our study, researchers concluded that the number of hours spent using the internet might cause health concerns in their life. Most of the students that are affected by Internet Addiction is age 16 to 17 years old. And lastly, almost all of the students are not at all aware or undecided of the pervasive imminent health concerns of Internet Addiction.

DISCUSSIONS

With utmost intricacy of our revered process of tabulation, analysis, presentation, and interpretation, the researchers, concluded that the students are affected in internet addiction. This is based solely on the results of our questionnaires. The number of hours spent using gadgets can trigger health concerns. Most students that are affected by internet addiction ranges from 16-17 years old. And almost all of the students are not at all aware or undecided of the pervasive imminent health concerns of internet addiction.

KEYWORDS: Case Study, Health Issues, Internet Addiction

SUBMISSION ID: R001-URDANE-0007

**Health Practices and Academic Performance of Grade One Pupils in Tha
Selected Public Elementary Schools in the District of Binangonan II**

Marivel Ditablan, Department of Education

Abstract

INTRODUCTION

Education is the cornerstone of success of each individual. To build a better nation, everyone must have a better living which is generally a provided by knowledge, skills, attitudes and behavior that he needs to achieve his goals and to attain his ambition in life. Health education is a process concerned with designing, implementing, and evaluating educational programs that enable individuals, families, groups, organizations, and communities to play active roles in achieving, protecting, and sustaining health. Its purpose is to contribute to health and well- being by promoting lifestyle, community actions, and conditions that make it possible to live healthful lives.

METHODS

Descriptive survey research design was applied in the study. A research- made questionnaire checklist was used to determine the extent of health practices of grade one pupils as perceived by themselves with respect to hygienic practices, food intake, physical activities and social environment. Documentary analysis was also applied since the average grades of pupils in the first grading period were obtained as basis of their academic performance.

RESULTS

There is no significant difference on the extent of health practices of grade one pupils with respect to hygienic practices, food intake, physical activities and environmental concern in terms of sex, and monthly family income, number of children in the family, and parents' educational attainment and also between the extent of health practices with respect to hygienic practices, food intake, physical activities and environmental concern and academic performance of pupils.

DISCUSSIONS

The study recommended that the teachers and parents may continuously work together to enhance the health practices and academic performance of grade one pupils. Teachers may inform the pupils that the well-being of an individual depends on the type of lifestyle they live. The proposed action plan is recommended for implementation. Parallel studies may be initiated using other variables.

KEYWORDS: Academic performance, environmental concern, health practices

SUBMISSION ID: R04A-RIZALP-0274

**Implications of the Comprehensive Water, Sanitation, and Hygiene in
Schools (WinS) Program among Junior High School Students of Sico 1.0
National High School (Grade 7 -12)**

Elma Gloria, Janeth Castor, & Marissa Quinia, Teacher

Abstract

INTRODUCTION

Hygiene and sanitation are essential to good health. The promotion of health and sanitation in the school has a major effect to the students learning outcomes and practice lifelong positive hygiene behaviors. The Department of Education has crafted the Policy and Guidelines for the Comprehensive Water, Sanitation and Hygiene in Schools (WinS) Program for the promotion of correct hygiene and sanitation practices among school children and clean environment in and around schools to keep learners safe and healthy. Often, this program is implemented, yet it is not enough to meet the standard requirements due to some health problems encountered by the learners. To properly deal with these problems, the researchers intended to focus on the implications of WinS Program in the health and sanitation among Junior High School Students of Sico 1.0 National High School for SY 2017-2018 and aimed to find out its effect on students' academic performance. Moreover, it facilitated the analysis into the effectiveness of the program to achieve the desired learning outcomes in different subject areas and to improve the extent of participation of learners in their personal hygiene every day that they can also apply at home.

METHODS

Multiple method designs were used. Quasi-experimental design was used to 855 respondents who have the same chance of being assigned to the comparison group. Descriptive method was used to describe and observe the behavior of the respondents regarding health and sanitation.

RESULTS

The implications of the WinS Program among Junior High School Students were: (1) less absenteeism of the students in school, (2) improved learning outcomes, (3) enhanced positive attitudes and behavior on health and sanitation, (4) improved physical and emotional health, and (5) promoted a child-friendly environment. Since then, the school became the Best Implementer of WinS for School Year 2017-2018.

DISCUSSIONS

The results of the study were needed to effectively implement the program on health and sanitation, promote consistent monitoring on learners' overall wellness, achieve higher learning outcomes, and encourage the involvement of other stakeholders of the school.

KEYWORDS: WinS program, hygiene, Sico 1.0 National High School, Health, Sanitation

SUBMISSION ID: R04A-BATANP-0308

Improving the Poor Nutritional Status of Grade Five Pupils in Balayan East Central School through Project EBD Eating a Balanced Diet

Ofelia Chua & Leonila Atajar, Teacher III

Abstract

INTRODUCTION

The nutrition of the child is one of the most important aspects that enable them to study properly and perform their duties within and outside the school. Health once neglected, can greatly affect the performance of the child in his class. One of the programs of Department of Education is the school feeding program for undernourished pupils. Pupils classified as wasted or severely wasted are the priority target of the program. The tool used to determine if the pupil is undernourished is the nutritional status report.

METHODS

The researcher used the descriptive method of research, which aim to determine the factors affecting the nutritional status of Grade Five pupils, the programs that the teacher used to enhance their nutrition problems. The data gathering procedure was a survey method, and the questionnaire was the data gathering instrument. The respondents of this study were the parents, 11 teachers of Grade Five and 60 malnourished pupils of Balayan East Central School.

RESULTS

It has been found out that the pupils who are malnourished 1) are mostly the pupils with low academic performance, 2) they are also the listed undisciplined pupils in their sections and also 3) they are the one who are prone to different kinds of sickness that results to their frequent absences.

With Project EBD's regular feeding and monitoring through home visitation greatly helped the pupils to improve their nutritional status. Their attitudes towards schooling also developed. Values also changed specifically their physical, mental, emotional and social well-being.

DISCUSSIONS

Project EBD - Eating a Balanced Diet can help minimized the number of wasted and severely wasted among 60 Grade Five Pupils in Balayan East Central School. As a result of continuous monitoring and home visitation from the nutritional status of the beginning year, there is a big improvement in the nutritional status of the said pupils.

KEYWORDS: nutrition, malnourish, monitoring

SUBMISSION ID: R04A-BATANP-1799

Issues on the Implementation of Dengue Vaccine in Acquiring School Health Services in Looc National High School, Nasugbu, Batangas

Alexandra Cloma, Department of Education Batangas

Abstract

INTRODUCTION

With the alarming status of the school in receiving health services, an intensive action is needed to be done to increase the rate of students acquiring school health services through the willingness and approval of their parents or guardians. An intervention program should be applied to open the minds of the students and parents that there is nothing to worry about the different existing school health services and exempt it in the issue of Dengvaxia.

METHODS

The main purpose of this study was to determine the impact of "Dengvaxia Issue" in acquiring school health services in Looc National High School, Nasugbu, Batangas. In this study, an Information Education Dissemination Material was constructed to increase the rate of students acquiring school health services. The level of awareness in Dengvaxia and impact of "Dengvaxia Issue" to the vaccines were assessed. The impact of

Dengvaxia to the parents of vaccines were qualitatively interpreted through mathematic analysis through in-vivo coding. To achieve these purposes, survey questionnaire, was made and focus group discussion (FGD) was conducted. Mixed method research design was employed and incorporated quantitative design with the use of questionnaire and qualitative approach through focus group discussion (FGD). Purposive sampling was used to choose the respondents.

RESULTS

An Education Dissemination Material is proposed to increase the rate of acquiring school health services in Looc National High School, Nasugbu, Batangas

DISCUSSIONS

In-take supplements given by the school for the students receive a high negative impact to the Dengvaxia recipients. Due to the Dengvaxia issue, the parents of dengue vaccines are not willing in accepting school health services for their children. The findings signify that the level of awareness on Dengvaxia issues affects the respondents' other mode of health services acquisition.

KEYWORDS: Dengvaxia, Dengue recipients, vaccines

SUBMISSION ID: R04A-BATANP-0003

Modernized Mosquito Repelling Techniques and Strategies

Monica Briones, Department of Education

Abstract

INTRODUCTION

Division of Vector-Borne Diseases (2017) extent that the most effective way to avoid abstention disordered from viruses circulates by mosquitoes when at home and during travail is to frustrate anopheles nip. They can spread viruses that make you sick or, in infrequent cases, cause mortification. Although most kinds of mosquitoes are just annoyance mosquitoes, some mosquitoes around the world disseminate viruses that can reason malady.

METHODS

The researchers used size numbers. It is the most peculiar process to use to refute the specific problems in this ponders. Further, this method of research involves the collection of data in management to distinction condition or to answer discussion casing the incidental state of the subject of the muse. With such characteristics, this mode of research is the most suitable to usefulness in this study since it stretches to terminate the extent of the Modern Mosquito Repelling Techniques and Strategies.

RESULTS

The address is categorized in 18 barangays, Anonas, Bayaoas, Camanang, Camantiles, Cabuloan, Cayambanan, Dilan, Dilan- Paurido, Nancayasan, Nancalubasaan, Paurido, Pinmaludpod, San Vicente East, San Vicente Centro, San Vicente West, Tiposu and Others. Others have the highest percentage of about 47.73%, next are Bayaoas and San Vicente Centro with a percentage of 9.09%, next is San Vicente East with a percentage of 6.82%, next are Camantiles, Nancayasan, and Pinmaludpod with a percentage of 4.55%, next are Anonas, Cabuloan, Dilan-Paurido, Paurido, San Vicente West, and Sugcong with a percentage of 2.27% and lastly are Camanang, Cayambanan, Dilan, Nancalubasaan, and Tiposu with a percentage of 0%. In terms of availability of drainage system in the community, the majority of the respondents answered Yes with a percentage of 70.45% while respondents who answered No has a percentage of 29.55%.

DISCUSSIONS

The results demonstrated the need on the findings are the following: (1) The use of topical repellant is the key to avoid mosquito bites. (2) Maintain the cleanliness in yourself and in your surroundings to avoid mosquito bites. (3) The Department of Health (DOH) should continue to advocate their programs to help the community in terms of the management of mosquito repelling techniques and strategies that aim to prevent certain diseases like dengue, malaria, and other mosquito-related diseases.

KEYWORDS: Repelling, Techniques, Strategies, Modern

SUBMISSION ID: R001-URDANE-0024

Needle on Crime: A Phenomenological Study of the Lived Experiences of Surgeons Operating a Criminal Suspect Patient

Karen Claire Medina, Student

Abstract

INTRODUCTION

Health service is one of the necessities that every individual needs nowadays, where surgeons lead the operation of a patient. In fulfilling their responsibilities, surgeons are experiencing some challenges. Although there are studies about the problems and challenges that a surgeon deals with in an operation, there seems to be limited studies about the experiences of surgeons who operate a criminal suspect patient. Thus, this phenomenological study was conducted to know more about the lived experiences of surgeons operating a criminal suspect patient. Specifically, the issues and challenges they are encountering and their coping mechanisms regarding those challenges were identified.

METHODS

This study used a qualitative method which presents the issues and challenges of surgeon operating a criminal suspect patient. The study involved six participants from General Emilio Aguinaldo Memorial Hospital, who were conversed through in-depth semi-structured interview. The interview question includes what the surgeon experienced when having operation with criminal suspect patients and the coping mechanisms they are using to deal with those challenges. Thematic analysis by Braun and Clarke (2006) was used as a framework of analysis.

RESULTS

The results showed that the surgeons experienced issues and challenges including emotional conflict, delayed needs, physical challenges, complicated injuries, performing their responsibilities, and criminal suspect patient's behavior. Likewise, as stated in Turjuul et al. (2005), the surgeons are personally challenged by the existential reality of life in their relationships with their patients. Referring to social service workers, using the available materials, professionalism, and good governance are the coping mechanisms of the surgeons. In accordance with this, Orri et al. (2015) cited that surgeons mentioned that there are several coping strategies in terms of their emotions which are proven to be effective, like teamwork, recognizing patient's emotions, balancing personal involvement and neutrality, and cognitive re-centering.

DISCUSSIONS

Hence, the criminal suspect patient's behavior, emotional conflict, delayed needs, physical challenges, complicated injuries, and performing their responsibilities are the common themes on the issues and challenges experienced by the surgeons. Conversely, the themes on the coping mechanisms are referring to social service workers, using the available materials, professionalism, and good governance.

KEYWORDS: surgeon, issues of surgeons, surgeons' coping mechanisms

SUBMISSION ID: R04A-CAVITP-0689

**Nurse Code: A Phenomenological Study of the Lived Experiences of
Emergency Room Nurses Conducting Triage**

Nadine Julia Mamaril, Student

Abstract

INTRODUCTION

Triage is a common procedure conducted in an emergency room of a hospital. This is a process done by nurses wherein they quickly evaluate and categorize the patients based on the urgency and need for care. However, due to different circumstances, nurses experience different problems that serve as hindrances to perform this protocol. Although there are existing studies about triage nurses, these studies focused on the roles of triage nurses in the emergency room and not their experiences on conducting triage. Moreover, most of the studies often tackle the general experiences of nurses in the emergency department.

METHODS

This study used a qualitative method. It is a phenomenological study that shows the different experiences of ER nurses in conducting triage. The phenomenon of this study presents the experiences, difficulties, and the coping strategies of triage nurses. The population of the study involved ER nurses who have already experienced conducting triage. By using an in-depth interview, the difficulties and coping strategies of five ER nurses from General Emilio Aguinaldo Hospital were emphasized. Braun and Clarke's (2006) thematic analysis was used as a framework analysis.

RESULTS

The results showed that continuous admission of patients, irate patients and relatives, and manpower shortage are the common difficulties experienced by ER nurses. Among these difficulties, manpower shortage was experienced by the five nurses. Palter, Urbietta, and Nordquist (2016) stated that shortages in nurses in the emergency department can lead to deficiencies in staffing and disruption of patient care.

On the other hand, the results showed that proper endorsement of patients, explanation of procedures to patients and relatives concisely, teamwork, and time management are the coping strategies done by nurses. However, among these coping strategies, teamwork is the most common coping mechanism for nurses. This was supported by Khademian, Sharif, Tabei, Bolandparvaz, Abbaszadeh, and Abbasi (2013), they stated that teamwork can manage patients effectively since prioritizing patients, which is the main goal of triage, is considered as a team goal.

DISCUSSIONS

Therefore, the common difficulties experienced by triage nurses are continuous admission of patients, irate patients and relatives, and manpower shortage. On the other hand, proper endorsement of patients, explanation of procedures to patients and relatives concisely, and teamwork were the common coping strategies done by triage nurses.

KEYWORDS: triage, emergency department, emergency room nurse

SUBMISSION ID: R04A-CAVITP-0678

Project MESN: Maganda ang Edukasyon Kung Sapat ang Nutrisyon

Lina Gonzales, Department of Education

Abstract

INTRODUCTION

The Department of Education (Department of Education), through the School Health Division-Bureau of Learner Support Services (SHD-BLSS), shall implement the School-Based Feeding Program (SBFP) to address undernutrition and short-term hunger among public school children. Gulayan sa Paaralan served as a partner of the SBFP. It served as supplier of vegetables such as malunggay, pechay, mustasa, sitaw, and other green leafy plants which are very essential for the nutritious meals served. A feeding program in such schools does more than alleviate absenteeism, lower dropout rates and improved concentration and energy levels in students. While weighing the pros and cons of starting a feeding program, it became very clear that such a project will have a long-term positive impact that would not only benefit the students but also the parents, teachers, and local community.

METHODS

A cohort study was performed with secondary data on children aged from five to 12 years old, they get their Nutritional status by weighing in and height in to become the recipient of School - based feeding program for 120 days.

RESULTS

The program had a positive effect on child weight gain, varying according to child nutritional status when starting this program; among those who started it with weight gain not compromised, out of 40 severely wasted pupils, 30 pupils become normal in their Nutritional status.

DISCUSSIONS

40 severely wasted pupils will benefit if they will become nourished and normal as per nutritional status. If the problem on severely wasted pupils will be solved better performance of the children school will be achieved. They can get themselves involved in all of the system's program and thrust for they are mentally capacitated because of proper nutrition. There is no doubt that the Department of Education mission and vision will be achieved.

KEYWORDS: Feeding, severely wasted, Nutritional status

SUBMISSION ID: R04A-TANAUA-0152

SBFP: Making Everyone in School Healthy

Teresa M. Tamayo, Teacher
(Adviser: Jomel Montero)

Abstract

INTRODUCTION

Malnutrition is a worldwide health concern. Government and non-government organizations geared their efforts in various interventions that could lessen and alleviate children's suffering from malnutrition. In Patong Elementary School, malnutrition is also a problem now. With this, the school is one of the recipients of "SBFP: Making Everyone in School Healthy" a double feeding program within thirty days which aims to decrease the number of severely wasted and wasted pupils by 50%.

METHODS

In this study, the researcher used a quantitative method of research. BMI tool was used to determine the Nutritional Status of the Pupils based on the 1st weighing and 2nd weighing of the pupils. After the accurate information gathering procedure, data collected were organized, analyzed and properly interpreted.

RESULTS

In 1st weighing out of 243 pupils of Patong Elementary School there were 27 "wasted" and 3 "severely wasted". It shows that 12% of pupils in this school have low nutritional status. After thirty days of double feeding, the "wasted" decreased to 17 pupils and "severely wasted" decreased to 1 beneficiary.

DISCUSSIONS

As the results revealed after implementing "SBFP: Making Everyone in School Healthy", it shows that the program was effective and SBFP goals were attained.

KEYWORDS: Malnutrition, SBFP, School Healthy

SUBMISSION ID: R013-SURSUR-0206

**Status of Health Care Services in Public Elementary Schools in the District
of Cabuyao: A Basis for School Health Care Program**

Mary Anne Lapidario, Mamatid Elementary School

Abstract

INTRODUCTION

Health is viewed as an essential component of all current K-12 Basic Education Curriculum program in the entire Philippines. There is an international saying that health is wealth. Teachers, school administrators, school health workers, parents and researchers support the idea that healthy students learn better. When a student arrives at school fed, rested, calm, and unworried they are ready to learn. Research showed that education is linked to academic achievement and health. Therefore, a localized study on the health care services among schools is a must. Health services and programs help assess, preserve, and promote student health. These services include ensuring access or referrals to primary health care services, preventing and controlling the spread of communicable diseases and other health conditions, adopting and enforcing a safe school environment, and providing educational and counselling opportunities for promoting individual, family, and community health (NCCDPHP, 2008).

METHODS

The study aimed to assess the status of health care services in public elementary schools in the Division of Cabuyao during school year 2016-2017 utilizing the descriptive evaluative design. The status of health care service/programs in public elementary schools described in terms of specific health care services provided. Survey questionnaires supported by unstructured interview were the data collection techniques. The survey technique, in-depth interviews and Focus Grouped Discussions (FGD) were conducted with the school health care workers.

RESULTS

Enhancement program will be made possible by formation, implementation and assessment of various modalities and delivery forms of school health related interventions which schools can be formed through committees to be grouped into following categories: (1) School Health Environment, (2) School Health Education, (3) School Health Services, and (4) School Nutrition Program Committee.

DISCUSSIONS

Based on the findings of the study, the following are recommended: (1) Create or improve the health care programs among public elementary schools; (2) Conduct health care training/seminars among public elementary schools; (3) Conduct first aid trainings at least twice per school year among public elementary schools; (4) Close monitoring of the health status of teaching and non-teaching staff is being suggested; and (5) Completion of the medicines and facilities needed to provide for an effective and efficient health care programs among public elementary schools.

KEYWORDS: Health Care Program, Health Care Services

SUBMISSION ID: R04A-CABUYA-0041

**Supplemental Feeding: Strategy on Increasing Body Mass Index(Bmi)
Wasted Grade 8 Students of Smnchs**

Sanchita T. Baylon, Teacher
(Adviser: Jomel Montero)

Abstract

INTRODUCTION

Malnutrition or malnourishment is the condition that results from eating a diet which nutrients are either not enough or are too much such that the diet causes health problems. One of the alarming issues in SMNCHS is malnutrition. To address the issue, a supplemental feeding activity to these identified students must be given priority in order to have a wasted school zone free and to help students minimizing their number of absences in school due to malnutrition.

METHODS

The experimental design was used to determine the effectivity of supplemental feeding program in San Miguel National Comprehensive High School. The study used purposive random sampling for Grade 8 students. Students were weighed and measured for its weight and height to determine their Body Mass Index and identified wasted students in Grade 8. Supplemental feeding was done weekly, every Wednesday only. The first feeding was given, October 12, 2016 and the last feeding was January 11, 2017.

RESULTS

The Grade 8 students benefited with the weekly supplemental feeding which has a higher mean of 16.55 compared to their mean before supplemental feeding which is 15.5. Looking at the standard deviation, students underwent supplemental feeding has lower standard deviation of .44 compared to the standard deviation before supplemental feeding which is .94. This signifies that wasted students of Grade 8 would likely to recover its health problem thus increases BMI result and be in the normal level of nutritional status.

DISCUSSIONS

The result implies that weekly supplemental feeding is an effective strategy to recover wasted Grade 8 students of SMNCHS. This can help our students recover from the physical problem as to reduce school problems on student's absenteeism. This indicates further that students benefited by the feeding program, thus protecting them from health problems in the future will be insured. As to conduct this study, students in wasted level can recover slowly but surely as long as sustainability of the feeding program be observed. The effect of supplemental feeding can help on the recovery from mild to moderate wasting school children.

KEYWORDS: Malnutrition, Supplemental feeding, Body Mass Index

SUBMISSION ID: R013-SURSUR-0180

HISTORY

Effects of 7E Learning Cycle among Grade 5 Learners' Critical and Analytical Thinking Skills in Araling Panlipunan

Avelina Oro, Department of Education

Abstract

INTRODUCTION

Quality of education is revealed by learners' performance. For the past years, the Philippines has been achieving poor results in various standard test. The result of 2012 National Achievement Test showed that learners obtained a mean percentage score of 40.53% (Philippine Basic Education, 2013). The performance of learners can be associated to several factors, one of these factors involve the teaching technique. Content based pedagogies result to poor thinking skills both inside and out the classroom. Hence, it can be deduced that there is a need for educational reforms.

METHODS

In this research, the experimental groups were given an intervention with the use of 7E learning cycle.

RESULTS

Prior to the beginning of the study, various data of learners were gathered to test the homogeneity of the four groups. These data included the percentile rank of learners in National Achievement Test (NAT). The data were subjected to analysis of variance.

DISCUSSIONS

The analysis of the past test scores revealed heterogeneity of learning. Experimental groups had higher posttest and again, scores were compared to control groups. Experimental groups were taught using the daily lesson log following the format of 7E learning cycle. The learners' critical and analytical thinking skills were developed using this intervention. Results showed that the 7E learning cycle has increased the posttest and gain scores of learners. Those who were not given the treatment got lower posttest and gained scores. Through the 7E learning cycle, learners of Araling Panlipunan were able to develop their analytical and thinking skills. Thus, it could be concluded that 7E learning cycle is effective in developing critical and analytical thinking skills of learners in Araling Panlipunan.

KEYWORDS: 7E Learning Cycle

SUBMISSION ID: R04A-CAVITP-0863

Historical Analysis on Ancestral Houses: Heritage Tourism of Juban

Pett Guerrero

Abstract

INTRODUCTION

The province of Sorsogon hosts lots of old houses that can be found in different municipalities, most likely, found in the municipality of Juban are the old houses which can be seen along South Luzon Maharlika Highway. Seems like the locals are not even familiar with the purpose of the old houses including their similarities and differences during the Spanish period and present which can bridge us from the historical root of the town. Though the town holds a heritage site not recognized by the country as one of the heritage places, the researcher exhibited that it can be beneficial for the community from which a tourism site can be developed and be transformed into a national historical site.

METHODS

Designed using historical analysis which involved the evaluation and synthesis of data on the purpose, similarities and differences of the old houses from the Spanish era and relating the implications to the present and future time, the study used documents, relics and artifacts, and reports as sources of data. As to oral reports, key informants involved 80 residents of barangay South and North Poblacion and were identified using the random sampling technique.

RESULTS

The old houses of Juban were used as residential houses by some families who are believed to be the richest clan in the municipality of Juban which include the Bendillo, Guevara, Grajo, Alindogan and Gorospe clan. At present time, some of the old houses are used as residential house namely: Olondriz, Grajo and the Gorospe Ancestral House. The old houses along the Maharlika Highway specifically the Alindogan, Guarin and Grajo ancestral houses serves as tourist attraction to the tourists and visitors of the municipality. Similarities and differences of the use and functionality of the old houses of Juban is at an average extent, because some of the old house were still used as residential houses while others serve different uses, such as function hall and lodging. The use of Advocacy Video Program on Bahay na Bato Old Houses of Juban will contribute to the developing tourism of Juban.

DISCUSSIONS

This study shows the use of the old houses during the Spanish era in terms of history and in the present time in terms of functionality including their similarities and differences and may be subjected for a further study for historical context. Historical documents of this old houses may be a big help for future researchers which can give a justifiable output and outcome for the continuous development of the tourism industry in Juban.

KEYWORDS: Ancestral Houses, Heritage, Tourism

SUBMISSION ID: R005-REGOFF-0001

**Testimonies of the Socio-Cultural and Historical Facts of Nuestra Señora
De Las Angustias**

Maricon Quinto, Department of Education

Abstract

INTRODUCTION

This study aims to determine the socio-cultural and historical facts of the devotees of Nuestra Señora de las Angustias about the establishment of Inorogan Shrine and its implications to various aspects of human life. It also seeks to understand the historiography of Inorogan Shrine and the socio-cultural and historical realities of their devotion to Nuestra Señora de las Angustias in the promotion of strong family and social relations, spirit of oneness in the community, peaceful community, educational achievement, religious tourism and culture, religious moral personality, economic growth, and political stability.

METHODS

A qualitative historical research was employed in the collection and analysis of data utilizing variety of strategies, such as exploratory interview, documentary, informal group discussions and content analysis. The findings of the study revealed that the historiography of the establishment of the holy shrine from the different key informants are interconnected.

RESULTS

It was also discovered that the devotion to Nuestra Señora de las Angustias has led to the establishment of strong family and social relations, spirit of oneness in the community, peaceful community, educational achievement, religious tourism and culture, religious moral personality, economic growth, and political stability. The people's devotion influences institutions of society that help shape behaviors and relationships, especially, the family and the school, institutionalized religious activities encourage individuals and organizations to renew their commitment to the society while the practice of religion and the exercise of devotion is a powerful antidote to many of our pressing social ills in the countryside. The study is deemed to have so much effect on society and culture, religion and ethics, economics and politics.

DISCUSSIONS

The historiography of Inorogan Shrine of Nuestra Señora de las Angustias is already a common knowledge to the people of Iriga City and of the adjacent localities. The socio-historical realities of Inorogan Shrine of Nuestra Señora de las Angustias are very evident among individuals, families and communities and have influenced religion, education, economy and the government. Inorogan, also serves to bind people together especially in times of crisis and confusion. Though sometimes dysfunctions occur, religious institutions have that powerful mechanism to address religious conflict, through their prayer warriors.

KEYWORDS: Testimonies, Socio-cultural and Historical Facts, Nuestra Señora de las Angustias

SUBMISSION ID: R005-IRIGAC-0013

Unfolding the History of the Quadricentennial Roman Catholic Churches in the Province of Camarines Norte

Daryl Quinito, Moreno Integrated School

Abstract

INTRODUCTION

Being a devoted Roman Catholic, born and raised in the same faith by equally devoted parents, the researcher took a heartfelt fascination on how religion could influence, shape and reshape his immediate society, the Province of Camarines Norte. The study aimed to document the history and significant contributions of the Quadricentennial Roman Catholic Churches in the Province of Camarines Norte.

METHODS

The oldest living local folks, active church youth leaders and the present parish priests of the quadricentennial churches were the key informants. To validate the responses from the structured and unstructured interviews, the quantitative method was utilized with the parish pastoral council as respondents. The researcher also employed documentary analysis and observation. The mixed methods (qualitative and quantitative methods) and historical design and descriptive evaluation were employed.

RESULTS

The quadricentennial churches of Camarines Norte remain as stunning features and silent witnesses to the rich culture and history of the Province of Camarines Norte. These centuries-old churches are proofs of early civilization, colonization and perpetuation of Catholicism and are tangible symbols of the rich cultural heritage, beliefs and traditions of the local folks. The supplementary reference material entitled "Delving into the Quadricentennial Churches of the Province of Camarines Norte: Their Contributions to the CamNorteños", was crafted so as to preserve and promote the Catholic faith, culture and traditions through meaningful education in traditional classroom settings. Based from the findings, a conclusion was drawn: The quadricentennial churches kept the local folks' faith in God amidst the passing of time and the challenges of modern living. These churches are proofs of the long and steadfast catholic faith of the people in Camarines Norte despite the influences of modern technologies, globalization and growth of religious sects.

DISCUSSIONS

Finally, Local historians and other research enthusiasts may continue to unearth and record the significant events, cultures, practices and traditions of Camarines Norte using technology to ensure widest dissemination and preservation of the historical records. A strong relationship should be maintained with the community, various government and non-government sectors like different societal groups, religious and education sectors,

KEYWORDS: Quadricentennial, Roman Catholic Church, Historical Unfolding, Province of Camarines Norte

SUBMISSION ID: R005-CAMNOR-0016

HOSPITALITY MANAGEMENT

Hiring Requirements of Selected Hotels and Restaurants in the National Capital Region: Basis for a Proposed Outcomes-Based Education Framework of Hotel and Restaurant Management Program

Jeffrey Aguila, Cavite State University

Abstract

INTRODUCTION

The main purpose of the study is to determine the hiring requirements of selected hotels and restaurants in the National Capital Region as a basis of the proposed outcomes-based education frame work for Hotel and Restaurant Management program.

METHODS

The study used descriptive research design utilizing quantitative method of research. The main instrument is composed of four parts namely, Demographic Information, Profiles of the Establishment, Hiring Requirements for Entry-level Positions in the Hotel and Restaurant Sector; and Challenges Encountered in Hiring Fresh Graduates with a Degree in Hotel and Restaurant Management. The study used purposive sampling technique in selecting respondents. A total of 22 managers / employers from the selected hotels and restaurants in NCR participated in this study.

RESULTS

The results showed that HRM graduate's physical attributes, knowledge, skills, attitudes, certifications and other pertinent documents are very essential requirements to qualify for an entry-level position in the hotel and restaurant sector.

DISCUSSIONS

It can be concluded the research results on hiring requirements affirm that there are specific requisites or criteria that an HRM graduate must have in order to qualify for an entry level position in the hotel and restaurant sector in the NCR. It is recommended to all HRM students and new HRM graduates to enhance their employability, hospitality faculty provide the realistic presentation of career expectations imbedded across hotel and restaurant sector, hospitality schools/ Universities schools offering Hotel and Restaurant Management program can adapt the proposed Outcomes-Based Education framework, and to hotel and restaurant employers and/or managers to provide educational institutions with more opportunities for student internships and practical training.

KEYWORDS: Hiring Requirements, Hotel and Restaurants, National Capital Region, HRM, Outcomes-Based Education

SUBMISSION ID: R04A-DASMAR-0002

INDIGENOUS STUDIES

Contextualized Curriculum Design in Alternative Learning System for Indigenous peoples Education in Batangas and Batangas City

Alexander De Castro & Brenda C. Gregorio, Department of Education - Batangas
Province Division

Abstract

INTRODUCTION

The study aimed to develop the contextualized curriculum design on Alternative Learning System (ALS) Indigenous Peoples Education and to describe the content of the said curriculum used by the ALS teachers of Department of Education Batangas Province and Batangas City to its effectiveness in teaching - learning process in Indigenous Peoples (IPs) in community learning centers. The problems met in using ALS-IP curriculum in the implementation of ALS Indigenous People Education may be analyzed further in developing the curriculum design in Alternative Learning System.

The study is conducted to develop the contextualized curriculum design for Indigenous Peoples in Alternative Learning System. The Documentary Analysis of research design was utilized to gather data. A Survey Questionnaire was the main data gathering instrument and was supported by the interview among the respondents compose of district ALS coordinators and ALS mobile teachers teaching in IP community. A focus group discussion, observation and interview was conducted to the respondents to have a full understanding on the contextualization and localization of Alternative Learning System IP Curriculum. The statistical tool used were frequency and weighted mean.

METHODS

This study employed quantitative - qualitative research suited to the main and specific objectives of the researcher. This was used as tool in gathering the data to the different queries that this study tried to answer. This type of design was chosen as it was deemed most appropriate and useful to describe the content of ALS Indigenous Peoples Curriculum.

In general, this study employed a qualitative and quantitative research method purposely to describe the variables and narrate, document and interpret in-depth the National Alternative Learning System Indigenous Peoples Curriculum and Indigenous Knowledge for the integration in the development of contextualize Curriculum for Aetas and Badjaos.

RESULTS

1. The most prevalent learning strand was the problem solving and critical thinking skill with a weighted mean of 23.53 which ranked first as revealed by 17 respondents. The indicator which was submitted as the utmost number was the use of scientific thinking in the application in problem solving and critical thinking.

Under learning strand six, Mother craft or pagsasarili, the indicator on acquiring knowledge, attitudes and life skill of improved living divulged less mastered ranked first which was equivalent to 64.71% as per evaluation of the ALS teachers handling ALS IP learners. This means that this aspect needs to be attended by the authorities who are in-charge in the development of the lives of the Indigenous Peoples in Batangas who showed interest in improving their lives as members of the community.

For the development of self and a sense of community under learning strand 3, recognition, promotion and protection of IPs'/ICC rights and welfare was the most number of responses expressing that this indicator was one of the problems that affect the lives of the IPs in the province. It signifies that the education being provided to them should address the provision of recognition, promotion and protection of their ancestral domain as the major IPs /ICC rights.

DISCUSSIONS

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KEYWORDS:

SUBMISSION ID: R04A-BATANP-0036

**From Community to the City: The Lived Experience of the Badjaos in Sittio
Callejon, Libjo, Batangas City.**

Jayson Patrick Samonteza, Looc Integrated School

Abstract

INTRODUCTION

This research study delineates the life of Badjao in terms of language, livelihood, religious belief, cultural practices, education, gender roles and political system, and documented their lived experience in their community in Mindanao and in the city before and after being of part of a new community in Libjo Batangas.

METHODS

A phenomenological research was chosen to explore the lived experiences of Badjao from their origin in Tawi -Tawi to Batangas City. This paper was made because the researchers believe that there is a need to have more research about the subjective experience of Badjao from their origin place to the city.

The study involved 15 Badjaos from Born Again Community, Batangas City, who have experienced living from their dominant geographical location to cities living on their own, and lastly became part of the Badjao community in Batangas. More than this, the respondents were selected according to their sex, in order to address the lived experiences of both sexes. Interview guide questions made by the researchers as the instrument of the study was used. The questionnaire is composed of two parts: Part 1 explores the demographic information of the respondents while Part 2 is consisting of interview guide questions that revealed information about the research topic.

RESULTS

Badjao used to believe in many customary practices due to their animistic religion. Now that they are already Born Again Christian, some of their customary practices are already excluded, some are retained and others are just modified.

DISCUSSIONS

Badjaos of Libjo Batangas in their own experiences revealed that as an itinerant people they adapt to other culture, they accept other culture and they reject some of their culture but despite of their experiences they are proud to be called Badjao. Inclusivity is a need in every pages of society. Indigenous people like Badjaos must be empower to achieve progress in their community.

KEYWORDS: Badjao, Indigenous People, Culture, History

SUBMISSION ID: R04A-CALAMB-0301

**Mainstream Culture and Practices to the Ethnic Conservatism of the
Dumagat People of Santa Maria, Laguna**

Mark Joevert Zamora, Department of Education, Siniloan Integrated National
High School (Senior High School)
(Adviser: Icy Princess Trencio)

Abstract

INTRODUCTION

Modernization is the world's solution for a better globalization. It is widely patronized by people of every nation led by progress and innovation. However, as it fosters the country's development, it puts ethnicities to tribal extinction and soon be only part of history books if not given proper attention by the government authorities. In this study, the researcher explored the ethnic conservatism of the Dumagat People of Santa Maria, Laguna to identify how steadfast they are when it comes to the conservation of their cultures and practices.

METHODS

In this study, the researchers applied quantitative method particularly with the use of survey questionnaire. A Quasi-Experimental design was used. It seeks to establish a cause-effect relationship among two or more variables. Prior to the conduct of the study, the researchers identified one group of respondents through purposive sampling technique. Among the group are thirty indigenous Dumagats from Sta. Maria Laguna with no specific demographic profile who responded to a set of survey questionnaires using a 5-point Likert scale. Data gathered were treated using the paired T-test statistical analysis.

RESULTS

When it comes to the extent of mainstream cultures and practices, the Dumagats are slowly assimilating to the larger accepted culture. However, the level of their ethnic conservatism is considered to be very low. Although they have been practicing their customs and traditions for centuries of generations, the late millennium had brought innumerable changes to their lives, socially and economically. Due to these rapid changes in the environment, loss of centuries old customs and traditions were held. They already set aside what their ancestors have given for them to be able to cope and survive to the changing environment. On the other hand, there's no significant relationship between mainstream and ethnic conservatism showing that the null hypothesis is true. The tremendous rise of modernization affected the way indigenous people live, removing the indigenous people from isolation to their phase of introduction to globalization.

DISCUSSIONS

The results indicated the grave need for the government's assistance to the Dumagat people, in order to achieve their basic needs without entering cultural borders. Dumagat ethnic culture will continue to vanish if the government won't respond immediately. The main reason why they assimilated to the larger culture is due to survival and the fall of isolation which is the result of urbanization.

KEYWORDS: mainstream culture, ethnic conservatism

SUBMISSION ID: R04A-LAGUNA-0077

Mother Tongue-Based Education to Indigenous People's Knowledge and Personality Development

Icy Princess Trencio, Department of Education, Siniloan Integrated National High School (Senior High School)

Abstract

INTRODUCTION

Language is an integral feature of educational practice in the classroom where educators link content and instructions via language where both children and teachers express well. Revealingly, the ethno-linguistic minorities' language skills do not serve them well because their language has no place in the classroom for the textbooks and teachings are in a language they neither speak nor understand for the curriculum and instruction is that of the dominant society. The study aimed to determine the impact of mother tongue-based education to indigenous people's knowledge and personality development.

METHODS

This dissertation study employed the descriptive-ethnographic research using a self-made questionnaire and a standardized test in gathering data from 43 teachers and 393 pupils from the Agta/Remontado indigenous group in General Nakar, Quezon also, an unconstructed ethnographic interview during a two-week immersion were made by the researcher to gather the data needed and to triangulate their responses for qualitative output. The statistical treatment used for data analyses were Chi-Square and Spearman-Rho Tests.

RESULTS

The findings revealed that all of the aspects (social, ecological, economic and cultural) investigated under the Mother Tongue- Based Education bear significance to personality development while, curriculum and instruction were significant to indigenous people's knowledge except for learning materials. Prior to the extent of mother-tongue, the curriculum primarily develops relevant skills, knowledge and values that will equip the learner and help them contribute to society and take pride in their indigenous identity instead of being uncomfortable about it. Also, with respect to their personality development the pupil-respondents were ecologically strengthened through learning how to protect their cultural sanctuary and even protect its biodiversity. While in relation to the result of the standardized test it showed that they bore competence on communication skills and analogy -that widens their point of view as an indigenous individual.

DISCUSSIONS

The Indigenous learners learn best when the educational program where designed based on their culture and world views hence, in communicating the contents it is more essential that it will be delivered to their native language. For the future researchers, they may conduct studies of similar nature specifically, experimental or performance test is recommended for future evaluation.

KEYWORDS: agta, indigenous education, mother tongue-based education

SUBMISSION ID: R04A-LAGUNA-0122

Suliranin sa Agarang Pagkatuto ng mga Mag-aaral na Badjao sa Mataas na Paaralang Pambansa ng Batangas

Rosalina Medrano Kasugufil, Department of Education - Batangas City

Abstract

INTRODUCTION

Education is for all. The study aims to determine the problems encountered by Badjao Students in Batangas National High School. The factors that affect learning in each class room looked into certain elements including where the students reside, materials that aid in learning and monetary aspect necessary to enable learning to take place.

METHODS

Descriptive research was utilized in data gathering and information collection. To back up data, the researcher used techniques such as observation, interview with elder IP's and other respondents, one-on-one discussion and Focused Group Discussion(FGD). Further data were gathered through documents such as students' records and learner's learning competencies. Another source of information was utilized, which is the open or free-flowing discussion among sixteen (16) Badjao students.

RESULTS

The study showed that the primary reason for absences in classes is the lack of finances-no money for transportation and food. The study also showed that said students had difficulty in understanding the lesson because the medium of instruction in English or Tagalog, which is not their native language. It was further determined that most of the students, albeit difficulties, to finish their studies and become professionals- teacher, welder, hotel and restaurant management, seaman, designer and social worker among others.

DISCUSSIONS

The researcher recommends that a special program be offered to Badjao students. This program should include interventions in reading, writing, and other activities related to fostering quality education to said students.

An immediate solution was given concerning the problems encountered. School supplies such as umbrella, bags, notebooks, pencils, ball pens, paper and boots were distributed to the students. Some of the students took part in the feeding program. Through the efforts of the researcher scholarship benefits were also granted through the help of certain people.

KEYWORDS: problem, immediate, learning, Badjao, fisherfolk, local, language, free flowing

SUBMISSION ID: R04A-BATANC-0311

**The Cultural Dynamism of Manide Indigenous People of Jose Panganiban,
Camarines Norte**

Florice Balderama, Alawihao NHS

Abstract

INTRODUCTION

The study brought to light the cultural dynamism, changes and adaptability of Manide tribe in Calibigaho, Osmeña, Jose Panganiban, Province of Camarines Norte. This study unfolded the historical development of the Manide in Jose Panganiban as to their socio- economic status, education, government programs, traditions, beliefs and practices; the factors affecting cultural dynamism

METHODS

The ethnographic approach adapted from J.P. Spadley's work in applying participant-observation during the immersion period, an in depth interview was made, observation and documentation. Number of literature and studies presented about the factors of cultural dynamism of indigenous people, yet none had ventured on the result of the adaptation of cultural changes in their tribe. This is the apparent that this present research would attempt to address.

RESULTS

The historical development of the Manides. Tribe was acquired their settlement by virtue of the Certificate of Stewardship Contract from the DENR. Socio-Economic. Farming, fishing and mining are their primary source of income. Education. Manide pupils/students were lucky to have sponsors in their education from NGO and government entities. Adult education is also implemented in their tribal settlement.

The Manide tribe members are not far from lowlanders from the use of gadgets like cellular phones, computers and social networking like Facebook. Calibigaho is their ancestral domain and they till and cultivated their land. Manide Resistance- Government activities and NGO assistance also contributes cultural dynamism and there is no evidence of resistance from the manide for all the advocacy and activities being introduced and implemented to them. Values Conversion- Despite the influence of the lowlanders, the traditional culture and rituals still exist.

DISCUSSIONS

Manides have acquired the ancestral domain of their land. Technology, Education, Communication Gadgets, Peer Influence, Modern Heath Practices are the factors that affect the cultural dynamism of the Manides.

The cultural preservation of Manide tribes' can be achieved through education and documentation of their local culture. Implication of this study is the proposed holistic developmental plan. A booklet with sample lesson plan to teacher on how to integrate the indigenous people culture change in teaching Senior High School in Understanding Culture, Society and Politics with sample activities to make the lesson collaborative and integrative.

KEYWORDS: Cultural Dynamism, Indigenous People, Environmental Resistance, socio-economic, ancestral domain

SUBMISSION ID: R005-CAMNOR-0042

INDUSTRIAL DESIGN

Designing, Constructing, and Performance Testing of Innovated Crop Cutter

Marie Liberty Faye A. Allauigan, Quirino General High School
(Adviser: Maylyn R. Acebo)

Abstract

INTRODUCTION

This study was conducted last November 20, 2016 to September 20, 2017 at San Marcos and Zamora, Cabarroguis, Quirino. This study aims to determine the significant difference between rice crop cutter and sickle in terms of their duration of harvesting (seconds) and mass of harvested rice in kilograms. This study also aims to find out which of the rice crop cutter and sickle performs better in terms of their duration of harvesting (seconds) and on the mass of harvested rice in kilograms.

METHODS

The researcher used t-test to determine if there is a significant difference between the two samples; rice crop cutter and sickle in terms of their duration of harvesting in a given area. Also, the researcher included the weight of the harvested rice to their data. In order to determine the best treatment in terms on the duration of harvesting, the researcher compared the sample mean of each treatment. Same through in finding the best treatment in terms on the mass of harvested rice, the researcher also compared the sample mean of each treatment.

RESULTS

By conducting this research the researcher have come up with the following conclusions; there is a significant difference between Treatment 0 and Treatment 1 in terms on the duration of harvesting in a given area and the researcher also find out that the Treatment 1 (which is the use of rice crop cutter) is a better treatment in terms on the duration of harvesting rice crops in a given area.

DISCUSSIONS

With the use of t-test the researcher found out that there is no significant difference between Treatment 1 and Treatment 0 in terms on the mass of harvested rice. In terms on the weight of harvested rice, Treatment 1 with the use of rice crop cutter was found to be the better treatment.

KEYWORDS: Designing, Constructing, Performance Testing, Innovated Crop Cutter

SUBMISSION ID: R002-QUIRIN-0021

Production of Bio-Based Thermal Insulator Using Tapioca Starch and *Oryza sativa* (Rice) Husk

Jan Corinne V. de Guia, Jernil A. Diaz, & Shalom C. Ruazol, Cavite National
Science High School

Abstract

INTRODUCTION

The Philippines allocates 47% of its land for agriculture (Zafar, 2018). Despite the great advantages this sector brings, the abundance of agricultural wastes has become a problem. These wastes are burned, bringing harmful effects to the environment and health of the farmers (Department of Science and Technology, 2006). As a tropical country, the Philippines also experiences high temperature that ranges from 32 to 41 degree Celsius. This falls under extreme caution in the heat index scale of PAGASA (Cabuenas, 2018). With these situations, the study aimed to produce a bio-based thermal insulator to resolve problems on agricultural wastes and high heat index in the country.

METHODS

Rice husk in varying amounts (25, 40, and 50 g) was treated with muriatic acid for an hour. One hundred fifty (150) mL of wood glue, 50 mL of distilled water, and varying amounts of tapioca starch (180, 150, and 120 g) were added. The mixture was stirred, transferred to a mold, and was left to dry. Two wood boxes were made (one installed with a commercial insulator and the other with bio-based insulator). Both insulator underwent the flammability test, water absorption test, and rate of heat transfer test. The preceding processes were done for three trials. Collected data were organized and analyzed using One-Way Analysis of Variance.

RESULTS

The commercial insulator burned the fastest (8.7 s) while Set up B burned the slowest (129.5 s). In terms of water absorption, Set ups B and C had the least amount of absorbed water (0.5 g). On the other hand, Set up A absorbed the highest amount (0.7 g). Bingel and Bown (2009) stated that if a material absorbs water, its strength and durability decreases. The commercial insulator performed best in preventing heat loss. The retained temperature is 51 degree Celsius, followed by Set up C, B, and A. With a level of significance of 0.05, results of One-Way ANOVA show that there is significant difference between the insulators in terms of flammability and no significant difference in terms of water absorption and rate of heat transfer.

DISCUSSIONS

Results show that the produced insulator is comparable to the commercial insulator in terms of water absorption and insulation properties. Meanwhile, in terms of being flame-retardant, the bio-based thermal insulator performed better than the commercial insulator. These imply that varying amounts of rice husk and tapioca starch affect the flame retardant, water absorption, and insulation properties of the bio-based thermal insulator.

KEYWORDS: agricultural wastes, bio-based, insulator, rice husk, tapioca starch

SUBMISSION ID: R04A-CAVITP-0151

Prototype Mini Hydroelectric Generator

John Angelo I. Guillermo, Quirino General High School

(Adviser: Joane G. Gabor)

Abstract

INTRODUCTION

The demand for energy has become relentlessly increasing especially in this era of booming economy, industrial activity and population. Finding energy alternative sources of energy have become increasingly popular as well to address the impending power crisis. The introduction of a new generator design is envisioned to minimize the cost and consumption of power in a community.

METHODS

A descriptive method was used in this study. The Prototype Mini Hydroelectric Generator was mostly made by recyclable materials. The performance of the machine were tested in terms of its power generation and machine efficiency. There were two trials in testing the generator. First, a low water pressure was used in testing the minimum power generation and a high water pressure to know the maximum power generation. The turbine will rotate as long as there is a flowing water to drive it. The rotor is attached to the turbine shaft and rotates. When the rotor turns, it causes the field poles to move past the conductors mounted in the stator. This caused electricity to flow and power to generate at the generator output terminals.

RESULTS

The power generation performance was based from the power generation machine efficiency (power output/power input x 100). The result showed that the average power production of volts per minute with a power inverter is 224.4 volts. In terms of the efficiency of the hydroelectric generator, it was noted that its average power generation efficiency is 96.96 percent. The result produced from the machine with power inverter is different from the rate of voltage generated. For the power generation efficiency, it was observed that it has a high percentage capability in producing enough volts to power a bulb (220 volts). Based on the tests, the generator is feasible to generate power.

DISCUSSIONS

Based on the gathered and testified data, the results showed that the Prototype Mini Hydroelectric Generator is capable of producing voltage in both high water pressure and low water pressure. It produces higher voltage when driven by high water pressure and it produces lower voltage when driven by low water pressure.

KEYWORDS: prototype, alternative power source, generation efficiency, voltage generated

SUBMISSION ID: R002-QUIRIN-0024

Quality Testing of Homemade Garden Tiles

Natajcia Mira Quindica, Quirino General High School
(Adviser: Imelda C. Sibayan)

Abstract

INTRODUCTION

Agriculture industry plays a significant role in the Philippine economy. It involves about 40 percent of Filipino workers contributing an average of 20% to the Gross Domestic Product. This comes mainly from agribusiness which in turn accounts for about 70% of the total agricultural output (CIDA - LGSP, 2003). This sector produces food crops, meat and animal products. It also produces tons of other materials long regarded as wastes. These wastes include crop residues, parts of crop plants not eaten and farm animal's waste products. Disposal of agricultural wastes is the main concern of our locality. People usually burn and throw garbage in canals which causes pollution and blocks the flow of water causing floods. To take action of these wastes, people started to recycle to lessen or eradicate waste. This is one of the reasons the researcher is encouraged to conduct projects using agricultural wastes. Production of home-made garden tiles with the use of these wastes is seen to be a potential solution to address the problem concerning to waste management.

METHODS

This study is experimental in design. Different agricultural waste were gathered. The control variable were commercial tiles while the different treatments were the different mixtures of the agricultural waste. The mixtures were placed in similar molders and sun dried for 7 days. The finished products were subjected to different test, compressive strength in DPWH, breaking point, water resistant. The return of investment were computed.

RESULTS

The different tiles were tested on its quality. The treatment with highest compressive strength is the T3 (egg shell), the treatment with highest breaking point is the T2 (Areca Nut), and the treatment with lowest water resistant is the control variable followed by T3. Moreover, the water resistance of the different treatments has significant difference. Lastly, different tiles made a potential source for return of investment.

DISCUSSIONS

Based on the findings, T1 and T3 are the best treatments in terms of its water resistant. However, none of the treatments has significant difference in terms of breaking point and compressive strength. The different materials used in the study can be recommended in making homemade garden tiles. Also, the agricultural waste will be reduced. Furthermore, future researches may find other agricultural waste for the production of tiles.

KEYWORDS: Quality Testing, Homemade Garden Tiles

SUBMISSION ID: R002-QUIRIN-0019

INFORMATION SYSTEMS

Attendance Tracking System Using RFID Card: A Tool to Increase the Attendance of Grade 9-Exodus Students of Don Manuel Rivera Memorial National High School, School Year 2017-2018

Jennifer Garbo, Department of Education

Abstract

INTRODUCTION

Attendance is important to students. RFID can be a tool to manage students' attendance. ATS using RFID card was utilized to increase attendance.

METHODS

Descriptive method was used in the study. ATS using RFID was launched. Z-test was used for correlation.

RESULTS

The ATS using RFID has significant difference in attendance. Students developed habit of regular attendance and punctuality.

DISCUSSIONS

The difference between the attendance of students after using ATS showed its effectiveness.

KEYWORDS: ATS using RFID to increase attendance

SUBMISSION ID: R04A-CAVITP-0337

CavSci Information Desk

Mauie Jonas, Student

Abstract

INTRODUCTION

One of the main problems of some people especially visitors visiting Cavite National Science High School, was having difficulties knowing the information about the school in terms of the location of the buildings, schedules, and the faculty in the school. With the use of advanced technology, Cavsci Interactive Desk (CID) is a modern solution to these common problems faced by the people toward our school. Kiosks are stand-alone devices that can deliver the same amount of quality for everyday use, and it does simple tasks such as answering questions, or providing information.

METHODS

Evaluation forms which consisted of a criteria and a rating table that was measured from one to five. Five being the highest and one being the lowest. The survey in terms of: (a) Appearance, (b) Content, (c) Functionality, (d) Accessibility was answered by 108 random Grade 7 students of Cavite National Science High School and the researcher computed the result for examinations and data analyses.

RESULTS

After surveying 108 random students from Grade 7, the data were evaluated by the researchers. The passing percentage of the survey must be at least 70%. Based on the results, the percentage of the survey given by the researchers and answered by the chosen Grade 7 students was 82.5% which shows that they have a positive response towards the prototype. Because of the result of the survey, the researcher concluded that the null hypothesis was rejected. The result showed that the prototype was proven to be accurate in terms of appearance, content, accessibility, and functionality.

DISCUSSIONS

CavSci Information Desk was a prototype device that is intended to inform the students about the information about Cavite National Science High School through the use of advanced technology. Based on the evaluation of random Grade 7 students, the CID gathered 82.5% of the positive responses which means that CID reached the public standards that gives relevant information. With the use of CID, Cavite National Science High School can compete with other schools in making advanced technology relevant in giving knowledge to people. Kiosks that can be found in some places lacks information that can satisfy the inquirer's query. CID aims to provide correct information to the user in order to satisfy its questions and queries.

KEYWORDS: technology, information

SUBMISSION ID: R04A-CAVITP-0337

CavSci Interactive Desk

Jasmine Lozares, Mauie Jonas, & Valerie Mhay Tigca, Student

Abstract

INTRODUCTION

One of the main problems of some people especially visitors visiting Cavite National Science High School, was having difficulties knowing the information about the school in terms of the location of the buildings, schedules, and the faculty in the school. With the use of advanced technology, Cavsci Interactive Desk (CID) is a modern solution to these common problems faced by the people toward our school. Kiosks are stand-alone devices that can deliver the same amount of quality for everyday use, and it does simple tasks such as answering questions, or providing information.

METHODS

Using the Slovin's formula, the researchers chose to utilize the 108 Grade 7 students. Evaluation forms which consisted of a criteria and a rating table that was measured from one to five. Five being the highest and one being the lowest. The survey in terms of: (a) Appearance, (b) Content, (c) Functionality, (d) Accessibility were answered by 108 random Grade 7 students of Cavite National Science High School, and the researchers computed the result for examinations and data analyses.

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KEYWORDS: Kiosk, Information, Cavite National Science High School

SUBMISSION ID: R04A-CAVITP-1504

Cavscite: Cavite National Science High School's Official Website

Leeann Mae Manalo & Yenzhou Nicolas

(Adviser: John Edsel Varias)

Abstract

INTRODUCTION

We are living in a fast paced, technology advanced world; when a parent is trying to find information about a school, the first place they look is the internet. Cavite National Science High School is the Regional Science High School for CALABARZON located in Garita-B, Maragondon, Cavite, Philippines. It lacks information on the internet or social media. Nine out of ten students in the school do not have enough knowledge about it. The school has no legitimate and updated website. Finding information about it such as its profile, events and achievements was difficult because it is not available online.

METHODS

Laptops were used for editing, installing, encoding and making the website. Cellphones were used for getting pictures and information. Wix was used as the website platform. Programming using HTML was conducted. The web designing was made as simple and plain as possible. Taking pictures of the facilities and gathering of information about the school was conducted. Next was the actual making of the website using wix.com, a website publishing. After making the website, it was published with a good price in own domain. Next was promoting the website through social media and posters. A survey was posted online for feedback through Random Sampling. Lastly, the analyzing of data through percentage.

RESULTS

Most of the respondents who answered the survey had a high rating to our website which indicates that the website had an excellent overall ratings based from the perspective of the users (students, teaching and non-teaching staffs, parents and other people who are curious about the institution) since the website has the exact information needed and it has a semi-formal theme which captivated the interest of users. Based from the recent result of the study and the previous one, the latest website has better results, information, and quality. Given that the previous (old) website was made using HTML, it has limited options and functions compare to the platform of the latest website (new) that was made using Wix.

DISCUSSIONS

The result indicates the importance of having a website, which benefits the users about the needed information about the school. It also shows the need of a website in a school for the information and news that benefits the users specifically the students, faculties, stakeholders, parents, and other people who are curious and interested about the institution. The website doesn't have much fixed security that may lead to hacking and spreading of wrong information. Having security will be a huge factor to keep the website as it is and by updating it as soon as possible.

KEYWORDS: website, wix, HTML, Cavite National Science High School

SUBMISSION ID: R04A-CAVITP-0832

Common Cellphone Apps Preferred and Apps Programs of Senior High School Students

Dessy Mae F. Boleche

Abstract

INTRODUCTION

The applications (Apps) that can be downloaded to smartphones or android phones are inventions that keep individuals connected to society, especially the Senior High School students that feel either cellphones or smartphones are an essentials to survive. Today, many students primarily uses smartphones for running apps but what are most common preferred apps of the Concepcion National High School Senior High School students. Students nowadays, are more engaged in using non-educational apps more than the educational apps that later on leads to a poor study habits poor academic performances.

METHODS

The statistical tools/method that were used to treat the data is Frequency and Percentage. This were used to measure the data gathered for the common preferred apps of the Senior High School students.

RESULTS

This study shows that 60% of respondents are male, most (63%) of the respondents are 16 - 17 years old ,24 out of 30 respondents use Facebook as social media apps, 20% of the respondents preferred Mobile Legends as game apps, 27 out of 30 respondents preferred Meriam-Webster Dictionary as educational apps. Most of the respondents spent 3-4 hours a day using social media apps, 14 out of 30 students spent 1-2 hours a day in using game apps, 15% of the respondents spent 1-2 hours per day in using educational apps, majority (85%) of the respondents uses social media apps for communicating and for fun, and 56% of the respondents engaged in social media apps to communicate with their friends, family and love ones.

DISCUSSIONS

Preferred cellphone apps of the respondents can affect their studies. Students are more engaged in using cellphone apps they are in studying. The result of the study showed that the respondents are easily tempted to use cellphone apps that they preferred (mostly social media apps to communicate and to monitor their love ones) than to do their academic tasks. Teenagers are curious of new things and bring a new set of attitudes and preference that separate them from their predecessors that is why they are not focused in one thing like studies.

KEYWORDS: phone apps, preferred phone apps, non-educational apps

SUBMISSION ID: R012-KORONA-0004

Human Society Development in Connection with Animal Husbandry App

Alexandra Nicole Aquillano & Jehiel Grace I. Rotazo, Student

Abstract

INTRODUCTION

Animal husbandry is not commonly known especially in the field of agriculture. Animal Husbandry deals with the feeding, breeding and healthcare of livestock for getting maximum benefits. The word 'husbandry' means the management of domestic affairs. In this generation's knowledge about technology, many machines and devices that make people's lives easier were massively produced. The purpose of this study is to inform people about animal husbandry and how it can help a lot of people through increasing the production of supplies needed by man.

METHODS

This application consists of lectures, pictures, and quizzes to help the user further understand the information given. The programming used to build the app is the MIT App Inventor. The respondents for this study are Grade 8 students from S. Y 2018-2019. The statistical analysis used is Two-Way ANOVA.

RESULTS

In the statistical analysis, the F-computed value in the interaction row is 2.088929 and the F-critical value is 0.563043, the F-computed value which is 2.088929 is greater than F-critical value 0.563043, the null hypothesis which states that there is no significant difference in the results of the pre-test and post-test of the selected Grade 8 students is rejected.

DISCUSSIONS

In accordance with the result, it means that the application is fully working and can give an impact to the knowledge of the respondents about animal husbandry.

KEYWORDS: Animal Husbandry, Livestock, Application, Agriculture, Information, Programming

SUBMISSION ID: R04A-CAVITP-0903

**Impact of Learning in the Use of Modern Technology of the Senior High
School Grade-12 General Academic Strand**

Jenifer Barruga & Josephine Avenilla, Calamba Integrated School

Abstract

INTRODUCTION

Nowadays, students use modern technology to access information easily. The students are able to create multimedia content and immediately share it to the world and participate in social networks where people from all over the world share ideas, collaborate and learn new things. The use of modern technologies is a powerful tool in transforming the learning process of the world.

It can help affirm and advance relationships between educators and students and adapt learning experiences to meet the needs of all learners. Smartphones and laptops are everywhere and they have become an integral part of everyday life. Everyone, from children to adults seem to own these devices and they are literate in using them.

Smartphone and laptop has been a great help to new generation, especially in gathering information to academic purposes. In fact, we are living in a 21st century, the era wherein students solely depend themselves in smartphones and laptops in terms of gathering data for their academic tasks, that is why it is called "Technology-based Education". With the help of these technological advancements, the world is now flowing in one connection.

METHODS

This research used descriptive survey method in gathering of data.

RESULTS

The result shown in the study is very Influential. It is a good indication and it shows that the students learn more efficiently with the help of these technologies.

DISCUSSIONS

It is revealed in the study that the participants that uses modern technology do perform well in the classroom compared to those who are not using the modern technologies. They can actively participate and give immediate response on the tasks given to them. Students must know their limitations in using their smartphones, laptops and other gadgets in order to utilize the positive result of these studies.

KEYWORDS: learning, modern technology

SUBMISSION ID: R04A-CALAMB-0249

Ionic Compounds Computer Application

John Carlo Perea, John Patrick Nicolas, & Mikkyla Cantorne, Student

Abstract

INTRODUCTION

The use of application software in teaching 21st century learners is starting to gain popularity among teachers in the academe. This is because 21st century learners are expected to have more skills in handling IT equipment. To keep abreast with the changing demands, teachers should try integrating the use of computer software in his/her classroom when teaching. For this reason, programs and applications must be used. This study is an attempt to investigate the use of The Ionic Compounds Computer Application.

METHODS

The Ionic Compounds Computer Application was programmed for the given pre-designed specifications. Then each function of the program was tested for accuracy of and functionality using indicators 1 or 0 corresponding to success or fail. Ten sets of data per function were collected, analyzed, and interpreted.

RESULTS

Results show that for the 10-trial functionality test, all results were successful. Hence a success rate of 100%.

DISCUSSIONS

The Ionic Compound Computer Application was found to be 100% successful in terms of functionality and accuracy.

KEYWORDS: Ionic Compounds

SUBMISSION ID: R04A-CAVITP-1582

**Online Requisition and Inventory System for Department of Education
Batangas City Supply and Property Office**

Marivic Calanog, Tabangao Integrated School

Abstract

INTRODUCTION

Daily operations primarily depend on the availability of various resources and on how well the employees utilize such resources. Department of Education Batangas City Property and Supply Office is responsible for product acceptance and inspection and delivery of items serving different departments of the division office and schools within Batangas City. Managing properties and preparing inventory reports become tedious, since encoding and updating records are done manually. Producing inaccurate and inconsistent reports pose a great challenge that the supply personnel encounter using the traditional way of performing their tasks. The developed website can improve the procedures in monitoring inventory, securing records and account information, and producing accurate reports for Department of Education Batangas City Supply and Property Office.

METHODS

System Development Life Cycle approach was adopted in the analysis, design and development of the system. An ISO 9126 software evaluation questionnaire was used to test the quality of the developed system. Participants were eight supply officers and five IT experts.

RESULTS

Table 1 presents the evaluation result from the respondents in terms of functionality of the system. Security got the rating of 4.5, which indicates that the software provides secured features of preventing unauthorized access as the system uses username and password for registered users only. Suitability also got the rating of 4.5, which means that the software performs its functions correctly.

Table 1

Software Evaluation Result: Functionality

CRITERIA WM SD INTERPRETATION

The software does what is appropriate. 4.5 1.80 EXCELLENT

The software has all available functions required for its execution 4.5 2.69 EXCELLENT

DISCUSSIONS

The system handles adding, saving and updating of property information. The system also produces accurate inventory and condemnation reports. Physical counting is necessary to have an accurate recording of inventory items and producing reports.

KEYWORDS: Inventory, Property, Website, Requisition, ISO 9126

SUBMISSION ID: R04A-BATANC-0091

Proposed E-Voting System for Malinao National High School

Elton Joseph C. Bercasio, Malinao National High School

Abstract

INTRODUCTION

Schools are allowed to organize student's organizations. The problem arises on the manual tabulation and validation of votes. For the past school years, Malinao NHS employed a manual process of election and had several issues, so the researcher came up with this capstone project. The developed system stores data and information of the election system of different organizations of the school. The salient features of the system are the admin and voter's dashboard. The user of the admin dashboard holds the responsibility of creating positions, creating profile of the candidates, adding voters and displaying results. On the other hand, the voter's dashboard is only limited to updating account and casting votes. E-VS operates on computer devices with windows 7 and up operating system. It is compatible with any type of browser and higher versions, but much better in Google Chrome. E-VS requires XAMPP or WAMPP to run and to provide a local host internet connection in order to save data to database.

METHODS

The descriptive research design was used to describe and present the manual election system and the proposed system of the researcher. Developmental research method was also used because the researcher systematically developed and evaluated the proposed election system. System features were evaluated after the conceptualization and development to secure the stability and accuracy of the system. The software development methodology employed by the study is the Rapid Application Development. It has 4 stages: Requirement Planning, User Design, Construction and Cut-over. In RAD method, the client will quickly provide feedback regarding the delivery of the requirements. Interview, empirical observation and questionnaire were the instruments or tools used for gathering data.

RESULTS

The system was evaluated according to ISO/IEC 21050:1. Quality Model focused on the quality characteristics such as functional suitability, performance efficiency, compatibility, usability, reliability, security, maintainability and portability. After tabulation of results, almost all of the evaluators gave an overall rating of far more than what is expected along each of the quality characteristics.

DISCUSSIONS

The evaluation of the system resulted to an affirmative response from the evaluators, although there are still minor concerns that needed to be revised. The assessment of the evaluators is concordant with each other, however, the system still needed to be refined to address its weaknesses and improve its strengths.

KEYWORDS: IT System, election, SSG, Information System

SUBMISSION ID: R005-ALBAYP-0021

**Qualitative Research of Behavioral and Cognitive Effects of ICT to Grade 11
Students of Sta. Clara Senior High School**

Bala, Pauline Andrea P, Banda, Nhuel James R., & Miranda, Zyra, Student
(Adviser: Noel Valenzuela)

Abstract

INTRODUCTION

This study determines the behavioral and cognitive effects of ICT. It deals with the evolution of technology that affects the student's performance whether at school or at home. The researchers examine the fast and advance enhancement of Information Communication Technology in the 21st century. Often these innovations are being developed from time to time, yet the effects of these changes in ICT manipulate the behavioral and cognitive aspects of a student. In this study, the researchers had noticed the need of the community especially the students in terms of their learning progress and diverse behavior towards their peers.

METHODS

This is a type of qualitative research which uses phenomenological grounded theory approach. The researchers focus on the Senior High School students of Sta. Clara Senior High School. 10 female or male students and teachers were responded to a set of semi structured questions. In the data gathered through qualitative analysis, the researchers defined that ICT can be a hindrance to success of the students both in academics and behavioral aspects.

RESULTS

Most of the informants of the study said that ICT had a lot of impacts that may lead into destruction on the development of an individual. In accordance to the result, teachers and parents are responsible for their children to have knowledge about ICT. They are the one who is capable of guiding their children. As a government employee, teachers are the one who must impart their knowledge about the proper use of ICT. In this way, the children will focus on their academics and personality development at all aspects.

DISCUSSIONS

The results demonstrate the lacking of awareness of the students about the effects of Information Communication Technology on their everyday performance in school. As conclusion, the researchers highly recommend to manage their time as students, dividing their time in school and for social interaction.

KEYWORDS: hindrance, diverse, enhancement, cognitive

SUBMISSION ID: R04A-BATANC-0298

Student Grades and Information System for JHS & SHS Students (SGIS)

Ernie Reynales, Department of Education, Sacred Heart High School

Abstract

INTRODUCTION

Teachers spend so much of their time in making various reports needed by the school, students, parents, and as well as the teachers themselves. One major task by the teacher is to accomplish various School Forms (SFs), and the requirement now is for it to be submitted by the teacher in computerized form. What a teacher needs today is a tool that automate some of their reports so that the time consumed in making reports can be used in preparing their lesson plans and instructional materials.

METHODS

Many approach were used to help the teachers in making their reports but instead of helping only one teacher with a similar problem by many teachers, why not use a tool to help them at once. The solution is to use a tool that is accessible by users through their mobile phones, tablets, netbooks, laptops, or desktop computer. The system is a web based application that can run in various operating system where browser is the only requirement.

RESULTS

Most teachers who utilized the tool were very happy since they can easily generate reports instantly through this tool such as knowing their top performer in the class, generate list of students, generate SF1 to SF10, etc. in an excel format. The collaboration between teachers were improved and the submission of their reports is now on time since reports can be generated through this system/tool. On the part of the student, they can easily view their grades through the system. The teacher will not read their grades anymore to the class nor student will ask every teacher about their grade in every subject. The teacher simply posts their grade using this tool and students will be able to view their own grade just by logging in the system.

DISCUSSIONS

The system provides positive impact to almost all teacher who participated in the implementation of the system. A lot of feedback were raised by the teachers. These provides further improvement of the system. The LIS of Department of Education can make use of this tool as basis to provide more avenue for the teacher where in their present system are not included, but some schools who do not have Internet connection, this will be the answer since it does not need Internet connection to function, this web application run in a Local Area Network.

KEYWORDS: Student, Grade, Information, System, IT System, Technology, Innovations

SUBMISSION ID: R005-CAMSUR-0029

IT AND MANAGEMENT

Functional App with Different Emergency Features (EMERGO)

Marc Aljosh C. Baldon, Tagaytay City Science National High School
(Adviser: Mrs. Luzviminda Q. Murillo)

Abstract

INTRODUCTION

An app is a computer software, or a program, most commonly a small, specific launchable program used in mobile devices. There are thousands of apps designed to run on today's smartphones and tablets. Apps were most commonly used to take pictures, send or receive text messages, access the Internet or play games. According to a 2010 study in the Pew Institute, one in four adults in the United States are using mobile apps. The apps market is considered a major and growing part of the smartphone market. Apps are easy and inexpensive to purchase and can be installed and removed from a device almost instantly without affecting the device's systems or other apps.

METHODS

The researchers used single group design and descriptive method as well, to explain the subject clearly and briefly. The researchers used single group design because they wanted to observe and measure the capacity of the different features of the Emergency App as well as the effects on the beta tester. On the other hand, descriptive method describes and interprets what the study all about. Formal procedures are applied and obtaining the citation data based on the samples are better.

RESULTS

In the observation method, most of the researchers answers were satisfied with the emergency app but some said that they are not sure and not satisfied with their encounter and while using the app. Overall, the majority of the choices are satisfied with the overall performance of the EMERGO App. In addition, the researchers also tested the app for different observation purposes.

DISCUSSIONS

The study proved that the app itself can help people make their life secure with the help of the different functional buttons. The app has social media panel, GPS, SOS, Alarm System and mobile flashlight that can help people in need during emergency situations. Out of 100%, 86.43% of the students from the selected sections trust the quality and the effectiveness of the app which can be classified under good satisfaction rating.

KEYWORDS: Functional App, Computer software, Mobile Devices, GPS, SOS, Alarm System

SUBMISSION ID: R04A-CAVITP-0373

Appraisal of Computer Literacy among Grade IV to VI Teachers in Coral Na Munti Elementary School in the District of Agoncillo: Basis for ICT Enhancement Program

Angelita C. De Castro & Hilario S. Garcia, Coral Na Munti Elementary School

Abstract

INTRODUCTION

This paper aims to determine and assess the knowledge of computer literacy of Grade IV to VI teachers of Coral na Munti Elementary School as basis for their ICT Enhancement Program. Unfortunately, based on the researchers' observation, some of the teachers have minimal computer literacy and the school has no program for computer literacy for teachers.

METHODS

Utilizing the descriptive method of research and interview. It secured data and information relative to the appraisal of computer literacy among the teachers and then described their responses.

RESULTS

Based from the data gathered from the respondents, an average weighted mean of 2.72, rated by the teachers satisfactorily were the five areas of instruction performed. Exhibiting professional standards garnered a 2.87 weighted mean which ranked first. On the other hand, reinforcing and involving of learners with a weighted mean of 2.53 which ranked last. With regards to the hindrances felt in providing computer literacy program of the teachers, it shelved an average weighted mean of 2.38 and interpreted to a less extent. Whereas, the last in rank as assessed by the teachers was their attitude with a weighted mean of 2.11. It explained that the teachers experienced much problem with regards to their confidence when they taught computer education.

DISCUSSIONS

The teachers were able to perform satisfactorily the different areas of instruction. Top from the rank was the manifestation of professional standards and the bottom in the rank was reinforcement and involvement of the learners. The results disclosed that they needed to have more seminars and training to become more literate in computer with accepting the responsibility without hesitation but with cooperation. However, hindrances were felt in a less extent. It was indicated that issues in teacher's attitude were the most serious barriers affecting providing computer literacy program. The findings also revealed that teachers have an anxiety in dealing with the equipment that brought lack of confidence wherein it was interpreted by the teachers as satisfactorily.

Nevertheless, the research serves as reflective reference among CMES teachers to constantly re-evaluate their level in computer literacy to improve their school performances in terms of the use of technology present in the school and to make them aware and be updated on technology and use it to improve instructional materials, learning experiences, teaching competencies, and pupils' performances.

KEYWORDS: Appraisal, Computer, Computer Literacy, Information Communication Technology, Professional Standards

SUBMISSION ID: R04A-BATANP-0254

**Assessment of the Ict Skills of Technical-Vocational-Livelihood Students of
Gulod Senior High School: A Comparison of Self-Assessment and Their
Actual Skills**

Glenda Delizo, Department of Education - Batangas City Division

Abstract

INTRODUCTION

The prevalence of information and communication technology (ICT) in K-12 education today suggests that students should be prepared better to use computer technology. This research shows the results of a study that determined the computing skills level of Technical- Vocational-Livelihood (TVL) Grades 11 and 12 students of Gulod Senior High School. This study also measured the difference between the students' self-assessment of their ICT literacy skills and actual assessment of their computer skills.

METHODS

The study utilized the descriptive research design with researcher-constructed questionnaire as main data gathering instrument. The statistical tools used were frequency, weighted mean and F-test. In discovering what level of computer literacy the students actually have, and pinpointing areas where students lack proficiency, the study aimed to develop reinforcements to address the weaknesses.

RESULTS

It was found out that most of the TVL students didn't have enough ICT literacy skills especially in word processing and spreadsheets applications. It was also notable that most students are not that literate when it comes to online research.

DISCUSSIONS

Thus, the goal of the study is to develop ICT modules which will provide flexibility in modifying content to accommodate the needed ICT literacy skills of students and furthermore provide a richer educational ICT experience for the TVL students.

KEYWORDS: ICT Skills, Self Assessment, Reinforcements

SUBMISSION ID: R04A-BATANP-1900

CDRASE: Cavsci Digital Research Abstract Search Engine

Carl Jerome Casaul, Ezekiel Hintay, & Mikko Roi Asia, Cavite National Science High School

Abstract

INTRODUCTION

Cavite National Science High School requires students to solve a particular problem in the community by creating a solution known as research. In the past decades, most of the studies are not utilized and wasted in the library. The research was conducted to solve this problem by gathering the past researches and creating a database that can serve as a platform where they can be collected and be utilized by students. The use of the software can regulate piles of researches on the libraries that are not used.

METHODS

The software was developed through the use of Microsoft Visual Basic 2010 and PHP MySQL for adding, accessing and managing content in a database. XAMPP Control Panel was used to connect the software and the database. The functionality of the program, CDRASE, was tested. The program was also tested through ratings of users based on reliability, utility, usability efficiency, and user-friendliness.

RESULTS

Series of test were conducted to ensure the functionality and accuracy of the software. With the use of mean averaging, CDRASE: Cavsci Digital Research Abstract Search Engine is very functional to use, the search bar, research viewer, and database access language has a functionality score of 100%. The functionality of the CDRASE has an average of 100% which means they are very acceptable based from the International Organization for Standardization (ISO, 2000). The program was also rated based on its reliability, functionality, usability, efficiency, and interface. The program got a score of 4.63 on the interface, 4.5 on the functionality, 4.545 on the usability, 4.87 on the reliability, and 4.62 on the efficiency.

DISCUSSIONS

The program got a functionality score of 100% which indicates that the program is very capable in doing its function correctly, and can be used for the official database. All of the criteria have a score above 4.5, which mean they are all very satisfactory. . According to the International Organization for Standardization (ISO, 2000), having an overall remark of very satisfactory proves that CDRASE is a high quality and functional program.

KEYWORDS: Application, research, database, visual basic, xampp, mysql

SUBMISSION ID: R04A-CAVITP-0180

Coping Mechanism of Information and Communication Technology students to the Problem Encountered on the Implementation of K- 12

Ericka Roxas & Kristine Villanueva, NGO
(Adviser: Jenifer Barruga)

Abstract

INTRODUCTION

The Republic Act (R.A) also known as Enhanced Basic Education Act of 2013 is an act that can help the students to enrich and improve their skills and intelligence by doing hands-on job. This study aimed to determine the coping mechanism of Information and Communication Technology students to the problem encountered on the Implementation of K-12. The main contribution of the study lies in the identification of those problems by knowing and understanding the problems which lead to the successful implementation.

METHODS

The researchers used purposive sampling method to gather the data. They also used survey questionnaires and interviews that aims to know the coping mechanism of ICT students to the problem encountered on the implementation of K-12. Specifically, forty (40) students combined from Grade 11 and Grade 12 were randomly selected to be the respondents.

RESULTS

According to the results of the study, there is a significant relationship between problems encountered and coping mechanism of the student on the Implementation of K-12. The problems encountered of students in Calamba Integrated were not enough computers, lack of internet connection, computer laboratory, class size and lacking of teacher specialized in specific subject thought.

DISCUSSIONS

The K-12 Program is widely implemented all throughout the country, Calamba Integrated School was probably not ready for the Implementation in ICT in terms of equipment's and ancillaries. The ICT students encountered problems such as not enough of computers, shortage of power connection to provide enough electricity, and poor facilities like the computer laboratory. They are integrating facility of the computer laboratory of the students in Junior High and Senior High School. The ICT teacher used seven computers for their hands on activities.

KEYWORDS: coping mechanism, problems encountered, K-12 Implementation, ICT

SUBMISSION ID: R04A-LAGUNA-0131

Crops Traceability Web Services with Analytics

Arsenio Amante, Punta Integrated School

Abstract

INTRODUCTION

This study aims to develop a system that will aid the farmers, dealers, local community, future investors and Department of Agriculture in embracing technological advancement in the field of crop planting, harvesting and marketing. This study endeavors to design and develop a user-friendly agricultural information system that will provide fast-tracking traceability to dealers and future investors on crop production, cycle of crops subject to harvesting, and marketing strategy to better enhance efficiency in selling of agricultural products.

METHODS

The researcher applies the two (2) approaches in conducting the study. These approaches were descriptive design which include interview, survey and observation approach and applying Software Prototyping as software development methodology.

RESULTS

The findings revealed that the system developed and created was very helpful in the promotion of the farmers' crops online in selected Barangays of Calamba City, Laguna. This helped them easily sell their products by finding buyers online through the use of geo-mapping. Through the system the buyers can view their target crop online and can easily communicate to the concern farmer to make their intended transactions. Additionally, using website the potential buyers would have ready access on the status of the crops as to whether it is on- going, harvested or sold out. Moreover, through the system's descriptive analytics, the top performing farmers can be viewed online based on the number of harvested crops and the number of damaged crops. This data would help the potential buyer/s or investor/s to decide on which farm and/or crops are they going to buy and/or to invest.

DISCUSSIONS

The results show that farmers in Calamba City needed help in selling their crops online especially during harvest season. As such, Crops Traceability Web Service with Analytics will aid them in crop planting, harvesting, and marketing. This farm-promotion technique has made their means of selling more accessible and convenient to both the buyer and the farmer. As a result, this significantly improved the profit- earning of the farmers

KEYWORDS: Crops Traceability, Web Services with Analytics

SUBMISSION ID: R04A-CALAMB-0216

Development and Evaluation of Digital Prospectus for Cainta Senior High School

Art Millen C. Lisboa & Ralph Jolan S. Martinez, CSHS
(Adviser: Bernard Bryan Ladera)

Abstract

INTRODUCTION

In 2016, SHS was implemented across the country. Schools from different parts of the country offer different set of subjects. In CSHS, transferees find it difficult to monitor the subjects that they need to take since there is no existing prospectus for each strand prepared for them. The registrar also experiences the dilemma of entertaining the concerns of each transferee regarding the subjects that they need to enroll. The researchers decided to design and develop a digital prospectus to aid the registrar to manage the subjects taken by the transferee. This computer-based application will help the students update their record and keep up with their schedule to finally graduate on the time that they have projected according to the subjects offered.

METHODS

This research utilized descriptive-developmental approach. The researchers designed and developed the digital prospectus and asked for the evaluation of the students and teachers regarding its acceptability. The data was gathered during the ICT expo where the researchers presented their program to the students and teachers. Twenty-nine irregular students and 13 grade 12 teachers were purposely chosen to evaluate the program through a survey-questionnaire.

RESULTS

The program's graphic user interface got a weighted mean of 4.64 interpreted as strongly agree by students. The same feature of the program got a weighted mean of 4.68 from teachers interpreted as strongly agree. Efficiency got a weighted mean of 4.62 and 4.71 from students and teachers, respectively. Students and teachers rated the reliability of the program with a weighted mean of 4.67 and 4.53, respectively, both interpreted as strongly agree. The usefulness of the program obtained a weighted mean of 4.63 from students interpreted as strongly agree. The same feature got a weighted mean of 4.64 from teachers interpreted as strongly agree. Students evaluated user-friendliness of the product with a weighted mean of 4.63 interpreted as strongly agree while teachers assessed the program with a weighted mean of 4.81 interpreted as strongly agree.

DISCUSSIONS

In general, both groups strongly agree that the developed program has positive features. It can be used as an effective tool to ease the problems in the subject assessment that should be taken by the irregular students and transferees. Moreover, it could ensure that they could take all the required subjects of the strand that they will enroll. To further improve the program, an online version can be developed to enhance its accessibility.

KEYWORDS: DEVELOPMENT,EVALUATION,DIGITAL,PROSPECTUS,SENIOR HIGH SCHOOL,computer, application

SUBMISSION ID: R04A-RIZALP-0257

Development and Evaluation of Online Enrollment System

Carlo E. Habahab & Gilbert Y. Bernas, CSHS

(Adviser: Marinel Andres)

Abstract

INTRODUCTION

Enrollment has always been a struggle for every student. Collecting the data from enrollment forms become a difficult task for the registrar and class advisers. In order to have an organized system of consolidating and sorting students' registration form, the researchers designed and developed an online enrollment system. Through the online enrolment system, students can enroll and fill out forms at the comfort of their homes. The registrar and the class advisers are authorized to retrieve, consolidate, and sort the data submitted by the students online. This program also brought convenience in accomplishing clerical works for both advisers and registrar.

METHODS

This research utilized descriptive developmental approach. The researchers designed and developed an online enrollment system and asked for the evaluation of the students. To determine the effectiveness of the program, the researchers conducted pilot testing by asking all the grade 12 ICT students to use the online enrollment system. The data were gathered through a survey questionnaire during the ICT expo where the researchers presented their program to the students. Convenience sampling was utilized by asking students who tried the program to evaluate the online enrolment system.

RESULTS

Based from the results the respondents strongly agree that the program developed meets the standard specified in the questionnaire. The program's aesthetic GUI, efficiency, reliability, usefulness and user friendliness were rated by the respondents with a weighted mean of 4.7 and can be interpreted as strongly agree. Moreover, respondents believed that the developed program has a suitable icon for the application, appealing graphic user interface, has an accurate content and is very responsive, useful and user-friendly.

DISCUSSIONS

Generally, the participants believed that the online enrollment system is designed appropriately, efficiently, reliably, usable, and user-friendly. Thus, the developed program can be an effective tool in improving the enrollment system of Cainta Senior High School. The School administration may consider adopting this enrollment system since the school is into computerization program. The program can be further improved by allocating enough funds to pay for the domain of the program. To increase the accessibility of the program, the link to the program can be added to the official web page of the school and of the other school-based developed programs.

KEYWORDS: DEVELOPMENT,EVALUATION,ONLINE,ENROLLMENT,SYSTEM

SUBMISSION ID: R04A-RIZALP-0261

Development of a Web-Based Registration and Computerized Enrolment System for Taal Senior High School

Elizalde Piol, Taal Senior High School

Abstract

INTRODUCTION

The Web-Based Registration and Computerized Enrolment System for Taal Senior High School was proposed in auxiliary of the existing Manual Enrolment System of the school for it to have an organized flow of transaction and an ease of work especially to the administrators of Taal Senior High School. The study aims to present the benefits and issues that occur in the online registration and computerized enrollment system. In the like manner, it also shows the innovation of registration and enrollment systems from traditional to high-end technology.

METHODS

The study applied the descriptive and developmental method of research. The descriptive method is used in documentary analysis and administration of survey using a structured questionnaire which was made based on the ISO/ IEC 9126 standard. Whereas, the developmental research method was used to build the system. The respondents of the study came from Taal Senior High School and were identified using random sampling method.

RESULTS

The developed system is design to retrieve and track the data in a faster, easier and safer way by storing file data of the student enrollees inside the database which will lessen the effort of school registrar. These details here could be seen in a second without having to worry that there will be a single datum lost. It has also a function that can access through internet that makes students easily view the information. The developed system concentrates on the gathered enrollment data from students which contains and indicates the student records like basic information, contact and address. It will provide enrollment history for every transaction of every student. It will be managed in an easy way without having to worry that there will be a single datum lost.

DISCUSSIONS

Development of A Web-Based Registration and Computerized Enrolment System for Taal Senior High School comprises a computerized registration and enrollment form which provides ease to students and better safekeeping and maintenance of data in a reliable database. It allows enrollees to fill up the form and submit. It permits the administrator or school registrar to collect and retrieve student's information. It can severely minimize the amount of effort exerted by the registrar required for multiple enrollees. It also permits enrollees to view whether their information has been submitted. The result shows that the system acceptable in terms of functionality, efficiency, reliability, usability, maintainability, and portability.

KEYWORDS: web-based, enrolment, ICT,innovation

SUBMISSION ID: R04A-BATANP-0024

**Development of an Automated Guidance and Counseling Information
Management System: A Basis of Behavioral Statistics of Student
Misconduct**

Katrina Amor Jumarang, Marilyn Tenorio, & Sharon Erolin, Senior High School
Within Nasugbu East Central School

Abstract

INTRODUCTION

The schools support the learning, well being and safety of all students with collaborative efforts among stakeholders to attain and maintain a positive behavior and effective discipline in public schools. Likewise, the meaningful integration of ICT would increase the delivery of guidance services and counseling for the benefits of the students. It is with these premises, the Guidance Counseling and Management Information System was developed to provide better services for the school.

METHODS

The researchers used the System Development Life Cycle for creating or altering information systems (SDLC). SDLC concept underpins many kinds of software development methodologies. SDLC puts emphasis on decision making processes that affect system cost and usefulness. Thirty (30) public schools guidance coordinators evaluated the developed system using the Software Evaluation Criteria to the six (6) software quality standards set by ISO 9126. The responses gathered from these criteria are used to assess the usability of the developed system for its end users.

RESULTS

The six components of Software Evaluation Criteria for the developed system are: (1) Excellent for Functionality which obtained 4.60 mean average; (2) Very Good for Reliability indicated a 4.43 mean average; (3) Excellent for Usability which achieved a mean average of 4.60; (4) Very Good for Efficiency which assessed with a mean average of 4.49; (5) Excellent for Maintainability with 4.55 mean average; and (6) Very Good for Portability with mean average of 4.49. Based on the perception of the respondents, the developed system is able to effectively automate the record and retrieval of the students' profile and violation record. The system was found to be compliant to the six (6) software quality standards set by ISO 9126 with overall rating of Effective, congruent to the objective which is to develop an automated statistical report on the misconduct among the senior high school students in SHS within Nasugbu East Central School based on the observed behavior of the students reported in the Guidance Office.

DISCUSSIONS

It is highly evident that the developed Automated Guidance and Counseling Information Management System should be utilized to ease the way to monitor the students' misconduct so as to give a corresponding action provided by the guidance office of the school. It is highly recommended that this research be improved with additional guidance and counseling behavioral parameters.

KEYWORDS: Guidance, Management Information System, Student's Misconduct

SUBMISSION ID: R04A-BATANP-1956

Factors Affecting the Teacher's Adoption of Computer Technology as an Instructional Material in Padre Garcia National High School

Evelyn Serrano, Padre Garcia Batangas

Abstract

INTRODUCTION

The adoption of computer technology in teaching and learning is an innovation that has revolutionized the education system. There is a widespread belief that computer technology empowers teachers and learners, transforming teaching and learning processes from being highly teacher-dominated to student-centered. The study determined the problems met by teachers in adopting computer technology as an instructional material. It also identified the factors affecting the teacher's adoption of computer technology in terms of time factor, availability of hardware, software issues, and personal knowledge about computers.

METHODS

The researcher used the descriptive method. The design fits the objective of the study to determine the problems encountered by the respondents and the factors affecting the adoption of computer technology as an instructional material in teaching using the validated researcher-made questionnaire. It was limited to the responses of the fifty four (54) teachers of Padre Garcia National High School.

RESULTS

High school teachers agreed that the most common problem encountered by the teachers in adopting computer technology is lack of financial support to acquire the resources. The respondents also agreed that insufficient time required to successfully integrate technology in teaching, absence of the computer laboratory, poor internet access, obsolete software that decreases its reliability and lack of computer technology training are also part of the common problems.

DISCUSSIONS

The results demonstrate that there is a need for additional funds to acquire resources necessary for further implementation of computer technology as instructional material. Teachers may be encouraged to attend ICT trainings and seminars to increase their knowledge and competencies. These initiatives will provide learners with knowledge of specific subject areas to promote meaningful learning and to enhance professional productivity.

KEYWORDS: Computer Technology, Instructional Technology, Software, Hardware

SUBMISSION ID: R04A-BATANP-0223

**Factors Affecting the Utilization of Computer Technology in Teaching
Primary Pupils in the Selected Elementary Schools in Talisay District,
Division of Batangas: Basis for Enhancement Program**

Nira Deloria, Department of Education

Abstract

INTRODUCTION

In this study, some schools in Talisay District Division of Batangas received multimedia classroom package from the Department of Education over the past years and some teachers attended specific basic computer training classes for proper use of technology in teaching. Teachers are now ready to use various technology in teaching learning process. But some teachers do not utilize the technology they have been given. They have been teaching for years and do not want to incorporate something new into their time-tested lesson plans for their own reason.

METHODS

The study utilized the descriptive method of research. Findings were obtained with the use of the survey method. The respondents of the study are the total population of primary grade teachers teaching in the select elementary schools in Talisay District. Data were gathered through a survey questionnaire which were related to the participant's perception regarding use of computer technology. Weighted mean was computed to describe the answers of the primary grades teachers based on the verbal interpretation in the questionnaire on the factors affecting the utilization of computer technology.

RESULTS

There is an agreeable perception about the factors affecting computer technology utilization among teachers in terms of their demographic profiles and they exhibit professional behaviors and place emphasis on high academic standards for their pupils, but most are reluctant to integrate technology because of their concerns about technical and infrastructural support and this may prevent technology integration. However, there are significant difference with the factors affecting their use of computer technology when grouped to age and years of teaching.

DISCUSSIONS

Primary teachers within the district should be provided by computer knowledge on simulation and graphic software and educationally equipped with appropriate knowledge in proper usage and application of computer technology specifically on publishing and concept mapping. Teachers are encourage to have collaboration on instructional strategies toward the use of computer technology software. The School Heads should maintain and encourage a well-developed evaluation procedure on the teachers' development in computer technology utilization in terms of appropriate software to be used. Moreover, the Department of Education must conduct a comprehensive assessment of the ICT environment at the school, division, regional and national levels for the improvement of computer utilization.

KEYWORDS: utilization, computer technology, teaching, primary pupils, enhancement

SUBMISSION ID: R04A-BATANP-0647

Gadget Invasion : Hazardous Effects to Students' Learning Progress and Their Moral Deprivation

Allyssa Jowen Dipad, Jerald Canubas, & Renier G. Datinggaling, Student
(Adviser: Noel Valenzuela)

Abstract

INTRODUCTION

Technology has always been advancing throughout the years, which made a big impact on the life of the people particularly the students. Thus, students lean their everyday life including their studies life into gadgets . In this study, the researchers discovered that the students too much engagement in the use of gadgets became the biggest dilemma because the learning competency and moral aspects are vividly affected as well.

METHODS

The qualitative descriptive research method was used to describe how students engaged in too much use of gadgets became the subjects of abrupt changes into their moral values and even to their academic performance at school. Ten selected students from the senior high school served as informants in gathering the data. Interview questions are open-ended to allow the participants to fully describe the experience from their own view point.

RESULTS

The informants concluded that gadgets have invaded the whole aspects of their personality. Their moral values have descended based on their responses, because they said that they emulated the things they saw and absorbed the things they learned out of the gadgets they used. Also, the informants' academic performance became the major dilemma of their parents, because some of them flunked at school. The results of the interview inferred that gadgets controlled the mind and the behavior of the people. Though it is useful in some other facet, gadgets has become the leeway of the annihilation of students moral aspect and their learning progress as being presented in the data gathered.

DISCUSSIONS

Hence, intervention is highly recommended by the researchers to give remedy to the worsening conditions of these students. The clear result of the study demonstrated the strong affirmation is highly needed of the parents to interfere to these students. Advancement is good but the result to the behavior and other aspects is worst.

KEYWORDS: academic performance, gadgets, moral aspect, advancement

SUBMISSION ID: R04A-BATANC-0296

Impact of National Certificate II (NC II) Assessment in Computer System Servicing (CSS) on the Future career Path of 12- Information and Communication Technology (ICT) students

Catherine Joy Oña, Calamba Integrated School
(Adviser: Margielyn Marte)

Abstract

INTRODUCTION

Information and Technology is one of the fastest growing fields in regards to career vacancies. One of the courses offered in Senior High School is Information and Communication Technology (ICT). Information Technology is an ever changing field and the curricula must address the needs and required changes in the workplace. One of which is passing the National Assessment in Computer System Servicing (CSS). One of the advantages of having National Certificate II (NCII), NC II passers enable them to be more employable, productive and flexible to the changing requirements of the industry and the workplace domestic and overseas. In line with this concern, students are empowered, become self-reliant and capable of supporting himself and his family. This research aimed to understand the impact of National Certificate II (NC II) in Computer System Servicing (CSS) in the Future Career Path of Grade 12 Information and Communication Technology (ICT) students.

METHODS

The researchers used the total enumeration of the respondents where all members of the whole population was measured. The researchers used quantitative method to gather the data and used survey questionnaires and also interview protocol that aims to know the effect of NC II for CSS on the future career path of Grade 12 Senior High School ICT students.

RESULTS

This study implies that the highest percentage or 37.04% of the respondents are unemployed because of financial constraint to apply for a job. However, there are 33.33% of the respondents who are aiming to work overseas to work in a computer-based company. 25.93% are considering building their own business connected on their NCs. 14.81% of the respondents took computer-related courses and pursued college. 11.11% of the students are still undecided on their future career plans.

DISCUSSIONS

According to the gathered data, some of the students who passed their National Certificate II (NC II) did not use it because of the following reasons: First, some of the students find unrelated jobs to computer servicing that are immediately available to provide for their living. Second, students remain undecided on their future career plans. And lastly, respondents took computer-related courses and pursued college.

KEYWORDS: Keywords: National Certificate, Computer System Servicing, future career path

SUBMISSION ID: R04A-CALAMB-0149

**Information and Communication Technology: It's Implication to
Classroom Instruction of Primary Teachers in Lipa City**

Agnes Morada, Department of Education

Abstract

INTRODUCTION

The researcher conducted the study to determine the implications of ICT to classroom instruction of primary teachers, the level of respondents' computer knowledge and skills, and the relationship between respondents' level of computer knowledge and ICT integration in teaching. In the Schools Division of Lipa City. It further dealt on the significance of ICT in the teaching-learning environment in preparing for the 21st century learning.

METHODS

The study utilized the descriptive method of research with the researcher-made questionnaire as the main data-gathering instrument. Using random sampling technique, the questionnaires were administered to 20 elementary public school teachers in the Schools Division of Lipa City. The results yielded were interpreted using T-test.

RESULTS

Most of the respondents were young adults between the ages of 26-35, majority of which female, graduates of bachelor degree and have served for 11 to 20 years in the teaching field. With regards to implication of ICT to classroom instruction of primary school teachers, teacher-respondents strongly agreed in terms of skills and knowledge and beliefs, while agreed in terms of integration, attitude and support. There is significant difference in the perceived implication of ICT to classroom instruction according to gender in terms of attitude, while there is no significant difference between male and female respondents in terms of skills and knowledge, beliefs, ICT integration and support.

DISCUSSIONS

Based on the findings drawn, the study suggests that teachers must be given sufficient computer training in useful software application that will enhanced their teaching styles and methodology. There is a need to sustain the use of ICT as an effective strategy and continue to access the skills-based approach in the integration of ICT in education. School administrators should integrate technology across all of the learning areas and among all learning levels for the student to attain higher levels of cognition within specific learning contexts. Effective use of ICT must be organized through extensive programs of teacher support in order to maximize its use for a more effective classroom instruction. ICT must be integrated early in the primary curricula because it will act as an important lever for ensuring the introduction and implementation of ICT into educational institutions and classrooms.

KEYWORDS: ICT integration learning

SUBMISSION ID: R04A-LIPAC1-0168

Insights of Grade Six Learners on PowerPoint Presentation in Learning Environmental Education

Ma. Blessel Gregorio, Ascendens Asia International Researchers Club

Abstract

INTRODUCTION

The use of PowerPoint Presentation as a medium in teaching simply reveals how the transiting era affects the methods of disseminating knowledge among students. With the inclusion of DO 52, S. 2011 - "Strengthening Environmental Education in Public and Private Schools," the use of PowerPoint Presentation in discussing environmental education is always evident; given that, utilization of various instructional materials such as books, visual aids and etc. are encouraged. However, the often overlooking of its effects is observable; thus, the use of PowerPoint presentation in a classroom can negatively or positively impact the students without the knowing of the teacher. It is in this light, that the purpose of this research is to determine the insights of grade 6 learners with regards of the effects of PowerPoint presentation in learning environmental education.

METHODS

This qualitative research used phenomenological method to gather the insights of grade 6 learners that learns through the use of PowerPoint presentation and to discover its advantage and disadvantages to the students. A purposive sampling strategy has been utilized in selecting the forty-five students who have undergone an interview and answered semi-structured questions. The various interviews were held in an undisturbed place for the respondents to focus more and arrive to the answers that they really tend to tell.

RESULTS

PowerPoint Presentation is used as a medium in teaching which definitely has visible advantages. Despite of it, the tool also holds a few disadvantages that are based on the results of the interview. In conclusion, the use of PowerPoint Presentation is very beneficial when it shows diagrams, pictures, and videos that conventional ways of teaching cannot offer. It helps learners in terms of effective communication amongst students and teachers. However, the shortcomings in using PowerPoint Presentation are pointed out as having inevitable technical difficulties that affect the lesson and the distracting designs and graphics that affect the learners' learning.

DISCUSSIONS

The outcome proved that PowerPoint Presentations have really been effective in terms of teaching and learning. It has been helpful to the youth to have such great technology that they can use today for educational purposes. Having this technology inside a classroom, which is meant to be a place where you'll learn things, will earn an edge in the race throughout our globalization.

KEYWORDS: PowerPoint Presentation, Phenomenological Method, Purposive Sampling Strategy

SUBMISSION ID: R04A-TANAUA-0169

**Levels of Internet Disorder: Its Relationship to the Academic Performance
of Shs Students in Esperanza National High School**

John Brix Rioflorido

Abstract

INTRODUCTION

The technological advancements are the proofs that the world has evolved. Social media and the internet has become widely known. Students enjoy the amenities it bring but some became hooked and obsessed turning into a disorder that causes fiasco in their studies. It is from this context that the researcher gain interest to conduct research on finding the Levels of Internet Disorder: Its Relationship to the Academic Performance of SHS Students in Esperanza National High School.

METHODS

The study used descriptive survey to determine the relationship between the levels of internet disorder and levels of academic performance of senior high school students. To give meaning to the data generated from the survey, the mean, standard deviation and Pearson Product-Moment Correlation were utilized. It determined if there is a Positive Relationship or Negative Relationship between the "Levels of Internet Disorders" and the "Levels of Academic Performance" of the students.

RESULTS

This study aims to answer: 1) the level of academic performance of students based on weighted average 2) the level of internet disorder of SHS Students 3) significant relationship between level of internet disorder and academic performance. The respondents are composed of 97 senior high school students, 58% male and 42% female. The study shows that 55% of the respondents are in severely addicted level, 42% has mild internet disorder only 3% has no internet disorder. In terms of academic performance, 20% are in outstanding level while 35% are in satisfactory level and 45% is fairly satisfactory. Study revealed that there is a strong negative correlation between the level of internet disorder and academic performance of the students. Most of the students who perform better in academics has no internet disorder, while students with poor performance are mostly identified to have internet disorder.

DISCUSSIONS

The result proved that the level of internet disorder of the students and their academic performance has negative relationship. It shows that when the level of disorder is high the academic level is low. The study suggests that schools must encourage students to limit their internet usage and focus on their academic performances and offline activities. Internet disorder must be looked more deeply by experts to create concrete basis and links on the study especially the resolution for it. All in all, internet disorder is bit by bit spreading to students and positively triggers failure in their academics performances.

KEYWORDS: internet addiction; internet disorder

SUBMISSION ID: R012-KORONA-0006

Maragondon Traveller's Resource Informative Page (T.R.I.P.)

Julia Bianca I. Imbo & Yvanna Franchezka Perio, Student

Abstract

INTRODUCTION

Maragondon is an uptown land located at the western part of the province of Cavite. The tourism of this town is already emerging although people are still not aware. Also, the people themselves who live in Maragondon are not familiarized by the hidden beauty of the town. Since tourism is one of the important aspect of economy, the researchers created a website that helped a lot of people in giving information about Maragondon. The website consists of home page, general information, tourism, government, services, and barangays.

METHODS

The needed materials such as laptops, cameras, data, and wix.com were gathered. Most of the information were gathered by exploring and asking to the Municipality of Maragondon. Layout making was performed after ensuring that all the information were completed. It was programmed by the researchers. The next one was the actual making of the website using wix.com. Then, publishing of the website. The survey was performed at Naic, Cavite.

RESULTS

The over-all rating of the people of Naic, Cavite was exemplary. The 75.5% of the samples rated the website exemplary because they find the design, accessibility, readability, mobile-friendliness, functionality, and content of the website were good enough and worked very well. The 21.5% of the samples rated it adequate because they thought that the mobile-friendliness of the website was just fine. And, the 3% of the samples rated it poorly because they found the mobile-friendliness of the website did not work at all.

DISCUSSIONS

The results showed that the website can help people to have a reliable and accurate source about the things they want to know about Maragondon, Cavite.

KEYWORDS: website, tourism

SUBMISSION ID: R04A-CAVITP-0931

Multigrade e-learning Competencies and Teachers' Training Needs

Karl Erickson Ebor, Planning Officer III, Mary Ann Metrillo, Bernadette Luna,
Teacher I

Abstract

INTRODUCTION

The Department of Education Computerization Program has reached even the farthest multigrade schools in the Philippines. However, in order to fully maximize learning, multigrade teachers must know how to integrate technology in their teaching instructions.

This paper sought to identify the e-learning competencies and training needs of multigrade teachers in Sariaya West District. It specifically looked at the level of familiarity of the respondents on basic e-learning concepts and processes and maintenance of hardware and software; the respondents' level of skills in using e-learning software and hardware; and the e-learning training needs of multigrade teachers.

METHODS

Utilizing quantitative approach, survey was done by gathering data through the questionnaire. Percentage, weighted mean, and ranking were used as statistical treatment and in the presentation of data.

RESULTS

Findings of the study revealed that the familiarity on e-learning of multigrade teachers in Sariaya West District varies. They are familiar with basic computer concepts and processes but are quite familiar with the maintenance of hardware and software. On the other hand, their skills in using e-learning differs from basic to skilled depending on the software and hardware that they are using. Additionally, they need to have training on e-learning particularly on IT equipment, antivirus and software and hardware maintenance.

DISCUSSIONS

In general, the main contribution of this study is methodical as it provided appropriate e-learning training design for multigrade teachers.

KEYWORDS: Multigrade, Department of Education Computerization Program, E-learning

SUBMISSION ID: R04A-REGOFF-0000

**Perception of Grade Ten Learners of Integrated School of Lawa on the
Effectiveness of ICT in Science Classes**

Christienne Janella Callada, Integrated School of Lawa

Abstract

INTRODUCTION

Information and Computer Technology (ICT) has been applied successfully in the teaching and learning process for decades now. Proper use of ICT proved to be beneficial in raising the educational quality and can be used for authentic assessments. In this light, the researcher aimed to discover the advantages of using ICT in a particular learning area - Science and how ICT integration in this field of discipline influenced the Grade 10 learners based on their perceptions.

METHODS

Descriptive surveys were chosen as the design of this study; this design had taken into account Qualitative data collection strategies. In this design, interviews were conducted on a sample of people that were chosen to accurately represent the entire population being studied. Everyone that is interviewed was asked the same series of questions, then the responses were organized so as to draw conclusions from them. Interview gave people a voice through the research process itself, hence the method was quite inclusive.

RESULTS

Based on the data obtained from the participants, it indicated that majority believed that ICT encouraged the learners to participate more actively in their Science class. Moreover, they supposed that using technology was the best way to make them understand the lesson easily. The findings showed that they were being productive and cooperative to be part of the lesson because they found ICT in their Science class motivating and interactive.

DISCUSSIONS

With the positive result of the study, the application of ICT integration in a Science class was to be mandatory. ICT should be used daily so as to keep up with the learners' need for something novel and interactive to make them participative and active.

KEYWORDS: ICT, Science, authentic, interactive, integration

SUBMISSION ID: R04A-CALAMB-0093

RATA: Raid Against the Aliens

Clarijey D. Gonzales, Gerome A. Verana, & Thea Aileen Linis, Cavite National
Science High School

Abstract

INTRODUCTION

Some of the most used gadgets are the android phones and tablets. The said gadgets are prominent high technology smart phones that run on Android Operating System (OS) which was developed by Google. These allowed people to download applications and multitask with ease (uSwitch, 2018). The problem with this nowadays are the high quality educational apps require expensive fees for it to be downloaded, because there is a n expense in producing good quality graphics for the app (Mahon, 2013). From the said problem, the concept of "RATA: Raid against the Aliens" was made. This focuses on enhancing students' mind on Biology, Earth Science, Chemistry, and Physics concepts in the means of an entertaining game.

METHODS

Inspired by the game "Space Invaders" , the extra-terrestrial-themed was designed to ease students' hard time in reviewing science concepts. This was made possible by putting together the science concepts suggested by the teachers for the content of the game. Pretest survey questionnaires were given while the game itself served as the post-test. Gathered data were treated with paired t-test.

RESULTS

Results reveals that out of thirty trials, average of post debugging accuracy test was 1, corresponding to successful with the average of only two unsuccessful operation. After the game was rated by the participants using a Likert Scale, the evaluation gives a response of 4.75 out of 5. Post-test had higher grade than pretest. The participants from the grade 7 had the highest average difference that means that the scores from pretest and post-test are quite far from each other. Paired t-test shows that there is a major difference in the scores for pretest ($M=32.15$, $SD=7.18$) and post-test ($M=55.58$, $SD=3.19$) conditions; $p=2.46$ is greater than $\alpha=0.05$.

DISCUSSIONS

The results demonstrate that post debugging accuracy has been successful with having only two minor bugs. Marks from the evaluation exhibit excellent response of the participants regarding the design, functionality, and innovation of the game. Pre and posttests show that the higher the grade level, the higher the number of correct answers obtain. This is because the concepts placed in the game were already thought to the higher years. The significant difference directs that the ability of RATA as an educational application is a promising innovation in the field of Information and Communication Technology.

KEYWORDS: science game, education, Information and Communication Technology, aliens

SUBMISSION ID: R04A-CAVITP-0364

**Scrutiny of Game-Based Learning Method as a Mechanism of Technology
Integration to Ameliorate the Knowledge of High School Students in
Chemistry 8**

Allaena Kate Nicole R. Casuga, Ky Ko D. Custodio, & Kyle Gwyneth Q. Morales,
Student

Abstract

INTRODUCTION

The universality of technologies and gadgets is bringing about modifications in the field of education. Technology integration is an integral part of the educational learning technique. Based on the survey conducted to the grade 8 students of CNSHS SY. 2018-2019 it showed that chemistry was the hardest branch of science since it deals with the topic about elements. Considering the trend of mobile applications, this research developed a mobile game called "Escaping Mr. Dalton's University," that can enhance the knowledge of grade 8 students in chemistry. Game-based learning (GBL) was used to contribute in the development of learning process.

METHODS

The game engine Cocos Creator was used in which C++ was utilized as the programming language. Xcode was used for coding the program and AdobePhotoshop CS5 for the graphical representation of the game. One hundred twelve students were identified as respondents using the Slovin's formula. A pre-test about Chemistry 8 was given to the respondents. The respondents were divided into two groups using stratified random sampling technique in which half were given a copy of the mobile game while half were not. Post-test was given after one month. Data were collected and analyzed using one-tailed and two-tailed z-tests.

RESULTS

Using one-tailed z-test, it was revealed that the post-test scores of students who played the game significantly increased compared to their pre-test scores, obtaining a z-value of 6.22 which was higher than the z-critical value of 1.64. Meanwhile, a computed z-value of 2.53, higher than the z-critical value of 1.96, was obtained using two-tailed z-test which revealed that the post-test scores of students who played the game were significantly higher than the post-test scores of those who did not. Both methods increased the students' knowledge, however, students who've used the game got a higher score. This is because GBL supports multisensory, active, experimental and problem-based learning.

DISCUSSIONS

The pre and post-test scores of the respondents showed a significant difference indicating that the concepts of GBL as a mechanism of technology integration was proven and applicable in terms of high school way of learning, gaining and ameliorating knowledge. The result of this research supports that games make such a powerful learning environment. A 3 dimensional representation of the characters, sceneries and other visual aids are recommended to attract more attention and players.

KEYWORDS: Game-Based Learning, Techno Integration, Chemistry, Gadgets, Mobile Games, Technology

SUBMISSION ID: R04A-CAVITP-0484

SHUTTER: Senior high Haircut, Uniform, Tardiness Tracker

Carlos Dale G. Araracap, Jose Ricardo P. Gagarin, & Norman S. Ortiz, Cavite
National Science High School

Abstract

INTRODUCTION

Cavite National Science High School (CNSHS) administration introduces and explains the rules and regulations that the students need to follow inside school premises. Every enrolment, policies of said school is discussed to

both parents and students to avoid confusions. The research study aimed to create and design a mobile application named "SHUTTER:

Senior high Haircut, Uniform, Tardiness Tracker" that will list and compile the misconducts against their signed school policy that are committed by the senior high school students of CNSHS.

METHODS

The mobile application SHUTTER was designed using Adobe Photoshop and coded in Xcode using C++.

The application was rebuilt using Android Studio and was tested for bugs. A survey whose participants are the student police of the senior high school of CNSHS was conducted to assess the application in terms of its design, functionality, and innovation. The survey was also conducted to determine if the characteristics for function testing of the application are functioning properly. The weighted mean of the collected survey results was acquired to determine its rating based on a scale ranging from poor-excellent (0-5).

RESULTS

Results from the survey show that the application received a weighted mean rating of is 4.93 with an interpretation of excellent for the criteria of design. It received a weighted mean rating of 4.70

with an interpretation of excellent for the criteria of functionality. A weighted mean rating of 4.67 with an interpretation of excellent for the criteria of innovation was received by it. It also received a mean rating of 4.96 with an interpretation of excellent for all the criteria. Lastly, it also received a mean rating of 4.93 with an interpretation of excellent for all the in-application buttons. The search bar and delete button received a weighted mean rating of 4.83, while the input bar, recent violation viewer, and school policy viewer all received a weighted mean rating of 5.

DISCUSSIONS

The results imply that the application was able to function properly and perform its purpose accurately. It also imply that the application can be applied in the school system of CNSHS due to it working correctly. SHUTTER currently only works on Android devices and does not include the junior high school students of CNSHS. These limitations could be improved upon on further study.

KEYWORDS: senior high school, haircut, uniform, tardiness, student police

SUBMISSION ID: R04A-CAVITP-0200

Social Media and the TVL - CSS 12 Students of CNHS - SHS AY 2018 - 2019

Baja, Giselle Marie
(Adviser: Jellina Rosga)

Abstract

INTRODUCTION

Social media has become a fundamental part of our lives. Many of us stay connected with friends, family, classmates, co-workers, businesses/organizations and others through different social media sites such as Facebook, Twitter, Instagram, LinkedIn, Snapchat and many other social networks. While being engaged and active online is a great thing, it has an effect on academic performance, relationship and health.

METHODS

The data was gathered through a survey questionnaire as the primary research instrument to gather some information that will support the study, it will contain Likert scale and ranking the major reason to the least reason why students use social media for.

RESULTS

The result shows that the respondent agree that social media has an effect on academic performance. The usage of materials from SMS like Wikipedia for research has helped improve the respondents' grades, Engaging in academic forums on social media increases the respondents' understanding of topics discussed in class. However, it can cause distraction in the respondents' study, it has an effect on relationships. Communication is faster through Social Media, As a source of entertainment to the family but also as a distraction to the family & to other people. It also has an effect on health such as poor effect on a person's eyesight, sleeping habits, makes a person skip eating, and cause diseases like urinary tract infection & other chronic diseases like hypertension & diabetes. Result also shows that in ranking the major reason why students use social media, 5 as the major reason, 4 as the next major reason and 1 as the least major reason. It shows that 4.2 answered that using social media helps to connect /reconnect with family and friends; 2.0 uses social media to be updated with latest local and foreign news 3.8 use it to help students in their study; 2.9 uses social media to write knowledge that they are interested in; 1.9 uses social media as a source of entertainment

DISCUSSIONS

It is without a doubt that social media is and will remain an important tool in human life as far as communication is concerned. Despite the benefits that students can harness from it such as sharing of information, building relationship, there is to some extent addiction and distraction of attention caused by the use of social media which could have consequences on the academic life of students. Seminars should be organized by teachers in various schools or facilities to enlighten students more about the possible implications of social media usage on their academic performance.

KEYWORDS: social media, effects, academic performance

SUBMISSION ID: R04A-CAVITC-0023

**Status of the Department of Education Computerization Program (DCP)
Implementation on Secondary Schools in the District of Pililla School Year
2018-2019**

Christopher Olaya, Pililla National High School

Abstract

INTRODUCTION

The Department of Education has been implemented the Department of Education Computerization Program (DCP) to the whole country, with the goal "Computer Literacy Anytime, Anywhere". While this is a great program, the department should also realize that computer literacy cannot just be attained in infrastructure alone. Other factors should be considered to realize this objective. This research work has looked at this problem and identify different solutions which can be baseline data for the basis of improvement and further enhance the program.

METHODS

The study used the descriptive method of research and utilized Secondary ICT Coordinators as respondents. To gather data, a researcher-made questionnaire-checklist was used as an instrument to evaluate the status of the Department of Education Computerization Program implementation, mean was utilized. To identify problems encountered in the DCP package in the different secondary schools in the District of Pililla qualitative response of the respondents was used. To know what plan of action will be created by the different secondary schools in the District of Pililla, a qualitative response of the respondents was used.

RESULTS

Based on the data gathered, the DCP answers the problem in computer backlog of all secondary schools in the District of Pililla, however, there were problems in the utilization of the said computer package. The teacher-student ratio should be addressed. The application that will be used on these computers to all subject areas should take into consideration. Internet connectivity and speed must also be dealt with. Curriculum and Teaching guides and Learners Material must be given priority. Also with regards to the DCP computer package, technical support must be provided and the service provider must always provide solutions to address the issue. Only one out of five secondary schools created a program to help students' computer literacy and created a plan of action to focus on the matter.

DISCUSSIONS

The findings indicate that there is a need for additional computer teachers to impart knowledge and skills in computer education. Furthermore, secondary schools must extend the use of the facilities across all learning areas to fully utilize the DCP package. Conduct LAC sessions to address the issue of teacher-student ratio. Create special programs to strengthen the computer literacy program among students and create action plans so that issues and concerns will be properly attended and create future plans for the students, teachers and other stakeholders.

KEYWORDS: DCP, Computer knowledge, ICT Laboratory, Program and Project, Computer Teacher TLE-ICT, Secondary, Teaching and Learning

SUBMISSION ID: R04A-RIZALP-0102

Student Portal for Senior High School Students of Amadeo National High School: An Initial Study

Amiel Richmond Balce, John Lawrence Bagasala, Josef Emmanuel Rocela, Joseph Yhel Esguerra, Justine Carl Amulong, & Paul Marshall Perez, Amadeo National High School

(Adviser: Michele Rocela)

Abstract

INTRODUCTION

This paper is an initial study on having a Student Portal for Senior High School Students in Amadeo National High School. A student portal is an online gateway where students can access the online registration system (ORS), view their grades, request for documents and update their contact information. The research is beneficial for this will be the pioneer study in the usage of student portal especially for the students, teachers and other stakeholders as well. Likewise, the presence of advance technology is being manifested in the school system by having this student portal, thus may encourage more students to enroll in the school.

METHODS

This is a qualitative research. School officials, senior high school advisers and students from different strands were all interviewed and asked their perceptions on having a school portal.

RESULTS

Based from the interviews, all the informants were all in favor of having a student portal in Amadeo National High School. For the students they do not mind at all if their personal information will be included in the student portal.

DISCUSSIONS

The study revealed that all the stakeholders would like to have a student portal for Amadeo National High School. The Information Technology Program to develop a Student Portal for the school is recommended and will be developed and implemented the next school year.

KEYWORDS: student portal, technology, data base

SUBMISSION ID: R04A-CAVITP-0056

The Effects of Strategic Intervention Material (SIM) in Computer Systems Servicing NC-II (CSS) to the Level of Mastery of Grade 12 TVL-ICT Students of Lopez NCHS

Jensen Ryan Lim, Lopez National Comprehensive High School

Abstract

INTRODUCTION

The Technical-Vocational-Livelihood (TVL) track in the Information and Communications Technology (ICT) strand introduced the different learning activities which will prepare the students to be skillful before they take the step into the world of work. However, the access of students' Learning Module and Teachers Learning Guide was limited and there was no module available for the students to help them in the teaching-learning process as prescribed in the curriculum. Without modules and other instructional materials, students' learning is negatively affected and their learning level becomes dense resulting to least learned competency. With this problem, the researcher makes a progress on how to bridge the learning gaps in Grade 12 students; the development of Strategic Intervention Material (SIM) in Technical Vocational Livelihood (TVL) particularly in Computer Systems Servicing (CSS) is the answer. Furthermore, the formulation of Strategic Intervention Material would help students to think critically.

METHODS

This study follows a Research and Development (R&D) paradigm. The variables are learning gaps in Technical-Vocational- Livelihood, Development of Strategic Intervention Material (SIM) in Computer Systems Servicing. After administering and scoring the Pretest, item analysis was made in order to determine what competencies were least mastered. The least mastered competencies were the basis for constructing the SIM and it was utilized as an intervention material. The SIM underwent content validation before it was finally given to the students ready for use.

RESULTS

It was found out that the least mastered competency for the specialization Computer Systems Servicing (CSS) conducted for TVL- ICT section Mabini was the core competency number 3 - Setup Computer Servers. Resulting to 32.56 index of mastery with an interpretation of low mastery for the competency. This became the basis for the development and validation of a Strategic Intervention Material.

DISCUSSIONS

SIM was used to increase the student's performance and skills in the competency. The Post-test MPS without the SIM was 40.81, and the post-test MPS with the use of SIM went up to 71.40 with a gain of 30.59. This datum shows that the use of SIM played a vital role in the development of skills and mastery for the specialization.

KEYWORDS: CSS-NCII, SIM-COC3, intervention program

SUBMISSION ID: R04A-QUEZON-0286

The Features of Quick Response (QR) Code as an Attendance Monitoring System: Its Acceptability and Implication to Classroom

Joseph Carreon & Michael Angelo Maleriado, Department of Education

Abstract

INTRODUCTION

The development of smartphones proliferates the use of QR code obtaining features of scanning and decoding barcodes that are useful in modifying the checking of attendance in the classroom. Hence, the QR code in school is becoming a popular tool in modern education. In this study, the researcher governs the features of an attendance monitoring system using QR code and the acceptability of the innovative platform used in checking the attendance of students and participants' point of view about the QR code embedded in the classroom.

METHODS

The study utilized a purposive sampling involving 20 teachers who adapted the QR code and 36 students who were exposed on attendance monitoring system from General Emilio Aguinaldo National High School in the academic year 2018-2019. Descriptive data analysis and an interview was used in the study and adapted standardized survey questionnaire used in evaluating database interface.

RESULTS

The digital application database was available and free on Android smartphones that can be exported to Microsoft Excel, while the system doesn't require an internet connection, is ideal for a big class, and paperless. With the combined evaluations of teachers-user and students revealed that the QR Code as Attendance Monitoring System was generally very highly accepted in terms of reliability, efficiency, accuracy, user-friendly, security and confidentiality.

DISCUSSIONS

The views of the participants paved that QR code in education was environment-friendly, cost-effective, user-friendly, innovative, very fast and readable codes. Hence, this study is geared towards evidence-based practice through this type of innovation that serves as a preference towards continuous improvement and successful adaptation of the QR code that is essential in modifying the checking of attendance of students in the classroom.

KEYWORDS: QR code, Attendance Monitoring System, Smartphones, Environment-friendly, Cost-effective, User-friendly, Acceptability

SUBMISSION ID: R04A-IMUSC1-0030

Use of Information Technology and Performance Level of Selected Elementary Schools: Basis for Enhanced School Development Plan

Lucky May Pasia, Department of Education

Abstract

INTRODUCTION

This study aims for a systematic and inclusive IT implementation, with the participation of all areas inside an academic institution to meet the goals of the Department of Education for the 21st Century learners. To our knowledge, neither studies nor validated frameworks currently exist to establish an integrative approach to IT needs assessment. The purpose of this study is to examine the effectiveness of information technology and organizational improvement efforts on the performance indicators of selected schools in the District of Cuenca, Batangas.

METHODS

This study utilized descriptive, field survey and historical research design that answered the statement of the problem. It is descriptive because the study attempted to explain the statistical results through descriptive narrative. It is also a field survey because a set of questionnaires was gathered to determine the profile required in the statement of the problem. It utilized historical design since relevant historical perspectives, such as performance indicators for previous years, influence of information technology and organizational improvement efforts on the selected schools.

RESULTS

The data gathered were from the teachers and school heads perspective, the use of IT develops effectiveness in the workplace. The communication system, such as Department of Education Batangas website, LRMDs, LIS and EBEIS, is informative and provides a teaching-learning inputs and feedback. The findings of the study also reveals that there is a significant relationship between the extent of use of information technology and level of performance of selected schools.

DISCUSSIONS

The result suggests that the use of Information Technology should be reflected on School Development Plan for future implementation. Proper utilization of IT must be strengthened to maintain the performance level of schools. Principals and teachers should continuously update themselves with available emerging innovations in organizational functions through attending seminars, workshops, conventions, training, and through researches.

KEYWORDS: information technology, performance indicators, school development plan

SUBMISSION ID: R04A-BATANP-2115

**Weather Update Mobile Software: An Intervention for Efficient and Timely
Weather Advisory in Mindanao**

Ergin Kylah S. Generalao, Giniesy M. Mabayo, Kaye Christine P. Prima, Kurt Ian
Khalid I. Israel, & Tristan Jay E. Tabafa, Gusa Regional Science High School - X
(Adviser: Rochelle A. Luzano)

Abstract

INTRODUCTION

For the past years, Philippines has experienced over 20 catastrophic tropical cyclones every year according to Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA). Philippines is known for its vulnerability to hazards especially typhoons (de la Cruz, 2016). PAGASA Regional Services Division of Mindanao (PRSD-Mindanao) is responsible for the analysis and information dissemination of Mindanao Island's weather conditions. However, the agency had a major problem in their weather information dissemination. Thus, the researchers who were also student trainees at the said agency conducted a research to address the pressing problem. The researchers were able to make a mobile software which will help the weather forecasters improve the timeliness and efficiency of the weather advisory.

METHODS

This study uses a descriptive - developmental research design which made use of rapid application development for the designing and creating the current mobile software. Tools used for the development are Android Studio (version 181.5056338), Photoshop CS6, Google Earth Pro, and BlueStacks 4. The software was tested and evaluated by the forecasters of PRSD-Mindanao in terms of efficiency and timeliness. The researchers also provided a 5-point Likert Scale evaluation form to assess the two factors of using the software.

RESULTS

The perceived positive effect of using the mobile software is generally highly effective ($\bar{X}_{I,,} = 4.94$, $SD = 0.02$). Furthermore, results show that the efficiency level of the mobile software is very efficient ($\bar{X}_{I,,} = 4.92$, $SD = 0.08$). Results also show that the level of timeliness of the mobile software is very timely ($\bar{X}_{I,,} = 4.96$, $SD = 0.04$). Henceforth, the mobile software is currently being utilized by the agency in disseminating weather advisories.

DISCUSSIONS

The results of the evaluation and utilization feedback of forecasters show that PRSD-Mindanao has improved their way of disseminating the weather information to the public with the use of the current mobile software. The mobile software helped the forecasters to create a weather advisory that is efficient with less technical error. Moreover, the mobile software also proved its capability to provide faster way of disseminating weather information.

KEYWORDS: weather, mobile, software

SUBMISSION ID: R010-CAGDOC-0002

Web Information Validation: An Innovative Technique in Achieving Data Quality

Ralf Emmanuel Octavio, Department of Education

Abstract

INTRODUCTION

Web information regularly develops excellent, evidence-based innovations. Web information improves faster because this is the number 1 source in seeking of information. We always depend on the information that we found on the web, but we didn't know if the information is credible and if it has a reliable source. All the information in a web browser are editable and can be easily changed. In this study, we explore the techniques of the students on how they find reliable information in the web browser.

METHODS

A multiple methods design was used. Using a grounded theory approach, we conducted to focus on the senior high school students of Urdaneta City National High School. Fifty students in 5 different strands responded to a set of questionnaire checklist. An inventory was also conducted, with data collected through quantitative analysis.

RESULTS

Most of the students that were surveyed with the questionnaires were ages 17-18 years old, all of the senior high school students have their android phone which they use in finding information. The average of their family monthly income is from Php10,001-P hp20,000. In terms of the utilization of web information, (1) Source verification most of the respondents agreed in the statements given, (2) from source-to-source verification we also got the average to agree in these statements, (3) data issue tracking the ten statements given was got the average 3.40- 4.19 with descriptive equivalent "agree." Overall the 3 given dependent variables with ten statements on each got the average score of 3.40-4.19.

DISCUSSIONS

Based on the finding gathered and conclusion of the study, the recommendations are: (1) the students agree or trust the sources that have a big name or a source that is publishing information for a long time. (2) From source-to-source verification exchanging or passing information from one source to another is not 100 % safe, it shows in the questionnaire that some of the students didn't agree in on the source to source verification. (3) The source or author who published the information has more appropriate to use in studying.

KEYWORDS: Reliable, Credible, Verification, Tracking, issue

SUBMISSION ID: R001-URDANE-0011

LANGUAGES AND LINGUISTICS

Patterns of Derivational Affixes of Bicol-Catanduanes

Rachel Anne Belangel, Department of Education, Professional Teacher

Abstract

INTRODUCTION

The Department of Education (Department of Education) Order 74 (s. 2009), more commonly known as the Mother Tongue Based-Multilingual Education (MTB-MLE), highlighted the need to study the linguistic diversity of learners and need to generate and make available materials in various Philippine languages. Through the Department of Education Order No. 16 s. 2012, it releases materials covering 12 languages and adds up 7 more languages. One of the languages that is not included in the development of materials for MTB-MLE is Catanduanes. Since Bicol-Catanduanes languages were underexplored, kindergarten and primary teachers in Catanduanes were using the materials in Bicol Naga which is different from their language. Teachers suffered teaching vocabulary among learners. Identifying derivational affixes patterns of Bicol-Catanduanes is a good strategy for them teach vocabulary among learners.

METHODS

Using content analysis of Tang Tacio's column "Isip-Isipon Ta" which is a sole article written in Bicol-Catanduanes were analyzed through Post Bloomfield morpheme-based analysis. I used Emergent coding to determine the patterns of derivational affixes. The results of the research were validated by chosen language teachers in Catanduanes.

RESULTS

Root word+-an, root word+-on, root word+-syon, root word+-a, ka+-root word, para+-root word, and repetition of first syllable+-root word+-on were patterns for nominalizer. Root word+-an and root word+-on were identified patterns in the verbalizer. Ma+-root word, maki+-root word, root word+-l, naka+-root word and ma+ first letter+-in+-root word were patterns for adjectivizer. Buru-/ suru-/uru+-root word, root word+-l, root word+-an and total reduplication +root word, ma+-root word, total reduplication +r, tig-/pig+-root word were patterns for adverbializer. The nominalizer patterns always occur from verb to noun, the verbalizer patterns always occur from noun to verb, the adjectivizer patterns always occur from noun to adjective, and the adverbializer patterns occur from noun to adverb. Identifying these patterns can help teachers and curriculum implementers to make material in mother-tongue.

DISCUSSIONS

The result identified and analyzed the patterns of derivational affixes in Bicol-Catanduanes. This doesn't study doesn't identify whether it is from Northern Bicol-Catanduanes or Southern Bicol-Catanduanes. This doesn't discuss the pattern of inflectional affixes which is crucial in the syntax analysis.

KEYWORDS: Patterns of Derivational Affixes of Bicol-Catanduanes

SUBMISSION ID: R005-CATAND-0005

2C2I1R in Teaching Language and Grammar Based on the Learning Style of Senior High School

Ana Maria Josue, Escuela Secundaria Senor De Salinas

Abstract

INTRODUCTION

In launching of modern techniques in teaching, teachers became more creative in their strategies particularly language and grammar but learners find themselves difficult to study the language. The phenomena lead the researchers to determine the learning style of the senior high school in studying language and grammar with the used of 2C2I1R in the lesson.

METHODS

The study used the descriptive quantitative design to compare the result of two schools and descriptive qualitative to interpret the learning style of one hundred (100) student from Tanza National Trade School and one hundred (100) students from Escuela Secundaria Senor de Salinas in Grade 11 using random sampling. The implementation of creative and innovative teaching strategies is used to meet student's needs through the innovation, intervention and strategies.

RESULTS

Students can be classified as diverging, converging, accommodating and assimilating. Researchers observed that Reflective approaches were more familiar and got the highest score among other approaches. There were no significant differences in all teaching approaches in both schools.

DISCUSSIONS

Effectiveness of the pedagogy often depends on how the learners interact to it. Group works can be helpful for students of different styles in learning and ability level. Knowing learner's personality has a great help for teachers to design, plan and implement new ways for the teaching-learning process.

KEYWORDS: 2C2I1R, language, grammar, learning style, pedagogy, qualitative, quantitative, descriptive

SUBMISSION ID: R04A-CAVITP-0314

**A Dynamic Approach of Language Games in Reading and Writing Skills for
Grade 11 GAS Strand Classes in Alangilan Senior High School; Basis for
Lesson Integration**

Blessie Arabe, Natalia V. Ramos Memorial Integrated School

Abstract

INTRODUCTION

Today is a highly competitive time that anybody, who is not well-versed with the necessary language skills particularly that of the English language will definitely be at the rear. They are afraid to talk, to take conversational risks, to read with comprehension and to write paragraphs because of fear, anxiety and apprehension. One way of creating favorable learning environment and enhancing language learning is through the use of a dynamic approach of games. Learning English through games provides a non-threatening atmosphere for students who are usually tense in a formal classroom setting.

METHODS

Pretest / post- test experimental method was used to determine the significant difference between the performance of the control group and the experimental group. The descriptive method was also used to determine the impact of language games in Reading and Writing for Grade 11 GAS students. The control group received the traditional way or the usual way of teaching in the language classroom whereas the experimental group played games in the language classroom as basis of lesson integration. Both groups took the pretest and the posttest to measure their achievement before and after the second quarter. But only the experimental group played the games and answered the questionnaire.

RESULTS

Majority of the students respondents' age was 17 years old which was composed of 25 or 83.33 percent. The performance of the control and experimental groups in the pretest revealed that 13 or 86.67 percent from control group were average students; and 2 or 13.33 percent were below average while in the experimental group 14 or 93.33 percent were average; and 1 or 6.67 percent was below average. The performance of the control and experimental groups in the post - test showed that 10 or 66.67 percent from control group were average, 4 or 26.67 percent were high and 1 or 6.66 percent was very high while in the experimental group 12 or 80 percent were very high and 3 or 20 percent were high. The impact of the dynamic approach of language games in Reading and Writing Skills for Grade 11 GAS students showed that students gained elements of joy and fun when using the game in learning Reading and Writing Skills.

DISCUSSIONS

Based on the results, language games are not only for kids but also for teenagers and for both genders. The student respondents believed that the dynamic approach of language games in Reading and Writing Skills for Grade 11 as basis for lesson integration had a positive impact in uplifting their skills and abilities in learning. English, in gaining the elements of joy and fun in learning the language skills, in integrating them in language lessons and in boosting their interest in English.

KEYWORDS: GAS - General Academic Strand; Language Games are five adapted language games used in the study that are geared towards the learning competencies in Reading and Writing Skills for Grade 11 ABM Strand Classes

SUBMISSION ID: R04A-BATANC-0354

A Structural Typology of the Legends from the East and the West

Anne Elizabeth Gumiran, Tagaytay City National High School, De La Salle
University - Dasmariñas

Abstract

INTRODUCTION

This study fairly analyzes the structure of the Philippine and American legends in the light of Vladimir Propp's Morphology of Folktale. It focuses primarily on the structure of legends and furthers its investigation to bring about the influence of culture on the structure of its corresponding literature.

METHODS

It examined 18 Philippine and 11 American legends through Morphology of Folktale plotted in four different manually developed matrices. In the two initial matrices, the Philippine and American legends were separately fragmented into relevant narrative events regardless of Propp's morphemes. Then, a matrix of Propp's narrative functions, considered as the final matrix, with the description of each function was created and duplicated. The final matrices were filled in with the narrative events from the initial ones that matched the description of the narrative functions in Propp's. After the final matrices were accomplished, the recurring narrative functions in both Philippine and American legends in the light of Propp's morphology were identified and noted.

RESULTS

The findings revealed that there are recurring patterns in both Philippine and American legends inside and outside the working framework. The universal features of heroic tales take account to the similarities in their narrative functions. Their respective culture, on the other hand, explains their significant differences such as their variations on leaving on a mission versus absention, battles, heroes' triumphs and resurrection. It provided a more profound explanation that the universal features could no longer elucidate for it is their way of life, beliefs, ideals, morals and practices speaking in their legends.

DISCUSSIONS

Philippines is an archipelago with rich and varied culture and ethnic groups. The variation of the ethnic groups comes with the variation of their folklore. However, most of these tales remain untold. This instance makes the interpretation of the Philippine legends, drawing from Gray's (1999) assertion, tentative. The present study only analyzed the available legends at large. Hence, the interpretations may be strengthened by the availability of other studies on the interpretation of these varied literature or an anthology of the unexamined literature.

KEYWORDS: Morphology of Folktale, American legends, Philippine legends, literary interpretation

SUBMISSION ID: R04A-CAVITP-0578

Ala-Eh Pen and Voices: Development of Localized Learning Material in English for Grade 11 Students

Gaylee Masangcay, Conde Labac Integrated School

Abstract

INTRODUCTION

Developing competence in grammar in a localized communicative situations and activities, English language learners can communicate appropriately in academic and professional environment. To develop localized learning material, the study described the respondents in terms of attitudes toward language communicative activities, interests in speaking and writing, English language media exposure, and localized practices. It measured the level of grammatical competence relative to using adverbs of intensity, coordinating conjunction, clauses, and spelling, capitalization, and punctuation. It determined the significant relationship between the levels of grammatical competencies and the students' descriptions.

METHODS

It made use of descriptive research, teacher- made test and questionnaire distributed to 239 Grade 11 students of the Division of Batangas City, 2017-2018. Percentage, mean, and pearson r product moment correlation were utilized.

RESULTS

Data revealed that Grade 11 students have a positive attitude toward communicative language activities, moderate interest to speaking and writing and frequent exposure to language media frequently perform indigenized practices. They got a fairly satisfactory level of grammatical competence on areas of adverbs of intensity and coordinating conjunctions, while they do not meet expectations on areas of clauses, and spelling, capitalization and punctuation. There is a significant relationship between levels of grammatical competence on adverbs of intensity, clauses and coordinating conjunctions and attitudes toward language communicative activities. There is a significant relationship between levels of grammatical competence on coordinating conjunctions and indigenized practices.

DISCUSSIONS

The sociocultural context where students live and learn must be transformed into a context where literacy practices abound. Thus, localization indigenization of learning material is encouraged. Ala-Eh Pen and Voices is a localized learning material that contains suggested localized grammatical activities and situations anchored on the low-scoring grammatical competencies and communicative situations with low composite means. The localized activities are entitled Three Things I Love in Isla Verde, Ala-eh, BatangueÅ^o ka ga?, Badjao: Educate A Community, Dive in Verde Island, Growing Sweetest Mangoes, Welcome to Sublian Festival and Delightful Batangas Cuisine.

KEYWORDS: senior high school, grammar, localization, inclusive, development

SUBMISSION ID: R04A-BATANC-0031

**An Overlooked Crisis on the Pronunciation of /f/, /p/, /v/, and /b/
Sounds: Perspectives from the Philippines**

Jessica Baybay, Trece Martires City Senior High School

Abstract

INTRODUCTION

An overlooked crisis on the pronunciation inversions of /f/, /p/, /v/, and /b/ among Grade 10 students has been pretty alarming for their age and educational level. In this study, the possible causes of inversions of /v/ and /b/, /p/ and /f/ sounds is explored. Furthermore, this investigated the significance of inductive approach to pronunciation drills to possibly lessen, if not eliminate, these inversions.

METHODS

Inspired by the Mother Tongue Interference concept of Moosa (1972), an exploratory-quantitative-interpretative design is seen to be most plausible for this study. A sample of Grade 10 students from a public national high school in Cavite undergone pre and post reading, interviews, and drills where the index of discrimination was computed and interpreted to reveal the study's findings.

RESULTS

The findings revealed that the possible causes of the inversions are due to cognitive, affective, and social factors. In addition, because of the improvement of students' pronunciation conducted in the post-reading after going through drills, the inductive approach is proven effective.

DISCUSSIONS

The inversions happen because the students find the sounds confusing and anxiety hits them whenever they read. It is also discovered that schools are not giving much attention to students' pronunciation. The lack of practice is deemed to have contributed to the inversions. Due to its proven effectiveness, the inductive approach to pronunciation drills is suggested to be used in classrooms because the respondents believed that it is easier and practices their tongues quite well.

KEYWORDS: pronunciation, inversions, drills, inductive approach

SUBMISSION ID: R04A-CAVITP-0155

**Analysis of Variety of Language in Sitio Tan-Ag, Barangay San Diego, Lian,
Batangas in Contribution to the Development of National Language**

Jessica Bentir, Paul Ymmanuel Argente, & Tricia Mhae Morales
(Adviser: Irene Andino)

Abstract

INTRODUCTION

Language is one of the most important components used by the people to communicate with each other. It is a soul of life. We can express our ideas, feelings and wants or needs by means of language. According to Encyclopedia Britannica, language is a system of conventional spoken, manual or written symbols by means of which human beings, as a member of social group and participants in its culture, express themselves. In a society we have the variety of language base from geographical location, different social group, and also in specific field work or expertise. The research will be able to study the variety of language of Sitio Tan-ag in order to discover the uniqueness of the language and culture of the people and also to promote and contribute in the development of our National Language (Filipino).

METHODS

The method used is the descriptive research. According to Center for Innovation Research and Teaching, descriptive research is a research used to "describe" a situation, subject, behavior, or phenomenon. Description research is used to observe and describe a research subject or problem without influencing or manipulating the variables in any way. The researchers were able to describe the variety of language in Sitio Tan-ag, Barangay, San Diego, Lian, Batangas. The researcher uses the observation and interview as a basis for gathering the data.

RESULTS

The variety of language develops or creates based from the experiences of the people in the society. It also develops and creates based from the customs, traditions and practices. Some words or languages were also created because of their dialect. In observing the language of the people, especially the way they talk to each other, it defines or describes the characteristics and tradition of the people. Also, it helped us show other nations or tongues that we have identity or uniqueness in language. Some of the terminologies or words provide the opportunity to include in the development of the national language.

DISCUSSIONS

Through the observation and interview, the researchers ask for the words and terminologies that the people used in communicating each other specially when they are in the field of farming rice, when they are together talking to each other in socialization. From these words and terminologies will be written, how are they going to create the word and the meaning in relation to their cultural, geographical location and field of works. The terminologies will be analyzed how they contribute to the development of the national language.

KEYWORDS: language, localization, development, national

SUBMISSION ID: R04A-BATANP-0839

**Analysis on the Usage Errors of Inflection '~s' in Noun+-s and Verb+-s in
the Written Composition of Grade Six Pupils**

Edgar Brizuela, mr_edgar_pbrizuela@yahoo.com

Abstract

INTRODUCTION

Language learning is actually a process of trial and error, thus, analysis on errors is a worth studying for. This way teachers could help their students to learn from their errors specifically on how to use -s or -es to indicate plurality in nouns and singularity amongst third singular verbs.

METHODS

The study analyzed the written composition of grade six pupils in Southville IV Elementary School using the method of error analysis derived from Corder's (1967). This method has three steps: (1.) Collection of sample errors (2.) Identification of errors and (3.) Description of the errors.

RESULTS

The study found out that the avoidance strategy with the highest productivity used by learners of all the proficiency levels is simplification by omission which occurs in over half of the 10 compositions. Majority of them simply omit the use of the inflection while others use alternative forms that are completely wrong in the contexts. Pupils resort mainly to simplification by omission and over generalization to overcome these difficulties.

DISCUSSIONS

Given the difficulty faced by second language learners it is necessary to set new parameters that suit with such exceptional rules, over generalization problems like the one above are therefore expected to be a common feature in the development of the interlanguage of Filipino learners of English.

KEYWORDS: Language, Learning , Error analysis

SUBMISSION ID: R04A-STAROS-0041

Ang Relasyon ng Makrong Kasanayan sa Filipino at Performans sa Pang-Akademiko ng K-12 ng mga Piling Mag-aaral sa Baitang 7 ng Paaralang Sekondarya ng Agham Lungsod ng Tagaytay Taong Panuruan 2016-2017

Elsa De Leon, Tagaytay City Science National High School

Abstract

INTRODUCTION

Sa pakikipagkomunikasyon ng tao, nakasalalay ang mensaheng nais niyang iparating sa kaniyang kapwa. Upang ang tao ang mag-angkin ng isang mabisa at maayos na paraan ng pagpapahayag tungo sa isang matagumpay na pakikipagkomunikasyon, nararapat na paunlarin ang mga kasanayang pangwika. Sinuri sa pananaliksik na ito ang relasyon ng makrong kasanayan sa Filipino at performans sa pang-akademiko ng K-12 ng mga piling mag-aaral sa baitang 7 ng paaralang sekondarya ng agham Lungsod ng Tagaytay taong panuruan 2016- 2017.

METHODS

Ginamit sa pag-aaral ang disenyong korelasyon at palarawang siyasat o descriptive method. Ang bilang ng mga mag-aaral na tumugon ay 80 mula sa kabuoang 400 na mag-aaral. Ginamit ang random sampling. Kinuha ang 20% ng kabuo ang bilang ng mag-aaral. Gumawa ang mananaliksik ng pagsusulit batay sa mga Kasanayang Pampagkatuto K to 12 Curriculum Guide. Binigyang pakahulugan ang mga datos sa pamamagitan ng mga sumusunod: frequency count at ranking,percentage,mean,T-test,one-way ANOVA at Pearson-r.

RESULTS

Natuklasan na mas maraming nasagot na tamang tanong ang mga babaeng mag-aaral. Hindi nakaapekto sa kanilang makrong kasanayan ang antas ng katayuan sa buhay at wikang gamit sa tahanan. Ang mga makrong kasanayan na nabibilang sa mataas na antas ng pagkatuto sa asignaturang Filipino ay pagsulat na may 71% at pagbasa na may 53%. Ang mga makrong kasanayan na may kahirapan sa mga mag-aaral ay pakikinig na may 44%, pagsasalita na may 31% at panonood na may 9% ng mga estudyanteng nakakuha ng iskor na 6 pataas.Ang performans pang-akademiko ng mga mag-aaral ay nagpapakita ng pagkakaiba-iba; karamihan ay nakakuha ng gradong 85, 90, 86, 87at 89. May relasyon ang kasanayan sa performans pang-akademiko ng mga mag-aaral batay sa programang K-12.

DISCUSSIONS

Ang unang bahagi ng kabanata ay naglalarawan sa mga katangiang demograpiko ng mga kalahok na mag-aaral sa pananaliksik. Nakasentro ang ikalawang bahagi ng kabanata sa pagtukoy sa makrong kasanayan sa pakikinig, pagsasalita, pagbasa, pagsulat at panonood na nabibilang sa mataas na antas ng pagkatuto sa asignaturang Filipino.Sinusundan ito ng pagtukoy sa performans na pang- akademiko ng mga mag-aaral sa asignaturang Filipino batay sa programang K-12. Nakasentro ang ikaanim na bahagi sa relasyon ng kasanayan sa performans pang-akademiko ng mga mag-aaral sa asignaturang Filipino batay sa programang K-12. Nakatuon naman ang huling bahagi sa pagtukoy sa programang interbensyon na maaaring isagawa upang mapataas ang antas ng makrong kasanayan.

KEYWORDS: K-12 Kurikulum, Pakikinig, Pagbasa, Pag-unawa, Pagsasalita, Makrong Kasanayan

SUBMISSION ID: R04A-CAVITP-0855

**Apologies, Requests and Compliments: A Gender-Based Exploratory
Analysis of Speech Act Realization Patterns**

Rubyrose Baldovino, Department of Education - Quezon National High School

Abstract

INTRODUCTION

Under the K to 12 System, communicative competence, which is the ability of learners to use language effectively and correctly in various contexts is considered essential in English Language Teaching. Learners need to assimilate, in addition to structural rules, a set of sociocultural rules that will guide the learners in the choice of appropriate forms. Therefore, successful speaking is not just a matter of using grammatically correct words and forms but also knowing when to use them and under what circumstances. Research in the area of speech act analysis needs to come to the teacher's rescue with better insights concerning the rules of appropriateness in both the target and the first language of the students.

METHODS

In order to analyze the strategies and semantic-syntactic structures of the target speech acts, this research made use of an Oral Discourse Completion Task to gather responses from the 15 participants who were selected for the study. Each discourse sequence presented a short description of various situations, and the informants were asked to respond orally. The data from 5 male, 5 female and 5 gay respondents were observed, recorded and described systematically, factually and accurately using frequency and percentage as its statistical tools.

RESULTS

It was found out that all speakers of the study overwhelmingly prefer to use the direct realization of apology with sorry as the performative verb. Meanwhile, the male, female and gay speakers employed conventional indirect requests followed by grounder in performing the speech act of request. Finally, it is also found out that compliments of male, female and gay respondents are highly adjectival. All these results proved that the respondents made use of very limited speech patterns in all situations, despite the varying interlocutors, degree of offense and other factors.

DISCUSSIONS

The study reveals that there were no significant difference in the strategies used by the speakers across all concerned genders. The results show that despite the many strategies that can be used, respondents employed very limited set of speech patterns regardless of the situation given and relevant factors considered. Thus, a proposed speech act guide (handbook) was created with an aim to widen the speaker's linguistic capabilities in performing pragmatics. It may be used by the teachers and learners who wish to achieve communicative competence through speech and oral communication.

KEYWORDS: *linguistics *speech acts *communicative competence

SUBMISSION ID: R04A-QUEZON-0090

Assessment on the Correct Usage of Grammar of Humanities and Social Sciences Students: Basis for a Proposed Intervention Program

Mariel Gamboa & Sharmaine Hernandez, Department of Education/LSHS

Abstract

INTRODUCTION

Grammar skills are useful in every aspect of life from education to leadership and social life to employment opportunities. Correct grammar is a valuable tool for success in many areas of life, it is not used to create a gap in the social world. In Lemery Senior High School, there are few students who mistakenly use grammar, at the same time, felt difficulty in constructing sentences and paragraphs. With this, the researchers conducted the study for them to assess the significance of learning the various grammar skills to be able to learn how to transfer knowledge of grammatical concepts from oral to written language.

METHODS

The study accumulated a quantitative method of a research study. Specifically, the design of the study is descriptive. They used a self-made questionnaire that determined the level of HUMSS students' level of correct usage of grammar. They also identified the difficulties that the students encounter with regard to their grammar skills. The respondents of the study were composed of 155 HUMSS students of Lemery Senior High School. The researchers utilized a Slovin's formula in obtaining the sample size of the study.

RESULTS

The level of grammar usage of HUMSS students was determined to have a great extent. As one of the evidences of it, they were able to make themselves aware on the meaning of the words they use. However, they found lack of self-confidence as a difficulty in practicing appropriately the correct usage of grammar. Among all of those difficulties is spelling words correctly. As students know the meaning of the words they use they still commonly committed mistakes in terms of the spelling of the terms. But as they tried to converse orally and through writing they were benefited by the fact of building foundation in all aspects of communication and developing a habit of active socialization among others.

DISCUSSIONS

The results of the study show that the level of grammar skills of HUMSS students is an average level. Misspelling words is the main difficulty that they encounter and to address this difficulty, it would be helpful to provide enhancement program for students that will focus on their mastery of communication and grammar skills in English. This program would enhance the students' use of the English language which could lead to an effective way of communication. Specifically, activities to be given in the said program will address the students' difficulty in spelling words correctly.

KEYWORDS: grammar, intervention, effectiveness

SUBMISSION ID: R04A-BATANP-1944

Code Switching in Teaching among School Teachers

Jana Marie Babagay, Department of Education – Laguna, Caesar Z. Lanuza
Elementary School

Abstract

INTRODUCTION

Code-switching is a common occurrence in bilingual societies like in the Philippines, where people have the opportunity to use two or more languages to communicate. Department of Education stipulates that the mother tongue of the pupils should be used as a medium of instruction in the primary level, while English is introduced as a second language with a transition to English medium of instruction from grade 4 onwards. The goal of this research is to gain deeper analysis on code switching in teaching English, Science and Mathematics.

METHODS

Descriptive statistics such as frequency and per cent count were employed to find out how much code switching in the classroom occur, while the mean and standard deviation were utilized in the levels of students' performance in English, Science and Mathematics. In addition, Pearson Product Moment Correction Coefficient was used to examine the relationship between the percentage of code switching and the student's performance in English, Mathematics and Science. To strongly justify the gathered data, the researcher conducted written interview regarding the feedback of teacher on using code switching in class.

RESULTS

Based on the calculations, among the indicators in English, the code switch result of negative .806 r-value indicated that as the code switch increased, the student's performance became lower. In Science, most of the indicators showed that there is moderate correlation between the usage of code switch and student's performance. It can be gleaned from the result of negative .544 r-value so as the percentage of code switching increased the lower performance in Science. Lastly, in Mathematics, it had a negative .848 correlation coefficient of the code switch percentage which illustrated a very high relationship between code switch and the performance of students. This also showed that the more code switching used, the lower the student's performance in the subject.

DISCUSSIONS

This revealed teachers often view code switching as a means of improving the comprehension in the lesson, however; it has detrimental for the performance especially when the assessment given uses English as its medium.

Based on the feedback, English teachers switched back to mother tongue or used code switching to cater the social needs of their students. In Science and Mathematics, teachers believed that students' level of performance must be considered first. Teachers should employ positive attitude towards this strategic tool in teaching core subject areas.

KEYWORDS: code switching, language, mother tongue, English, student's performance, assessment

SUBMISSION ID: R04A-LAGUNA-0057

Content Analysis of Violence in Major Philippine Broadsheets

Jieran Del Rio, Liwayway National High School

Abstract

INTRODUCTION

Editorial articles published in newspapers have been serving its popular argumentative purpose to various readers for years affecting how people understand and see depicted national and international issues. There is one underlying question in this regard, "is there a textual evidence showing subtlety on the writtenness of these textual genre?" And so, this study attempted to investigate how writers depict types of violence using various linguistic elements and socio-cognitive strategies and how they employ linguistic features embedding functions in argumentative editorials seemingly designed to be retrieved using these strategies.

METHODS

The current study is corpus-based employing the principles of content analysis. Using this linguistic lens, a total of 30 argumentative editorials culled from the Manila Bulletin, The Philippine Star and Philippine Daily Inquirer published from the time President Duterte took office (June 2016) to February 2018 were scrutinized. The analysis is based on descriptive approach as it is dependent on the phenomena found in the content analysis of the corpus of the study. The research design requires a researcher to observe, describe, and investigate how texts behave in a journalistic corpus.

RESULTS

The current study revealed that there is an evident depiction of violence and possible abuses of the constitutional law in the argumentative editorial texts. Furthermore, these texts were rich in linguistic features subtly manipulated as revealed in the filtered functions of the socio-cognitive strategies and media manipulation techniques, tenses and voices of the verb, functions and structures of sentences, hedges, modals, cliches and tautologies. The result, the researcher was able to devise a typology / conceptual construct which might serve as a basis for other corpus-based analyses.

DISCUSSIONS

The result of the study indicates the need for second language (L2) trainers (subject teachers and campus journalism mentors) and authors to redefine the various functions of many linguistic features which must be contextually perceived and demarcated such as in the problem of universality (as in the function of the tenses of the verb to express meaningful sentences). Moreover, it signifies that there is a pressing need to review similar editorial texts and other news articles in campus papers as well as memoranda, and other school reports. This action will benefit the future constructs of the similar documents.

KEYWORDS: content analysis, linguistic features, media manipulation techniques, socio-cognitive strategies, textual genre

SUBMISSION ID: R04A-QUEZON-0097

Correlation between Tributaries and Performance in Three Macro Skills in English

Melisa Magbago, Department of Education – Batangas, Banilad National Highschool

Abstract

INTRODUCTION

People learn language at varying speed and depth due to individual differences. There are students who learn new language more quickly and more easily than others. Some language learners are successful by virtue of their sheer determination and persistence. However, there are crucial factors influencing success in language development that are largely beyond the control of the learner. These factors can be broadly categorized as internal and external. It is the complex interplay of these factors that determine the speed and facility with which language is learned. This study was pursued to determine the level of performance and the tributaries affecting the English language development of G9 students in Banilad National High School, Batangas Division for the purpose of developing intervention programs.

METHODS

A descriptive quantitative method was utilized in this study. The statistical techniques used were frequency, ranking, and percentage to determine the performance of G9 students in L2 in speaking, reading and writing. Pearson r was used to find out if there's a significant relationship between the tributaries and performance of the student in the tests.

RESULTS

Findings revealed that in Speaking, the respondents performed fairly. Reading skills were on average level. In Writing, the respondents performed poorly. The most serious problem was the lack of interest in watching movies and in reading English books. The development of L2 skills was affected by the tributaries as to attitude to an average extent. The home affected the development of L2 skills to a moderate extent. The effect of tributaries in terms of school to the development of L2 skills was to an average extent. There was a high correlation between the speaking, reading and writing skills and students' attitude, home and school.

DISCUSSIONS

In the light of the findings and conclusions, the following was recommended: 1) G9 students have to be intrinsically motivated by the home, school and by him too to learn English as a second language; 2) Banilad NHS specifically the teachers have to take action in creating awareness of the factors that contribute to the learning of English as a second language; 3) parents have to do their contributions to motivate their children to learn English as a second language; 4) proposed intervention program for the development of English Language Skills of the Grade 9 students has to be implemented; and 5) Instructional materials have to be used in the intervention program.

KEYWORDS: correlation, tributaries, macro skills

SUBMISSION ID: R04A-BATANP-1523

Discourse Analysis on Benigno Aquino III and Rodrigo Duterte's State of the Nation Address

Timothy Bautista, Philippine Normal University

Abstract

INTRODUCTION

State of the Nation Address (SONA) is one of the political discourses that can predict the personality of local politicians and a relevant factor to study when investigating public image. In the country, some studies delve with analyzing speeches of the president and underpinning their ideologies; however, there is a dearth of literature comparing speeches of a politician. This study is an attempt to investigate how the personality of President Rodrigo Duterte and his predecessor Benigno Aquino Jr. is revealed through their SONA.

METHODS

A qualitative design was utilized in this study. Combining Critical Discourse Analysis (CDA) method and Aristotelian rhetoric, the researcher selected one particular speech of the two presidents that best represents their speeches and analyzed its language forms. Moreover, Halliday's Systemic Functional Linguistics served as the basis in identifying the functions of language and ideologies it reveals.

RESULTS

The examination of the ideational function of the two speeches revealed that both presidents are man of action as they use more of material processes to suggest that they are carrying out their platforms to achieve developments in the government. Moreover, the analysis of interpersonal function indicates that the use of modal verbs and personal pronoun are good choice in establishing the character portrayal of the politicians. It further reveals that Duterte is a narcissist and populist leader by his choice of I-talk while his predecessor is more of a collectivist as demonstrated by the dominant choice of pronoun we. In terms of rhetoric, both resembles structure of persuasive speech that uses the three types of appeal, the ethos, pathos, and logos, to build a desirable personality that would eventually satisfy the addressee. However, the address of Duterte gave emphasis on ethos and pathos while Aquino focused on pathos and logos.

DISCUSSIONS

The study provides insights on both teacher and students in discovering the discursive patterns and ideological aspects of the political speeches. Thus, it can help them in analyzing speeches objectively. It can also raise an awareness to practitioner on the importance of critical discourse analysis in language teaching in spoken and written discourses. It can also broaden their knowledge in delivering instruction using authentic material such as political speeches.

KEYWORDS: Critical discourse analysis, political discourse, state of the nation address

SUBMISSION ID: R04A-RIZALP-0005

Drawing Reality: A Semiotic Analysis of "War On Drugs" Editorial Cartoons in Philippine Broadsheets

Marivic Climacosa, Department of Education - Cavite

Abstract

INTRODUCTION

Editorial cartoons are illustrations that convey messages on specific realities in the world. "Cartoons are intended to transform otherwise complex and opaque social events and situations into quick and easily readable depictions that facilitate comprehension of the nature of social issues and events" (Abraham, 2009). It would be thus of interest to investigate on the editorial cartoons on a controversial issue in the Philippines using the theory of semiotics. This paper aims to analyze the War on Drugs cartoons published on "The Manila Bulletin" based on the theory of semiotics.

METHODS

The data for this study are six editorial cartoons from the two leading broadsheets in the Philippines, "'The Philippine Daily Inquirer' and 'The Manila Bulletin'". The selection criteria were clearly established prior to the conduct of this study. First, the researcher selected the top two most read broadsheets in the country based on the 2016 Nielsen Consumer and Media View Study.

RESULTS

Using Semiotic analysis, the following results were drawn: Table 1. Summary of Analysis

Cartoon Theme Message

PDI 1 (Backfire) The campaign against drugs and the issue of "coddling drug lords" make the president's position at risk. PDI 2 (Backfire) The "War on Drugs" evidently backfires President Duterte and General "Bato"

PDI 3 (To be rehabilitated or To be killed) As the "War on Drugs" continue, more numbers are added on the death list. MB 1 (To be rehabilitated or To be killed) Drug addicts are killed instead of being rehabilitated

MB 2 (The elusive truth) The public's quest for the "elusive truth" on Kian's death

MB3 (Excuses for killing) "Nanlaban" as the common excuse of the police everytime killing happens.

Legend:

PDI- Philippine Daily Inquirer MB - Manila Bulletin

DISCUSSIONS

Discussion

The Philippine Daily Inquirer (PDI) maintains its image as anti-government with its direct criticism on President Duterte as reflected in the two backfire themes. Another personality, PNP Chief General "Bato" was also criticize in one of the cartoons.

On the other hand, The Manila Bulletin (MB) focuses on the issue and not on personalities such as the president and the PNP chief.

These situations depicted on the cartoons are unconstructive on Philippine leadership. Although these cartoons do not involve the international community, the "war on drugs" campaign in the Philippines has instigated negative reactions not only from the local but also from the international community.

KEYWORDS: Semiotic analysis, symbolism, exaggeration, labelling

SUBMISSION ID: R04A-CAVITP-0542

**Effectiveness of PreModified Comprehensible Input to the Vocabulary
Competence of Grade 10 Students**

Maria Karen Athena Galang, Department of Education

Abstract

INTRODUCTION

Vocabulary is a crucial component for the success of second language acquisition for it forms the core for the proficiency along the five language macro-skills such as reading, listening, writing, viewing and speaking. In the Philippine context, the National Achievement Test conducted on March 2012 shows that defining words through context clues ranked fourth in the Ten Least Learned Skills of the students. Students have exhibited difficulty in executing the skill due to poor vocabulary ability and skills.

METHODS

The study utilized 60 Grade 10 students randomly assigned as the experimental and control group. The instruments used in the study were a teacher-made test, a learning plan conducted to both groups and texts which were given during the reading session (traditional input for the control group and premodified comprehensible input for the experimental group). Before the experimentation, a uniform pretest was administered to both groups. For one week, the control group was taught using the traditional input while the experimental group was subjected to the premodified comprehensible input. After the treatments, both groups took a uniform posttest.

RESULTS

Both groups garnered a mean falling under "slightly effective" during the pretest. This indicates that both groups have the same baseline level prior to the experimentation with regards to vocabulary competence. Using the t-test of difference for correlated means, both groups manifested a significant difference on their performance in the pretest and the posttest. This means that there was an improvement in the performance of the students after the treatments, whether traditional or using premodified comprehensible input. Using t-test of difference for uncorrelated means on the posttest results, it was found out that there is a significant difference between the two groups. The experimental group garnered the greatest mean gain of 41.67 against 28.11 of the control group.

DISCUSSIONS

The use of premodified comprehensible inputs show more promise in terms of vocabulary competence. It allows learner to provide attention to unfamiliar words which can get lost from a reader's attention without textual enhancements. The use of textual modifications such as bold facing and underlining directs the student's attention in giving meaning to these unfamiliar words in order to have a complete sense of the text. The provision of definition gives means for the learners to fill in the gaps to their own vocabulary capacity.

KEYWORDS: premodified comprehensible input, vocabulary competence, comprehensible input

SUBMISSION ID: R003-TARLAP-0001

Effectiveness of Project Abakada Plus on Developing the Reading Skills of Grade Two Non-Readers

Almira Sabelino

Abstract

INTRODUCTION

Reading is one of the most important skills a pupil should learn in school. A pupil who cannot read encountered difficulty in his/her studies. All subjects in school requires reading, failure to attain this is also failure in his/her studies. Having pupils who are non-readers is also one of the biggest problem of the teacher and school as well. That is why school administrator and teachers should find ways and means to teach these children to read.

METHODS

This study used a descriptive method of research. It described, analyzed, and interpreted data concerning pupils' reading ability. Quantitative data is derived from the Phil- IRI documents. The seven (7) pupils who were identified as non - readers based from the result of Phil-IRI posttest last school year 2016- 2017 are the participants of the study. The researchers asked the permission from the school Teacher In charge to use the PHIL-IRI documents in their study. Pupils participants were given questionnaire checklist for their profiling.

RESULTS

The data gathered from the pupils and teachers respondents have been summarized, tallied and put in tabular form, which are herein presented to answer the problems posed earlier in this research.

DISCUSSIONS

With the results derived from the study, the researchers had reflected the following such as family plays important role to the life of learners, teachers should put his/her heart in everything he/she does, teachers must be competent enough in teaching reading among pupils especially to primary level, teachers should encourage the parents and other members of the family of the Grade II pupils to exert effort to follow up and assist their children in developing their oral reading in Filipino, parents should give enough time to teach their children despite of their economic status, ABAKADA PLUS program is an effective reading remediation for non- readers.

KEYWORDS: ABAKADA PLUS

SUBMISSION ID: R04A-RIZALP-0277

**Effects of Idiomatic Expressions in Filipino among Grade 9 Students of
Natalia V. Ramos Memorial Integrated School**

Angelica Rementilla & Mary Rose Predonio, Department of Education

Abstract

INTRODUCTION

The artistry and creativity of communication is always enhanced by the use of colourful language. This is an intentional diversification in the use of words. Communication is not direct or ordinary because one has to fully think in order to understand its meaning.

The first objective of this study is to Identify the effects of the use of Idiomatic expressions in the Filipino subject for the Grade 9 students in Navera V. Ramos Memorial Integrated School. The aim of this research is to find out the ways that idiomatic words can be used as well as how it affects or influences the students. It also aims to propose recommendations to help in the development of their vocabulary whether in written form or verbal use. The study is focus only on the students of the 9th grade. The number of respondents is ninety five (95) in the school year 2017-2018.

METHODS

The research used the descriptive method. It was made using the Descriptive Survey Research Design. It made use of questions to give information and collect data on effects on the use of idiomatic expressions by students of literature and novels. The research was done with the use of a thorough and well-thought examination using various statistical methods. It was tallied together and the weighted mean and percentage taken by the researchers.

RESULTS

Based on the results, Idiomatic expressions were used more often on writing in discussing literature and novels in the Filipino subject. It results in the increased use and better practice by students not only in comprehensive reading but also in actual writing. It is also very helpful in measuring the ability in their use of idiomatic expressions in writing or speaking.

DISCUSSIONS

The complete results of this study are fully in accordance with the statement of the respondents that there is a positive effect in the use of idiomatic expressions in the whole learning and personality of the students. It is important that they feel comfortable using these expressions in their everyday speech and writing. Idioms are not only part of language but also part of universal communication.

KEYWORDS: effects, idiomatic expressions, Filipino

SUBMISSION ID: R04A-BATANC-0397

Electronic Instructional Material in Teaching Literature and Reading Proficiency of Tboli Pupils

Ermie Abesamis, MAT-English

Abstract

INTRODUCTION

Reading is one of the most significant factors in the learning process of every pupil. In elementary level, pupils struggle in reading proficiency and teachers continue to improve their reading strategies and materials to conquer these issues.

This study "Electronic Instructional Material in Teaching Literature and Reading Proficiency of Tboli Pupils" aimed to assess the effect of the material in the pretest and post-test of Grade Five pupils in Lambuling Elementary School.

METHODS

The researcher used Total Enumeration Technique to achieve the result of the study. All the Grade Five pupils were selected which consisted of two sections; the Newton and Einstein which had thirty five (35) pupils each with the total of seventy (70) pupils.

RESULTS

The Reading Proficiency of the Grade Five pupils in terms of Vocabulary and Reading Proficiency in the pretest, the Control Group generally achieved a "Did Not Meet Expectations" level. This means that the pupils in this level struggles in their reading proficiency. In the post-test, the group obtained "Fairly Satisfactorily" level. It shows that the group improved their understanding after the lesson had been taught to them. Similarly, the experimental group obtained "Did Not Meet Expectations" level in the pretest while in the post-test; the group achieved a "Satisfactory" level. This means that the pupils improved their level of reading proficiency. The overall mean gain scores in Reading Proficiency of the Experimental group and control group showed that there was an improvement between the two groups after the intervention had been employed.

DISCUSSIONS

It is concluded that the Electronic Instructional Material is effective and appropriate in teaching Literature to the pupils. More so, the significant difference between the reading proficiency of the control group and experimental group means that the Electronic Instructional Material is better than traditional way of teaching in improving the reading proficiency of the pupils.

The findings of the study should be considered as bases to strengthen the use of Electronic Instructional Material in teaching literature not only for Tboli pupils. Moreover, further study may be undertaken on the effectiveness of the Electronic Instructional Material in Teaching Literature.

KEYWORDS: Electronic Instructional, Teaching Literature, Reading Proficiency

SUBMISSION ID: R012-SOUCOT-0005

Empowering Teachers' English Proficiency through ICET (Institutional Communication Enhancement Time)

Sylvia Marquez, Pulong Sta. Cruz National High School

Abstract

INTRODUCTION

This action research aims to improve the level of English proficiency of teachers by making it as part of the professional development activity.

METHODS

The data was based from test results before and after the ICET Series of teaching-learning sessions and were conducted personally by the researcher following the schedules on structure specifically correct usage, followed by speech improvement, reading ability and writing skills were based on the test result using activity sheets, board works and lecture.

RESULTS

The computed t value of the paired difference between the pretest and post-test is -2.167 at 36 degrees of freedom, P 0.05, CI36 -4.1471 -.11953. Therefore, there is a significant difference between the pretest and post-test after the utilization of the activity sheets on series of sessions. Thus, ICET improved teachers' level of English proficiency.

DISCUSSIONS

: This study focused on determining the level English proficiency of teachers before and after the implementation of the ICET. It is heuristic because it will help address problem on communication affecting the accomplishment of reports, dealing with stakeholders and students learning outcomes.

KEYWORDS: activity sheets, intervention, teaching-learning sessions, level of English proficiency

SUBMISSION ID: R04A-STAROS-0061

Englishes in College English Tests in a Selected Philippine Higher Institution

Cristeta Tapia, Trece Martires City Senior High School

Abstract

INTRODUCTION

The evolution and widespread recognition of Kachru's World Englishes paradigm does not only recognized the varieties of English used by the non-native speakers of the language globally. However, this linguistic phenomenon also raised numerous debates on the role of English as an international language. Thus, a major concern is on the language teaching and learning process which involves issues on language testing. This paper aims to contribute to the enriching field of investigations relating to the WE paradigm and language testing.

METHODS

A descriptive content analysis was used on the thirteen sample English tests from a private university. The tests include Preliminary, Midterm and Final examinations which were provided by English Instructors. The tests were examined to determine the most common types administered to college students. Then, test items with representations of the varieties present were pointed out and were discussed.

RESULTS

Content analysis of the test items reveal that discrete-point test in fixed response, identification of grammar structures and sentence reconstruction are the common grammar tests administered. Meanwhile, the grammar constructs present are prepositions, objects of prepositions, and prepositional phrases; adjectives and adjective clause; adverbs and adverb clause; pronouns and pronoun-antecedent agreement; verbs, subject-verb concordance, verb tense, passive and active voice; modals, infinitives, imperatives, conjunctions, correct usage, correct word choice and correct meaning. In addition, American English is the most promoted variety among the test items with the presence of a few items for British English. There were only two cases of Philippine English found.

DISCUSSIONS

Results of the analysis of the thirteen sample tests reveal that in terms of knowledge in grammar, university students are tested based on the foreign varieties of English; American and British. The results attest the need of a test that will not only promote the exonormative standards but must also be sensitive to the native variety in which the learners can relate and understand better. Real life situations, expressions and terms used in daily communicative situations must be the major linguistic components of the tests. Consequently, there is a need to design a sensitive variety type of tests to avoid biases in measuring the students' grammar proficiency.

KEYWORDS: World Englishes, testing, grammar, university students

SUBMISSION ID: R04A-CAVITP-0094

**Enhancing the Composition Styles and Pattern of Paragraph Development
of GII Students in Reading and Writing through Independent and
Integrated Written Task**

Arlene Diamante, Department of Education - Canda NHS

Abstract

INTRODUCTION

It is observable among students that they foster condescending attitude towards writing that they view it difficult if not threatening. As a result, many students have wonderful ideas which show a lot of creativity but are hampered by poor writing communication skills and more often have tough times to clarify and deepen their own understanding of some concepts and find ways to relate ideas to one another. With the aforesaid problems, The Grade II Senior High School students of Canda National High School are no exception. In this respect, the researcher was prompted to make an analysis in Grade Eleven students' composition in terms of average text length, content structure, writing styles and pattern of paragraph development to verify her observation and identify the most common composition styles and pattern of paragraph development of the students and find ways to improve learner's composition. Moreover, students need to know the elements of different English composition forms and the writing conventions that go with them.

METHODS

The quantitative and qualitative method of research is used in this research through documentary or content analysis of the written discourse features of student-produced outputs accomplished in two sets of written task the Independent and the Integrated task of 90 respondents. Frequency, Percentage and Mean were the statistical treatment utilized in the study.

RESULTS

It was found out that the average text length was written in short length in both text types. Likewise students are more likely to produce relatively longer text when asked to construct composition in an independent manner rather than with integrated task. In terms of content structure most of the students had an unidentified parts in their composition since they consists only of one paragraph as shown in Task 1 while with body was identified in Task 2. Questions as a writing styles was the most dominant both in Task 1 and Task 2. Narration and Description are both dominant pattern of paragraph development in the two sets of written task.

DISCUSSIONS

This action research is an avenue to teach the G-II students on how to write compositions which are relatively average and longer text length. There is also a need to teach the students the diverse way of starting and ending an essay to achieve variety in their writing styles. Hence, administrators may use the results of the study to further formulate programs to enhance students' writing skills

KEYWORDS: Written Works, Composition Styles, Pattern of Paragraph Development, Independent and Integrated Written Task.

SUBMISSION ID: R04A-QUEZON-0186

Enhancing the Writing Skills of Grade 12 Students through Process Approach

Rodolfo Calimag, Paliparan II Integrated High School

Abstract

INTRODUCTION

Writing is known as a complex intellectual task involving many component skills which is perceived to be difficult to most students. This study aimed to determine the effectiveness of Process approach in enhancing the writing skills of grade 12 HUMSS students at Paliparan II Integrated High School. Moreover, the study is anchored on Expressivist Process Theory of Writing in which it highlights the process of writing that is centered on the writer's transformation through underscoring each step before completing the output. It also helps the students develop social skills of the students since it will require them to do peer evaluation in which they will learn from one another.

METHODS

The researcher employed quasi-experimental research with one group pretest and post-test design. This research method lacks the randomization in the selection of respondents. Also, there is no controlled group involved in the study. The pretest result served as the baseline in the identification of the respondents involved in the study. Furthermore, the statistical treatment applied were mean, standard deviation, and Z-test.

RESULTS

The findings of the study revealed that there was a significant difference between the pretest and post-test scores of the students in the writing test after the utilization of the teaching strategy. The Z-test also revealed that the performance of the students in the writing test were identical prior to the implementation of the teaching strategy. It also obtained that the post-test scores of the students achieved significantly higher in compared with the pretest score.

DISCUSSIONS

The result of the study presents the effectiveness of process approach in enhancing the writing skills of Grade 12 HUMSS students. It revealed that when learners are given guidance and opportunity to reconsider and revise their writing in each step through intensive assistance by the teachers, they will improve their writing skill. This supports the claim of many researches in writing that process approach is deemed effective in enhancing the writing skills of the students.

KEYWORDS: WRITING SKILLS, PROCESS APPROACH IN WRITING

SUBMISSION ID: R04A-DASMAR-0029

Exploring the Linguistic Features of Philippine Headlines in On-line Newspapers

Regicelle Cabaysa, Tayabas City Division Stand Alone Senior High School

Abstract

INTRODUCTION

The richness of headline's genericity made a number of researchers to give their attention on headline both as literary and non-literary genre. Because headlines can be analyzed as an independent text type which can be divorced from its lead and story, this made headline an interesting topic of most studies. These same reason prompted the researcher, who is a student of Applied Linguistics and a School Paper Adviser, to study the linguistic features of headlines. Amidst the expansive studies already conducted on headlines, this research is aimed to look at Philippine English newspaper headlines from a different perspective - that is, from a World Englishes point of view and is intended to analyze the implications of the findings to language teaching particularly in English

METHODS

Using the framework offered by Mardh (1980) and Mouillaud and Tetu (1989) on the typical features of news headlines, a sample of 82 headlines gathered from INQUIRER.net, philstar.com and mb.com from July 21 - 29, 2016.

RESULTS

The findings of the study revealed that the typical linguistic features of English headlines in the country include the use of present tense for the past tense, the use of to + infinitive for future tense, the use of main verb + infinitive, extensive use of abbreviations, omission of words, the use of colon to introduce direct speech, the use of comma to replace the conjunction "and", and the use of loaded words enclosed in scare quotes. Analysis of the findings showed that the language of headlines deviates from the grammar and norms of Standard English

DISCUSSIONS

With the features revealed in the study, headlines may be considered a good springboard for Filipino teachers who wish to enhance student's creativity on the qualities of effective language use such as conciseness, correctness, completeness and concreteness of the message. Moreover, headlines are considered authentic materials which can provide students additional leaning on how English language can be used creatively. Exercises aimed at honing students' versatility on the use of English language can be done by writing or assigning headlines to their stories.

KEYWORDS: Philippine English, headlines, on-line newspapers

SUBMISSION ID: R04A-TAYABA-0009

Factors Affecting Second Language Speaking Skills of Junior High School Learners

Alnies B. Gala, Teacher
(Adviser: Jomel Montero)

Abstract

INTRODUCTION

In the English as a Second Language (ESL) learning context, speaking English has always been a critical skill to develop. One of the essential activities of man is communication; it is where he/she shares his/her thoughts, ideas, and feelings toward each other. Speaking before a group or public has been a long standing issue in the communication and language arena. Students tried to avoid speaking in public because of embarrassment, shaky voices, rapid heartbeat, feeling of discomfort, inferiority complex and low self-respect. This study is only focused on the Second Language Speaking Skills among Junior High School Learners of Mahayag National High School of S.Y. 2018-2019 with the different factors that can affect the speaking skills of the learners using English.

METHODS

The researcher used quantitative research design utilizing a questionnaire in a checklist form. To cater the number of respondents to be included in the study, the researcher used the Stratified Random Sampling. The total number of JHS students during the described school year is 200, while the actual number of respondents was only 133 based on the utilized sampling procedure.

RESULTS

The study is focused on the grade 7 students. The research investigated the demographic profile of the learners which contains the age, year level, ethnicity and sex; among all, sex was mostly showing a significant relationship to the second language speaking skills of the JHS learners in the teaching-learning process of English as a second language. On the factors that affect the learners' speaking skills, a slight difference was seen in instructional factor.

DISCUSSIONS

The results showed that classroom activities and methodologies as well as teaching aids could have affected students' speaking in the classroom, especially if the teacher makes use of activities that challenges the students confidence such as those speaking activities requiring learners/students to display their critical thinking skills, when this occurs in the classroom, students' performance specifically their speaking performance would be affected.

KEYWORDS: Second Language Speaking, Speaking Skills

SUBMISSION ID: R013-SURSUR-0163

**Flipped In-service Training (FIT) on English Language Proficiency:
Teachers' Learning Outcome and Insights**

Jennefer Aranilla, Dasmarinas West National High School

Abstract

INTRODUCTION

The positive impact of professional growth and development programs for teachers has driven the Department of Education to support in-service training for teachers. However, during in-service training, teachers suffer from burnout as a result of lecturing strategy, loss of teacher autonomy, insufficient time, irrelevant topics to their field, and unsupportive working environment. Thus, the researcher was prompted to try an emerging approach in providing professional development known as Flipped Professional Development. This study focused on determining how effective flipped in-service training for teachers as an alternative approach in designing and delivering school-based continuing professional development. Such training emphasized on enhancing the English language proficiency of the selected Non-English teachers of Dasmarinas West National High School.

METHODS

The mixed method research design was employed since it involved both quantitative and qualitative data. The 30 purposely selected respondents from Science, Math, TLE, and MAPEH departments were asked to answer 40- item pre and post English language proficiency tests to determine their learning outcome. A five-point Likert scale survey questionnaire, written interview, and a reflective journal were also utilized to gather further perceptions regarding its effectiveness.

RESULTS

Flipped in-service training on English Language Proficiency has brought about significant improvement in the language proficiency of the Non-English teachers. The respondents perceived this to be effective in terms of promoting positive professional learning experiences and improving their knowledge and skills. These positive perceptions can be attributed to its potentials to promote flexibility, engagement, greater knowledge, and accessibility. Its appropriateness to adult learning, effectiveness in generating learning, and valuable use of time were also observed by the process observer.

DISCUSSIONS

The effectiveness of flipped in-service training in improving learning outcome and in creating positive training experiences justify its potential as an alternative approach in designing and delivering in-service training for teachers. Further comprehensive research may be conducted to examine its full potentials in order to gain a deeper understanding of its impact on teachers' training experiences and performance that eventually lead to successful student learning outcomes.

KEYWORDS: flipped learning, flipped professional development, English language proficiency

SUBMISSION ID: R04A-DASMAR-0009

Games in Intermediate Graders' Vocabulary Mastery

Arselisa Baldovino

Abstract

INTRODUCTION

The study delved on games in intermediate graders' vocabulary mastery. Subjects of the study include the grade V and VI pupils of Kinabigtasan Elementary School. The study employed experimentation and was conducted at Kinabigtasan Elementary School during the S.Y. 2013-2014.

METHODS

All grade five and six pupils of Kinabigtasan Elementary School were taken as subjects of the study. Universal sampling was employed in the selection of the respondents. For the traditional method, there were 24 pupils utilized. For the experimental method, 26 pupils were included. The study used games as the vehicle to establish the data on the query of the study. The following games were used for the experimental mode of teaching vocabulary master. A paper-pen test. The results of the scores were statistically computed in its difference. There was no significant difference in its mean scores. Since the mean scores did not have significant difference so it adjudged valid. After the experimentation was conducted, results were gathered, tabulated and subjected to statistical analysis.

RESULTS

Findings of the study revealed that the pretest-posttest mean scores of those who were given the traditional vocabulary mode of teaching is 25% in pretest and 31% in the posttest. Those who were given the vocabulary game mode of teaching got 29% in the pretest and 57% in the posttest. The level of the vocabulary performance of those under traditional mode of teaching vocabulary is "emerging" while those under the vocabulary games mode of teaching are in "developing". There is a very high significance in the difference of the pre-posttest scores of those who were under the vocabulary games mode of teaching. Those who were given the traditional mode of teaching showed that there is no remarkable difference from pretest to posttest. Game designs used in the experimentation are proposed to be used in vocabulary teaching.

DISCUSSIONS

The study offers the following recommendations based on the significant findings and conclusions. A change from traditional mode of teaching vocabulary may be explored in order to determine whether the learners improve or not. There is a need to update teachers' mode of teaching vocabulary if level of learners' vocabulary performance is to be increased. Motivating learners in vocabulary games may be done if teachers are to make a difference in enhancing learners' vocabulary performance. Proven and tested vocabulary games such as those used in this study are recommended for use.

KEYWORDS: GAMES, VOCABULARY MASTERY

SUBMISSION ID: R013-SURSUR-0162

GRASPS: Contextualized Speaking and Writing Performance Tasks in for Grade 11 Students

Gaylee Masangcay & Maria Nilda I. Laureta, Conde Labac Integrated School

Abstract

INTRODUCTION

Contextualizing language instruction through GRASPS (Goal-Role- Audience-Situation-Product-Standard) performance tasks adheres to the principles of the K-12 curriculum which require it to localize and indigenize learning based on students' educational and social contexts. To develop contextualized performance tasks through GRASPS, the study assessed the extent to which students demonstrate proficiency in performance standard tasks such as composing a persuasive speech, writing a concept paper, delivering an impromptu speech and presenting a research report.

METHODS

The study utilized descriptive research design and questionnaire to 20 senior high school teachers of the Division of Batangas City, 2017-2018. Weighted and composite mean and ranking were used to statistically treat the data.

RESULTS

As assessed by the teachers, students have shown proficiency to a moderate extent in delivering an impromptu speech, writing a concept paper, presenting a research report, and composing a persuasive speech. They demonstrate a moderate extent of proficiency in following appropriate organizational pattern with sound arguments. They show a moderate extent of proficiency in defining a concept paper whereas the least rated competency is observing grammatical correctness. They have a moderate extent their proficiency demonstrating non-verbal cues such as movements and gestures to emphasize the main points but fairly low in applying organizational patterns to deliver an efficient impromptu message. They got a moderate extent of proficiency in integrating well-designed visuals into the presentation of a research report.

DISCUSSIONS

Data can be attributed to student's appreciation to various performance task where they play a role in contextualized manner having the practical value of utilizing the language. In terms of writing, students are aware of the knowledge on the topic that can facilitate smooth production of quality essays, but there is still a need to take serious effort in enhancing their grammatical correctness. With these, contextualized performance tasks in delivering an impromptu speech, presenting a research report, composing a persuasive speech, and writing a concept paper were conceptualized to enhance grammatical competencies of Grade 11 students.

KEYWORDS: speaking, writing, performance tasks, grammatical competence, language proficiency

SUBMISSION ID: R04A-BATANC-0398

Heograpikong Varayti Ng Tagalog-Batangas Ng Mga Guro At Mag-Aaralsa Ilang Piling Lugar Sa Batangas: Tungo Sa Pagbuo Ng Modelo Sa Pag-Aaral Ng Varayti Ng Wika

Demetrio Bautista, Department of Education

Abstract

INTRODUCTION

Ang pag-aaral ng varayti ng wika ay isa na ngayong disiplina at nais ng mananaliksik na makatulong upang mapalawak ang disiplinang ito. Ang karanasan sa pagtuturo ng guro sa mga mag-aaral ay naimpluwensyahan ng iba't-ibang mag-aaral sa paraan nang pagbigkas at talasalitaang ginagamit. Nais patunayan ang teorya ni Giles - ang teorya ng akomodasyon.

METHODS

Ang mananaliksik ay gumamit ng pamaraang deskriptibo na ang layon ay mailarawan ang heograpikong varayti ng Tagalog- Batangas sa ilang piling bayan ng Batangas ayon sa impluwensya ng mga karatig lugar. Ang instrumentong ginamit sa pangangalap ng datos ay ang inihandang talatanungan para pasagutan sa mga guro at videong ginamit sa mga guro at mag-aaral sa ginawang pakikipanayam. Ang ginamit na mga hakbang sa pangangalap ng datos ay ang mga sumusunod: 1.) paghahanda sa pagkuha ng datos, 2.) pagpili sa mga lugar, 3.) pagkuha ng video sa mga kalahok, 4.) pagpapasagot sa talatanungan, 5.) pakikipanayam, 6.) pagta-transkrayb at pagwawasto sa mga datos, at 7.) koding ng mga datos.

RESULTS

Ang varayti ng Tagalog-Batangas sa paraan ng pagbigkas ng mga salita ng mga guro at mag-aaral na taga-Lobo, Batangas na naimpluwensyahan ng mga guro at mag-aaral na taga-Calapan Oriental Mindoro. Matigas ang paraan ng pagbigkas ng mga salita tulad ng /pidi/ sa /pede/ at /tapus/ sa /tapos/ ay ilan sa mga halimbawa ng ganitong paraan ng pagbigkas. Ipinakita din ng mga guro at mag-aaral ang pagpapahaba ng diin sa paraan ng pagbigkas tulad ng /gayon/ sa /gay.on/ at /ngayon/ sa /ngay.on/

DISCUSSIONS

Ang ganitong sitwasyon sa paraan ng pagbigkas ay impluwensya ng interaksyon ng mga guro at mag-aaral sa mga guro at mag-aaral sa probinsya ng Romblon na kalapit ng Oriental Mindoro at nadala naman ng mga taga- Oriental Mindoro sa Lobo, Batangas. Naging gamitin din ng mga guro at mag-aaral na galing sa Lobo, Batangas ang mga salitang galing sa Oriental Mindoro tulad ng tason, tanggoy, paraka, bomba,uuna na at lamog. Ginamit din ng mga guro at mag-aaral na galing sa Oriental Mindoro ang mga salitang galing sa Lobo, Batangas tulad ng umayos ka, pag-igihin, nagsungasob, pangkal, papanhik, pavanaog, hunta, nabubo, busilig, patikar, bumuog, bangibi, dudukal, hibahib at asbar. Ang mabilis na paraan ng pagbigkas ng mga taga-Nasugbu, Batangas ay ang pagkakaroon ng pagputol ng mga salita upang ipakita na may diin sa unang pantig ng salita tulad ng /pasanin/ sa /pas.anin/, /dagim/ sa /dag.im/, /mabigat/ sa /mabig.at/, /ganoon/ sa /gan.on/ at /gabihin/ sa /gab.ihin/

KEYWORDS: HEYOGRAPIYANG VARAYTI VARAYTI NG WIKA

SUBMISSION ID: R04A-BATANC-0021

Ice Cream Letter Sounds: Developing Phonemic Awareness among Kindergarten Pupils in Taysan Elementary School

Suzette Aguila, Department of Education – San Jose

Abstract

INTRODUCTION

The study was conducted by the researcher to enhance understanding on phonemic awareness among kindergarten pupils in Taysan Elementary School. The results obtained will be of great help to pupils who are enrolled in Taysan Elementary School as well as to the teachers to determine the factors that affects the development of their phonemic awareness.

METHODS

The descriptive method was used in this study having 25 pupils who enrolled in Taysan Elementary School as respondents. The method was applied which involves collecting of data in order to test the hypothesis or answer questions concerning the current status of the subject of the study. The researcher used the proposed strategy through implementing it during teaching letter sounds. This study also points out the nature of the situation as it exists at the same time and explores other method most suitable in learning.

RESULTS

The researchers found out that using this strategy means efficient aid in teaching literacy in kindergarten. This strategy can be applied in teaching initial sounds of a word. The implementation of the activity was guided by researchers made rubrics for genuine evaluation on the learner's response. Seventy-six percent of the pupils answered the activities near to perfection and achieved the high score of 9 points. Twenty-one percent of the pupils attained the verbal interpretation of average with 7 points and 3% of the pupils attained the verbal interpretation of low performance that the researchers gave extra activities to master the lesson among the pupils. The proposed action plan covers activities to develop the phonemic awareness of kindergarten pupils.

DISCUSSIONS

The information gathered from the study will give insights to teachers and pupils on how this strategy will develop the phonemic awareness among kindergarten pupils. It also serves as reference to other teachers to experience the same problems with their pupils. The emphasis of the school-based study is focused on the use of various activities to develop phonemic awareness of kindergarten learners. The output of the study pertained to the supplementary materials to enrich the teaching of Language and Literacy.

KEYWORDS: Phonemic awareness, initial sounds, letter sounds

SUBMISSION ID: R04A-BATANP-1676

Improving Least Mastered Reading Competencies of Students through Computer-Based Instruction Using Journalism-Related Texts

Sarah L. Monteiro, Plaridel Integrated NHS

Abstract

INTRODUCTION

Learners of today are enveloped in technology from an early age and it is inevitable that they are now literate in using computer even without a proper training. Reading programs that have sound and graphics were invented to make learning more fun. This research aimed to investigate the effect of computer-based reading program on the present development of reading competency of Grade 9 students.

METHODS

Descriptive and experimental method were used in this research to determine the causal relationship between the computer- based reading programs and classroom instruction using journalism related text to the level of reading competency of Grade 9 students of Plaridel Integrated National High School, academic year 2017-2018. The static group comparison was the experimental design used in this study. Two groups, wherein, each had fifty (50) respondents, used the same set of activity, but in different modes of instructions. Group A answered the activities in a computer-based reading program, whereas Group B answered it in traditional way or the classroom instruction.

RESULTS

The findings showed that students who were subjected to the computer reading program revealed that their level of perception on the use of it is they all agree with an overall mean of 2.81 and sd of 0.71. Student-respondents' perception on the usage is to a great extent which could be interpreted as they all agree on the use of it. On the data presentation of the level of reading competency of students who underwent computer-based instruction and classroom instruction, the result was students who underwent CBI are powerful when it comes to predicting outcomes with a mean of 81.42 and sd of 10.73 but proficient in other reading competencies. On the other hand, the reading competency of the other group of students who were subjected to pure classroom instruction is proficient in all categories.

DISCUSSIONS

The results demonstrate that the data on the significant difference in the mean scores of Grade 9 students in the least mastered reading competencies showed that the mean scores of students who used computer-based reading program are significantly better than the mean scores in the same reading competencies using classroom instruction. Computers have the ability to aid learning effectively, however, some features of the computer reading program must be modified as deemed necessary for the success of this program.

KEYWORDS: Computer-Based Reading Program, Least Mastered Reading Competencies

SUBMISSION ID: R04A-LAGUNA-0239

Improving Reading Comprehension of Grade 10 Students From Cavite National Science High School through a Response Journal (S.Y. 2018-2019)

Maricar Ligsal, Cavite National Science High School

Abstract

INTRODUCTION

Without comprehension, reading is a difficult task among learners. Reading comprehension helps students improve their knowledge, skills and experiences they must acquire to become proficient readers. Typically poor readers face inadequate awareness in developing, selecting and applying strategies that can increase their comprehension of the text. They may also have trouble connecting the ideas of a text. This made the researcher use a reader response journal for her learners. It aims to help the reader identify the organizational structure of narratives or the expository texts to help them read and understand. This improves the comprehension of the learners for they need to think and reflect upon what they have through the journal.

METHODS

One hundred forty-one Grade 10 students made use of the response journal. The worksheet was designed to get a feeling of how the students were perceiving the use of the journals. Modeling is the technique used by the researcher. The researcher modeled her thinking about a selected piece of text and how that thinking can be used to form a written response. The students were required to accomplish 6 response journals out of the pre-selected readings for Grade 10. It was accomplished halfway through the research period.

RESULTS

With the reading surveys, the researcher identified the student's attitudes about reading and writing about their reading. Generally, there was a small variation between the pre and post surveys. When questioned how well they liked to read, 50 % of the respondents love reading. The question of how much they believed writing about what they read would impact how well they recalled what they read caused in a slight decrease. On a scale of zero to four, with zero being "not at all" and four being "very much", 70% of the student population claim that the response journal help them recollect ideas and events from the story.

DISCUSSIONS

In analyzing the data and notes, the researcher found out the use of response journals an effective scheme to improve memory thus increase reading comprehension. Practically, most of the students showed constructive results. For some, the increases were slim. With this in mind, adjustments need to be made for those who find it not for them. The researcher concluded that she can lessen the number of journals, let them draw about what they read, or vary the writing by giving them specific things to write about. The researcher recommended to use other strategy that would best give the student direction on what to write.

KEYWORDS: READING COMPREHENSION

SUBMISSION ID: R04A-CAVITP-1336

Interactive, Discipline-specific Language Module for Future Teachers

Mariz R. Millando, MAED, Buhaynasapa National High School

Abstract

INTRODUCTION

Teacher education students must prepare themselves to be successful members of the global workforce by being exposed to relevant, discipline-specific activities targeting not only the language content but also linguistic competency, for the tool to thriving in a competitive global community is English proficiency. Discipline-specific English courses require application of English language in various contexts but within one discipline. As such, the researcher was motivated to assess how instructional materials in teaching English courses were being utilized, of the goal of developing learning module that would further help the prospective teachers in the holistic language teaching and learning process.

METHODS

The qualitative-descriptive research design was used with document analysis, interviews, and researcher-made questionnaire as research instruments. This study utilized the five campuses of the Batangas State University offering Teacher Education programs as the research environment. This study made use of the total population of English instructors and students who were able to take the courses English 101 and 103 as respondents. They were obtained through purposive sampling.

RESULTS

The study revealed that Education students from the selected BatStateU campuses perform satisfactorily in Eng. 101 - Advanced Grammar and Composition, while they perform meritoriously in Eng. 103 - Oral Communication. The teachers moderately utilize the available printed, visual, audio, audio-visual, teaching equipment, projected media, and computer and internet-based materials. However, real objects and simulations are slightly used in teaching English courses. The respondents also revealed that they slightly encountered difficulties in teaching discipline-specific language courses relative to classroom management, instructional methodology, and assessment and evaluation. On the other hand, they moderately encountered difficulties in teaching preparation, class participation, and learning facilities and environment.

DISCUSSIONS

In general, the utilization of available instructional materials is not significant to the difficulties encountered by the teachers in teaching discipline-specific language courses. The researcher then proposed a module and remarks that it must be validated prior to adoption in order to help address the problems and difficulties pertinent to the teaching of discipline-specific language courses in the teacher education program.

KEYWORDS: interactive, discipline-specific, language module, future teachers

SUBMISSION ID: R04A-BATANP-1353

Language Development in Written Discourse Used By Senior High School Students

Edelita V. Abegania, Department of Education

Abstract

INTRODUCTION

The need to be proficient in the use of English among non-native speakers has become a large-scale fact. Teachers are challenged of taking in hand the needs of the growing number of learners whose chief language is not English, since the importance of language learning has been fully recognized as a goal of language teaching and learning in the department. In this regard, this study was conducted to identify the level of language development in written discourse used by SHS students in their communication process, as well as the common flaws displayed in their written outputs and the different activities used by the teacher to overcome the different flaws identified.

METHODS

This study utilized descriptive research design to describe the nature of the situation as it exists at the time the study. Purposely selected, forty SHS students of Magsaysay National High School, Diffun, Quirino, responded to a questionnaire as the major instrument in gathering the needed data. Certain concerns were addressed for the purpose of ensuring the privacy and the security of the target respondents and the school itself. These issues were identified in advance to prevent future problems that might arise during the research process.

RESULTS

As to the level of awareness of language development in the written discourses of the respondents, the result of the findings revealed that student respondents are aware as to the grammar aspect, rhetorical aspect and as to the mechanics in their written discourses that disclosed an average mean of 3.45. On the different flaws displayed by the respondents, the findings vividly revealed that the data gathered from the respondents usually displayed flaws in the language development in their written discourses with an average mean of 3.77. Lastly, as to the different activities used by the teacher, the result of the findings revealed that the teacher initiated various activities in the language development of their written discourses that displayed an average mean of 3.69.

DISCUSSIONS

The analyses of the data gathered showed that teachers teaching English subject should continuously abreast changes in the acquisition of the second language taking into consideration the culture of learners. The general repercussion arrived in this study is for teacher teaching English subjects to be cognizant of the different variables that can be contributory to the effective learning styles and practices they employed in strict compliance to all mandates of the Department of Education.

KEYWORDS: language development, written discourse, senior high school students

SUBMISSION ID: R002-QUIRIN-0081

**Lexical and Linguistic Competencies of Grade 7 Students of Dacanlao G.
Agoncillo National High School**

Leovy Aala, Dacanlao G. Agoncillo National High School

Abstract

INTRODUCTION

Learning and understanding the English language is always in demand knowing that English is considered the second language in most countries nationwide. It is the medium of instruction in schools and universities and even in government and in business. This study identified the lexical and linguistic competencies of Grade 7 students. The result of the study was the basis of the language communicative activities developed which the students used to develop their competencies.

METHODS

A descriptive method of research in gathering and analyzing data on the level of lexical and linguistic competencies of Grade 7 students of Dacanlao Gregorio Agoncillo National High School as basis of proposed communicative language exercises. The researcher formulated test question used in assessing student's lexical and linguistic competencies. The teacher-made test was administered to the respondents after the pilot testing and revisions have made.

RESULTS

Based on the result of the teacher made test administered to the respondents, Grade 7 students have a low level of performance in lexical competency. In items which require the students to identify the synonyms of the given words through context clue, the mean proficiency score (MPS) is only 40.46%. On the other hand, only 22.77% of the respondents acquire the proper answer on items regarding antonyms, while 57.92% of the students get the answer on items testing their knowledge on heteronyms. Additionally, 33.85% of them had a correct response on the test items about word formation. On numbers asking the respondents to choose the most appropriate word to complete the given sentences, 50.54% of the participants got the answers correctly. Lastly, 44.92% had a correct answer on items which required them to determine the correct word parts. The data gathered shows that students' level of performance is low in lexical competence in terms synonyms, antonyms, heteronyms, choice of words, word formation and word parts.

The study also revealed that Grade 7 students have low level of performance in linguistic competence relative to subject-verb agreement, use of pronouns, determiners, adjectives and adverbs. The mean proficiency score in the test items on observing correct subject- verb agreement is 55.77%. On the test items regarding the correct use of pronouns, the mean proficiency score of 51.69% was obtained, 50.54% was the acquired MPS on test on the use of adjectives, 29.92% on the items requiring for the utilization of accurate determiners and lastly, 37.23% was the MPS on the items about the correct use of adverbs.

DISCUSSIONS

The results the need for additional activities and language exercises to help Grade 7 students in improving their lexical and linguistic competencies. This will enhance students' learning through practice.

KEYWORDS: Lexical, Linguistic, Competencies, Communicative, Language, Exercises

SUBMISSION ID: R04A-BATANP-2009

**Linguistic Competence in English of Grade 7 Students in Don Leon
Mercado Sr. Memorial National High School, San Juan West District,
Division of Batangas**

Jeenyvie Gamo, Teacher

Abstract

INTRODUCTION

Linguistic competence constitutes knowledge of language, but that knowledge is tacit, implicit. This means that people do not have conscious access to the principles and rules that govern the combination of sounds, words, and sentences; however, they do recognize when those rules and principles have been violated. This kind of competence is possessed by native speakers of a language. It is distinguished from linguistic performance as to how speakers would deliver and say the words. Competence is one of the characteristics of a native speaker. It is their ability to comprehend and be understood by people using the language. Everything that relates to the English language must be known by somebody to be called competent.

METHODS

On this study, the descriptive method was used to survey the existing conditions that concern the linguistic competence and level of performance of Grade 7 students in Don Leon Mercado Sr. Memorial National High School. The respondents of the study were 175 students from Don Leon Mercado Sr. Memorial National High School, Division of Batangas.

RESULTS

Most of the respondents were classified as poor as to their final grade in English seven. There is a need for them to spend more time in studying English to improve their level of linguistic competence. Respondents' level of linguistic competence as to content and function words were both classified as Average. Their scores were not that far from each other, so it arrived in almost the same results.

DISCUSSIONS

The intervention activities were created based on the findings on the level of linguistic competence of the respondents in grammar as to content and function words. It is necessary for the learners to undergo activities to improve their literacy skills and be more equipped in facing K to 12 Program.

KEYWORDS: Linguistics, Language

SUBMISSION ID: R04A-BATANP-1691

Linguistic Landscape Analysis of the Advertising Signage of Senior High Schools in the Municipality of Rosario, Cavite

Marivic Gallanosa, Rosario National High School

Abstract

INTRODUCTION

The paper examines the linguistic landscape found in Rosario, Cavite which has been the seat of many senior high schools. It has been found out that there are many advertising signage promoting Senior High Schools. The purpose of this research to describe and compare the advertising signage of Senior High Schools in the Municipality of Rosario, Cavite. It also aimed to give suggestions on how to better improve the quality of each signage in order to capture students' eyes on the visual and textual graphics provided in their advertisements.

METHODS

The method used in this study was Descriptive-Qualitative method to explain and discuss the commonalities of each advertising signage in the municipality. In a-Grounded theory perspective, open and axial coding, as well as the diagramming memo of students' perception were accomplished to categorize the responses into a saturated theme. Based on the students' perspectives, whether it is visual or textual graphic, the advertising signage should be informative, appealing, technically edited and the font size and color should always be considered. Each advertising signage was analyzed through the frameworks of Chen's multimodal model for linguistic landscape (2016) and William's Guidelines for Visual Aid (2004).

RESULTS

The findings of the study revealed that advertising signage should consider the three communication elements. These are language design, visual design, and spatial design which should be equally promoted in a linguistic landscape. It has been found out that LL should be noticeable to the public so that it would develop communication with the viewers. These were demonstrated in 1.) Descriptive analysis of each advertising signage based on its commonalities, 2.) The students' perception of the advertising signage in their preferred school and 3. An analysis of the advertising signage based on William's framework on designing textual and visual graphic (2004).

DISCUSSIONS

This study only focuses on small range context that might bring conflict on generalizability. Nevertheless, other researchers are welcomed to focus on a wider scope. The study suggests that the school should design an effective, informative and attractive advertising signage. Also, it is recommended to improve senior high schools' advertising signage so that the information would be effectively delivered. It also implies the importance of communication elements which should equally be given importance and properly placed based on the suggested guidelines.

KEYWORDS: Linguistic landscape, advertising signage, visual and textual graphic

SUBMISSION ID: R04A-CAVITP-0040

**Listening Comprehension Level of Selected Grade Seven Students in
Montalban Heights National High School**

Lorenzo Ruiz Costo, Montalban Heights National High School

Abstract

INTRODUCTION

This research aimed to determine the listening comprehension level of selected Grade seven students of Montalban Heights National High School. This research was undertaken to answer the following problems: The profile of the respondents in terms of: sex, and previous grade in English; the listening comprehension level of the respondents as manifested through listening for instructions and listening for directions; and the significant difference in the listening comprehension level of the respondents when they are grouped according to profile.

METHODS

The study was conducted at Montalban Heights National High School with thirty-eight (38) grade seven students as the respondents. Frequency, percentage distribution and ranking to show the profile of the respondents in terms of sex and previous grade in English. Mean was utilized to determine the level of the listening comprehension skills in particular to listening for instructions and listening for directions. Analysis of Variance was employed to determine if there is a significant difference between the listening comprehension skills of the students when grouped according to profile.

RESULTS

Based on the data gathered, the total number of respondents was 38; 10 or 26.3% of respondents were male while 28 or 73.7% of the respondents were female. 12 or 31.5% of the respondents got a grade ranging from 81 to 84, 7 or 18.4% of the respondents got a grade ranging from 85 to 88, and 19 or 50% of the respondents got a grade ranging from 89 and above. On the listening comprehension level of the students, the mean score for listening for instructions was 7.56 while the listening comprehension level of the students, the mean score for listening for directions was 9.21.

DISCUSSIONS

Based on the results, the researcher recommends that teachers of English should not focus on speaking, reading, and writing alone. Lessons in the following macro skills will be more effective if listening comprehension activities and lessons will be included in each lesson. It is also highly recommended that listening materials in listening should be localized for better understanding of students.

KEYWORDS: Listening, Listening Comprehension, Listening for Instructions, Listening for Directions

SUBMISSION ID: R04A-RIZALP-0133

Literature-Based Approach Instructional Materials on Increasing the Willingness to Communicate Inside the Classroom of ESL Grade 10 Students

Ireen Marasigan, Dolores Macasaet National High School

Abstract

INTRODUCTION

English is considered as the second language in the Philippines. It is also included in the basic education curriculum. However, most of Filipino students still have poor English proficiency as evident by having low national mean percentage score in National Achievement Test that usually ranges from 45-48%, far behind the national target of 75%. In this study, the researcher focused on using literature-based approach instructional materials on increasing the willingness to communicate inside the classroom of ESL students. The study shows willingness to communicate inside the classroom as an important factor in the acquisition of second language.

METHODS

The study employed the quantitative approach. Pretest and post-test were given to determine the difference in the willingness to communicate inside the classroom of Grade 10 ESL learners. The researcher developed instructional materials using the literature-based approach and implemented them. The significant relationship of the language learning orientations of the students to their WTC was determined as well as the as the significant relationship of the language learning orientation of the students to their profile.

RESULTS

The findings suggest that the respondents are not always willing to use the English language in the whole duration of an English class. It is evident during the implementation because the respondents kept on code-switching or using their L1 every time they were reciting, participating in class discussion or presenting their outputs in class. However, results further suggest that the instructional materials have helped the respondents in comprehending and appreciating literary works, building their self-confidence through the interactive and collaborative activities, understanding the English language better and increasing their willingness to communicate using the target language inside the classroom.

DISCUSSIONS

The similarity in English skills might be a contributing factor in observing almost the same rates of WTC in the pretest and posttest, though the level of difference was almost significant. Measuring each macro skill and willingness outside the classroom could have been included in research. Other factors could also contribute to the WTC inside or outside of the classroom such as gender, socioeconomic status, perceived competence, language anxiety, motivation and the teachers' pedagogical content knowledge (PCK) among others may cause an increase or decrease in WTC.

KEYWORDS: Willingness to Communicate (WTC), Literature-Based Approach, Second Language Acquisition (SLA); English as Second Language (ESL)

SUBMISSION ID: R04A-QUEZON-0237

Local and ASEAN Foreign Culture Integration in Improving Academic Performance in English V: A Continuous Improvement Project

Nicolas Sasaluya I, Department of Education

Abstract

INTRODUCTION

This research along with the Continuous Improvement aims not only to improve the English academic performance of Grade V, but also to be familiar and give importance to the culture and tradition of their locale, and of the ASEAN community. This research was implemented to: identify the academic performance level in English; determine the factors affecting the learning process; measure the level of effectiveness of the project; and find out if there is significant difference between the previous and current academic performance level after the implementation of the innovation. The researcher created a Material aligned with learning competencies in English V Curriculum Guide to be used during the period. This research was also made possible through of the Basic Education Research Fund of Policy, Planning and Research Division, Region V.

METHODS

This used descriptive method of gathering the data needed in answering the problems identified, and by discussing the result. Table was used to plot pupils' academic performance in English, and used checklist on the factors affecting English learning and on the level of effectiveness of the interventions implemented. Strategies were employed to 40 pupils, like Acacia Got Talent, Pro'ject and Project', Acacia Special Award and other specific activities along with this research project.

RESULTS

The study revealed that there is significant difference in the pupils' academic performance in English before and after the implementation of this innovation, and confirmed the level of effectiveness of the material integrated in the subject. This showed that pupils were interested in learning the subject if they are familiar with the content of the materials, and integrated local and foreign culture in English subject. Actual performances, and other implemented activities helped in achieving the goals of this study. However, there should be separate activities, strategies, and tutorial with the identified low performing pupils.

DISCUSSIONS

From the results, the integration of these cultures contributes in learning English subject. Recommendations were raised for the effectiveness and efficiency of the intervention, an individualized instruction should be done specially with the low performing pupil, exposure of pupils to other local and ASEAN culture and practices, differentiated activities and techniques should be employed to cater the differences of the learners, and the materials devised must be used by intermediate grade levels in elementary.

KEYWORDS: Local and ASEAN Foreign Culture Integration, English Academic Performance

SUBMISSION ID: R005-CAMSUR-0107

Mastering Simple Past Tense Thru Utilizing Cooperative Approach

Cecilia Casas, Department of Education-Liliw National High School

Abstract

INTRODUCTION

Learning a different language such as English is quite difficult for some countries because they feel uncomfortable in using the language. Filipinos are privileged to have the English language as part of the school curriculum. Yet, through the years the students' knowledge in correct grammar seems to deteriorate. While some say that correct grammar is not that important as long as people can understand what they mean in a conversation, still we cannot leave the fact that the knowledge of using the the correct tense of the verbs, consequently affecting the agreement of the subject and the verb which is essential in both spoken and written language matters. In one aspect it is gleaned that the students were having a hard time identifying the verbs and the use of the past tense in the simple aspect once that it is used in the sentence. Thus there is a need to arrest this problem and that is the reason why this study is conducted.

METHODS

This study is a descriptive research utilizing a quantitative approach to gather data. Specifically the researcher used the cooperative approach to teach the past tense of the verb in the simple aspect to the learners. In this method the students experienced team teaching wherein they were grouped and each group member helped one another to answer the given task. The data gathered was the total number of participants who reached the mastery level in the given assessment test at the end of the lesson. The respondents were the Grade 8 students.

RESULTS

Based on the findings, group work and activities can draw out varied talents and varied viewpoints. It can promote better learning and good camaraderie among the learners. It was also observed that the learners gain confidence in answering the task knowing that they have their group mates to help them.

DISCUSSIONS

The cooperative learning approach can be a useful strategy to help the learners identify the past form of the verb and understand its use in the sentence. However, there must be a close monitoring on the part of the teacher to see to it that everyone in the group participates in the activities.

KEYWORDS: Simple Past Tense, Cooperative Learning Approach,

SUBMISSION ID: R04A-LAGUNA-0224

Millennial Language and Its Implications to Standard English

Carlos Jr. Nueles, Public School Teacher

Abstract

INTRODUCTION

Millennial language refers to the words and expressions used in a conversation adapted and invented through the use of social media. These words and expressions are used across discourse communities (home, school, friendship and church), which become part of the way people communicate especially in the use of Standard English. The millennial learners in the Philippines have created new words and expressions that need awareness to promote universal understanding among its users. This study identified the commonly used millennial words and expressions by the Filipino learners across the different discourse communities and analyzed its implications to the use of Standard English.

METHODS

This qualitative research that used validated survey questionnaires determined the commonly used words and expressions by the millennial learners across discourse communities and its implications to the use of Standard English. Focus group discussion and a series of unobtrusive observations from the different discourse communities were conducted to identify how millennial words and expressions influence the way they communicate and use the Standard English in a conversation.

RESULTS

Words and expressions that are recently invented are always used wherever people go. The words that create an impact to the society are the words that people commonly speak. The identified commonly used millennial words and expressions by the Filipino learners entailed that different discourse communities are also influenced by the social media trends specifically in the formation of new vocabularies used in a conversation. These new formations on the way people speak have implications to Standard English on reading and listening comprehension, speaking, writing and vocabulary.

DISCUSSIONS

Several millennial words and expressions were identified across discourse communities. Learners perceived that millennial words and expressions can contribute in learning the English language especially in making connections for comprehension. This study did not focus on grammar and its effects to behavior that others may delve on. These millennial words and expressions can help students contextualize their expressions in the classroom setting through creating lesson exemplars that incorporate millennial words and expressions. Thus, a dictionary containing the commonly used millennial words and expressions might help the learners to understand its definition and usage.

KEYWORDS: millennial language, discourse communities, Standard English, implications

SUBMISSION ID: R005-LEGAZP-0010

**MS-TaLA (Matalinhagang Salita-Talasalitaan Linangin Araw-araw) sa
Pagpapaunlad ng Kasanayan sa Talasalitaan ng mga Mag-aaral sa
Ikasampung Baitang ng Cavite National Science High School 2016-2017**

Arlyn Tolentino, Cavite National Science High School

Abstract

INTRODUCTION

Ang matalinhagang pahayag o pananalita ay may malalim o hindi lantad na kahulugan. Sinasalamang paggamit nito ang kagandahan at pagkamalikhain ng anumang wika (Filipino-Panitikan Pandaigdig-Modyul para sa Mag-aaral, 2015). Ang talasalitaan naman ay talaan ng mga salita at parirala na may kahulugan at inayos ng paalpabeto o tinatawag din bokabularyo o mga salita ng isang wika (Diksiyunaryo Pilipino, 1994). Layunin ng pananaliksik na ito na mapaunlad ang antas ng kasanayan ng mga mag-aaral sa matalinhagang salita at talasalitaan sa pamamagitan ng MS-TaLA (Matalinhagang Salita-Talasalitaan Linangin Araw-araw).

METHODS

May isang daan at dalawampu't isang (121) mag-aaral na kalahok sa Baitang 10. Ang interbensiyong MS-TaLA ay sinimulan sa buwan ng Hunyo at natapos sa buwan ng Pebrero. Apat (4) na beses ang klase sa Filipino. Gamit ang Power Point Presentation, bawat araw ay may limang (5) bilang ng matalinhagang salita o talasalitaan na sinagutan sa loob ng 2 minuto at iwinasto pagkasagot. Sa ikaapat na araw ng klase, ibinigay ang 15 aytem sa nakaraang 3 araw na sinagutan sa loob ng 5 minuto at iwinasto pagkasagot. Pinaghambing ang bilang ng tamang sagot sa unang 3 araw at sa ikaapat na araw ng MS-TaLA. May Talatanungan (Questionnaire) din kaugnay sa antas ng kasanayan sa Matalinhagang Salita at Talasalitaan. Sinagutan ang nabanggit na mga tanong sa paraang "Self- Assessment" .

RESULTS

Ang bilang ng tamang sagot sa ikaapat na araw sa MS-TaLA ay mas mataas kaysa sa pinagsama-samang puntos sa naunang 3 araw. May positibong resulta naman ang mga sagot sa dalawang (2) tanong. Ang antas ng kasanayan sa Matalinhagang Salita at Talasalitaan ay tumaas mula sa 7.43 % sa 71.9 at 0 % sa 18.2% sa huling magkasunod na antas ng kasanayan bago at pagkatapos ng implementasyon ng MS-TaLA. Pinatunayan ng pagbabago ng bahagdan sa antas ng kasanayan na ang MS-TaLA ay may positibong epekto sa pagpapaunlad ng kasanayan ng mga mag-aaral sa Matalinhagang Salita at Talasalitaan.

DISCUSSIONS

Batay sa resulta, ang MS-TALA ay nakapagpapaunlad ng kasanayan ng mga mag-aaral sa Matalinhagang Salita at Talasalitaan. Inirerekomenda na maging bahagi ang MS-TaLA sa araw-araw na pagtuturo ng Filipino.

KEYWORDS: MS-TaLA, Talasalitaan, Wika

SUBMISSION ID: R04A-CAVITP-1507

**Neutralizing the Ala-Eh accent in the Spoken English of Grade 11 students
using ELSA (English Language Speech Assistant) in the enhancement of
Oral Communication: A Teaching activity**

Julerita Babao, Department of Education

Abstract

INTRODUCTION

English is primarily regarded as the primary vehicle for global communication (Albert, 2013). The argument arises from the given that English is by far the most commonly spoken language and is also the same mode of communication used in the world wide web or the Internet (Lewis, 2009). In this regard, the school plays an integral role, the English subject as a curriculum and the English teacher are at the frontline of this goal. This paper anchors itself in the augmentation of helping students residing in Batangas City towards the aim of reducing their regional accent. The province of Batangas is known for having a peculiar accent which manifests itself in the spoken English of the students and this paper aims to develop a way towards regional accent neutralization.

METHODS

The study is primarily categorized as a Descriptive research. The researcher utilized a speech application ELSA or English Language Speech Assistant which was administered to purposely chosen 55 Grade 11 students in a span of two weeks. This study is limited to accent neutralization in the spoken English of the students and may require further studies for improved validation. The statistical method that the researcher employed was Simple Mean Analysis.

RESULTS

The study showed that there is a significant correlation between the utilization of the learning application in the accent neutralization of the study participants. Further, the demographic profile (gender, sex and length of stay in Batangas of the students) is a significant factor in English Second language learning. The students highly agreed in the presence of a distinct regional accent in Batangas, thus, they also have this strong embedded Batangueno accent. They believed that this accent can be neutralized and mitigated through the use of learning application. This heuristic analysis demonstrates the significant impact that English Language Speech Assistant can contribute in the accent neutralization of students.

DISCUSSIONS

The study intends to contribute on the existing literature that harbors on regional accent and spoken English with the necessary corrective tools that can be used to reduce regional accent in spoken English.

KEYWORDS: Accent Neutralization, ELSA Application, Batangueno accent, Grade 11 students

SUBMISSION ID: R04A-BATANC-0002

Pagbuo ng Sanayang Aklat sa Pagtuturo ng Mga Kuwentong Bayan ng Lungsod ng Koronadal: Batayan sa Pagtukoy ng Antas ng Pagpapahalaga sa Panitikang Katutubo

Richard P. Moral, Jr., Davao Writers Guild Komisyon sa Wikang Filipino
Language Researcher

Abstract

INTRODUCTION

Ang pananaliksik na ito ay naglalayong ipakita ang antas ng pagpapahalaga ng mga mag-aaral sa panitikang katutubo, aalamin ng pag-aaral na ito kung may mas mabilis bang pagkatutong nagaganap sa mga mag-aaral gamit ang mga panitikang katutubo.

METHODS

May 2 bahagi ang pananaliksik: 1) pagkuha ng mga kuwentong bayan (KB) mula sa mga taong edad 60 pataas at nakatira sa sa Lungsod ng Koronadal nang mahigit 25 taon. 2) isinadokumento ang KB na ito at ginawan ng Sanayang Aklat (SA) na gagamitin ng mga guro sa pagtuturo ng panitikan at balarila. Kumuha ng 163 respondente mula sa 5 paaralang pampubliko sa pag-aaral na nagtakda sa balidasyon at pagpapahalaga ng SA. Habang sa akseptabiliti ng SA ay naging katuwang ng pag-aaral ang mga guro sa asignaturang Filipino bilang pool of experts na tumanggap sa nabuong SA. Ginamit sa pag-aaral na ito ang modified rating scale, frequency counts, weighted mean, rank at Verbal Interpretation upang matukoy ang baliditi, akseptabiliti at pagpapahalaga sa panitikang katutubo. Kasama na ang pagkuha ng pre-test at post-test.

RESULTS

Sa baliditi ng SA, napatunayan ng pananaliksik na tumaas ang natamong iskor ng mga mag-aaral batay sa isinagawang pre-test at post-test, tumaas ng 4-7 puntos matapos ang ginawang pagpapakitang turo. Sa pagpapahalaga ng katutubong panitikan, lubos na tinanggap at pinaniwalaan ng mga mag-aaral ang KB naisulat na may kabuuang mean score na 4.55. Sa akseptabiliti ng SA ay nakakuha ng total mean score na 4.94 ang nabuong SA ibig sabihin, lubos na lubos na tinatanggap ng mga mga guro sa Filipino ang nabuong work book upang magamit sa pagtuturo, higit sa pagtuturo ng katutubong panitikan.

DISCUSSIONS

Napatunayan ng pananaliksik na ito ang mabilis na pagkatuto ng mga mag-aaral gamit ang KB at mas napahalagahan nila ang katutubong panitikan sapagkat nagpapakita ito ng pamilyar na kultura at paniniwala na humubog sa kanila. Gayundin, kailangan ng mga guro sa Filipino ang isang aklat na kanilang magagamit upang ipakita ang katutubong paniniwala at pagpapahalaga ng isang bayan.

Kung kaya inirerekomenda ng pag-aaral sa mga administrador ng paaralan ang pagpasok at integrasyon ng mga katutubong panitikan sa asignaturang Filipino upang mas mapahalagahan pa ang mga panitikang bayan at katutubong kultura. Kailangang bumuo rin ng reading program ang paaralan na ang sentro ay mga katutubong panitikan upang mabilis na maipaunawa sa mga frustrated reader o independent reader ang konsepto at pangyayari sa teksto nang walang anumang balakid.

SUBMISSION ID: R012-KORONA-0017

Pagsasalin sa Filipino ng Modyul Pang-Awtomasyong Industriyal: Tungo sa Modernisasyon ng Wikang Filipino

Amelita Madrid, Batangas State University

Abstract

INTRODUCTION

Hindi maitatanggi na malaki ang papel na ginampanan ng pagsasaling-wika sa paglaganap ni Kristiyanismo sa ating bansa. Nang dumating ang mga Kastila dito, sinikap nilang pag-aralan ang mga wika sa Pilipinas upang maisalin nila sa wikang nauunawaan ng mga katutubo ang mga doktrina ng Kristiyanismo, nang sa gayon ay mapalaganap ang kanilang paraan ng pagsamba. Mahalaga rin naalaman ang estilo ng pagsasaling-wikang proyekto.

METHODS

Ginamit ng risertser ang pamaraang deskriptib upang makatiyak sa kahusayan ng salin, kung ano ang lebel ng pagsang-ayon ng mga ekspert bilang mga respondent/ebalweytor. Isang set ng kwestyuneyr ang nagsilbing pangunahing instrumento sa isinagawang pag-aaral. Ang mga ekspert na kalahok ay pinili ng risertser base sa kanilang ekspertis (tagapagsaling wika, propesor sa Filipino, enhenyero elektrikal, propesor at tagapagsanay sa kursong pang-awtomasyon, propesor sa elektrisidad at elektroniks). Sila ang itinuring na respondent/ ebalweytor. Ang kanilang mga kredensyal, mga kaalaman at kasanayan sa larangang pinag-aralan, sa wika, pagsasalin at sa kaalamang panteknolohiya ay sapat upang kanilang mapagpasiyahan ang kahusayan, kalinawan at ang pagiging katanggap-tanggap ng salin sa mga target na gagamit. Sa pagpili ng tekstong isinalin, isinaalang-alang ng risertser ang sinasabing dapat na maging malapit sa puso ng tagapagsalin ang tekstong kanyang isasalin. Dahil sa layuning makapag-ambag sa pagpapalaganap ng mga panguhing kaalaman sa makabagong teknolohiya at sa development at pagpapayaman ng ating wika, napagpasiyahang isaling ang modyul na nakasulat sa wikang Ingles. Ingles and simulaang lenggwahe (SL) tungo sa wikang Filipino, ang target ng lenggwahe (TL).

RESULTS

Sa pamamagitan ng mga pamamaraang ginagamit sa pagsasalin, maiinintindihan ng mga target na gagamit ang saling teksto. Magsisilbing itong pantulong sa mga estudyante para sa mabilis na pagkaunawa at pagkatuto sa mga araling pinag-aaralan at mga gawaing sinasanay.

Ang pagtanggap at paggamit ng kagamitang panturong tulad nito ay lumilinang sa intelektwalisasyon ng ating wika.

DISCUSSIONS

Ang ating wika ay nadadala sa proseso ng modernisasyon sa pamamagitan ng panghihiramn, paglikha at pagkakarga ng dagdag na kahulugan sa kasalukuyang salita. Dagdag na ambag ng salin ng modyul, tulay ito para sa gawaing bilinggwal, sa pangkabuhayang aspeto, sa pamamagitan ng salin, maraming mga manggagawa ang makaiintindi, magiging instrumento sa pagsusulong at pagpapaunlad ng kabuhayan ng bansa.

KEYWORDS: PAGSASALIN

SUBMISSION ID: R04A-BATANC-0023

Parent-Teacher Partnership in Developing the Reading Comprehension Skills of Grade 6 pupils in Bato District

Ivy Mota, Department of Education

Abstract

INTRODUCTION

Improving reading comprehension is a major concern of the educational system. Despite the various programs and projects designed to improve the literacy level, the PHIL- IRI and academic performance showed that there were big numbers of Grade 6 pupils who were not able to read and comprehend. This study determined the Parent-Teacher Partnership in Developing the Reading Comprehension Skills of Grade 6 pupils in Bato District.

METHODS

Descriptive-evaluative-inferential correlational method with documentary analysis was employed. A total of 23 elementary grade 6 teachers and 321 parents responded to the rating scale while 321 elementary grade 6 pupils responded the comprehension skills test which served as the basis in determining the reading comprehension of the pupils and the extent of parents and teachers' participation in developing grade 6 pupils' reading comprehension skills. Frequency count, percentage, rank, weighted mean, MPL, Kruskal-Wallis one- way Anova, Wilcoxon Mann Whitney U test, and Kendall Coefficient of Concordance W with the corresponding Chi-square test were used to treat the data statistically. Significant level was set at 0.05

RESULTS

The Profile of Reading Comprehension Skills of the Grade 6 Pupils in Bato District. The mean and MPL of the different skills were: Noting Details 42.45%; Sequencing Events 56.5%; Identifying Character Traits 46.5%; Getting the Main Idea 40.3%; Getting the Meaning of the Word 35.6%; Organizing Ideas 40.25%; Predicting Outcomes/Making Inferences 38.5%; Summarizing of Ideas 40.75% and Evaluating Ideas 35.1%. Based from the data, the overall rating of the reading comprehension profile of the pupils was, "Needs Improvement" and therefore, below the target. Parents and teachers' assessment on their extent of participation in developing the pupils reading comprehension skills were tested in terms of the different dimensions. There is a significant difference on the parents and teachers' assessment on their extent of participation in developing the reading comprehension skills. There is a significant difference on the parents and teachers' assessment on their extent of participation in developing the pupils' reading comprehension skills.

DISCUSSIONS

The results have shown the need of the formulated policy recommendations by the researcher to be observed and practiced by parents and teachers in developing the pupils' reading comprehension skills in Bato District for the attainment of an improved academic performance.

KEYWORDS: Parent-Teacher Partnership, Reading Comprehension

SUBMISSION ID: R005-CAMSUR-0103

**Perception of Grade Nine Learners of Integrated School of Lawa to the
Effect of K-drama in their English Proficiency**

Hannah Sigrid Durias, Integrated School of Lawa

Abstract

INTRODUCTION

In 2003, Korean dramas or K-dramas were aired in the Philippine television captivating the hearts of the Filipino audience up to these days (Correa, 2013). One of the entertainments of the teens nowadays was watching K-dramas (Delos Reyes, et. al., 2017) and as this grew over time, K-dramas created an impact to the academic performance of the learners (Liu, 2015) affecting also their English proficiency. This research aimed to know the perception of grade nine learners of Integrated School of Lawa to the effect of K-drama in their English proficiency.

METHODS

Qualitative research design, particularly the Grounded Theory Design was used in this research study. The difference between the English proficiency of the learners and their perceptions to the effect of watching K-drama was analyzed. The research adapted a questionnaire based on the questionnaire of Liu (2015). The participants for this study were the grade nine learners from the two different sections: Sincerity and Integrity of Integrated School of Lawa for school year 2017-2018.

RESULTS

The study found out that watching English-subtitled K-dramas can improve the English proficiency of the learners. Aside from the entertainment value, learners also get an educational help through watching English-subtitled K-dramas and this is the improvement of their grammar in the English language which is essential in the development of their English proficiency. Watching English-subtitled K-dramas affects the English proficiency of the grade nine learners of Integrated School of Lawa in the good way where they feel confident to use the English language outside the classroom and their English class, therefore, K-dramas with English subtitles can serve as tools for the English proficiency development of the learners.

DISCUSSIONS

The findings of this study suggested that K-dramas can be both sources of entertainment and educational material particularly an English proficiency development tool for Filipino learners. The researcher hopes that the findings of the current study will contribute to the growing body of literature about the effects and impacts of K-dramas to Filipino lives. The current qualitative study found out some of the possibilities for future research about the effects of watching K-dramas to Filipino learners.

KEYWORDS: k-drama, English proficiency, entertainment, subtitle

SUBMISSION ID: R04A-CALAMB-0077

Problems Encountered by Students with Overseas Parents in Learning Language Courses

Leolyn Esgeurra, Buhaynasapa National High School
(Adviser: Gelly P. Bagui, Lpt)

Abstract

INTRODUCTION

Overseas Filipino Workers (OFWs) are the modern heroes of the Philippines due to their sacrifices to go and work abroad for the betterment of their families' socioeconomic status and to provide better quality of living. However, this situation lessens the frequency of parents to become more involved with their children's schooling. The reason for conducting this study is to determine how OFWs' children perform in language courses such as English and Filipino. Specifically, it aimed at assessing their academic performance and the problems they are encountering relative to class participation, writing and thinking skills, oral recitation, and output making.

METHODS

A qualitative-descriptive method was used in this study with validated questionnaire as research instrument. A supplemental semi- structured interview was also used to further elicit the experiences of the respondents. The study made use of 85 OFWs' children of Buhaynasapa National High School, School Year 2017-2018, obtained through purposive sampling. Before conducting the study, the researcher secured permits to authorities. She personally administered the research instrument used.

RESULTS

As revealed in the study, the respondents are performing very satisfactorily (85-89%) in written works and quarterly assessments as evident on the generated frequency of 36 and 37, respectively. On the other hand, they perform outstandingly (90-100%) in language courses such as English and Filipino in terms of performance tasks as indicated on the obtained frequency of 35. In contrary to their remarkable performances, they are still frequently experiencing problems in learning language courses especially in writing-related activities. The respondents are also frequently experiencing problems in learning activities in language courses relative to writing skills. It generated the highest composite mean of 3.11. It was followed by oral recitation with the composite mean of 3.09. The findings also revealed that they are also frequently experiencing problems in learning language courses relative to thinking skills, output making and class participation.

DISCUSSIONS

Even though the respondents perform well in language courses, having an OFW parent affects their learning performance in the said course. Clearly, it denotes that lack of direct parental involvement and support to the learning activities of students greatly influence the academic achievement of students in English and Filipino. Therefore, enrichment activities shall be provided.

KEYWORDS: OFWs, Language courses, learning Language courses

SUBMISSION ID: R04A-BATANP-1072

**Proficiency in English as a Second Language (ESL) of College Students in
Varied Courses and Laboratory High School Students of Laguna State
Polytechnic University (Siniloan Campus)**

Icy Princess Trencio, Department of Education, Siniloan Integrated National High
School (Senior High School)

Abstract

INTRODUCTION

Language is a living subject that evolves over time since people use it to communicate. With this, Filipinos are said to be one of the fluent speakers of the English language among the neighboring countries in Asia. Their capacity to communicate well with the other races had been a competitive edge for them in job market. In this context, with the trend towards globalization and international industries the demands for human resources who are proficient in the English language were really high.

METHODS

This study used the descriptive correlational research method to gauge the ESL performance of 702 college students from ten courses and 104 secondary laboratory students from Laguna State Polytechnic University. It was determined and studied in terms of their profile and proficiency level in ESL's five areas of competencies. The relationship between and among variables were analyzed using the one-way and two-way analysis of variance (ANOVA), regression and unpaired t-test.

RESULTS

Findings revealed that the performance of the respondents in ESL test was significantly influenced by their profile specifically by the course taken, year level and sex. Also, percentage of students' enrolment decreases as they progresses to the next year level which may be attributed to various reasons such as financial difficulty and poor scholastic performance. It also appeared that high school students were financially well off than their college counterpart. Moreso, it was revealed that the respondents performed well in advanced vocabulary idioms while they struggles under tenses of verbs of the ESL test given. Furthermore, significant differences occurred among the eleven courses investigated as well as among the five areas of competencies indicating that the courses taken by the respondents had significant bearing on their performance in the ESL tests.

DISCUSSIONS

These imply that the respondents' ESL performance can be attributed to some differences in the admission criteria and course requirements for enrolees. It further implies that their level of competency in the five areas significantly differed from one another. It is therefore recommended that the university may adapt a standardized test that can be used for admission among college entrants.

KEYWORDS: ESL, English Proficiency

SUBMISSION ID: R04A-LAGUNA-0123

**Project I-Connect: Teaching English Using Buddy System Strategi an
Intervention to Enhance Reading Skills with Accuracy among Grade V-
Abokado Pupils of Salcedo Elementary School**

Rolly Jr. Ramos, Cavite Association For Research Education

Abstract

INTRODUCTION

Reading is a multifaceted process involving word recognition, comprehension, fluency, and motivation. Learning to read is complex. Children don't learn one reading-related skill and then move on to the next in a step-by-step process. Instead, they must develop competency in four areas simultaneously: word identification, comprehension, fluency, and motivation. Many of learners nowadays are suffering difficulty in reading. Most of the learners reading profile falls under slow reader especially in reading stories with comprehension.

METHODS

Descriptive method was used by the researcher to identify the reading profile of the pupils. The research was conducted to increase reading performance among pupils of grade V-Abokado at Salcedo Elementary School. The researcher will evaluate pupils with the least performance in reading with accordance to their reading profile result. The student respondents were the proponent's own students.

To measure pupils' reading ability, the proponent used Pretest, Pairing System and Posttest available reading materials in Project I-Likha. The teacher will give materials to all pupils on pretest. Students who failed are the respondents of the Project I-CONNECT/Buddy System Strategy. After connecting, respondents will be given posttest to measure if they have improvement in reading.

RESULTS

During the pretest, Out of the 32 pupils, 15 got the passing rate and the the rest failed. The Mean of the the pretest was 68.20%. With the help of Project I-Connect, the pupils who passed on the pretest chose a reading buddy among the students who failed to increase their reading accuracy. After a week of tutoring among slow reader with the fast reader, the proponent gave the same reading materials as their posttest. To evaluate slow readers reading ability with accuracy, the evaluation was enhanced through the help of the Project I-CONNECT. The result increased from 68.20% to 91.25%.

DISCUSSIONS

Using the I-CONNECT intervention, the study develops confidence specifically with the use of I-Likha materials provided by the schools. Support of parents and teachers at the start of the intervention has helped a lot in the performance of the pupils. Based on the results and observation, regular interconnection of pupils among each other through buddy system can develop more self-confidence. Sustaining pupil's interest in reading can best be improved through collaboration and support of peers as peers are one of the great influence to a child.

KEYWORDS: Connect, Reading Profile, Buddy System, Collaboration

SUBMISSION ID: R04A-CAVITP-1679

**Project Teach: An Intervention for Reading Comprehension Skills of
Selected Grade Six Pupils of Conchu Elementary School for the School Year
2016- 2017**

Maila Pantoja, Department of Education

Abstract

INTRODUCTION

Reading comprehension is really a big and serious concern that needs to be addressed by every school among their pupils. Without strong foundation of the reading skills, the pupils can hardly perform in the class, thus the opportunity to enjoy the learning process is compromised. This study explored the reasons of the varying level of success of the reading innovation used in improving the comprehension level of the pupils using Project TEACH -Together Everyone Achieve Holistically.

METHODS

This study utilized the quantitative-descriptive method in the Project TEACH as intervention for the 67 Grade Six pupils who were under the Reading Frustration Level and 3 non-readers of Conchu Elementary School, the partner school of Osorio Elementary School under the program of School to School Partnership (SSP). The purposive sampling was used to determine the participants in this study. The participants were selected through the conduct of Phil- IRI standardized test. To assess the implementation of the Project TEACH, the method of collecting data used was a questionnaire

RESULTS

The salient findings of the study were the significant difference between the results of the pretest and posttest having the t-value of 14.25 and the positive assessment result of the implementation of Project TEACH which got the computed mean of 2.74 from the pupils and 2.60 from both the parents and SSP team that respectively considered the implementation of the Project Teach very satisfactory. Out of 70 participants, 53 became instructional readers and 17 became independent readers. The improvement on the reading comprehension skills of the participants of SSP as shown in the computed T-value from the pretest and the posttest was very evident and the implementation of the Project TEACH was very effective as reflected on the very satisfactory rating of the stakeholders.

DISCUSSIONS

The results demonstrate the need for through assessment of the reading difficulty of the pupils in order for the innovation to be effective. The reading problem is further addressed when the bases of the exercises for each comprehension skill are aligned with the needs of the pupils like the ABRC, the reading materials used in the implementation of Project TEACH.

KEYWORDS: innovation, comprehension skills, reading foundation, holistically, frustration readers, instructional readers, independent readers,

SUBMISSION ID: R04A-CAVITP-0340

**Proposed Enrichment to the Inadequacies in Conversational English of
Select Grade Ten Students of Inicbulan National High School SY 2016-2017**

Marietta Sandoval, Inicbulan NHS

Abstract

INTRODUCTION

This study is about selected Grade 10 High School students from Inicbulan National High School who displayed inadequacies in the conversational English. These are poor sentence construction, wrong use of tenses and connectives, lack of vocabulary knowledge and skills and inappropriate syntaxes. Dacanay agreed with the assumption that automatic habit information is necessary in the teaching of the foreign language or English as our Second Language of instruction as stated in Section 13, Act No. 74 of the 1973 Constitution.

METHODS

Observation and series of tests were used to assess the knowledge level and skills of the selected students through purposive sampling. The proposed interventions used were one-on-one tutorials, mentoring/coaching and journal writing. Under tutorials are textual reading, translating texts, paraphrasing and interpreting contents. Survey aims to know why the learners were hesitant in the use of English during classroom conversations and discussions. Through observations and tests, the researcher came up with a program that targets the weaknesses of these learners.

RESULTS

Tutorial is the most basic of all the proposed intervention. The learners consider it harder because the focus is on them and on the techniques employed. Mentoring had given them the chance to correct themselves and be corrected without thinking that somebody is taking advantage of their weaknesses. Teachers and students were able to work hand in hand without pressure and learned to trust one another. Learners were able to improve themselves gradually, without being embarrassed publicly. Journal writing allowed learners to express themselves on discussions and became more willing to speak. Students began to improve in conversation and used content words although function words are lacking. The participants were developing self-esteem and self-confidence.

DISCUSSIONS

In general, quality education is really a hand in hand effort of the administration, the school, the home, parents, and learners. This applies generally on all levels and on all subjects. Verbal communication is the transmission of ideas, opinions, emotions or attitudes through the use of oral languages. Through this spoken language, man is able to develop self-confidence, acquire friends or even create enemies. This is imperative to students so they could converse effectively with teachers and peers. They have to express themselves however because spoken language is relied upon more than the strict adherence to standard English.

KEYWORDS: conversational English, intervention, constructive aid, second language teaching

SUBMISSION ID: R04A-BATANP-1913

Proposed Remediation Module on Fluency for Grade-3 Pupils

Mariann D. Bongalon, Teacher
(Adviser: Mariann Bongalon)

Abstract

INTRODUCTION

This study aimed to develop a proposed remediation module on fluency to improve the oral reading skills of the Grade 3 pupils in Agnas Elementary School, Agnas, San Miguel, Tabaco City. The study answered the following: the strengths and weaknesses of the Grade 3 pupils along the competencies on fluency, the lessons on fluency that are provided in the Learner's Materials that target the identified weaknesses and the remediation module on fluency that may be proposed to address the weaknesses of the pupils.

METHODS

The study used cross sectional design and descriptive method of research. The respondents were 43 Grade 3 pupils of Agnas Elementary School, Agnas San Miguel, Tabaco City for the School Year 2017-2018.

RESULTS

The strengths of the Grade 3 pupils on fluency considering sets of criteria were on the two (2) competencies: Competencies No. 4 on reading with accuracy, speed and proper phrasing, sentences with short u words, with a weighted mean of 3.39 which is described as very good, and; Competency No. 5 on reading with accuracy, appropriate speed and correct intonation of 2-syllable words consisting of short e to u words with a weighted mean of 3.2 which is described as good.

The weaknesses of the Grade 3 pupils on fluency were the three (3) competencies: Competency No. 1 two (2) syllable words with short vowel sound with a weighted mean of 1.81 which is described as growing; Competency No. 2 reading aloud from familiar prose and poetry consisting of long vowel words with a weighted mean of 1.94 which is described as growing; Competency No. 3 on reading aloud short stories/poems consisting of short a, e, i and o words with speed, accuracy and proper intonation, with a weighted mean of 2.24 which is described as growing.

DISCUSSIONS

To address the weaknesses of the Grade 3 pupils, the proposed Remediation Module on Fluency contains three (3) Parts. Each lesson has eight activities on Self reading, Buddy Reading with vocabulary development, Repeated Reading, Model Fluent Reading, Sharing Activity, Choral Reading, Partner Reading, and Individual Reading.

KEYWORDS: FLUENCY GRADE 3 REMEDIATION

SUBMISSION ID: R005-TABACO-0029

Reading and Writing Module for Home-Schooled Senior High School Students

Almileth De Luna, Department of Education - Cavite

Abstract

INTRODUCTION

Students' schooling could be affected by various reasons. It could be due to shortage in finances, change in residency, health problems and even early pregnancy. With the Department of Education campaign for Education for All (EFA) 2015 and that no child should be left behind, home schooling or modular class was implemented. This aims for students with difficult situations, to be able to achieve target competencies even at home. Thus, Reading and Writing Module was created.

METHODS

The module strictly followed the prescribed curriculum guide of Department of Education. During the preparation, topics in the curriculum guide were plotted and divided. Reading and Writing module was created with consideration to its appearance, contents, activities provided, language used and its integration with other subjects. An existing tool for validating the module was adapted and used in the study. The module, along with the tool, was then disseminated to selected Teachers of English for validation. The data were gathered and tabulated to know the module's level of acceptability. Descriptive statistics was used to interpret results in the study.

RESULTS

The module obtained mean scores of 4.15, 4.15, 4.1, 4.22 and 3.98 with standard deviation scores 0.80, 0.80, 0.71, 0.91, and 0.83 in terms of appearance, contents, activities provided, language used and integration, respectively. Appearance is highly acceptable since it is interactive, and the visuals and graphics can encourage students. The module's content is highly acceptable since content is well-formulated and well-organized. It is simple and matches students' level of understanding. Activities provided in the module are highly acceptable because it includes collaborative activities and provides opportunities to practice and apply concepts or skills. Language used is also highly acceptable since it is easy to understand, clear, concise and motivating. Integration is only acceptable since it is not fully related with other learning areas. The overall level of the modules' acceptability is high (mean= 4.12 and standard deviation= 0.80).

DISCUSSIONS

The results signify that the produced Reading and Writing Module can be used by home-schooled students in senior high school. For improvement, it is suggested that the module should be integrated with other learning areas and the use of original and authentic images is recommended. Further studies can be made to test the module's effectiveness and its reliability and validity.

KEYWORDS: Reading and Writing, module, home-schooled students

SUBMISSION ID: R04A-CAVITP-0820

Reading Anxiety of Junior High Students: Its Effect on Their Reading Performance

Lenelyn S. Salera, Secondary School Teacher
(Adviser: Jomel Montero)

Abstract

INTRODUCTION

Research has shown that Reading Anxiety is highly correlated with the Level of Reading Performance. Thus, this study attempted to investigate the relationship between the variables. This study attempts to provide information that can assist educators in selecting an appropriate instrument for their particular classroom needs.

METHODS

The quantitative-descriptive research design was used to guide the analysis and interpretation of data. Data was gathered using a standardized questionnaire that was administered to 174 Grade 7 students of San Miguel National Comprehensive High School to find out more about their reading anxiety problems.

RESULTS

Based on the results of the study, it was revealed that a number of students were under Frustration Level, which means that students have deficiencies in their reading performance. The conduct of the study also showed that the students who were identified as independent readers were "Moderately Relaxed" while reading English passages; conversely, those students who were at the Instructional and Frustration Level felt "Moderately Anxious" while reading English passages.

DISCUSSIONS

The Grade 7 students of SMNCHS are moderately anxious towards English passages due to the panic that is experienced when they have to read without preparation. It embarrasses them to volunteer for the answers in their reading class, and they feel that reading activities move so quickly that they worry about getting left behind. Because of this, they developed a negative feeling and they were not totally motivated towards English language reading. They also lack preparation in terms of reading. They were prone to anxiety due to lack of practice; they were also afraid of the negative evaluation of their English teacher.

KEYWORDS: Reading Performance, Reading Anxiety, Junior High Students

SUBMISSION ID: R013-SURSUR-0146

**Reading Comprehension Level of Grade 4 Pupils of Subic Elementary
School: Basis for Reading Intervention Program**

Elbie Mendoza, Agoncillo Senior High School & Feliciana Aquino, Subic
Elementary School

Abstract

INTRODUCTION

It could also be helpful to the teachers of Grade IV level to conceptualize and apply the proper strategy to make the process of teaching reading comprehension well. This study is deemed imperative to address one of the very important issues in Subic Elementary School: the pupils' reading comprehension. Through this study, the researchers hope to develop a reading intervention program with intervention and instructional materials that will serve as an authentic resource to help these pupils become total readers. This will ultimately improve not only their reading comprehension skills but also their academic performance.

METHODS

The study used a descriptive research design using a questionnaire to obtain the necessary data from the lowest twenty pupils who were in Frustration Level. To complement the statistical data, an interview with the teachers was also performed. Descriptive statistics were applied using frequency and percentage on the data obtained. The respondents were chosen based on the result of the PHIL-IRI administration in Grade IV for the SY 2018-2019 comprising the lowest twenty (20) pupils in the frustration level.

RESULTS

There was a total of 117 out of 138 Grade IV pupils who fell under Frustration Level. There were no pupils who fell under Independent Level and there were only 2 (two) Instructional Readers. The result signifies the need to address the issue in the level of reading comprehension of Grade IV pupils of Subic Elementary School.

DISCUSSIONS

The factors that greatly affect the reading comprehension skill of pupils can be attributed merely to their habits and attitudes, scarcity of reading materials, and the absence of parent's guidance to supervise their kids in reading at home. The teachers are doing their part to ensure that they understand what they have read through the use of the computer as an aid in reading the lesson and by providing rewards and incentives for those students who performed well in reading. An action plan and reading intervention program to enhance the level of reading comprehension skill of students must be needed and applied.

KEYWORDS: reading comprehension, skill, frustration level, independent level, instructional readers

SUBMISSION ID: R04A-BATANP-0213

Register of Weaving: Basis for the Development of Cultural Glossary of Lopez

Mary Anne Eviza, Department of Education - Lopez National Comprehensive High School

Abstract

INTRODUCTION

Language and culture play an important role in one's individual. Language manifest culture in language carrier and culture will manifest language. With this, the researcher believes that among Fan Weavers of Lopez, there are certain words used within the culture of weaving. Weaving is considered as the culture of Lopez but young Lopez benighted with their own culture and language register used within this culture. This study sought to identify how the culture of weaving exist and to develop cultural glossary based on the culture of the community.

METHODS

A descriptive-qualitative research design was used in this study. Descriptive method was used to identify how the weaving culture of Lopez exists. A qualitative design was used to determine weaving register used in a particular community of weaver, with the belief that culture plays an important role in the language used by the person guided by one culture. The interview was used among weavers of selected barangay in Lopez, Quezon, to gather data about the existence of weaving culture and weaving registers, from raw materials, process, terms or name of the product and other words used in fan weaving

RESULTS

Lopez' culture of weaving was carried by the Japanese to those who lived in the remote barangay of Lopez using young anahaw leaves, which was the most accessible raw materials from the environment. It was passed to various families for generations, where new styles, processes, and materials in weaving were developed. From a simple anahaw fan, lapat or bamboo fan, and the latest raffia fan, which is made from bull leaves using a machine in weaving. There were 65 registers collected from the culture of weaving, which was used for their daily life. "Register of Fan: Cultural Glossary of Lopez" was then developed. It's a glossary containing 65 weaving registers arranged alphabetically with meaning, corresponding parts of speech written in italic inside the parenthesis, and appropriate sample sentences for better understanding of the readers.

DISCUSSIONS

The results of the study show that culture must be preserved and valued for it mirrors the language of the persons sharing the same culture and the life of the entire community. Language development also varies from one culture to another and therefore needs to be embraced by the people living in a certain community especially the youth or the new generation to avoid language extinction. For the success of the study, immediate utilization and dissemination of the output will be needed to inculcate culture and the associated language.

KEYWORDS: glossary, register, weaving

SUBMISSION ID: R04A-QUEZON-0150

Role Playing: A Pedagogy in Teaching Oral Communication

Jermy Ann Ratonel, Department of Education, ETTMNHS

Abstract

INTRODUCTION

Speaking confidently among secondary ESL learners inside the classroom is quite challenging. They opt not to speak even though they know the answer because they are shy or afraid that their fellow classmates might laugh.

Many problems were found related to speaking. Most of the students were less motivated in speaking tasks. Some of the students want to express their ideas and feelings, but they do not know how to. Some of the students know how to construct sentences, but they are reluctant to speak. They are afraid of making mistakes. They are also afraid of being laughed at by other students, so they just keep silent and keep their ideas and feelings in their mind (Iswardati 2016).

METHODS

The purpose of this study is to utilize role-playing in teaching and overcoming the stage fright of the students in Oral Communication using the experimental design. Cluster sampling was used, where the researcher divided the population into separate groups called clusters. Then, a simple random sample of clusters was selected from the population. The researcher conducted her analysis of the data from the sampled cluster. To come up with more reliable results, questionnaire, performance tasks with rubrics, and lesson plans were also used.

RESULTS

The level of proficiency of learners under the controlled group excelled in oral communication having the 2.25 SD and with the Mean of 24.60 having 30 as the perfect score. While the other group showed a low-performance level in proficiency. It is a factual statement that learners using role-playing in teaching perform well and even better compared to those who used the traditional way of teaching communication.

DISCUSSIONS

In oral English teaching, teachers are supposed to help their students form the good habit of communicating with others orally and think in English at the same time. Thinking in English means having to understand, judge, and express yourself in English. If students get used to portraying and presenting the English language with the use of role-playing or simulation, they will soon get used to it, not just with the use of English language but also with the formation of enough confidence to talk in public. Role-playing also helps boost g humor or the sense of individuality of each person to freely express their thoughts and emotions without any hindrance in delivering it.

KEYWORDS: Pedagogy, stage fright, confidence, speaking

SUBMISSION ID: R04A-CAVITP-1145

**Selected Factors and Their Influences on the Spelling Performance of
Selected Grade Seven Students of Looc National High School for the School
Year 2017 - 2018**

Anna Vanezza Bartolome, MARFA, Department of Education Calamba , Looc
Integrated School

Abstract

INTRODUCTION

Literacy is the ability to read and use written information and to write appropriately in a range of contexts. It is used to develop knowledge and understanding, to achieve personal growth, and to function effectively in society. In order to be clearly understood, people need to spell words correctly.

Nowadays, orthography seems to be one of the major problems, especially among students. This study is conducted to determine if the selected factors such as socioeconomic status, study habits, and social media exposure have an influence on the spelling performance of grade seven students of Looc National High School.

METHODS

The description method was employed to find answers to the problem, to describe what the spelling performance of the students is, and to scrutinize its relation among the selected factors. Seventy-five students out of the total population of the seventh grade were gathered through the use of Slovin's formula. They responded to a set of questionnaires and spelling activities. The Pearson product moment correlation (r) was used to determine the significant relationship between the variables.

RESULTS

The selected grade seven participants from Looc National High School for the school year 2017-2018 yielded an Average Proficiency Spelling Performance. Socioeconomic status and study habits were interpreted as highly influential, while social media exposure was figured out as influential on their spelling skills. Values show that spelling performance and the selected factors had a significant relationship. This shows that the capability of the students in procuring resources made available by the society and their learning style can highly affect their skills. Exposure to social media can somehow affect their orthographic performance.

DISCUSSIONS

The outcome of the study clearly shows that the selected factors mention has a direct influence on learners' orthography. However, this was conducted only among selected grade seven students. It was limited to selected factors such as socioeconomic status, study habits, and social media exposure. It can be said that there might be many other factors that can have a bigger impact on the problem. This can be an instrument for further research. Learners and other stakeholders should give more importance to the said skill for this can be their foundation in being a good communicator, both in written or in oral form.

KEYWORDS: socioeconomic status, study habits, social media, spelling performance

SUBMISSION ID: R04A-CALAMB-0265

Senior High School Students' Attitudes towards English and Tagalog-English Code-Switching

Kristine Joy Urriza, Morong National High School

Abstract

INTRODUCTION

Code-switching has always been a dilemma among multilingual nations like the Philippines in terms of academic and communicative functions in the teaching and learning contexts. Code-switching is a complex, skilled linguistic strategy used by bilingual speakers to convey important social meanings above and beyond the referential content of an utterance. This paper intends to gather perspectives from the points of view of the respondents regarding their attitudes towards English and Tagalog-English.

METHODS

Both quantitative (questionnaire) and qualitative (open-ended questions) research approaches were used to collect data. The data collected was then analyzed to measure the differences in the students' language attitudes towards English and Tag-lish code-switching in class or during casual conversation. Fifty senior high school students of Morong National High School-Senior were randomly selected from the sections handled by the researcher.

RESULTS

Findings imply that respondents are unanimously positive towards English. It is also perceived as a necessity for future success and vital for everyone. They are aware of the importance of English as instrumental, and therefore, highly valued and perceived to be the very key to a better future. Moreover, findings imply that respondents are unanimously positive towards Tagalog-English. Bautista (2004) claims that Tagalog-English is the language of the educated middle and upper-class Filipinos. The stand may associate to be true, but it could not be the basis for generalization. Out of 50 respondents, 90% has a positive attitude towards code-switchers. Grade 11 and 12 students are equally positive towards code-switchers. They usually converse in Tagalog-English code-switching during casual conversation. It is also generally perceived as a good learning technique in their English communication skills during the discussion.

DISCUSSIONS

The respondents imply that the practice of Tag-lish is natural, and thus, serves as an emerging trend. Respondents' attitude towards Tagalog-English code-switching is not equally positive compared to their attitudes towards the English language. It was found out that using English is highly regarded than using Tag-lish. However, respondents' attitudes towards Tagalog-English code-switchers are equally positive to their attitudes towards the English language, while respondents' attitude towards Tagalog-English is congruent to the respondents' perception towards themselves as Tagalog-English code-switchers.

KEYWORDS: code-switching, Bilingual, Tagalog-English, attitude

SUBMISSION ID: R04A-RIZALP-0058

Siargao Lexical Variants of Surigawnun: A Pedagogic Grammar Monograph

Marites Pinera, Pilar National High School

Abstract

INTRODUCTION

Adhering to the MTB-MLE policy under the K to 12 Program has prompted the Filipino teachers to develop contextualized instructional materials (IMs) in their own native tongue. In Surigao del Norte, few IMs utilizing its native Surigawnun language are already available. However, in Siargao Island, the use of these crafted IMs brings confusion among teachers from Kinder to Grade 3. They are confused about the ideal spelling of Surigawnun words and on Surigawnun words on the island that are incomprehensible by Surigawnun natives outside the island. Hence, this study is timely since the results will clarify points of argument on what to adopt as the idealized orthography of Surigawnun language and will avoid misunderstanding and misconceptions of words.

METHODS

The research method used was descriptive analysis. Verbal data were collected from a recorded casual interview with native Surigawnuns in Siargao Island. To identify Surigawnun counterparts of the lexical variants in Siargao, a Surigawnun poetry book was scrutinized. Another source of word counterparts was retrieved from the posts and comments of Surigawnun natives who are members of a Surigawnun exclusive Facebook group account named Manunuyat nan Surigawnun (Surigawnun Writers).

RESULTS

Results of this study reveal that Surigawnun language follows the phoneme-grapheme correspondence in its idealized orthography. It uses only three vowel letters Aa, Ii, and Uu to represent three corresponding vowel sounds /a/, /i/, and /u/; and uses only sixteen consonants with one glottal stop in medial position, symbolized by the hyphen (-). This study also reveals that there are one hundred thirty (130) lexical variants of Surigawnun content words in Siargao Island that have exact word counterparts in Surigawnun and English. These are composed of thirty-eight (38) nouns, forty-five (45) verbs, forty (40) adjectives, and seven (7) adverbs.

DISCUSSIONS

The findings of this study lead to the output “A Pedagogic Grammar for Siargao Synonyms of Surigawnun.” In this monograph, the Surigawnun words are spelled as they are sounded. The teachers in Siargao may use this monograph in teaching the Siargao Surigawnun content words. This study recommends also for a Provincial language policy that will establish the Surigawnun Orthography to avoid confusion on spelling. It is also recommended that Siargao Surigawnun lexical variants shall be habitually spoken by the Surigawnun natives in the island to ensure its transmission to the younger generation.

KEYWORDS: Surigawnun, content words, lexical variants, orthographic idealization

SUBMISSION ID: R013-SIARGA-0000

**Speaking in (Foreign) Tongue: Difficulties of Grade 12 Students of Letran
Bataan when Learning Korean**

Marjorie Anne M. Estrella, Colegio de San Juan de Letran-Bataan
(Adviser: Marvin Ibabao)

Abstract

INTRODUCTION

Learning a foreign language plays a major role in the global world. It is essential to know how globalization has affected language all over the world for a better understanding of how schools and teachers can continue to serve the growing population better (Wilson, 2017). In this study, the researchers tried to understand the reasons behind the difficulties encountered by the students in studying the Korean language as it is one of the main languages being used worldwide.

METHODS

Descriptive case study approach was used for this study. This study was intended to illustrate and to know why the respondents are having difficulty in learning a foreign language. The researchers used purposive sampling in choosing 6 from the pre-determined Grade 12 respondents. An in-depth interview using a semi-structured set of questionnaire was used to gather the necessary information.

RESULTS

The study revealed that the students perceive the importance of foreign language for its future use and that it breaks communication barriers. Also, they find the subject not interesting. However, some respondents are determined to learn despite the difficulties. Also, majority of the respondents said that learning a foreign language is difficult because they do not see its practical use. Furthermore, lack of interest, lack of immersion, and the teaching strategy are mostly the reasons for the difficulties. Because of these factors, it results in a student having a hard time embracing, learning, and understanding this language.

DISCUSSIONS

In the absence of people who speak the language, students practice using the language by talking to other students around the world through the internet or downloading a mobile application that translates one language to another. The results will be able to help the teachers to be more innovative in their teaching strategies to catch the attention and interest of the students. They are recommended to have class activities that would be more interesting and relatable to the students.

KEYWORDS: Korean Language, Foreign Language, Difficulty, Importance of foreign language

SUBMISSION ID: R003-BATAAN-0002

Stance Markers in HUMSS and STEM Research Articles

Reicon Condes, Region IV-A CALABARZON Division of Quezon Talipan
National High School

Abstract

INTRODUCTION

Research writing has been treated as a faceless discourse. However, this traditional convention in writing research articles (RAs hereafter) started to shift to the writing style that considers writers' intersubjectivity and reader-response. The skill of provoking text interactional enables writers to communicate an idea clearly, reasonably, and safely. Yet, not all RA writers might be aware of stance-taking that can be done in texts. Hence, such a topic might be explored to give writers an edge on making their RAs more enticing and persuasive for the readers.

METHODS

Using criterion-based-selected RAs under HUMSS and STEM discipline, the study investigated the way authors manifested their voices in the text and enabled the text to interact with the readers through stance taking strategy. Guided by the framework of Biber et al. (1999) for attitudinal stance functions, results of relational content analysis on the use of stance markers across RAs were assessed per 10,000 words.

RESULTS

Considering RAs under HUMSS, authors utilize attitudinal stance markers that reveal their attitude and feelings towards the proposition more frequently than those authors of STEM RAs. On the contrary, STEM RAs utilizes attitudinal stance markers showing authors' judgment of the proposition more frequently than HUMSS RAs. Meanwhile, stance markers showing expectation is almost equally utilized by the authors of both HUMSS and STEM RAs. From this, it can be perceived that authors of HUMSS RAs express their attitude freely on their academic works, which enhances the subjectivity of their works compared to STEM RAs which tends to be more objective in presenting propositions. On the other hand, authors of RAs under STEM Discipline were more able to give judgment and evaluation on the presented idea compared to their counterparts in HUMSS.

DISCUSSIONS

This study revealed that as HUMSS RAs writers express their attitude through the use of stance markers, STEM RAs writers reveal their evaluation of the content of the proposition. Researchers may be educated on the use of stance taking in research writing the way published RAs on peer-reviewed journals were written. In this manner, research writers might be able to increase their prominence in the academe by making their research findings, assertions, and claims acceptable and persuasive. Considering this, stance functions may be integrated into the research writing curriculum to enhance the researchers' skills in conveying their voices within the text.

KEYWORDS: authorial voice, research articles, stance markers

SUBMISSION ID: R04A-QUEZON-0187

Strengthening the Usage of English Language for Grade 7 Students in Linguistic and Socio-Cultural Competencies

Julie Maligaya, Teacher III

Abstract

INTRODUCTION

Language, as an essential tool for human expression, comprises a system of rules unconsciously present in the mind of a person, enabling him to relate sounds with meaning. As a system of arbitrary vocal symbols, man communicates with one another through speech. Words, ideas, concepts, moods, and attitudes are communicated through language as a system like voices, sound, gesture, with written symbols. In language, the learners' communication competence play a significant role as indicators of their knowledge of syntax, morphology, phonology, including social knowledge in using utterances, appropriate in authentic, social, school, and environment.

METHODS

The descriptive method of research was employed in this study to gather and interpret data. This was used to determine the levels of language performance of grade 7 students in all public schools of Agoncillo and San Nicolas Districts, Division of Batangas. Language performance deals with linguistic competence in terms of morphology, syntax, semantics, and orthography, while socio-cultural competencies are along with the social contextual, stylistic appropriateness, cultural and non-verbal communicative factors. It used specific data gathering techniques and attempted to produce accurate data that congregate explicit details and information; hence, this is appropriate in the current research to evaluate linguistic competence.

RESULTS

Linguistic Competence of the Student - Respondents shows 1) Morphology divulged the data that the majority of the grade 7 students had an average level of linguistic competence of 36.36 percent; 2) Under Syntax, results showed that the majority of the grade 7 students or 38 percent had an average level in linguistic performance; 3) Semantics manifested that a greater part of the grade 7 students performed moderately as reflected by 35 percent; and 4) Orthography showed a group of 36 percent was in the moderately satisfactory level of linguistic competence. On the other hand, Socio-contextual Factors reflected in the data that the respondents depicted the socio-contextual factors to be at a good level as evidenced by the average weighted mean of 3.38.

DISCUSSIONS

Based on the foregoing findings, the linguistic competence of grade 7 students was Moderate to Satisfactory. Socio-cultural competence of grade 7 students was Good level. The result suggests that the student - respondents possess Average performance. There is a high correlation between the performances of students in English to their socio-cultural competence.

KEYWORDS: Communicative Competence, Cultural Factor, Language proficiency, Linguistic/ Grammatical Competence, Morphology, Social Contextual factors, Orthography, Sociolinguistic Competence

SUBMISSION ID: R04A-BATANP-0576

**Syntactic Patterns of Codeswitching among Students in Higher Education
Institutions (HEI's) in Catanduanes**

Reashiela Khan, Department of Education - Division of Catanduanes

Abstract

INTRODUCTION

Codeswitching is a window through a language's syntactic vulnerabilities. As new features emerge in young speakers' oral register, the transmission of inherent characteristics of the Bikol language could be affected across time. This research investigated the percentage of monolingual, bilingual, and trilingual utterances in the spontaneous speech of the tertiary students in HEIs in Catanduanes; the naturally occurring syntactic patterns in their codeswitching behavior in noun phrases (NP), verb phrases (VP), descriptive phrases-adjectives (DPAdj.), descriptive phrases-adverbs (DPAdv.), prepositional phrases (PP), and conjunctions (Conj.); and the syntactic directionality of codeswitching towards Bikol, Filipino, and English.

METHODS

Through Conversation Analysis, visual cues drew 110-minute spontaneous conversations from 11 groups of third-year students in four campuses. Tri-step coding generated a quality-quantitative description of the codeswitching structure at the general utterance, constituent-specific, and general syntactic levels.

RESULTS

Findings revealed 67% of the utterances were monolingual, of which 82.4% were in Bikol. Of the 29.5% bilingual utterances, 70% switched Bikol and English. The remaining 3.5% mixed Bikol, Filipino, and English. Top in the ranking of the naturally occurring patterns of codeswitching in NPs was structured with Bikol determiner plus English noun word; in VPs with English root word preceded by Bikol verb prefix "na-"; in DPAdj. with descriptive adjectives in Filipino; in DPAAdv. with negative Filipino adverb plus another Filipino interrogative adverb; in PPs with Bikol prepositional marker plus English NP; and in Conj. with English coordinating conjunctions.

Overall, codeswitching appeared 41.7% in NPs, 23.6% in VPs, 12% in PPs, 9.4% in DPAAdv., 8.9% in DPAdj. and 4.3% in Conj. Finally, syntactic transcription revealed that 86.6% of constituents with codeswitching followed the syntax of Bikol, 85.6% of Filipino, and 48.6% of English. NPs with codeswitching tended to follow the syntax of Bikol by 86.1%, the VPs that of Bikol by 91.1%, the DPAdj. that of Bikol and Filipino by 93.9%, DPAAdv. that of Filipino by 84.2%, PPs that of Filipino by 86%, and Conj. that of English by 100%.

DISCUSSIONS

Results drew quantitative values for frequency of codeswitching in interlocutor's oral repertoire, the vulnerable points in the vernacular's phrasal structures, the critical intrusion in system morphemes, and the preference of spontaneous codeswitching for the English.

KEYWORDS: syntax, Catanduanes Bicol, codeswitching, syntactic transcription, grammar, phrase structure rules

SUBMISSION ID: R005-CATAND-0002

**Teachers and Students' Attitude towards Code-switching in
Communication Arts Course at Laguna State Polytechnic University,
Academic Year 2016-2017**

James Alvin P. Mirador, Department of Education - Sto. Tomas Integrated High
School, Calauan, Laguna

Abstract

INTRODUCTION

The use of Filipino in English classrooms requires research attention. Code-switching or the phenomenon of using two or more languages to communicate exists, thus, switching in L1 to L2 classrooms is apparent. This study sought to examine whether Filipino is acceptable in courses where English should be the medium of instruction. It analyzed the gap between the perceived and observed teachers and students' attitude towards code-switching in Communication Arts course at Laguna State Polytechnic University, Academic Year 2016-2017.

METHODS

Statistical tools like frequency and percentage, weighted mean, and t-test were used. Mixed method was utilized, having both descriptive-survey and descriptive-observational approaches. Purposive sampling technique was applied in determining the respondents. Four English teachers and 109 students were interviewed and observed for a month. The primary data gathering instruments were 10-item semi-structured interview questions, 20-item questionnaire-checklist rated as 4 - strongly agree, 3 - agree, 2 - disagree and 1 - strongly disagree, and observation guide interpreted as 4 - evident, 3 - fairly evident, 2 - poorly evident and 1 - never seen.

RESULTS

In terms of teachers' attitude, only perceived and observed efficiency in tasks was "significant." Perceived and observed students comprehension, equivalence between L1 and L2, reiteration, and scaffolding were "not significant." In terms of students' attitude, perceived and observed impression and English teachers' image were "significant." Perceived and observed language preference, L1 and L2 strengths, and test-taking was "not significant." It can be concluded that the null hypothesis: There is a significant difference between the perceived and observed teachers and students' attitude relative to code-switching, was "partially sustained."

DISCUSSIONS

In light of the foregoing findings, the following was recommended: English teachers should efficiently delegate tasks and make students effectively deal with classroom activities. Improve English teachers' image and impression by having the students view their teachers positively as partners in language learning. Use L2 when teaching Communication Arts course at all times, since English teachers are required and mandated to teach in the said medium of instruction. Revisit outcomes-based syllabus in English to check its intended learning outcomes. Finally, craft a university language policy that shall outline the use of MOI in different courses.

KEYWORDS: code-switching, gap analysis, observation, perception, teachers and students' attitude

SUBMISSION ID: R04A-LAGUNA-0307

Teachers' English Language Proficiency and Its Effect on Students' Language Performance

Lorna O. Biñas, Teacher
(Adviser: Jomel Montero)

Abstract

INTRODUCTION

The English proficiency of teachers is always assured when they apply for ranking and as they enter formal teaching practice in the Department of Education. While this has been assured at their entrance, there are varied changes along the years of teaching practice. Teachers' English proficiency seems to be as important as the subject they are teaching with English as the medium of instruction. This study dealt with correlating the English proficiency of teachers in San Miguel National Comprehensive High School to their students.

METHODS

A correlation research design was used. The instruments used to determine the Level of Teachers' English Language Proficiency was Department of Education's designed English Proficiency Test. To get the Students' Language Performance, the study made use of the Division's Achievement Test and the National Achievement Test result. Data were subjected to data analysis such variables as mean percentage score and linear regression.

RESULTS

The level of Teachers' English Proficiency was high; the level of Students' Language Performance was moderate; Students' Language Performance and Teachers' English Proficiency did not correlate; and based on the findings and related readings, the intervention fitted to enhance Students' Language Performance was a Proposed Language Arts Remedial Class via Reading Short Stories.

DISCUSSIONS

It was found out that it is not the teachers' English proficiency that can attribute to students' language performance. It was related instead to the lack of students' engagements in in-depth reading where the language is extensively manifested. It is therefore recommended that a Language Arts Remedial Instruction via Reading Short Stories will be explored in improving students' language performance.

KEYWORDS: Language, Proficiency, Effects, Performance

SUBMISSION ID: R013-SURSUR-0175

The Contributing Factors of Students' Writing Apprehension and their Perception on the Process Approach of Teaching Writing: A Qualitative Study

Kristiffer George de la Cerna, Department of Education

Abstract

INTRODUCTION

Writing is a complex process in the classroom, which makes the students become apprehensive on their ability to write. Previous research revealed that writing apprehension affects students' writing performance. Quantitative research revealed that the process approach has significantly improved students' writing performance (Bayat, 2014). In this regard, the researcher was interested to explore the factors that contribute to students' writing apprehension and to reveal the reasons why the process approach in teaching writing statistically improved students' writing performance.

METHODS

This research utilized a qualitative research design. Using the basic qualitative research, the researcher conducted a semi-structured interview, observation, and document analysis among the purposively selected grade 11 Humanities and Social Sciences students. Guided by the findings of Al - Shboul and Fathri Hawari's (2015), the researcher performed the qualitative data analysis. Furthermore, participants' validation method was employed in this study to ensure the validity and reliability of the researcher's analysis.

RESULTS

The findings of this study revealed that the most common factor of students' writing apprehension is their inadequate knowledge in academic writing followed by negative writing in the past, negative attitude towards writing, and lack of knowledge in English grammar. On the other hand, the reasons why process approach has statistically improved students' writing performance are a convenience in writing, opportunity to do self-assessment, a tool for writing, improve self-efficacy, encourages diligence, and provides a sense of fulfilment.

DISCUSSIONS

The results of the study present that the causes of writing apprehension are different from student to another, that students' good understanding that making mistakes while writing is part of the learning process that leads to a positive outcome, and that their awareness of the causes of their writing apprehension allows them to better understand themselves. Furthermore, the teachers' role is important for the success of the students' writing performance and that the teachers' better understanding of the students' writing apprehension leads to device better solution to address the students' writing difficulties. Lastly, the suspension of teachers' personal assumptions from the students' writing ability allows channelling communication between the teacher and students that eventually leads to learning success.

KEYWORDS: Writing Apprehension, Process Approach, Writing Performance

SUBMISSION ID: R04A-DASMAR-0037

The Effectiveness of Experiential Learning in Phonological Awareness through Minimal Pairs

Aljon Basilio, Bernard Yamson, Dannel Marc Villarias, Genibeth Velasco, Jojelyn Valencia, Joyce Lorraine Composano, Marilyn Gonzales, Rea Joy Vicente, Rheanne Villas, & Rynette Lyle Victor, Department of Education - Masbate Province

Abstract

INTRODUCTION

Language teachers always look for specific extensive decoding instructions and best practices for students with severe impairments on phonemic awareness and decoding skills. Often, these pedagogical innovations were applied with lesser chances of success to students with diverse cultural and linguistic backgrounds. In this study, we witnessed remarkable results of progress in authentic learning using explicit experiential learning strategies. We attained an exemplary high level of success with evidence-based approaches on experiential learning theory and contrasting treatment through minimal pairs.

METHODS

The researchers used one group pre-test post-test pre-experimental research design. Utilized experiential learning approach and linguistic bases of phonological interventions to 30 randomly selected grade 11 students who participated in phonemic assessments with inclusive 10 guided process steps of modular instructions. Each lesson module used experiential learning of minimal pairs contrasting treatments with data analyzed statistically.

RESULTS

There is a high level of significance in the study. The computed t-value was greater than the t-table value wherein computed t-value was 14.75 with a degree of freedom (df) of $30-1=29$ and critical value at 2.045. This implied that the null hypothesis is rejected; therefore, the alternative was accepted. There was a significant difference between students' post-test and pretest. The mean score of pretest (46.47) is reduced to 15.33 after the application of the intervention and the variance of post-test (62.53) is less than the pretest (244.88). Experiential learning then was effective in improving phonological awareness of Grade 11 students at Cabitan National High School.

DISCUSSIONS

The results of this study showed significant improvement in phonemic awareness after the applied intervention. Thus, utilization of experiential learning showed a high level of significance in the study. This implied to utilize experiential learning in teaching phonemic sounds through lecture-aided materials and visualization models in every language teaching process. The knowledge gained from this research can be used by language teachers as effective teaching tools for pedagogical practices, which is potentially useful in increasing solutions to severe impairments of phonemic sounds productions in the English language.

KEYWORDS: Minimal Pairs, Learners, Experiential Learning, Language, Phonemic Awareness, Visualization Models

SUBMISSION ID: R005-MASBAP-0017

The Effectiveness of LINCS Vocabulary Strategy in Vocabulary Development

Michelle Gabarda, ANHS – Annex

Abstract

INTRODUCTION

Learning new words is often associated with reading a text. Vocabulary covers a wide scope in communication. It helps students express themselves in speaking and writing and understand the ideas in listening and reading. Yet, in Language Learning it seems and sounds that vocabulary does not give much emphasis as it is used often only in unlocking difficulties in preparation for reading and using the list of vocabulary words in sentences. The new set of words does not store for a long time that results in limited words that they can be expressed when they talk and write and comprehended when they listen and read. This paper will focus on the LINCS Vocabulary Strategy, a learning strategy that was published by Edwin S. Ellis (1992), University of Kansas Institute for Research of Learning Disabilities.

METHODS

The process of assimilation and accommodation in Jean Piaget's Cognitive Theory is carried in this study as it centers in the application of LINCS Vocabulary strategy that uses mental techniques in associating the schema of a new word with the prior knowledge with the use and application of the senses. This study grouped the subjects under the Vocabulary Strategy in the Learner's Material (LM) of Grade 10 students as the control group and the experimental group under LINCS Vocabulary Strategy.

RESULTS

Based on the gathered results, students who did LINCS Vocabulary Strategy had positive results on the vocabulary test that included the vocabulary words from Grade 10 Learner's Material compared with the students who did not work with LINCS Vocabulary Strategy. 12% of the students who engaged with LINCS Vocabulary Strategy got the perfect score on the given vocabulary test.

However, 0% was the result of the vocabulary test administered by the students who did not undergo in LINCS Vocabulary Strategy. From the 50-item test, 96% of the students who worked with LINCS Vocabulary Strategy got 40 and above in their scores. Yet the students who did not work with LINCS Vocabulary Strategy obtained the 76% on the same range of scores.

DISCUSSIONS

Based on the given results, the LINCS Vocabulary Strategy was effective in vocabulary development of the students. The said strategy did not only empower the bank of words of the students but also the power of word association and creative hand of the students. The vocabulary was developed by linking the definition with the reminding word that sounded like the vocabulary word and the created picture

KEYWORDS: LINCS, Vocabulary and Communication

SUBMISSION ID: R04A-STAROS-0063

The Effects of Social Networking Sites in the Second Language Development of the High School Students

Amor Dulce

Abstract

INTRODUCTION

The Internet is now the most powerful and vital technology affecting digital communication because of the never-ending growth of domains, hosts, sites, and networks. It has connected the netizens, expanded the global perspectives, created massive available resources, promoted more collaborative works, and improved people's lifestyles.

The English language is perpetually changing to accommodate developments. In the past several years, its evolution becomes uncontrollable because of the Internet and other technologies. Now, the development of the English language is accelerating at an extraordinary rate, and dictionary publishers are struggling to strike the right balance between significance and reliability.

Social networking sites have become a steering force behind the new words that surfaced in the English vocabulary. The majority of the words, terminologies, and acronyms that are being submitted for the inclusion in dictionaries are either several facets of social media or words that have attained widespread recognition because of the creative use of social networking sites.

METHODS

This study used survey-questionnaire as an instrument. The researchers tallied the data gathered and tabulated in its frequency and weighted mean table.

RESULTS

The best positive effects of social networking sites on the second language development of high school students are that it can develop their communication and language skills. It can help in the learning of new words, meanings, vocabularies. On the contrary, the respondents consider the conciseness of writing as the least positive effect of social networking sites.

The relating negative effects of social networking sites to the second language development of the high school students is the negligence of word agreement. The respondents also considered the usage of slang, abbreviations, word or language combinations, and emoticons as one of the minor negative effects of using social networking sites. On the other way, usage of poor grammar has the least negative effect of social networking sites in the second language development of high school students.

DISCUSSIONS

It is essential that they can give more attention to language development and learning of the learners. It is also helpful if they will give proper guidance to their students and teach them to realize that the formal way of forming words and communication are better than the informal way.

KEYWORDS: academic performance, second language acquisition, social networking sites

SUBMISSION ID: R04A-BATANP-2138

The Effects of Using Designed and Developed Instructional; Website in Teaching Classical Literature

Kristina Caluag, Sto. Nino National High School & William Teleg, Marikina High School

Abstract

INTRODUCTION

English classrooms across the country making use of traditional texts are now colliding with new technologies, leaving educators scrambling to figure out how to teach Classical Literature in the midst of a digital revolution. It has become the teachers' responsibility to exert more effort in making literature enjoyable and meaningful for Filipino students. In their attempt to do so, the researcher designed and developed an instructional software, specifically an instructional website that will determine if incorporating and using it in class would make teaching and learning Classical Literature different, relevant and meaningful to the students.

METHODS

The study determined the effects of using designed and developed an instructional website in teaching literature among students. This entailed the use of mixed methods research such as experimentation on the innovation's effectiveness, distribution of questionnaires, and administration of focus group discussions and interviews to the respondents to determine their schema or prior knowledge on the use of the instructional website. It also required a quasi-experimental design.

RESULTS

The study yielded to the result that respondents ranged from 15 to 16 years old. However, there was 1 respondent from the female group who was just 13 years old and there was 1 respondent from the male group who was already 19 years old. The administered pretest of the researcher which was a 40-item test had a weighted mean of 26.51. The highest score in the pre-test was 36 and the lowest was 14. The same kind and number of item tests were given to the respondents as post-test with a weighted mean of 31.68. The highest score was 39 while 28 was the lowest. The result of the study showed that there is a significant difference between the pre-test and post-test scores of the group.

On the focus group discussion and interview, the respondents shared that the effects of using the designed and developed instructional website as a learning aid in teaching literature are: participating in online discussion groups with their classmates is interesting and effective in learning, using the instructional website in learning activities helps build a good classroom community and develops collaboration.

DISCUSSIONS

Learning Classical Literature is an integral part of studying the English language. However, with the advent of technology, new ways of learning the language are needed by the learners. The results of the study demonstrated a positive impact of using the designed and developed instructional website in teaching Classical Literature. It can be gleaned that an instructional website as an example of Computer-assisted Language Learning was highly successful as an enhancement for traditional teaching. It also showed that the integration of technology into the classrooms considerably improved the learning and teaching of Classical Literature.

KEYWORDS: Classical literature, instructional website

SUBMISSION ID: NCR1-MARIKI-0000

The Multimodality in a Philippine TV Interview: The Communicative Role of Non-Verbal Gestures

Anne Elizabeth Gumiran, Tagaytay City National High School; De La Salle University - Dasmariñas

Abstract

INTRODUCTION

Multimodality is quite an integral part of communication as it enriches, supports, and regulates meanings of verbally delivered messages. However, its relevance and appropriateness to the type of communicative situation interlocutors are engaged into is sometimes overlooked. This article investigated the multimodality in an interview in a Philippine primetime TV show. It focuses primarily on the facial, hand, body, as well as the prosodic features and their particular functions with high regard to their turn management and feedback purposes. It furthers the endeavor to compare the different functions played by the common non-verbal gestures between and among the participants of the discourse

METHODS

The MUMIN coding scheme of annotation that is adapted in the study involves manual annotation of the non-verbal gestures with communicative functions of the participants which include two interviewers and an interviewee. The data is gathered through video recording and transcribing the December 24, 2014-episode of Aquino and Abunda Tonight. It is a 15-minute primetime show in a Philippine TV network, ABS-CBN, in which the discourse, a face-to-face interview, can be labeled as structured but casual. The participants were labeled as IR1, IR2, and IE in which IR stands for interviewer and IE, the interviewee. The non-verbal gestures of the participants were manually annotated in a devised matrix based on the tool adapted.

RESULTS

The analysis revealed that a particular functional value may be attributed by different descriptive features and vice-versa depending on the contributions of the interlocutors in face-to-face interaction. Furthermore, it was brought into light that factors such as the conversational setting and the relationship that exists between and among the participants of the discourse contribute to and are seen to have an impact on the production of the non-verbal gestures and its functions.

DISCUSSIONS

Hence, based on this finding, it is suggested that a similar study be done taking into consideration the varieties of the aforementioned factors (the i.e. formal or casual setting, personal or impersonal relationship between the participants) as well as the semiotics present in the non-verbal gestures of the participants.

KEYWORDS: multimodality, non-verbal gestures, feedback, turn-management

SUBMISSION ID: R04A-CAVITP-0580

**The Relationship between Vocabulary and Writing Skills of Grade 9
Students of General Emilio Aguinaldo National High School: Basis for a
Proposed Instructional Protocol for Vocabulary Enhancement**

Johanlyn Gonza, General Emilio Aguinaldo National High School, Department of
Education – Imus City

Abstract

INTRODUCTION

Many educators experience problems on how to expand students' vocabulary skills. It is through one's stock of words that one develops the ability to express ideas clearly especially in writing. Lack of adequate vocabulary related to written communication is one of the problems that have to be taken into consideration if quality education is to be achieved. In this study, the researcher tried to determine the level of vocabulary skills, the level of writing skills, and the relationship between the students' vocabulary and writing skills.

METHODS

To find the relationship between the level of vocabulary and writing skills of the grade 9 students of General Emilio Aguinaldo National High School, this study applied correlative research design. 365 respondents from 7 sections were given an objective-type vocabulary test and were asked to write an essay rated through a rubric. Data collected were tested through quantitative analysis.

RESULTS

Respondents were described to possess above average level in vocabulary skills and in all the areas of writing skills, getting the lowest average in paragraph construction. The study revealed that the writing skills of grade 9 students are significantly related to their vocabulary skills.

Hence, it may be inferred that a student who is good in vocabulary is likely to be good at writing. Since the respondents are deemed to be above average performers in vocabulary skills and writing skills, they have the potentials to enhance both skills. Moreover, based on the findings of the study, an instructional protocol for vocabulary enhancement was proposed.

DISCUSSIONS

Based on the interpreted results, it appeared that the performance of the grade 9 students in vocabulary tends to affect their performance in writing paragraphs. Therefore, there is a need for teachers to employ techniques and strategies that would enhance students' vocabulary including better strategies in teaching paragraph construction. Further, researches concerning the relationship between vocabularies and writing skills must be done in order to find some other solution to this problem. Thus, the utilization of the instructional protocol to enhance vocabulary is recommended.

KEYWORDS: vocabulary skills, writing skills, vocabulary enhancement

SUBMISSION ID: R04A-IMUSC1-0038

The Transitivity Analysis of John Green's the *Fault in Our Stars*

Anne Elizabeth Gumiran, Tagaytay City National High School; De La Salle
University - Dasmariñas

Abstract

INTRODUCTION

More often than not, various constraints have significantly affected the ELT's approach to teaching literature, limiting the learners' engagement into the basic levels of reading only; thus, depriving them of the reading that taps their higher order thinking and more profound comprehension resulting to poor scores in reading assessments.

Consequently, this study presents a formalistic approach to deciphering a body of literature; hence, unfold the deep-seated ideologies in texts that help to promote critical reading among the English language learners.

The present study aims to examine the character type of the main character in the novel *The Fault in Our Stars* by John Green. It also aims to unfold the development of the character type through analyzing the text's linguistic features in the light of Transitivity theory proposed by M.A.K/ Halliday.

METHODS

Descriptive method was used in the study. There were 30 clauses from the book, which were systematically and randomly sampled. These were grouped accordingly based on the recorded participants.

RESULTS

It was found in the study that the chosen clauses present varying participants and circumstances contributing to the main character's development. These were divided into parts. The first part contains 15 clauses that involved Hazel Grace, the main character in the novel. Second contains Augustus Waters, the main character's love interest with 7 clauses. The third part doesn't have a common participant but rather Abstract concepts that described what cancer has done to the main character. The fourth part included the people who greatly influenced that main character's perspective and being.

The transitivity analysis unfolded Hazel's development as a character as well as her world view in the perspective of a cancer patient which is evident in the processes and circumstances of the clauses examined. Her character evolved; thus, annotated as a round type as she progressed from a distressed teenage cancer patient to a person manifesting lightheartedness and a hint of happiness despite her condition.

DISCUSSIONS

The linguistic choice of the author also highlighted the battle of Hazel, a fictional entity yet a resemblance of reality, which constructs her worldview. It is noted as well that her acts, words, and way of thinking were made evident by her material, verbal, and mental processes. These ideologies are representations of how people with cancer, in reality, deal with their situation every day.

KEYWORDS: Systemic Functional Linguistic, Transitivity, meaning, The Fault in Our Stars, character type, ideology

SUBMISSION ID: R04A-CAVITP-0572

The Unspoken Adversities of ESL Learners in Public School

Anne Elizabeth Gumiran, Tagaytay City National High School; De La Salle
University - Dasmariñas

Abstract

INTRODUCTION

Various survey on the English Proficiency Index conducted in 2017 has revealed that the Philippines' rank has descended and the rates have gone lower. Despite the high proficiency level garnered in the EF EPI, Philippine Educational agencies have been alarmed by the present rate that they have seen as mediocre compared to the target passing score of other Asian countries' EP rates.

With that in mind, parts and parcels of these agencies are taking steps to better the communicative skills and competencies of the students most especially in using the English language. Accordingly, this requires a look into where the very reason for the descent lies - the challenges encountered by the students.

This study focused on the speaking challenges experienced by Senior High School ESL learners (N=231) in Tagaytay City National High School in using the English language in various communication contexts generally categorized by Richards (2006) as the threefold Types of Talk: Talk as Performance, Talk as Interactional, and Talk as Transactional.

METHODS

The data were gathered through a triangulation of survey with actual participation of 173 students as respondents (N=231), observation and interview with 70 students who are randomly and purposively sampled.

RESULTS

The study revealed the challenges that hinder the ESL learners in using the English language in communicating in various contexts include being shy to use the language when speaking, being afraid of committing grammatical errors and being comfortable using their first language when expressing their selves. The furthered inquiry revealed that these difficulties are based on the following: poor vocabulary, lack of self-confidence, and time pressure. Further, it was also found that student tends to encounter more challenges in a performance type of communicative set up than in a transactional or interactional one.

DISCUSSIONS

It has to lead to a more significant finding that the challenges encountered by the students are dependent on the size and type of audience and the kind of relationship that exists between and among them. This study hopes to devise programs and activities that will further improve the speaking skills in English of the students based on the difficulties identified in the study.

KEYWORDS: English language, Speaking Difficulties, Types of Talk, ESL learner

SUBMISSION ID: R04A-CAVITP-0561

User-friendly Error Guide in Creative Writing

Marilou Maas, Bondoc Peninsula Agricultural High School

Abstract

INTRODUCTION

This study dealt with error analysis in writing composition in Creative Writing classes, which was the basis in the preparation of a proposed remediation material. This attempted to: (1) identify the common error committed by the students in Creative Writing; (2) categorize the type of error that the students frequently committed in terms of mechanics, usage, grammar, and organization; (3) develop a user- friendly error guide to avoid errors; and (4) evaluate the user-friendly error guide by experts in terms of content, style, structure and development of ideas.

METHODS

Respondents were chosen using purposive sampling. It utilized the descriptive method of research to describe the error analysis in writing. The frequency distribution and percentage were used to determine the most common errors committed in writing. To determine the acceptability of the proposed remediation material according to content, style, structure, and development of ideas, the weighted mean was used.

RESULTS

The study revealed that the common errors committed by students taking Creative Writing are the use of verbs and misspelling. Errors on the use of punctuation marks, incorrect verb forms, misspelled words, and incorrect word choice is common under mechanics, grammar, usage, and organization, respectively. From errors committed by the students, the use of verb forms is the most common followed by the error in using the verb tenses and misspelled words. There are also cases that the respondents have unclearly written the words in mechanics and the use of space and incorrect margin are also seen. In terms of grammar, verb forms, verb tenses, subject-verb agreement, and missing verbs occurrences are attributed.

DISCUSSIONS

The User-Friendly Error Guide consists of different stages or steps that can be used by the students taking Creative Writing. The study further revealed that the teacher-respondents rated the proposed remediation material as highly acceptable according to the accuracy of the content, clarity, learning activities, and appeal.

Finally, the researcher recommended the following: (1) instructors may consider allotting amount of time discussing the verb system; (2) instructors may create activities that will enhance the knowledge of the students about the different parts of speech; (3) students may continue reading more resources for them to learn new words and check on the correct spelling of words; and (4) school administrators may provide manuals as guides for teachers to correct errors.

KEYWORDS: error analysis, creative writing, user-friendly error guide

SUBMISSION ID: R04A-QUEZON-0216

**Vocabulary Development Worksheets for Grade Five Second Language
Learners at Mohon Elementary School**

Rhoda Macatangay, Venus Marpessa R. Alcantara, & Diana Rose N. Castillo,
Department of Education – Batangas Mohon Elementary School

Abstract

INTRODUCTION

Every teacher ultimately wants his learners not only to succeed but to excel in all areas of life. One of the ways teachers can do this is to make them literate. Teach the children to read, increase their comprehension of what is being read, and lastly, assist them to verbalize their learning. As Biemiller quoted, “Teaching vocabulary does not ensure success in reading, just as learning to read words do not warrant success in reading.” However, lacking either word identification skills or adequate vocabulary will ensure failure.

This study explored the possible ways that help mitigate the learners' difficulties in vocabulary usage and provide interventions that would enhance vocabulary development of Grade Five pupils of Mohon. In order to enhance the comprehension competence of our students in the classroom, vocabulary development must be given high regard and must be linked to meaningful communicative activities in the classroom.

METHODS

This is descriptive research that utilized the unstructured interview, checklist, and teacher-made vocabulary test in data gathering. The outputs are vocabulary development worksheets with activity focusing on vocabulary development using different strategies for grade 5-second language learners at Mohon Elementary School.

Worksheets given have undergone review and analysis, by the principal and English key teachers. Mean percentage, weighted mean, and ranking were utilized to analyze the data as the statistical tool. Select learners were also interviewed to find out which areas in vocabulary development suit their level of capability. Thus, the results obtained gave the researchers the confirmation on the vocabulary deficiency of the intermediate second language learners.

RESULTS

The researchers came up with vocabulary worksheets to augment the vocabulary level of grade six-second language learners. It was categorized as vocabulary building through synonym/antonyms, context clues, word analogy, puzzle and configuration clues. They were designed as booklets or two-fold pamphlets so as to make it look interesting and to avoid humdrum.

DISCUSSIONS

Vocabulary indeed is one factor in which the learners fail so needing much attention as of this moment. Vocabulary worksheets may help develop their skills in reading and speaking, but there are certain strategies and techniques which helped more, therefore, the school and the entire teaching staff must improve their teaching styles and consider varied innovation so as to meet the target.

KEYWORDS: worksheets, techniques, vocabulary, pamphlets, booklets

SUBMISSION ID: R04A-BATANC-0199/R04A-BATANP-0855/R04A-BATANP-0861

Women as Written in the Gospel

Nerry Teope, Department of Education – Cavite

Abstract

INTRODUCTION

This is a feminist interpretation of the lives of nine women characters from the Books of the Gospel (Matthew, Mark, Luke, and John). It used the feminist tenets from the historical development of the Feminist Theory focusing on De Beauvoir's (1949) "The Second Sex," Harding's (1986) dimensions of gender oppression, and Grudem's (2002) biblical foundation for womanhood.

The previous studies separated the secular and religious feminisms. Thus, this study focused on the connection between secular feminism (Granek, 2010), experiences of women in the society, and religious feminism (Khan and Docherty, 2007), experiences of women in the scriptures as it compared and contrasted the experiences of Herodias, the bleeding woman, Salome/ mother of Zebedee's sons, Martha, Samaritan woman, Elizabeth, The Virgin Mary, Mary of Bethany, and Mary Magdalene to relate them with the modern women's lives and issues such as identities, sex roles, violence, and the way they resist oppression in school, in the workplace, and in the society (Heldke & Connor, 2004).

METHODS

This study analyzed, compared, and summarized the sex roles (biological creation) of nine women characters, the types of oppression they encountered, and their images. The corpora for analysis were explored through the feminist approach associated with Merriam's (2009) critical qualitative research particularly feminism.

RESULTS

The results of this study revealed that the women in the Books of the Gospel performed dynamic and changing gender roles (social construction). Four among the nine women have traditional roles as wives and mothers at the same time, three of them have demeaning roles as patient, adulteress, and prostitute, and the remaining two had other supporting roles as provider and sister. All the women characters experienced a particular type of oppression regardless of their gender roles but those who were spiritually sensitive transcended their oppression as exposed by their common functions and representations.

DISCUSSIONS

The integration of various genres from the Bible in DepEd's Learning Modules under the K to 12 Curriculum may inform the modern learners with the embedded crucial lessons that will shape their minds and transform their passions. This research suggests that teachers of English should use not only literary texts but also Bible texts as a basis of their instructional materials in their teaching-learning process.

KEYWORDS: feminism, biblical foundation for womanhood, oppression

SUBMISSION ID: R04A-CAVITP-0122

LAW & LEGISLATION

Practices on Waste Disposal among Donsolanos Pursuant to the Municipal Ordinance No. 154 S 2017

Esther Marinay, Student
(Adviser: Julius Caesar Averilla)

Abstract

INTRODUCTION

Waste management is the process of treating solid wastes and offers a variety of solutions for recycling items that don't belong to trash. It is about how garbage can be used as a valuable resource. Waste management is something that each and every household and business owner in the world needs. Waste management disposes of the products and substances that you have used in a safe and efficient manner. It involves activities and actions required to manage waste from its inception to its final disposal. This includes amongst other things, collection, transport, treatment, and disposal of waste together with monitoring and regulation. It also encompasses the legal and regulatory framework that relates to waste management encompassing guidance on recycling, etc.

METHODS

The study dealt with the practices of the people in the Poblacion of Donsol on Waste Disposal Pursuant to the Municipal Ordinance No. 154 S 2017. The descriptive-analytic method survey using survey questionnaire was used. The respondents of this research comprised of 111 respondents in 7 barangays in Poblacion.

RESULTS

Out of 111 respondents, ninety-five answered that they practice segregation with regard to waste disposal with the percentage of 85.5%. in terms of rank, segregation ranked one. From the findings, the researchers arrived at the conclusion as a basis of recommendation to the study: (1). Even though there is a Municipal Ordinance that tells people to practice waste segregation, there are people in Donsol who burn their waste. (2). Most people in Poblacion of Donsol prefer to segregate waste and have it collected by the garbage truck. (3). Most people in Poblacion of Donsol were aware and follow the Municipal Ordinance "No segregation, No collection." (4). Based on the data, the action that can make the Donsolanos in Municipal Ordinance be more aware of the issues at hand was to conduct relevant symposia or seminars.

DISCUSSIONS

Based from the findings, the researchers were able to realize the following conclusions: Most people in Poblacion of Donsol were aware and follow the Municipal Ordinance No Segregation No collection policy, they prefer to segregate waste and collect it by the garbage truck. Based on the data, the action that can make the people be aware of other Donsolanos in Municipal Ordinance was to conduct a symposium or seminar to all people in Donsol.

KEYWORDS: Waste Management, Waste Disposal,

SUBMISSION ID: R005-SORSOP-0011

Marijuana (Cannabis Sativa): A Cure for Asthma as Perceived By Health Practitioners in the Municipality of Donsol

Diosel Vidal

(Adviser: Julius Caesar Averilla)

Abstract

INTRODUCTION

Marijuana is one of the most abused drugs in the world. You may have heard someone say that because marijuana is a plant, it's natural and so it's harmless. But it's not. It can cause some coughing and breathing problems. Some studies show however that it can actually be helpful for treating asthma. Asthma is a chronic disease of the airways that makes breathing difficult. Cannabis is known to not only significantly reduce anxiety and stress, but it can also minimize asthma symptoms and prevent the onset of attacks.

METHODS

This study used interview approach for conducting research. Specifically, it utilized the descriptive - analytic interview. The main purpose of the researchers is to determine the use of marijuana for asthma patients. The study made use of a questionnaire, which was composed of five main questions as a guide in collecting data about Marijuana a Cure for Asthma.

RESULTS

Based on the findings, the majority of the respondents in terms of age were those thirty to thirty-nine aged. In terms of sex, the majority were female. And in terms of works, respondents were nurses. The researchers, therefore, conclude that the highest number of answers is that marijuana is a kind of drugs that are prohibited in our country and that it is an herb. The majority also quoted that marijuana can cure any kind of diseases. And being addicted to marijuana can be considered as a disease. They also said that Donsolanos are aware of the effects of marijuana. Sport is one of the essential practices to lessen the people using Marijuana. As the majority recommended, seminars can help to spread awareness and to enlighten those users about the effects of marijuana in our health.

DISCUSSIONS

The researchers, therefore, recommend the following: To the student, they must have enough knowledge about this topic. To the parents, they must give enough time educating their children, especially those teenagers. To the community, they must support every activity that tackles about the effects of marijuana. To the next researchers, if their study is related to this topic and uses this as their basis, may they enrich and improve their study. Proper information dissemination, especially for teenagers, must be done, focusing on the proper way to avoid being addicted to marijuana. The researchers also recommend further reading on the topic, specifically on resources and materials that tackle about marijuana being a cure for asthma, at the same time the effect of abusing marijuana and the diseases that can be caused by this substance.

KEYWORDS: asthma, cure, Mary Jane

SUBMISSION ID: R005-SORSOP-0013

**Perception of the Students, Parents, Police Officers, and Social Workers to
the Implementation of the Revised Juvenile Delinquency Act**

Aira Rose G. Impas & Joseph Angelo G. Mediario, CSHS
(Adviser: Gerald Martos)

Abstract

INTRODUCTION

Crime excuses no one. Recently, lowering the age of criminal liability has been surfacing in the news. In 2012, RA 10630 or the Revised Juvenile Delinquency Act was enacted to protect the right of every child as well as to exempt them from criminal liability. However, the law does not guarantee that children will be prevented from committing any crime nor will absolutely protect their rights at all times. This research sought to measure the perception of the respondents regarding the implementation of RA 10630.

METHODS

The quantitative-descriptive approach was utilized in this study. A survey questionnaire was used to collect data from four groups of respondents who are composed of 34 parents, 34 students, 25 police officers, and 7 social workers who were all purposively selected. The study was conducted in the municipality of Cainta, Rizal. The anonymity of respondents was kept to address ethical concerns.

RESULTS

In terms of enforcement, the four groups agree that LGUs were able to enforce the law properly by providing 24-hour child care institution; moreover, the guidelines prescribed in conducting rescue operations for children were observed without jeopardizing their rights with the average weighted mean of 4.44.

In terms of punishment, an average weighted mean of 3.97 shows that all groups agree in the provisions cited in the law such as exemption from criminal liabilities of children under 15 years old and/or confinement of children in a childcare facility while their case is on trial. In terms of attainment of the aim of the law, all groups agree that the objectives were fully attained at 4.42 interpreted as agree. Respondents believed that seminar for development and joint parental guidance should be implemented as an intervention with the average weighted mean of 4.63 interpreted as strongly agree.

DISCUSSIONS

The results revealed that the four groups believe that RA 10630 is well enforced in the municipality. They believe in all provisions of law that aim to protect the child. However, some of the respondents slightly disagree with the provisions of the law in terms of punishment. Furthermore, based on the result in the part of the punishment provided under this law, some of the respondents have slight disagreement for it yield the lowest average mean. Future researchers are advised to conduct a qualitative study about the experiences of minors who have been in conflict with the law. Result of this study may help other municipalities to improve the implementation of this law.

KEYWORDS: Perception, Revised Juvenile Delinquency Act, Ra 10630, Philippine Law, Research

SUBMISSION ID: R04A-RIZALP-0260

MANAGEMENT & GENERAL MANAGEMENT

Towards a School's Good Governance Anchored on the Primacy of the Teacher's Voice of a Public School

Facon Geronimo Jr., Department of Education

Abstract

INTRODUCTION

Teachers are not only about having a voice but also that their voice has an impact. They have firsthand experience regarding what works in the classroom, and they care about their voices being genuinely solicited and heard. They start to care less about offering their opinions when it seems like the asking is a mere formality. The question is, does their voice matter? When can it be considered the prime voice? This is what the present study tries to determine: towards a good school's governance anchored on the primacy voice of the teachers of a public school.

METHODS

Qualitative research was designed to reveal a target audience's range of behavior and the perceptions that drive it with reference to specific topics or issues. It uses in-depth studies of small groups of people to guide and support the construction of hypotheses. The results of qualitative research are descriptive rather than predictive.

RESULTS

More than half of the respondents have MA units. About half of the respondents are below ten years in their length of service, while the other half has served at least ten years or more. for the grade handled, one-third of the respondents are handling Grade 3 while the remaining two-thirds are handling Grades 1, 2, 4, 5 and 6. All of the respondents are involved in the academic area.

in terms of the assessment of the supremacy of their voice: Belonging: The overall weighted mean affirmed that the teacher-respondents agree will all the indicators; however, they reveal that the school is not a welcoming place. Moreover, they felt that they are not valued as a member of the school community.

DISCUSSIONS

The school head should ensure that a school is a welcoming place in terms of the physical environment and the organizational atmosphere. in addition, the teachers should feel valued as a member of the school by getting their opinions and side of the story when there are issues and concerns. The teachers should establish a strong rapport with the students through their classroom activities and interaction.

KEYWORDS: towards a school good governance anchored on the primacy of the teacher's voice of a public school

SUBMISSION ID: R04A-CAVITF-1339

Engaging Rodriguez National High School Stakeholders in Improving the Learners' Outcomes

Lourdes Norp, Department of Education – Camarines Sur

Abstract

INTRODUCTION

This action research aimed to engage the stakeholders of Rodriguez National High School, Pili, Camarines Sur in improving the learners' outcomes for the school year 2016-2017. Learning outcomes refers to the increase of mean final rating and improvement on the students' reading and comprehension skills using a descriptive method of research with nine varied interventions implemented in attaining the expected outputs.

METHODS

This research employed a descriptive and developmental method of research in answering the problems stated in line with the efforts of maximizing stakeholders' involvement in the improvement of learning outcomes.

RESULTS

in line with the attainment of the objectives, the following were the findings: 1] on the level of involvement for the improvement of learning outcomes, both teachers and school head had very high results; 2] on the teaching and assessment strategies employed during teaching - learning sessions, both group discussion, and written examinations topped the lists with very high results; 3] maximum involvement of school stakeholders - alumni, parents, students, teachers and community leaders for the school improvement rank first among the different innovations, interventions and strategies implemented; 4] encourage stakeholders like alumni, parents for continued initiative/programs for the school improvement ranked first in the list of stakeholders' suggestions and 5] improvement in the learning outcomes was very evident among Grade 7 students on their mean final rating and reading and comprehension skills.

DISCUSSIONS

The NAT IV result of Rodriguez National High School, Pili, Camarines Sur, for the school year 2014-2015 revealed that it was beyond the standard rating of 75% National Mean Percentile Score which was 45.15% only. With these statistics, it is assumed that learners do not perform well which resulted in low performance in their academic activities. Since National Achievement Test results are no longer uploaded when this action research was finished, the researcher replaced the said data with that of the students mean final rating in all learning areas since the same data was used to replace the NAT Results in the teachers and school heads individual Performance Rating (IPR).

KEYWORDS: Learning outcomes, innovations, and stakeholders

SUBMISSION ID: R005-CAMSUR-0038

Entrepreneurial Skills and Managerial Performance of Small and Medium Enterprise in Cabuyao

Carmela M. Marte, Catherine Serrano, & Sheila-aan Barahan, PSHS
(Adviser: Caroline Bobiles)

Abstract

INTRODUCTION

Small and medium enterprises contribute meaningfully to achieving general economic development. Several factors may influence the success of these enterprises such as economy, capital markets, strategies, and changes in regulations. However, apart from these common factors, management styles and entrepreneurial skills play significant roles. In this study, the researchers examined the entrepreneurial skills and managerial performance of small medium enterprises in the City of Cabuyao as factors affecting growth and success.

METHODS

Descriptive -Correlational research design was employed in this study. This research design allowed the researchers to determine the relationship of entrepreneurial skills to the managerial performance of the owners of enterprises. Thirty entrepreneurs who have been in the business for 5 to 10 years from the City of Cabuyao were the respondents of the study. A self-made questionnaire composed of two parts--the level of entrepreneurial skills of small and medium enterprises in terms of their communication skills and creative thinking and the level of managerial performance in terms of management skills and leadership skills--was used to gather data.

RESULTS

Many entrepreneurs revealed positive results in the level of entrepreneurial skills both in the aspects of communication skills and creative thinking. The managerial performance in terms of management skills and leadership skills showed positive capabilities among the entrepreneurs. Among the entrepreneurs, there exists a significant relationship between entrepreneurial skills and management performance.

DISCUSSIONS

The result demonstrates that feedback, constant communication, and varied creative communication engagement are needed for successful business ventures. Management and leadership skills offered positive influence in the field of managerial performance including interaction with other organization.

KEYWORDS: small and medium enterprise, entrepreneurial skills, managerial skills

SUBMISSION ID: R04A-CABUYA-0023

**Improving School Processes in Department of Education Camarines Sur
through Continuous Improvement Program**

Mildered Prades, Department of Education – Camarines Sur

Abstract

INTRODUCTION

Implementation of projects was done in a traditional way because one's notion is that they were needed to address issues and concerns in schools and in the workplace. In this research, we employed a continuous improvement process. Voice of the customers was listened to and the root causes of the problems were analyzed and validated prior to the implementations of the interventions. Projects had been effective in varied levels.

METHODS

Multiple methods design was employed. Anchored on a systems approach, face-to-face training, intensive mentoring and coaching were conducted using the three major stages such as assess, analyze and act. These three stages have ten process steps. Seven teams with five members per team were involved using purposive sampling. These teams were from elementary and high schools with a team from the division office. The commitment of support from the school heads and from the process owners was sought. Pilot implementation was conducted before the rollout to the bigger size of respondents.

RESULTS

All the outputs were achieved in varying levels of accomplishments. Projects had varied focus. Solutions implemented were drawn from the voice of the customers and from root cause analysis conducted. Interactive and innovative teaching and learning materials were used including interactive and game-based activities. Varied assessment techniques were employed in three types such as written works, performance tasks, and quarterly assessments.

DISCUSSIONS

Results were remarkable; however, the CI Teams somehow found difficulty in implementing their projects without the direct guidance of the CI Coaches. Availability of finished CI projects following the ten CI process steps is highly appreciated. Institutionalization of the CI in the workplace will be the next effort.

KEYWORDS: continuous improvement, school processes

SUBMISSION ID: R005-CAMSUR-0114

Improving the School Safety of Pongtod Elementary School through Construction of School Steel Gate

Leliosa Ronquillo, Head Teacher I

Abstract

INTRODUCTION

Provision of a good learning environment in order to increase the achievement performance of learners is the primary concern of school administrators for which managing a school is not an easy task to do. It needs the skill and ability to act accordingly and of controlling a business or department to be collaboratively done. Schools need to have appropriate security measures in place to protect school property and assure a safe and secure environment for staff and pupils. Safety is never an option but a default priority. Hence, one should not wait to cure it, it must be given attention and solution.

METHODS

There are many ways to reach this goal; one of which is to conduct meetings with parents, GPTA, with the stakeholders, local and municipal officials, and private individuals. The purpose of the said meeting is to listen to the voice of the customer/learners in order to collect brilliant ideas that might contribute to the solution of the present problem/situation of the school. Planning and organizing the school data is very vital in order to have a reliable baseline of the existing situation. Sourcing out for funding is very necessary for financial stability and the implementation phase of the project will soon start.

RESULTS

Listing of the gathered opinions, ideas, and suggestions of the stakeholders is the result of the Focus Group Discussion (FGD) being done. First is the prioritization and assessment innovation. Second is the donation of parents, Local School Board budget share, and school Maintenance and Other Operating Expenses (MOOE) budget share. Third, the parents and other stakeholders were motivated and encouraged to support the school program and projects, and they were glad to see the complete implementation of the school gate.

DISCUSSIONS

The result demonstrates the need for the active involvement of the school head, teaching staff, and other stakeholders in order for the implementation to be more effective. Whatever programs and projects in school, the parents must be properly informed to ask their full support moral and financial assistance. The school head cannot do it alone without collaboration to other people, the parents of the pupils, stakeholders, community people that will lead to a successful implementation and harmonious relationship to the partner of the school, the community.

KEYWORDS: collaboration, stakeholders, partnership

SUBMISSION ID: R013-TANDAG-0001

Intensifying the Pedagogical Practices of the Humanities and Social Sciences (HUMSS) Teachers in Calaca Senior High School

Joemark Gumapac, Department of Education - Calaca Senior High School

Abstract

INTRODUCTION

The challenges that lie ahead in Calaca Senior High School are enormous. Most of the recently hired teachers were new graduates with minimum experiences from private schools, some were not teachers by profession, especially those who handle Technical Vocational Livelihood track, others were not yet licensed professional teachers, while there were few who teach other subjects not aligned to their specialization, which adds more difficulties in the preparation and delivery of the lessons. The researcher aimed to assess the pedagogical practices of the teachers, which determine the imperfections that need strengthening and improvement. It guided the researcher in devising an action plan to further strengthen the quality of practices that will remediate the identified pedagogical issues.

METHODS

The study employed a descriptive research design involving 24 Humanities and Social Sciences teachers as respondents. No sampling method was employed since all of the HUMSS teachers were involved in the study. A self-made questionnaire validated by knowledgeable research grammarian and statistician was utilized as the main data gathering instrument. Frequency, ranking, weighted mean, and Pearson-r were used for the analysis of data.

RESULTS

The teachers' profiles show that none of them have finished master's degree or doctorate degree. 14 teachers have passed the Licensure Examination for Teachers (LET) while 5 teachers haven't passed the board exam yet. Majority of respondents are beginning teachers with 0-3 years of experience. Teachers' effectiveness in preparation of Daily Lesson Log is moderately evident since they lack training for the new format of lesson planning. The teachers' effectiveness in the utilization of pedagogical approaches is least evident because they lack knowledge of the different strategies introduced by the Regional Memorandum which is the 2C2IR. The teachers' effectiveness in providing assessment activities and classroom management is moderately evident, which is significantly related to their profile. It means that the respondents' professional qualifications, educational background, and experience affect the effectiveness of teachers' pedagogical practices.

DISCUSSIONS

Effective teachers who utilize a variety of pedagogical strategies display a wide range of skills and abilities that lead to creating a learning environment where all students feel comfortable and are sure that they can succeed both academically and personally when they applied the appropriate approaches. This complex combination of skills and abilities integrated into the professional teaching standards that also include essential knowledge, dispositions, and commitments that allow educators to practice at a high level. The proposed action plan has a positive effect on the pedagogical practices of the HUMSS teachers. Hence, it improved teachers' skills in the preparation of daily lesson log, utilization of pedagogical approaches, providing assessment activities, and classroom management.

KEYWORDS: pedagogy, lesson planning, classroom management, assessment, humanities, and social sciences

SUBMISSION ID: R04A-BATANP-0657

Leadership Style of Student Council Officers in Cavite National High School - Senior High Schools as Basis for a Proposed Leadership Program

Alnia Bautista
(Adviser: Jellina Rosga)

Abstract

INTRODUCTION

Being a student-leader helps to learn how to plan an event, organize their time, develop their skills in public speaking, and lead others that's why student leadership provides the student training to express themselves in school-related task or ideas, goals and desires in a productive and constructive way. The purpose of this study is to determine the leadership styles of the student-leaders of Cavite National High School. The study aims to determine how those skills are used in the classroom or in their organization and to discover whether those skills enhance their leadership. Results of this study can serve as a basis for a proposed leadership program in order to train student-leaders who wants to lead an organization and make the system of the school better.

METHODS

One hundred student council officers responded to the given survey questionnaire. in this study, the researcher gathered data in a statistically and numerical method from the respondents. The research design was used is non-experimental correlational design through a descriptive-survey method and the inferential statistical tool was used to determine the significant relationship between the profile of the respondents and their leadership style and the significant difference in the assessments of the students when grouped according to their profile.

RESULTS

The results of the study reveal that there is a significant relationship and differences between the profile of the respondents such as sex, age, grade level, and the number of extracurricular activities joined to the transformational leadership style of the student council officers. Since the assessment according to the profile, which has computed f-ratio is greater than the Critical f-value using 0.05 as the level of significance with 98 degrees of freedom. Findings from this study provide evidence and use as a basis to implement a leadership program that could make an impact on creating great leaders and develop a continual flow of leaders.

DISCUSSIONS

According to Horowitz (1990), programs and different activities have been created as ways to enhance the leadership abilities of students. Transformational leadership style is definitely causing a change in individuals and social system focuses on "transforming" others to be encouraging and harmonious. Finally, one interesting direction for future research will be to further investigate the academic performance of students' self-assessments to their time management skill in leadership.

KEYWORDS: Leadership style, Student leaders

SUBMISSION ID: R04A-CAVITC-0025

**Levels of Participation of the School Stakeholders to the Different School
initiated Activities in Banjo Laurel Elementary School S.Y. 2016-2017**

Vilma Briones

Abstract

INTRODUCTION

Stakeholder engagement is the process by which an organization involves people who may contribute to sharing a common understanding and involvement in the decision-making process of projects in school. It aims to evaluate the levels of participation of the school stakeholders and implementation of volunteerism during special activities, like collaboration in crafting the E-SIP, PTA General Assembly and Conferences, Teachers Month, SOSA, SBM, Card Day, Brigada Eskwela, and others. As a school leader, we need to identify the strength to sustain and weaknesses to identify the priority improvement areas; hence, this action research was prepared.

METHODS

The researcher used the School Improvement Plan (SIP) terminal review in identifying the Priority Improvement Areas of the school. Brainstorming of the different activities that need to be enhanced thru the support of School Governing Council, Parents Teachers Association, School Planning Team and Project Team were identified; and one of the identified activities that need improvement is the stakeholders' participation. The school head, together with the cooperation of dedicated and committed teachers in school, Project SLWS or Strong Linkages with the Stakeholders was launched. The project aimed to enhance the needs of the school by providing a strong linkages to stakeholders through Improvement of Physical Facilities like Repair and Improvement of School Fence, Landscaping of School Ground, Construction of School Canal, Putting Steel Matting in front of the School, Repair Water Pipe Line and Construction of Handwashing Area that makes our learner motivated and inspired in enrolling in our school.

RESULTS

Based on the attendance during PTA General Assembly, SOSA and other activities in school, out of 233 pupils, 182 parents were present. The data revealed that there is a remarkable increase in stakeholders' participation in school programs and projects. It will contribute meaningfully to the success of a school partnership in response to the welfare of the learners.

DISCUSSIONS

Project SLWS was found to be effective in enhancing stakeholders' participation. The proof of evidence is the school became the 2nd Place winner in the division level during the Brigada Eskwela. We need to continue the strong linkages with the stakeholders for the success of and welfare of our learners.

KEYWORDS: linkages, priority, partnership

SUBMISSION ID: R04A-TANAUA-0089

Management Competence and School Administrators' Attributes: Inputs to Learning Leaders' instructional Capability and Teaching Performance

Elvira Angeles

Abstract

INTRODUCTION

This study dealt with Management Competence and School Administrator's Attributes: inputs to Learning Leader's instructional Capability and Teaching Performance. It sought answers on these: What are the perceived management competencies of the School Administrators in terms of supervision, administration, performance evaluation, and support for quality instruction? What is the respondent's perception of the personal qualities of the school administrator in terms of personal traits as attitudes and beliefs, and working relationship with subordinates? What is the respondent's perception of professional attributes in the knowledge of educational management, understanding psychological and social principles and appreciation of school management? What is the level of instructional capability of learning leaders in terms of teaching skills and evaluation skills? What is the mean self-evaluation of teachers in accordance with Competency-Based Performance Appraisal System for Teachers (CB-PAST) occupational competence, professional and personal characteristics, punctuality and attendance?

METHODS

This study was conducted for the purpose of determining the variables that may have an effect on Management Competence and School Administrator's Attributes: inputs to Learning Leaders instructional Capability and Teaching Performance. The descriptive method of research was utilized and the survey technique was used in gathering data. The questionnaire served as the main instrument for collecting data. Frequency and percent distribution and arithmetic mean was used to describe the general information on the respondents' profile and on the other variables of the study.

RESULTS

Taken singly or in combination, the hypothesis that the administrators' management competencies are not significantly related to learning leaders' instructional capability and teaching performance is partially upheld. The hypothesis that the instructional capability and teaching performance of learning leaders are not significantly influenced by the administrators' personal qualities is not accepted. The hypothesis that the administrators' professional attributes are not significant contributors to instructional capability and teaching performance of learning leaders is partially supported.

DISCUSSIONS

There is a change that management competencies of administrators may create a big impact on the success of the schools' K- 12 Basic Education Program by attending seminars to raise the level of teaching performance.

KEYWORDS: CB PAST, Learning Leaders, Management Competence, Supervision, administration, quality instruction, personal traits, psychological principles, educational management, instructional capability

SUBMISSION ID: R04A-SANPAB-0016

**Management Plan in Selected Technology and Livelihood Education Areas
for Teachers of Junior High School Students**

Geraldine Mayuga

Abstract

INTRODUCTION

Knowledge, skills, and competencies of Technology and Livelihood Education (TLE) teachers on selected TLE areas, beauty care and cookery, as perceived by school heads and TLE teachers themselves were assessed to determine the quality of instruction and the implementation of desired learning competency. It also dealt with the personal and professional qualities of teachers in teaching TLE. In addition, the study investigated the various issues and concerns encountered by TLE teachers relative to meeting TESDA standards. In this study, a management plan was proposed to enhance the knowledge, skills, and competencies of TLE teachers from schools in Area I, Province of Batangas for greater productivity of the graduates.

METHODS

The descriptive method of research was used, with the questionnaire as the main data gathering instrument. The researcher also used interview guide questions to substantiate the study. One hundred thirty-three (133) respondents which comprised of thirty-one (31) school heads and one hundred two (102) TLE teachers served as the subject of the study.

RESULTS

The findings showed that TLE teachers manifest professional qualities to a great extent, specifically in terms of work values, human relations, communication skills, and creativity. The study also revealed that TLE teachers are moderately knowledgeable and moderately competent on the skills and competencies needed in beauty care particularly on nail care and wellness massage, and in cookery, specifically on preparing hot and cold meals. The findings indicated that there are significant differences between the assessment of school heads and TLE teachers on the knowledge in beauty care and on the skills and competencies in cookery. Data analysis also revealed the different issues and concerns that teachers encountered in teaching the two selected areas in TLE relative to meeting TESDA standards.

DISCUSSIONS

A management plan proposed by the researcher can enhance and improve the TLE teachers' knowledge, skills, and competencies in the selected TLE areas. The study recommended that the management plan be presented to concerned authorities for evaluation before it could be implemented by the school heads and TLE teachers, in the hope of enhancing the effectiveness of teachers to prepare graduates towards greater productivity.

KEYWORDS: Management plan, Technology, and Livelihood Education, Junior High School

SUBMISSION ID: R04A-BATANP-1974

Managerial Practices of the Public Secondary School Heads in the Division of Urdaneta City

Gemma Prestoza, SDO Urdaneta City

Abstract

INTRODUCTION

This study aimed to determine the managerial practices of the public secondary school heads in the Division of Urdaneta City along with human resource, fiscal, physical facilities, and networking/linkages aspects.

METHODS

It looked into the profile of the secondary school heads in terms of age, sex, civil status, academic rank, educational attainment, and years of service as school heads as well as the profile of the secondary school teachers in terms of age, sex, civil status, academic rank, educational attainment, and years of service as teachers. Problems encountered by the school heads were also identified as well as the proposed action plan to improve their management practices.

RESULTS

The study divulged that managerial practices along the human resource aspect are moderately practiced. Along the fiscal aspect, managerial practices of school heads have been assessed by school heads as highly practiced while teachers' assessment is moderately practiced. While physical facilities aspect has been evaluated as highly and moderately practiced by school heads and teachers, respectively. It also revealed that school heads had serious problems along with networking and linkages while moderately serious along three other aspects. Based on the foregoing findings, it revealed that majority of the school heads are 40-50 years of age, male, married, with MA/MS units, serving as Principal IV and in the service for 10-20 years; most of the teachers are female, 36-45 years old, married, baccalaureate degree holders, with T-III positions and in the service for 11-20 years; and the managerial practices of the school heads have been evaluated as moderately practiced along human resource, fiscal and physical facilities, however, indicators along linkages and networking have been assessed as slightly practiced, and the most serious problems encountered by the school heads are along networking and linkages particularly benchmarking.

DISCUSSIONS

The results demonstrate that school heads must finish their further studies in order to establish credibility along with personnel management. While school heads and teachers have evaluated the managerial practices of the school heads as slightly practiced especially along with networking, there is always a room for improvement to make it moderately or highly practiced. Department of Education should offer more scholarship grants for the school heads to improve and enhance their managerial skills and competence along with human resource, fiscal, physical facilities and especially along with networking and linkages.

KEYWORDS: Managerial Practices, Public Secondary School Heads, Public School Management

SUBMISSION ID: R001-URDANE-0042

Project ExPress: Expedite the Payment Process to External Creditors

Mariben Berja, Department of Education – Camarines Sur

Abstract

INTRODUCTION

Expedite the payment process to external creditors from 178 days to 45 days? Based on the records of the Accounting Section, Department of Education Camarines Sur has still unsettled financial obligations to external creditors from 2013 to 2015 that made the division unpopular among several external creditors/providers, which hampered the efficient delivery of educational services. With this situation, the division sometimes resorted to negotiated procurement to avail the services of external providers for some amount of less than 1M.

METHODS

This study employed a mixed method of research. Purposive sampling technique was used. Only those personnel involved in the payment process to external creditors. It employed the process of Continuous Improvement Program (CIP) using the three stages of Assess, Analyze, and Act. These stages have the 10 process steps used as a guide in solving the problem. Statistical treatment was made possible through the use of MS Excel. The study used descriptive statistics like summation, mean, percentage and rank. This is a team project with Ms. Mildred J. Prades, Delfin A. Bondad, and Maria Elena A. Argarin.

RESULTS

The payment process of SDO Camarines Sur to external creditors was reduced from 178 days to 37 days in 2016. The system of progress monitoring, coordination among the supply office, inspectors and creditors and inappropriate interpretation and implementation of the policy were among the root causes identified by the team. Citizens Charter containing the office improved flow chart of transactions; commitment form of each personnel stating the tasks assigned with corresponding time allotment per transaction; adoption of unified logbook and checklist; institutionalized feedback and monitoring system by assigning functional coordinator per section, conduct of regular coordination meetings of section heads and utilization of customer satisfaction survey and office layout enhancement applying Systematic Filing System through 5S were among the solutions implemented.

DISCUSSIONS

Capacitating the SDO personnel is of great help for the institutionalization of Continuous Improvement Program in Camarines Sur Division. It will be the next effort of the team in SDO Camarines Sur. Improvement of division and school processes towards the attainment of excellent results is the goal of everyone.

KEYWORDS: financial efficiency, continuous improvement

SUBMISSION ID: R005-CAMSUR-0119

Project MESA: Monitoring and Evaluation of Stakeholders' Achievements

Edna Aladano, Department of Education – Camarines Sur

Abstract

INTRODUCTION

The new station, new teammates. The main purpose of this action research was to keep track of the performance and achievements of the school stakeholders especially the teachers of Gov. Mariano E. Villafuerte Sr. High School, Pili, Camarines Sur, the school year 2018-2019. With this, authentic data were generated to further fit in the different innovations and interventions to be employed since the school head is newly transferred from Binobong National High School, Pili, Camarines Sur. This project is one of the researches funded under the Basic Education Research Fund (BERF) in Bicol Region for the calendar year 2018.

METHODS

This study used a mixed method of research and total enumeration of teachers as respondents this school year 2018-2019. individual Performance Rating (IPR) was one of the tools used with listening to the voice of the customers. Result-based data analysis was employed. Mentoring, provision of technical assistance, coaching, and monitoring were the processes implemented. Students' performance were tracked and outstanding performance was rewarded. Descriptive statistics were used such as summation, mean, percentage and rank that facilitated data analysis.

RESULTS

Findings of this action research were as follows: Female teachers dominate the teaching personnel, the majority are in 25 to 40 years old, and most are holding regular permanent posts of teacher 1 positions for more than 10 years in the service with BS as the majorities' educational attainment with education courses. Most of them are TVL teachers. Teaching loads were in line with their major or minor specialization. for KRA 1, the only strength under objective 2 which was considered as areas needing improvement with the lowest rating obtained. KRA II objectives were considered strength. The overall rating was still considered strength. The majority had submitted IPCRF with almost half who have a portfolio. Majority of the AIP projects were implemented for SY 2018-2019.

DISCUSSIONS

Since the school year is not yet over, there are still great chances for these 25 students to overcome their failures in some subjects since catch-up mechanisms are being implemented. The child-centered educational system is adhered to so that everyone will achieve his/ her potential at their own pacing.

KEYWORDS: stakeholders, achievement, monitoring

SUBMISSION ID: R005-CAMSUR-0123

Management of Human Resource as Outcome of Practising School-Based Management: Basis for Strategizing a Localized Resource Plans and Policies

Jhomar Sor, Department of Education

Abstract

INTRODUCTION

Department of Education Order No.83 s. 2012, which contains the Implementing Guidelines on the Revised School-Based Management (SBM) Framework, Assessment Process, and Tool (APAT), necessitates that each school shall be assessed to determine the level of SBM practices in school; provide basis on which to establish its plan of action; improve the SBM support systems through interventions that the school and other admin levels of Department of Education; and determine effectiveness of SBM practices in the delivery of basic education services. The researchers aimed to find out about the quality management of human resource as an outcome of practicing school-based management be a basis for strategizing localized resource plans and policies.

METHODS

This study employed the dimensions of both quantitative and qualitative approaches. The researcher used purposive sampling technique in this study. The respondents of this study were 16 Elementary School Heads, 4 Junior High School School Heads, 1 Senior High School Heads and 370 teacher-respondents in the District of Malvar in the school year 2017-2018.

RESULTS

The school head and teacher respondents perceived that practicing school-based management components as "very highly practiced." Both of the respondents perceived quality management of human resources in school operations as "very highly evident." Responses of the respondents reveal no significant difference. Respondents do not differ on strategic planning, problem-solving, instructional improvement, assessment for learning, school performance, stakeholders' participation, managing school facilities, monitoring, and assessment. On the other hand, both of the respondents reveals that there is no significant difference in perception in terms of quality management of human resources.

DISCUSSIONS

School heads and teachers serve as the school's steering wheel to get into the right direction and that leads to the achievement of the greater and lawful good, the school and the learners. School heads and teachers both agreed that in order to ensure the quality in the operation of the school, transparency must be observed. As a whole, both SBM and QMHR is expected to be more effective and efficient among the learners in the use of resources and more responsive to local needs. Parents are involved in school affairs such as monitoring and evaluating school personnel. QMHR can pave the way to a transparent, higher accountability and an increased focus on improving educational outcomes.

KEYWORDS: school-based management, quality management, human resource

SUBMISSION ID: R04A-BATANP-2289

**Records Management: A System and Procedure of Camarines Sur
Polytechnic Colleges, Nabua, Camarines Sur**

Jhomer Rosal, Department of Education

Abstract

INTRODUCTION

The main thrust of the study was to evaluate the records management system and procedure of educational institution with the end view of proposing a plan of action and operational manual that would enrich and develop the records management system and procedure that will put on the right place in the right order at the right time for the right person at its lowest cost.

METHODS

Different design methods were used. Using the descriptive -evaluative survey method of research in the treatment of the data gathered with informal interview among the respondents. It was evaluative in nature since there is a need to measure the level of awareness; the level of compliance, level of satisfaction, and problems encountered as to the records management system and procedure. Thus, records management plan and an operational manual can be designed based on the findings of the study to further attain the educational objectives of the school.

RESULTS

The study helped to design and develop a records management system and procedure that would provide, enhance, and automate records management and give direct benefit to the records section in terms of records creation, records maintenance and control and disposition by avoiding any confusion that would jeopardize the quality of education. The Improved or Update Records Management Operation Manual be emerging to ensure its sound performance in handling records and documents. The records management plan that was developed based on the findings of the study will enrich the records management system and procedure.

DISCUSSIONS

The outcomes show that the records management system and the procedure was developed using extreme programming methodology. An evaluation of the creation of the record maintenance and control and disposition determined that the study achieved many of its predefined objectives however, the major limitations of the study was the scope covered. From proper analysis and assessment of the designed records management system and procedure, it can be concluded that the action plan and enhanced records operational manual developed is an efficient, usable and reliable for the records management system and procedure.

KEYWORDS: records management

SUBMISSION ID: R005-IRIGAC-0022

Rewards System towards Goal-Oriented Teaching

Ruby Castillo, Department of Education

Abstract

INTRODUCTION

Education is noted as a powerful force in bringing about the desired change. in the educational arena, administrators must ensure that teachers and learners are well motivated to create a positive learning atmosphere. Thus, there are different factors that affect the performance of quality -oriented teaching relative to instructional competence, teacher's job involvement, and participation, all of these were presented in this study.

METHODS

The respondents of the study were public school teachers. Questionnaires were distributed and collected. The research used the descriptive research design and utilized the t-test to determine the factors that affect the perceptions of teachers with regards to the teacher's instructional competence and participation and involvement. Weighted mean and standard deviation were used to measure the mean level of the reward system of teachers in terms of intrinsic and extrinsic and the perceived level of quality- oriented teaching with regards to instructional competence and job involvement and participation.

RESULTS

The respondents who participated in the study revealed that (1) motivational reward system in terms of promotion, success orientation, benefits and salary and recognition and merit, self- development which includes self-regulation and self-worth variables were indicated as " highly evident" indicators; (2) quality-oriented teaching relative to advanced system teaching includes instructional competence, instructional interventions, individual Performance and Commitment, and job involvement and participation were found to be "highly evident"; (3) educational background, position, educational attainment and length of service were believed to be significant factors that affect the quality- oriented teaching.

DISCUSSIONS

The results demonstrate that the reward system is given by the administrators whether intrinsic or extrinsic significantly affect the performance of quality-oriented teaching of public school teachers. The results may imply that teachers will become happy if they are not isolating themselves from the group. Therefore, it is imperative that teachers need to have an optimistic view in life, the feeling of security and trust to the people around him, so he will be involved and satisfied. The instructional leaders may give rewards because this gives fulfillment to teachers which may contribute to the delivery of quality education to our learners.

KEYWORDS: System

SUBMISSION ID: R04A-LAGUNA-0201

**Structural Equation Modeling Approach (SEM) for the Personnel
Management Competence of the School Heads in Selected Schools of
Lopez, Quezon, Division of Quezon**

Ailene A. Ebor, Lopez National Comprehensive High School

Abstract

INTRODUCTION

The school head manager has many responsibilities including being an administrator, instructional leader, and curriculum leader at different points in a day. It is a balancing act of having to juggle between these various roles. Often times, more attention is to give the managerial and administrative tasks and that of the instructional leader is relegated to others in the administrative hierarchies even though the core business of a school is teaching and learning.

METHODS

The researcher used the descriptive survey method to attain its purposes. In selecting the method, the researcher took into consideration the fact the present study is a status trend and deals with the prevailing personnel management competencies of the school heads.

RESULTS

Based on the findings, all the personnel management competencies of school heads along with leadership, decision making, planning, organizing, motivating, and controlling were agreed by the respondents. As to the performance of school heads on a technical and conceptual category in terms of communications, training, performance appraisal, disciplinary action, and negotiations, these were also agreed by all of the respondents. In addition, the result showed that there was no significant difference noted in the assessments between school administrators and teachers on the competencies of school administrators in the human and conceptual skills category. This would prove to a large extent the reliability of the assessments on these two skills and this proved that assessments of school administrators were higher than that of the teachers.

DISCUSSIONS

The interpersonal skill should be developed among the school heads through a warm and easy approach and build constructive and effective relationships; they should use diplomacy and tact to diffuse tense situations and should have a style and charm that immediately put others at ease and disarm hostility. Every school should have a managing vision and purpose, communicates a compelling and inspired vision or sense of core purpose, makes the vision sharable by everyone, and can inspire and motivate entire units or organizations. Every school should have a technical working committee to assist the principal in school planning. School heads should motivate other teachers and create a climate in which people want to do their best, assess each other's strengths and use them to get the best out of him or her and promote confidence and optimistic attitudes.

KEYWORDS: structural equation modeling approach, personnel management competence, school heads

SUBMISSION ID: R04A-QUEZON-0317

Teachers' Organizational Satisfaction and Work Engagement: Basis for Personal and Professional Development Plan

Leziel S. Nierra, Teacher & Hiyasminda C. Dolanto, School Head

Abstract

INTRODUCTION

in this 21st century, teachers play greater roles and are given a bigger commitment to the learning of their students due to some external factors such as challenges within the teaching profession itself which range from students' discipline, school facilities, teachers' own knowledge competency, and teachers own economic standing (Omar & Bin, 2015). With so many things to accomplish, teachers are being confronted by various regulatory requirements causing them to perform multiple responsibilities aside from their major duty of delivering quality instruction. It is in this premise that the researcher hopes to find out the organizational satisfaction of teachers and their work engagement level.

METHODS

The researcher utilized a descriptive-correlational research design in finding the level of organizational satisfaction and work engagement of teachers in this study. The instrument used in gathering the data was an adapted questionnaire from Bay, A.B., et. al. (2014). Some adjustments were made in order to suit the respondents. This study gathers quantifiable information that can be used for statistical inference on the target respondents through data analysis. As a consequence, this type of research takes the form of close-ended questions which limit its ability to provide unique insights. However, when used properly it can help in measuring the significance of something a group of respondents represents.

RESULTS

The result showed that teachers were satisfied with the services provided by the school in terms of learning and development, reward and recognition, leadership, and work environment. The teachers were always engaging with their work as indicated in their vigor, dedication, and absorption. Teachers were satisfied with the motivation given to them to pursue post-graduate studies. The result leads to the researcher to craft a personal and professional development plan that will increase or improve the teachers' organizational satisfaction and work engagement.

DISCUSSIONS

Fair, clear, and transparent implementation Department of Education policies regarding the promotion should be practiced in order to increase the level of organizational satisfaction of teachers. Equitable distribution of teachers' workload ("Equal work, equal pay policy") should prevail in the workplace. The harmonious relationship between and among the school administration, teachers, students, and other school stakeholders should be maintained. Further study on organizational satisfaction using other variable is encouraged.

KEYWORDS: organizational satisfaction, work engagement, development plan

SUBMISSION ID: R012-SOUCOT-0011

The Impact of Aligning Personal Values on the Performance of Bank Employees in San Juan, Batangas

Rose May U. Adan, San Juan Senior High School
(Adviser: Stephen Sabile)

Abstract

INTRODUCTION

Personal value is defined as broad, trans-situational, desirable goals that serves as guiding principle in the people's lives. It may be developed through experience and has a great impact on professional jobs. Good personal value is what makes a good foundation for a good employee. It determines the action of a person in leadership role. Perception, attitudes, personality, skills, knowledge, experience, confidence and commitment are few of the variables which are important for understanding the behavior of people. Having a clear understanding of personal values gives a guide on what to look for in a company. It covers activities that improve awareness and identity, develop talents and potential and build human capital.

METHODS

The researchers used phenomenological study method in getting necessary information of the study. It also used purposive sampling that specified feature of function and ensured that the research return relevant information.

RESULTS

Aligning personal values created an impact towards clients and workplace such that it will provide excellent services to the clients, the employees will become productive individuals and they can build good customer relationship. The values which an employee must possess are dedication, loyalty, responsibility, discipline, and enthusiasm at work. Employees applied their personal values by loving their work and create an environment where everybody feels comfortable and happy in a workplace. Employees do their task accordingly and be responsible to all given tasks. Aligning personal values lead productivity and more dedicated with their work. Employees are happier and more inspired to do their job. Thus, they feel more dedicated not just to show up but to actually perform. Achieve greater success is a possible output through aligning personal values because they set the same goals and focus on the same end result.

DISCUSSIONS

Upon discussing the information gathered, the researchers forwarded recommendations to help the employees in aligning their personal values with their performance. The bank employees should always maintain and improve their personal values and align them properly within their performance as a worker. Every employee should build the appropriate degree of values alignment among people whose values are bound to offer. Lastly, the manager together with their employees should continue learning and exploring new ways to accomplish their tasks correctly and attending proper training in applying values on their work.

KEYWORDS: Personal values, bank employees, personality, attitudes, customer relationship

SUBMISSION ID: R04A-BATANP-0877

Project Step-Step Increment Timely & Efficient Processing

Lyn Sison, Powermemory Inc., Jonas Anton Manalo, Pathways To Higher Education, Yolanda Chua, Psychological Association of The Philippines, Aileen Lapitan, Records Officer Association of Department of Education, & Rodel Sulsona, Association of Information Technology Officers

Abstract

INTRODUCTION

The Project STEP is under the Schools' Division Office which focuses on efficiency in terms of delivering educational services particularly on the grant of step increments of Department of Education Calamba City Employees. Data from 2013 to 2016 showed that, only 29.40% total employees qualified for step increment were processed and 89.62% processed step increment were paid for differential within 2 months time while the others ranges from 3 months to 2 years. The increasing number of employees who were not given step increments on time proved that the current process does not meet the division's objective of improving the delivery of educational services. Hence, this project was developed to improve and expedite the processing of the step increment of teachers and employees of Department of Education, Division of Calamba City.

METHODS

The study is a descriptive research which utilized survey and interview to teachers, school heads, people primarily responsible in initiating the step increment, and other division personnel. Through interview and survey, the Team identified the problem areas in the process and came up with a system which addressed the problem. In coordination with the proper offices and cooperation of the team, a system that automatically identify employees qualified for Step Increment was created. Technical Assistance to capacitate HR Staff on the use of the system and on the whole process were provided and in effect, delay on the processing of Step Increment was completely eliminated.

RESULTS

The study revealed that in the last six months, the step increment process of non-implementing secondary teachers did not reach the 100% accomplishment level. Thus, the Schools' Division Office proposed and implemented a pilot testing of the Step System intervention in July 2017. Subsequently, the implementation went well since 100% step increment of non-implementing secondary teachers were successfully processed. With the aim of continuously improving the efficiency on delivering educational services, a division-wide implementation of the project was approved by the Schools Division Superintendent and initiated by the team and the HR Unit.

DISCUSSIONS

By the end of 2017, Department of Education Calamba City is gearing towards processing and giving all its employees the Step Increment on time of which they are entitled. In addition, the team is striving to include in the STEP System other HR areas that may aid the Division Office and its personnel in achieving Transparent, Ethical and Accountable governance.

KEYWORDS: Project Step, Step Increment, Step System, Personnel, Employees, Department of Education Calamba City

SUBMISSION ID: R04A-CALAMB-0250

Project Tanim Ani: Basis for Banyaga NHS and GPP Improvement

Ayessa Alilio, Jovanilyn Carandang, & Krystel Palicpic, Department of Education

Abstract

INTRODUCTION

The implementation of Project Tanim Ani boosts the awareness of the teachers as well as the students to improve the Gulayan sa Paaralan wherein the outcome was focused on supporting the Feeding Program. For the School Canteen Fund Project and Program, different practices and strategies of Project Tanim Ani has been studied to get the most effective practice that Banyaga National High School used for the school improvement and development. Specifically, the involvement of its stakeholders and community served as the highlighted part of the said improvement.

METHODS

A descriptive method of research was used in the study. A questionnaire was used as the main gathering instrument. The statistical treatment applied by the researchers was weighted mean and frequency. These were used to find out the most effective practice of Gulayan sa Paaralan and the benefits of Project Tanim Ani in the improvement of GPP in Banyaga National High School.

RESULTS

It was found out that the most effective practice done by Project Tanim Ani was bear an assistance in different stakeholders such as parents, LGU, and other community individuals. Through their involvement, the GPP was improved and that helped increase the Canteen Fund, support the Feeding Program, and other school projects that need Local Funds.

DISCUSSIONS

The results suggest that through the community and other school stakeholders' participation and involvement, the Project Tanim Ani was successfully implemented for the benefits of the school, the students in particular. It served as a great help to other school programs and projects as well as schools' development.

KEYWORDS: stakeholders, implementation, improvement, strategies, boosts

SUBMISSION ID: R04A-BATANP-1573

Project MTBS: Manual and Technology-Based Back Up Filing System to Facilitate Prompt Action on Office Transactions

Mary Roselyn Berja, Department of Education - Camsur

Abstract

INTRODUCTION

To provide good services makes a huge difference. It is essential to address the needs and meet the expectations of every stakeholder to attain individual and institutional objectives. This can be achieved through the collaborative efforts of the students, teachers, staffs, and administrator. In this study, the proponent design interventions or facilitative procedures towards effective and efficient rendering of service. The study would not have been possible without the support from Department of Education Region V through the Basic Education Research Fund (BERF) and the SDO Camarines Sur Research Committee.

METHODS

This action research used the descriptive method of research in discussing topics related to the target of speed up release of the requested forms and other documents by the clientele. Descriptive method was used in discussing topics about the profile of the clientele who will be requesting forms and other documents in the school (registrar's office and principal's office), the filing system strengths and challenges of Rodriguez National High School, Pili, Camarines Sur, the acceptability levels of the innovations implemented to facilitate speedy release of the requested forms, and other documents and the project impact resulting from the interventions, innovations, and strategies implemented.

RESULTS

Results of this research are as follows: 1) Among the document requests, school requirements topped the purpose, with the alumni, and requested by parents or siblings; 2) Availability of printers topped the strengths while the availability of personnel who will take charge on the preparation of forms and other documents was one of the challenges in terms of the school's filing system and responding to the document requests of the stakeholders; 3) Simplified Process benchmarked from the Continuous Improvement topped the rank of interventions implemented; and 4) the Project impact has 96.58% level of success for attaining for beating the 6.58 minutes from the baseline of 3, 360 minutes.

DISCUSSIONS

The results demonstrated that the five interventions, namely: interactive logbook, softie forms, speed up release of forms and documents, visual management, and a simplified process, paved the way for more improved transactions and it has to be maintained or be furthered develop for better delivery of service to all the stakeholders of Rodriguez National High School.

KEYWORDS: Stakeholders, prompt release of documents, continuous improvement

SUBMISSION ID: R005-CAMSUR-0014

MANUFACTURING ENGINEERING

Amphibious Elevating Stand Incorporated with Recycled Floating System: A Flood Mitigation Model

Roldan Joseph Perez & Maria Andrea Aranton, Laguna Senior High School

Abstract

INTRODUCTION

Due to its geographical location, the Philippines experiences at least 20 typhoons annually. These typhoons bring heavy rains and strong winds that cause floods. Its vulnerability to floods has increased with urbanization thus, contributing great damage to assets. Several innovations on properties have been made to lessen the effects of it. However, those became inaccessible because of its affordability. In light of this, recyclable materials can be used in making new flood mitigation strategy. This can also help in minimizing and utilizing wastes.

METHODS

The amphibious stand is composed of two layers: (1) the stand and (2) the hollow compartment for the floating device. For the first layer, the plywood was cut into 49x32cm with a rectangular hole in the middle measuring 25.5x19cm. For the foundation, two pieces of 42x25cm plywood with 32x5cm space formed on its lower middle. Two extra 28x10cm plywoods were created to make it more durable.

The second layer was another 49x32cm plywood and a 25x18x42cm plywood rectangular box compartment. The second layer was then inserted into space in the first layer. For the floating device, used plastic bottles were cleaned, sealed and put together in the compartment in pairs. Two 5x4cm plywoods were made and attached to serve as a lock for the second layer once it reaches its elevation limit.

RESULTS

The amphibious stand was subjected to water and weights to test its maximum elevation. There were three set-ups with varying water level and volume. All set-ups were exposed to seven different weights, each having three trials. In set-up A, the device was submerged to 10in and 0.5 cbm of water. The average height of elevation added in 1 to 7 kilograms was 6, 5.4, 5, 4.3, 3.3, 2.5, and 2 in, respectively. In set-up B with 20 in and 1 cbm of water, the data gathered were 7, 6.6, 6, 5.6, 5, 4.6, and 4 in. The last set-up, which used 30in and 1.5 cbm of water, 10, 9.6, 9, 8.6, 8, 7.6, and 7in of elevations were recorded. Pearson Correlation Analysis was used to relate the weight and height of elevation. The r-value in set-up A was -0.9937 while set-ups B and C both had -0.9988.

DISCUSSIONS

In all set-ups, the results showed that the height of elevation increases as the water level and volume increases. Moreover, the r-value computed in the Pearson Correlation Analysis showed a strong negative relationship between the weight and height of elevation indicating an inverse relationship. With these findings, the concept of the Amphibious Elevation Stand was proven feasible.

KEYWORDS: amphibious, elevating, stand, recycled, floating, flood, mitigation, model

SUBMISSION ID: R04A-LAGUNA-0043

MARINE SCIENCES AND FISHERIES

Culturing Nile Tilapia (*Oreochromis niloticus*): Using Fish Scales and Fish Gills as an Alternative Fish Feeds

Angelo Levardo, Archie S. Lovete, Kenneth T. Tupay, Loyola Senior High School,
Patrick John G. Santisida, & Rojielyn M. Leyban, Carmona National High School

Abstract

INTRODUCTION

Because of the archipelagic nature of the Philippines, Filipino citizens have been depending on the fishing industry as one of the primary sources of their income.

In this study, culturing of Nile tilapia (*Oreochromis niloticus*) using fish scales and fish gills as alternative feeds were conducted.

METHODS

The fish scales and gills underwent sun drying, pulverizing, and baking process. Four tanks were prepared for each treatment (T1- Fish Scales, T2-Fish Gills, T3-Fish Scales and Gills, and T4-Commercial Brand). Each tank had fifteen tilapia fed with two grams of feeds twice a day for two months. Five tilapia were randomly selected from each tank for weight and length measurement every two weeks.

The data were treated statistically using Composite Mean to find the effect of each treatment to the growth of tilapia. One-way ANOVA was employed to find the significant difference between the weight and length of tilapia before and after the treatments. T-test was applied to find a significant difference in the growth of Nile tilapia before and after the treatment. Pearson Product Moment Correlation of Coefficient was used to test the relationship between the weight and length of cultured tilapia.

RESULTS

The result showed that the commercial brand feed has the highest composite mean weight (5.74 g) while the fish gills feed (7.01 cm) has the highest composite mean length. The result of ANOVA proves that the weight, F-value of 1.74 and 1.79, and length, F-value of 0.50 and 0.22, of Nile tilapia before and after the treatments are comparable. Supported by the t-test, no significant difference in the growth of Nile tilapia before and after the treatment was noted. Pearson-r reveals that weight and length have a positive correlation using different treatments, fish scales, fish gills, and commercial brand feeds have 0.60, 0.21, and 0.81 rxy value except for the fish scales and gills (0.06) which have a negligible relationship where its weight is not affected by its length.

DISCUSSIONS

This study proves that alternative feeds could be used as a substitute for commercial brand feeds.

KEYWORDS: Nile tilapia, fish scales, fish gills, alternative, culture, fish, aquaculture, tilapia

SUBMISSION ID: R04A-CAVITP-1272/R04A-CAVITP-1186

Over Troubled Waters: A Mixed Method Research on the Impacts of Fishing Industry and Life Satisfaction among Fishermen

Arvin Englisa, Student

Abstract

INTRODUCTION

A range of literature vastly supported the importance of the fishing industry in sufficing the protein demands and in helping the community to achieve socio-economic development. However, it is patent that fisher folks are only given very less attention and support despite the role they play in food and economic security. In this study, we explored if the impacts of the fishing industry can increase the life satisfaction of fishermen and what factors contribute to their contentment.

METHODS

The sequential explanatory mixed-method research design involving two distinct phases was used. In the quantitative phase, 30 fishermen who actively engaged in the fishing industry of Barangay Magnaga responded to a standardized-modified questionnaire which underwent validation by experts to measure the impacts of the fishing industry and life satisfaction. On the qualitative phase, a set of research questions were created out from the quantitative through five in-depth interviews of fisher folks, one focused-group of mariculturists, and five key informants comprised of wives of fishermen who witnessed the challenges in the industry to triangulate data.

RESULTS

Quantitative findings demonstrated that indeed the extent of impacts of the fishing industry with reference to the fishing indicators are high in socio-economic development, low in the level of income from other sources, moderate in employment generation, and very high in priority areas development. It is also indicated that the level of life satisfaction among fishermen is high. Moreover, qualitative data suggest that threatening calamities, lack of financial security, health-related issues, and scarcity of baiting hooks are some of their struggles, and finding alternative jobs, take agricultural jobs, business engagement, hard work, and perseverance helped fisher folks cope with these challenges. On the other hand, the factors that affect their life satisfaction are enough income, harmonious work in the fishing industry, relationship with others, sound physical health, positive emotional health, and enough support from the government.

DISCUSSIONS

The results revealed that the impact of the fishing industry is highest in priority areas development and lowest in gaining income from other sources. It also demonstrated that fishing itself is the greatest factor that affects fishermen's satisfaction and emotional health doesn't affect their contentment that much. Themes generated in phase 2 thereby highlight the need for an intervention program to cater to fishermen's dilemma.

KEYWORDS: life satisfaction, fishing industry, Barangay Magnaga

SUBMISSION ID: R011-COMPOS-0011

MARKETING

**Factors Affecting the Market Price of Fish in the Northern Part of Surigao
Del Sur, Philippines**

Maribeth P. Alapan, Teacher

Abstract

INTRODUCTION

The study focused on the factors affecting the market price of fish in the northern part of Surigao del Sur, Philippines. The study also attempted to find a significant difference among the identified factors affecting the market price of fish. The respondents of the study were the fishermen, middlemen, fish vendors, and consumers of the six (6) identified coastal barangays in northern Surigao Del Sur namely: Linintian, Magosilom, San Pedro, Consuelo, General Island, and Ayoke.

METHODS

The researcher-made questionnaire was the tool used in the study. The researcher-made questionnaire was composed of questions categorized into four (4), one for each of the intended respondents: fishermen, middlemen, fish vendor, and consumers. Each question category contained competencies based on the Local Ordinance No.2-2008 Section 6 for Selling and Buying Strategies of Fish, which addresses the identified factors affecting the market price of fish. Informal interviews and observation were made to verify data and ascertain the validity of the respondents' answers. Mean and ANOVA (Analysis of Variance) was used to quantify and analyze the gathered data.

RESULTS

Based on the findings of the study, among the five (5) identified factors affecting the market price of fish, the quality of fish, as a factor, was found to greatly affect the market price of fish while water pollution was considered as the lowest factor affecting the market price of fish. Furthermore, it was found that all the five identified (5) factors cited in the study had significant contributions to the formulation of the market price of fish in the northern part of Surigao Del Sur.

DISCUSSIONS

The result conveyed that there is a significant difference in the factors affecting the market price of fish. The significant differences on the factors affecting the market price of fish in the northern part of Surigao del Sur vary from the different effects which contribute to the price formulation of the fish in the same region. This means that the market price differential is dependent on the varying factors, which include the quality of fish, fishing location, weather condition, water pollution, and price demand. These factors give a significant influence on formulating the market price of fish when there is a high purchasing power of consumers, abundant fish population inaccessible fishing areas, weather conditions, and water pollutions.

KEYWORDS: Price demand, Market price, Price differentials, Quality of fish

SUBMISSION ID: R013-SURSUR-0088

Keeping Up with Customers' Satisfaction: An Inquiry on Product and Service Enhancement of Food Vendors at Night Market in Taytay Rizal

Alexis Dalumpines
Taytay Senior High School

Abstract

INTRODUCTION

Statistically, the changing economy and the open competition in this kind of business, quality enhancement is essential to stay and keep up with open competition anchored on the small and medium enterprise (SMEs) guidelines and requirements. This study sought to surface the enhancement strategies that vendors should engage in to keep up with customer's satisfaction and laws therein in engaging food vendor business.

METHODS

The quantitative/descriptive method was used to describe the enhancement strategy used by the respondents. Specifically, a survey checklist to gather data and descriptive statistic such as percentage, central tendency, standard deviation and analysis of variance (ANOVA) to analyze the gathered data were used. Respondents were purposively chosen. In this, study, only willing food vendors were chosen to be respondents, specifically a total of fifteen (15) food vendors served as respondents.

RESULTS

From the gathered data, the findings of the study were as follows: (1) in terms of quality, the satisfaction of the costumer were marked as the highest enhancement concern of the vendors; (2) in terms of price, making the product affordable than other vendors selling the same product; (3) in terms of taste, considering their product than competitors were well noted to the respondents; (4) among the variables age, educational attainment, and work experience) educational attainment found to be significant.

DISCUSSIONS

The result of this study echoed the fight and the flight of the food vendors in the Philippines to stay in the business and to keep up with their customers as well. On one hand, this study reflects how these enhancement strategies help food vendors to stay in the business at the same time cope up with the open competition. On the other hand, it also transpired the sacrifices they made like adjusting the price, making lower than their competitors of which this only means some of them were not after instant profits but just to keep their business up and increase the number of customers.

KEYWORDS: enhancement strategies, food vendors, entrepreneurs, Taytay Night Market, Taytay Senior High School

SUBMISSION ID: R04A-RIZALP-0041

Marketing Strategies and Marketing Viability of School Stationeries

Jobel de Torres, Jyrsha Claire Vilan, & Ynna Zamora, PSHS
(Adviser: Angelie Joyce Gomez)

Abstract

INTRODUCTION

School stationeries' business is one of the country's growing business ventures because of the proliferation of students' interests in education. The development of varied marketing strategies for school stationeries to compete with the digital market poses challenges among school stationeries enterprises. This study aims to determine the significant relationship between marketing strategies and market viability of school stationeries.

METHODS

The correlational research design was used with a sample of 50 respondents. This research allowed the researchers to determine the relationship between the marketing strategies employed and the market viability of school stationeries. Data needed to be gathered through a survey questionnaire composed of two parts; the marketing strategies on the 4P's (product, price, place, promotion) of the owners in school stationeries and market viability of school stationeries.

RESULTS

Many owners revealed a positive attitude towards product, price, promotion, and place to meet customers' demand. The owners revealed a positive attitude towards their market viability.

DISCUSSIONS

The results revealed that the owners of school stationeries designed and delivered products or services that fully satisfy customers' needs and wants for successful marketing strategy implementation. Results showed that the owners saw price as an important marketing strategy. Likewise, they regarded price as something that would help them market their products. It also means that the owners saw promotion as an important marketing strategy. Moreover, they regarded promotion as something that would help them market their product. A strategic location or the place of the establishment is important in marketing school stationeries. It also means that the respondents prioritized their customers' welfare and satisfaction as reflected in the business viability of school stationeries.

KEYWORDS: marketing strategy, market viability, school stationeries

SUBMISSION ID: R04A-CABUYA-0025

MASS MEDIA

Effectiveness of www.cavite.gov.ph and Tapatang Caviteño in Informing District VI Residents of the Projects and Development in Cavite

Ted Jayson Guadamor, Bulihan National High School - Senior High School

Abstract

INTRODUCTION

This study was conducted at Cavite State University-Main, Indang, and also at District VI of Cavite thus, encompassing the municipalities of Amadeo, General Trias, Tanza and Trece Martires City to find out the effectiveness of www.cavite.gov.ph and Tapatang Caviteño in informing District VI residents of the projects and developments in Cavite.

METHODS

Survey questionnaires were used to gather data in this study which applied the descriptive method of research. Purposive convenience sampling was used to obtain the 400 District VI residents who participated in this study.

RESULTS

The results of the study show that: the participants are both slightly exposed to news articles regarding projects and developments in Cavite in both communication materials. Participants are moderately aware of the projects and developments in Cavite as they have perceived in both communication materials. Website www.cavite.gov.ph is effective in terms of development journalism, while Tapatang Caviteño is moderately effective. Both communication materials are moderately effective in terms of information function. Both communication materials are moderately effective in terms of mobilization function.

DISCUSSIONS

The age of the participants affects their level of exposure to www.cavite.gov.ph, while the age of the participants does not affect their level of exposure to Tapatang Caviteño. It can be observed that there were fewer people exposed to www.cavite.gov.ph as the age group increased. The gender of the participants affects their level of exposure to in both communication materials. The educational attainment of the participants does not affect their level of exposure to in both communication materials. The age of the participants does not affect their level of awareness to projects and developments in Cavite as perceived from both communication materials. The gender of the participants affects their level of awareness to projects and developments in Cavite as perceived from in both communication materials. The educational attainment of the participants does not affect their level of awareness to projects and developments in Cavite as perceived from www.cavite.gov.ph and Tapatang Caviteño. The level of exposure of the participants to www.cavite.gov.ph and Tapatang Caviteño affects their level of awareness to projects and developments in Cavite. It can also be noticed that slight exposure to articles in www.cavite.gov.ph and Tapatang Caviteño can lead to moderate awareness of projects and developments in Cavite.

KEYWORDS: communication, Cavite, mass media, development journalism, newspaper, online journalism, news

SUBMISSION ID: R04A-CAVITP-1589

Effects of Mass Media to the Political Views of Grade 12 Students of University of Batangas

Lyca Mae Fajil, University of Batangas Hazel Dawn Frago - University of Batangas
& Ma. Kristina Isabel Salazar, University of Batangas Nerissa Salcedo - University
of Batangas
(Adviser: Amelita Driz)

Abstract

INTRODUCTION

The Philippines has been facing a lot of socio-economic and political problems. Nowadays, there are several political phenomena that greatly impact the lives of many Filipino's in different aspects. One's awareness can pave the way to opportunities in stating concerns regarding these issues. Lack of participation may result in the insufficiency of addressing government matters that's why there is a need for the individuals, especially youth to state their opinion on certain governmental policies or projects.

The awareness concern mostly lies heavy with the youth since they play a vital role in achieving changes in socio-economic and political attributes in governmental affairs and policies. However, the participants will be possible through effective collaboration with mass media. This study aimed to understand and measure the effects of mass media on the political views of Grade 12 students. With this, it will fill some specific matters regarding political involvement that other studies did not much tackle further.

METHODS

The study used a descriptive correlational design in acquiring the necessary information needed. The survey questionnaire was used as the main data gathering instrument. There were 275 participants in the study from different strands and tracks inside the University of Batangas. In terms of analysis and interpretation of the study, weighted mean, composite mean, and Pearson's r were used.

RESULTS

Majority of the respondents perceive that mass media has a role in public awareness through aiding and sending information to the public. It also influences the students to form an opinion regarding politics. However, people tend to believe the information easily when it comes to this aspect. Moreover, there is no significant relationship between the role of mass media and its effects on the political views of the grade 12 students of the University of Batangas.

DISCUSSIONS

The results showed that there is still a need to strengthen the use of mass media in the political views of the grade 12 students. Seminars, online platforms, and more research about this matter will help the students become more informed about the importance of political engagement through mass media. Also, this will help to support the importance of public opinion while upholding the ethical principles through proper opinion forming. Moreover, the school and organizations may consider the results of this study for the benefit of the students' engagement in politics.

KEYWORDS: Effects of Mass Media, Roles of Mass Media, Political Views, Grade 12 Students

SUBMISSION ID: R04A-BATANC-0479

Effects of Social Media Article and Newsprint in the Stand of Grade 11 Students

Edrich Dale S. Topacio & Patrisha Nikole P. Carel, Department of Education
(Adviser: Adelma Topacio)

Abstract

INTRODUCTION

This study was primarily focused on evaluating the reaction of the students on some government issues presented in different news platforms. This study endeavors students to be informed or be aware of the effects of social media news and newsprint on decision making. This likewise lets teachers be aware of the proper use the social media or newsprint as an approach in teaching current events to their students.

METHODS

This study compared the students' argument on the news they read from social media and newspapers. Using comparative research design, the research participants were asked to state their reaction on an article both published in an online infographic and editorial newsprint. A validated questionnaire was used to elicit the students' argument. A set of rubrics, on the other hand, was utilized to evaluate the validity of the articles used and the students' argument.

RESULTS

Results reveal that the research participants' written response evaluation for the newsprint and social media article was significantly different in terms of the platforms used to present the news. The participants tend to be more argumentative due to what they read from an online source than from a printed one. The order of reading the materials, however, does not significantly influence the participants' reaction on the news they read.

DISCUSSIONS

The written response evaluation for the newsprint and social media article showed a significant difference in the student's argument. Their argument in social media is higher than the newsprint. In social media to newsprint data gathering, responses in the social media article remain higher than their newsprint argument. Evaluating their arguments present in social media and newsprint showed that their stand in the given issue shifts from agreeing to disagree, disagree to agree, neutral to disagree, and neutral to agree upon reading the social media article while some stick with their previous argument. There is a significant difference between the argument in the social media and newsprint article, but the order of reading the materials doesn't affect their evaluation score.

KEYWORDS: Social Media Article, Newsprint, Students' Argument

SUBMISSION ID: R04A-DASMAR-0023

Reasons why Grade 8 Learners of the Integrated School of Lawa Spend Time Using Social Networking Sites

Marie Antonette May Domingo, Integrated School of Lawa

Abstract

INTRODUCTION

Teenagers are the biggest consumers of social networking sites. Their dependence to these sites was evident with their stories and pictures constantly posted, sometimes, with just minutes or an hour interval from their previous posts. The advantages of using SNS are quite clear, such as communication, business, and other personal purposes, but these advantages are being forgotten with all the disadvantages using SNS brought.

Parents feel that their teens no longer pay attention to them when they were together, that their teens were glued to their mobile devices, and that SNS led to teen depression, bullying, and many more. With the drawbacks mentioned, the researcher wanted to know why ISL's Grade 8 learners still spend time or even wasted time using social networking sites.

METHODS

To determine the reasons why Grade 8 Learners of the Integrated School of Lawa spend time using social networking sites, a sample survey was used as the study method. Survey studies are usually used to find facts by collecting data directly from the involved population or sample. It is the most commonly used descriptive method in researches.

RESULTS

Based on the findings, the reasons why ISL's Grade 8 learners spent time using SNS were as follow: (1) to gain more friends, (2) to express their feelings, (3) effective tools for e-learning, (4) a great influencer in terms of the latest trends, and (5) improve their communication skills. The researcher found a positive response among the participants' answers in the survey done despite the disadvantages of using SNS.

DISCUSSIONS

In spite of the positive outcome of the study, there was still the need for the parents to monitor their children's use of social networking sites. By observing the frequency of use and posts, the parents might have an idea on the life their children were leading and would be able to intervene when needed.

KEYWORDS: Social Networking Sites, post, influencer, trends, teens

SUBMISSION ID: R04A-CALAMB-0094

Semiotic Analysis of the Philippine TV Commercials

Ella Dia Hebron, University of Rizal System

Abstract

INTRODUCTION

Ferdinand de Saussure's "Diagram of a Sign" was applied in analyzing the Philippine TV commercial. The researchers used the Saussurean model wherein a sign is composed of two parts: the signifiers known as the sound patterns and the signified serves as the concept that cannot be separated. Signifiers hold meaning that implies that there are associations of codes that signs can be interpreted. Thus, the relationship between signifiers and signified are arbitrary.

METHODS.

A qualitative-quantitative type of research was utilized since the analysis and interpretation are based on quality and the selection of commercials is through statistical treatment. Data of the study were gathered through quantitative method utilizing a survey checklist to identify the top 10 popular food and beverages commercials to analyze its qualitative attributes applying the theory semiotics. The signs in selected commercials are deeply analyzed to discover the meanings and implications of the advertisement.

RESULT

The researchers' findings for the usage of components of a good commercial included the following: (1) Humor - the usage of this component is to add entertainment to the viewers to be easily remembered (2) Taglines and Jingles - to catch the viewer's attention and be remembered for a long span of time through repeated phrase, lyrics, and lively song (3) Storyline - allows the viewer to understand the commercial very well (4) Model - component of a commercial that promotes the product and add up popularity in endorsing (5) Visuals - allows the viewers to be attracted in terms of colors, shapes, lightings and other visual attributes. After the close discussion on components of commercials, it was revealed that a good commercial is considered as good when it possesses the five (5) components, which are humor, taglines, and jingle, storyline, models, and visuals. Moreover, commercials have symbols that can be interpreted that relate to social implications, culture, and beliefs.

DISCUSSIONS

Through semiotic analysis, the researchers were able to verify the certain claims on analyzing the symbols that it is related to social implications, culture, and beliefs. Meanwhile, the researchers were able to prove that components of a good commercial include humor, taglines and jingles, storyline, model, and visuals through statistical treatment. The researchers recommend to apply triangulation of analyzing Philippine TV commercial, use another genre of Philippine TV commercials, analyze Western TV commercials, and utilize the synchronic and diachronic analysis in understanding other forms of media and arts.

KEYWORDS: Semiotic Analysis, TV Commercials, Signifiers

SUBMISSION ID: R04A-RIZALP-0363

Student Journalists' Involvement in Public Affairs through School Publications in Batangas City

Aiken Jhon Magpulhin, Hannah Paulene Dimaano, & Marion Macatangay,
University of Batangas
(Adviser: Amelita Driz)

Abstract

INTRODUCTION

Schools and universities, acting as instruments to establish youth participation in social issues, have been treating school publications as an organization to inform the students about what has been going on with the university and report on facts involving societal issues. There were some researches done related to journalism; however, most of them focused on the fearlessness of journalists in the consequences of politics. This study centralized and fixated the issue to the involvement of the students regarding public subjects and interests. This employed data concerning the participation of student journalists in civic issues and its implications by means of writing articles that are relevant and significant to the campus and society.

METHODS

The descriptive research design was used in acquiring the information. The survey questionnaire was used as the main data gathering instrument. The participants of this study were a total of 116 student journalists from the schools and universities inside the borders of Batangas City. The weighted mean, composite mean, and Pearson's *r* were used in the analysis and interpretation of data.

RESULTS

Most of the respondents are involved in delivering news especially when issues are about youth awareness regarding societal problems; in giving comments and opinions with regard to news concerning people's awareness on the administration of the current president of the country, and in featuring people, places, and events. This involvement comprises the chance to inform many people by delivering news about the rampant issues of social media, a chance to weigh their arguments and logical reasoning in presenting their opinion, and a chance to write an article tackling light but important entertainment for the Filipinos. Moreover, no significant relationship is found between the level of involvement of student journalists in public affairs and the extent of disseminating information and presenting subjective opinions.

DISCUSSIONS

The results showed that there is still a need to enhance the involvement of student journalists in public affairs to successfully fulfill their duties. Symposium, seminars, social media account for the publication and teambuilding activities that will emphasize the role of student journalists in participating in public matters and concerns are suggested to be done. Moreover, the Department of Education through the school's press conferences may consider the results of this study for the benefit of the student journalists.

KEYWORDS: Student Journalists, Involvement in Public Affairs, School Publications, Batangas City

SUBMISSION ID: R04A-BATANC-0189

MATHEMATICS AND STATISTICS

Using Count and Match Charts to Develop the Number Literacy of Kindergarten-Elena S.Y 2018-2019

Eguaras, Anjanette, Bagumbayan Elementary School

Abstract

INTRODUCTION

Numeracy is about more than just counting, be familiar with patterns, sorting and categorizing objects, talking about time and the patterns of the day, measuring and calculating amounts, arranging objects in space and identifying shapes, are all examples of mathematical thinking that contribute to numeracy. Materials and resources that allow children to problem-solve and explore the world "mathematically" are therefore key elements in the development of numeracy. Blocks and other construction materials, puzzles, and opportunities for patterning and sorting using, for example, found materials such as shells, seeds or leaves, all provide experiences that encourage mathematical thinking and the use of mathematical concepts and language. Children need opportunities to learn and experience numbers. Learning to count, recognizes numbers, and comprehend quantity are a few of the significant concepts. Repetitive experiences build understanding and fluency with numbers. These experiences help expand understanding and learn new concepts. A strong number sense is vital for future understanding of more complex math topics. The researcher believed that the conduct of this action research will be of great help to develop the number literacy of Kindergarten-Elena in Bagumbayan Elementary.

METHODS

Simple random sampling technique employed and forms a population parameter of ten (10) pupils of Kindergarten-Elena. Accordingly, to Easton and McColls (2009), it is the basic sampling technique when we select a group of subjects (a sample) for a study from a larger group (population). Each individual is chosen entirely by chance and each member of the population has an equal chance of being included in the sample. Their names were listed on small slips of paper, put in a bowl, then jumbled thoroughly without looking at the slips on the paper, the researcher had drawn the desired sample size of ten (10) kindergarten pupils as actual respondents of this study. The study was to develop the number literacy of pupils from Kindergarten; a pretest was given to know their prior knowledge on numbers. Count and match chart utilized to check the progress on pupils number literacy. At the end of the treatment, a posttest was given.

RESULTS

The study demonstrated that pupils who used the count and match chart made a growth on early numeracy assessments and in pupil's work. Pupil's received six weeks of using count and match chart and were able to make strong gains as compared to their last performance in recognizing numbers. The researcher gained a clearer understanding of how positive early numeracy intervention can have on kindergarten students when students received targeted instruction that matched their learning needs.

DISCUSSIONS

The purpose of this study was to explore the impact of using the count and match chart in kindergarten pupils. The participants were a small group of kindergarten students who ranged in ages from four to five years old. Each of the 10 pupils made significant growth between their pre-test and post-test, after using count and match chart. Forming a strong mathematical foundation amongst children in school is not an easy task. The teacher must have enough knowledge how to deliver it properly and how the pupils will understand it easily. Effective teaching practices such as hands-on learning experiences will make a huge help in developing their number literacy. Without a strong numeracy foundation, the mathematical concept will be difficult and more challenging for kindergarten pupils. It is the hope that this early numeracy intervention will ensure the growth of these kindergarten pupils throughout their education.

KEYWORDS: COUNT AND MATCH CHARTS, DEVELOP NUMBER LITERACY

SUBMISISON ID: R04A-LAGUNA-0399

Use of Video Clips in Enhancing Mathematical Skills of Students At Risk of Dropping Out (SARDO)

Leonelle Joy V. Morana, Department of Education - Sarangani

Abstract

INTRODUCTION

This study focused on the effectiveness of the use of video clips in enhancing the Mathematical skills of the Grade 10 students-at-risk-of-dropping-out (SARDO) enrolled in Kiamba National High School during SY 2017-2018.

METHODS

One group was randomly assigned as the experimental group who was taught with the help of video clips while the other is the control group who was taught using the traditional method of teaching.

RESULTS

Based on the results, it was found out that the Grade 10 students who are at risk of dropping out who were taught with the help of video clips on the topics discussed that were shown during the teaching and learning process significantly performed better than those students who were taught using the traditional lecture teaching method. Similarly, the traditional lecture method of teaching also significantly improved the Grade 10 students who are at risk of dropping out learning performance in Mathematics. Moreover, utilizing video clips in enhancing Grade 10 who are at risk of dropping out had similar effect on male and female learning performance in Mathematics.

DISCUSSIONS

With these findings, the school administrators should encourage teachers especially those teaching groups of students who are at risk of dropping out to utilize available video clips during their teaching to enhance students' learning performance.

KEYWORDS: video clips, Mathematical skills, Grade 10, students-at-risk-of-dropping-out (SARDO), Kiamba National High School, Sarangani Province, General Santos City

SUBMISISON ID: R012-SARANG-0221

Used of Tangible Objects in Identifying One Half of the Elements of a Set of Objects for Grade One - Magalang Pupils

Escarcha, Maryjoy, Bagumbayan Elementary School

Abstract

INTRODUCTION

Mathematics learning in early childhood is essential. One important way that young children gain learning in mathematics can be enhanced is through adult support and instruction that is connected to and extends their preexisting mathematics knowledge. These kinds of mathematics learning opportunities help children learn to mathematize or engage in processes that involve focusing on the mathematical aspects of an everyday situation, learn to represent and elaborate a model of the situation, and use that model to solve problems. Understanding their needs will help teachers to assist pupils in their learning capabilities.

METHODS

The study will focus on identifying one-half of the elements of a set of objects using tangible matters. Discuss the problem to the pupils. Rico has eight marbles. He wants to give half of them to his brother. How many marbles should he give to his brother? Ask the following questions so they can easily understand the problem: (a) who has marbles? (b) How many marbles does Rico have? (c) What does he want to do with the marbles? d. How many marbles does he should give to his brother? Let the pupils act it out using tangible objects like marbles.

RESULTS

Used of tangible objects in identifying one half of the elements of a set of objects engage the pupils actively in the activity. You gain the interests, self-confidence of the pupils and at the same time, they are learning in positive outcomes of the activity.

DISCUSSIONS

The result of the study could help the pupils to engage in Mathematical activities in identifying one-half of the elements of a set of objects. Through this learning, they will have a clearer idea of the effectively using tangible objects in engaging Math activities. The teachers will have a positive result in doing activities to the pupils.

KEYWORDS: TANGIBLE OBJECTS, IDENTIFYING ONE HALF OF THE ELEMENTS, SET OF OBJECTS

SUBMISISON ID: R04A-LAGUNA-0409

Use of Multi-Media in Increasing Mathematical Skills in Adding and Subtracting Dissimilar Fractions of Grade- Four Pupils in Bagumbayan Elementary School

Olea, Merlie, Bagumbayan Elementary School

Abstract

INTRODUCTION

Having fun in Mathematics inspires one to learn how to think very logically and to solve problems using that skill. It instills on their mind how to be accurate in thoughts and words. Mathematics also teaches life skills. No one can find any part of their life that is not touched by mathematics because we are surrounded by it and by people who do know math. It also guides them to discover their full potential in learning Mathematical skills despite of some difficulties in doing it. In K-12 curriculum especially in Mathematics IV, some competencies need more attention and intervention as well. Some of them are addition and subtraction of Dissimilar Fractions wherein most of the pupils are not familiar with the topic. Thus, it results failure in their Mean Percentage Score in their Periodical Test. Regardless of various activities given and presented by the teacher to the pupils, most of them were not able to get the correct answer and could hardly solve it. This situation is very alarming that leads the researcher to conduct an action research to improve the competency of grade four pupils in addition and subtraction of Dissimilar Fractions hence get sufficient knowledge in determining the appropriate techniques and strategies needed to increase their capability and skills about dissimilar fractions.

METHODS

The researcher used the descriptive research method to attain information concerning the status of the K to 12 curriculum in different learning situation. The strategies to be accomplished to gain the mastery of the lesson are for the benefit of the pupils. The comparable study, which examined the results of the given tests, pursued to determine changes over time. This design helped the researcher to accomplish all the essential data for the pupils.

RESULTS

The passing Mean Percentage Score rate of grade four pupils in Bagumbayan Elementary School to add and subtract dissimilar fractions within the grade level accepted the fact that using multimedia presentation, the teachers in Mathematics enhanced the interest of the pupils to improve their mathematical skills.

DISCUSSIONS

To uplift the computation skills of the pupils in adding and subtracting dissimilar fractions, one of the most important duties of the teacher is not to give his/her pupils the impression of doing too much activities but to apply technique/strategies that is appropriate to their level of thinking. This study proved that using multimedia presentation as one of the best intervention to be applied by the teacher in teaching lessons in Mathematics, high MPS rate was obtained.

KEYWORDS: Multi-Media, Mathematical Skills in Adding and Subtracting Dissimilar Fractions

SUBMISISON ID: R04A-LAGUNA-0410

The Use of Desmos Graphic Calculator in Teaching Rational Functions

Nathaniel Galopo

Abstract

INTRODUCTION

Various computational software programs and applications have been developed and improved in the recent decades up to the present, which have been used in the teaching and learning of Mathematics. The development of these technologies allows learners the opportunity to engage themselves in a more responsive and in-depth learning and accountable for their learning through creative and stimulating investigation. Primarily, this study determined the effectiveness of Desmos graphing calculator apps in teaching Rational Functions to Grade Eleven (11) students under Humanities and Social Sciences (HUMSS) classes for SY 2017-2018.

METHODS

The study employed a quasi - experimental, non-equivalent control group design. It involved two groups, one served as the experimental group and used iPads with installed Desmos graphing calculator apps while the other as the control group learned using the traditional approach. Each group comprised 30 students selected through simple random sampling. The two groups were given pretest and posttest constructed by the researcher and validated by Mathematics Master Teachers. The internal consistency of the instrument established using the Cronbach's alpha. A dependent sample t-test was used to determine the significant differences between the pre-test and post-test scores within a certain group, whereas, an independent sample t-test was conducted in order to determine whether significance differences exist between those using the traditional approach and those using Desmos graphing calculator.

RESULTS

Comparing the pre-test results, both groups performed poorly in Rational Functions, implying that the two groups did not differ in the level of performance before the experiment was conducted. After five weeks of delivery of the lesson, the experimental group that was aided with Desmos had a significant improvement in their posttest performance as compared to the pretest. In like manner, the control group, which was taught merely by lecture method of instruction, also showed significant improvement in their performance. However, the mean gain score of the experimental group was significantly higher than the mean gain score of the control group.

DISCUSSIONS

Results obtained show that the experimental group, which was aided by Desmos graphing calculator during the teaching- learning process, performed significantly higher than the control group. This indicates that the use of Desmos graphing calculator had elicited as a positive result on students' understanding in Rational Functions. Other researchers who viewed supported this that android-based educational applications can be used to increase or enhance mathematical comprehension, speed up the graphing process, free learners to analyze and reflect on the relationships between data. Thus, the need to integrate Math applications such as Desmos graphing calculator in Mathematics classroom is deemed essential.

KEYWORDS: Desmos graphing calculator application, Rational Function, Quasi-experimental, Philippines

SUBMISISON ID: R012-SARANG-0167

**Schedule Math Drills to Enhance Problem Solving Skills in Mathematics of
Grade Two- Yakal S.Y. 2018- 2019**

Marinas, Sonia, Bagumbayan Elementary School

Abstract

INTRODUCTION

Elementary Grades Teachers are liable for a child's strong educational foundation. The willingness to provide him basic knowledge, which includes Mathematics, is expected to progress later on if addressed at an early stage and would surely have a carry over to the next years of his studies. The younger the pupils are, the easier is the task to develop among them toward certain skills and build up the competencies they must possess. The quest for quality education needs effective and efficient teachers as well as skillful learners. However, it has always been the pupil's difficulty to solve word problems in Mathematics starting in the primary grades. With the forgoing ground, the Grade Two- Yakal pupils of Bagumbayan Elementary School in the District of Santa Cruz are no exceptions. Based on the performance of the said group of pupils, despite the eagerness to learn, they still fall short particularly in problem solving as reflected in their previous formative and summative tests. The recorded trend is only about 27% out of 33 pupils only 9 of them reached the mastery level. The mention situation prompted the proponent to conduct this action research. The ability to solve problem is a basic life skill and is essential to our day-to-day lives, at home, at school, and at work. We solve problems every day without really thinking about how we solve them. Problem solving for Grade Two- Yakal is not easy. The Researcher decided to make this Action Research to help the learners.

METHODS

The research developed expressive techniques since the researcher used the results of the first periodical test to compare for their second periodical test. Increase number of pupils attain 80- 85% Mastery Level

RESULTS

The result of this action research shall be reported after the Grade II- Yakal Pupils Achieved 80-85% MPS in the posttest.

DISCUSSIONS

Schools have an obligation to provide all students with high quality mathematics instruction. Each student learns differently and has different strengths and weaknesses in regards to their learning needs, especially on collecting data on Mathematics. Students helps educators make solid, data based decisions. When individual student need have been identified quality core mathematics instruction using differentiated instruction, flexible, student groupings, and team teaching needs to take place. Teaching the basic mathematics facts to mastery level is a crucial part of any mathematics program. Using an instructional sequence that moves from concrete instruction to representational instruction to abstract instruction is effective and highly recommended.

KEYWORDS: SCHEDULE MATH DRILLS, ENHANCE PROBLEM SOLVING SKILLS IN MATHEMATICS

SUBMISISON ID: R04A-LAGUNA-0420

**Problems Affecting the Numeracy Skills among Grade Four Learners of
Selected Schools in Malapatan 1 District**

Jivielyn Vargas-Nalangan

Abstract

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INTRODUCTION

Numeracy is the skill to apply math concepts in all areas of life. A child's low numeracy skills may result in detrimental performance towards higher mathematics. Many children experience difficulty bridging informal Mathematics knowledge to formal school Mathematics. The use of structured, actual materials is significant to secure this association, not only in the early primary grades but also during idea development stages of higher-level Mathematics. Some learners require particular emphasis in translating between various written forms and different ways of understanding the various representations of objects or drawings. Thus, it needs long-term appropriate remedial attention in order to support successful life adjustment in adulthood. This study determined the problems affecting the numeracy skills of Grade IV learners of selected schools in Malapatan 1 District. The categories of these problems were home, personal, emotional and problems on teacher's instruction.

METHODS

This study utilized descriptive-correlational method of research. The problems affecting the numeracy skills were correlated to the level of numeracy skills in Mathematics of the learners. Such problems were categorized into home problems, personal problems, emotional problems, and problems related to teacher's instruction. There were 100 respondents chosen through simple random sampling using fish bowl technique to identify the names of the learners from the four selected public elementary schools in Malapatan 1 District. The researcher used statistical tools such as frequency, percentage, mean, and Pearson r.

RESULTS

The result of the study showed that Grade IV learners are moderately affected by home problems, personal problems, emotional problems and problems on teachers' instruction. The level of numeracy skills in Mathematics of Grade IV learners is satisfactory. There was a 4.69 difference between the numeracy skills of male and female learners. Lastly, emotional problems of the Grade IV learners and their problems with their teacher's instruction, slightly affected their level of numeracy skills in Mathematics.

DISCUSSIONS

The result implies that the more the Grade four learners are affected by their emotional problems and teachers' method of instruction problems; they tend to have a low level of numeracy skills in Mathematics. Moreover, remediation instruction may be conducted for poor performing learners in Mathematics. This is to prevent their poor learning levels and schools must conduct in-service trainings, seminars, or workshops. This may also help to develop teacher's strategies, techniques, and methods for a more effective Mathematics teaching. These are recommended to avoid problems affecting the numeracy skills of the learners.

KEYWORDS: Numeracy skills, mathematics, remediation instruction

SUBMISISON ID: R012-SARANG-0129

**Mathematical Analysis of Unidentified Blaan Costume Designs: Basis for
School of Living Tradition(SLT) Curriculum Integration**

Clarence Kate V. Granada, Ermella Sheen M. Dionisio, & Jeffrey V. Ruto,
Malungon NHS

Abstract

INTRODUCTION

The main issue to be addressed in this action research was the problem of current Blaan weavers to decode the designs of their elder Dreamweavers. The transfer of knowledge from generation to generation done in the School of Living Tradition (SLT) is the current challenge of the SLT teachers. It is believed that the designs were imparted to the Dreamweaver through l'nilong (fairies) who were considered guardians of nature. Every design is unique as each Dreamweaver dreams of different designs. Currently, the weavers are not dream-designed dependent. SLT teachers taught how to preserve the Blaan designs. According to the Gumusek president, Rebecca S. Ayao (2018), the number of Blaan designs as of the moment was not added nor subtracted. However, they found five (5) designs that were very complicated to copy, identified, and duplicated. Thus, the SLT teachers were not able to teach these intricate designs to the SLT next generation weavers. The main purpose of the study was to determine the patterns of unidentified Blaan costume designs in a mathematical way. The researcher was interested in teaching strategies to be crafted and which part of the teaching aids needs enhancement. The researchers used the inductive analysis with the aid of isometry, wallpaper guide of Fisher, G.L. (2010) and the international union of frieze & crystallography (IUC). The Blaan weavers in Lamlifew, Datal Tampal, Malungon, Sarangani Province were interviewed on the designs that they considered unidentified, responses were transcribed.

Designs which were not considered crystallographic nor frieze were not included in the investigation. Two unidentified designs were present on the l'bong "Slah. The first was identified as Pmm2 and the second was Pm11. One unidentified design was present on the l'bong Nsif and it was identified as Pm22. The last two unidentified designs were present at the Salwal Nsif. One was identified as P111 and the second was identified as Pm11. From the findings, the strategies to be crafted was the teaching aids: brochures and video animation. A brochure is a three-folded form printed in a letter size while the video is a 2:45 (min: sec) presentation. Evaluations were conducted with the IPED representatives (IP Education), Tourism officer, and Gumusek President. In general, the brochure and animation were above average on organization, knowledge-based, and appropriateness. The front page pixelated photos of the brochure and the captions of the video needs to be enhanced. Teaching aids were now ready to be used by the SLT weaving teachers. Evaluation of the effectiveness of teaching aids is recommended.

SUBMISSION ID: R012-SARANG-0206

Logic Games in Mathematics

Cabral, Mizpa Grace R., Laguna Senior High School

Abstract

INTRODUCTION

Logic and math games can be very powerful educational tools which stimulate and motivate learning. Logic Games in Mathematics was a developed learning material consisted of different logic games and math puzzles modified by the researcher. It promoted understanding and use of math and the development of logical thinking, encourage the development of self-esteem, explains math with fun situations and boosts the development of collaboration and teamwork.

METHODS

The descriptive research design was used in testing the hypothesis and systematically analyzed the data gathered from the ratings for developed learning material on logic games. Mean and standard deviation was used to compute the mean ratings of the teachers and experts on the validation of components of logic games and technicality of the game. The T-test for correlated samples was used to determine the difference between the ratings of the teachers and experts.

RESULTS

The overall mean rating of the teachers and experts on the validation of the components of logic games in terms of description (4.73 and 4.28); players (4.69 and 4.36); objectives (4.72 and 4.36); and instructions (4.70 and 4.28) which are all interpreted as very evident. On the other hand, the following were the evaluators' rating on the validation on technicality of the game: the overall mean rating of the teachers and experts on the validation on technicality of logic games in terms of clarity (4.72 and 4.30); appropriateness (4.69 and 4.48); attainability (4.74 and 4.49); and adaptability (4.72 and 4.32) which are all interpreted as very evident. It is concluded that there is no significant difference among the ratings of the teachers and experts on the assessment on the components of logic games in terms of descriptions, objectives ,and instructions. While, in terms of players, there is no significant difference among the ratings of the teachers and experts on the assessment on the components of logic games. Moreover, there is no significant difference among the ratings of the teachers and experts on the assessment on the technicality of the game in terms of attainability. While, in terms of clarity, appropriateness ,and adaptability, there is no significant difference among the ratings of the teachers and experts on the assessment on the technicality of the game.

DISCUSSIONS

It is recommended that primary and secondary teachers are encouraged to develop highly acceptable learning material through the help and guidance of experts and authors in order to cater to the needs of the students. Administrators must also be creative and resourceful in implementing programs and seminars for teachers in developing different instructional materials for the benefit of the students.

KEYWORDS: Logic Games, Mathematics, Teacher, Education, Intervention

SUBMISSION ID: R04A-LAGUNA-0427

Hots on Enhancing the Performance in Mathematics of Grade Four Learners

Arcas, Pilita D., Gatid Elementary School

Abstract

INTRODUCTION

Instructional supervision is one of the roles of the school principal. Being an instructional leader, she always sees to it that each teacher is sensitized to his/her instructional problem. She is very much concerned with the improvement of instruction inside the classroom, so she called the key teachers and the Master Teachers to a meeting to conduct some problem census and the possible solutions to them. I told the principal that my greatest difficulty is that the pupils can't respond to Higher Order Thinking Skills (HOTS) questions in Mathematics. Based from the results of the summative tests and quarterly tests given, I found that only 12 out of 38 pupils or 32% passed the quarterly test, Summative test results showed that only 8 out of 38 pupils or 21% passed the tests whenever HOTS questions are given. It seems that the pupils are not exposed to this kind of question. The situation gave me an idea of enhancing the performance of the pupils in Mathematics by exposing them to Higher Order Thinking Skills questions. This study aimed to develop the critical thinking skills of Grade Four Learners through HOTS questions in Mathematics. It also helps enhance the learner's performance in the said subject through continuous exposure to HOTS. It is conducted in the 3rd Quarter of the school year 2018-2019 in Grade Four-Lanzones class. The result of the study will also serve as a guide for the teachers in facilitating HOTS questions in Mathematics lesson.

METHODS

This research was purely Descriptive. The researcher used simple Statistics in the form of frequencies and percentages to analyze quantitative data collected such as Raw Scores of the learners in the Pre-Test and Post Test (20-item test) composed of HOTS questions that were administered before and after the actual study and the six Weekly Tests (10-item test) given composed also of HOTS. The researcher monitored the weekly progress of the class through the results of the Enrichment Exercises given every Tuesday and Thursday during the 30-minute Study Period. She also recorded the learners' grades in Mathematics from 1st to 3rd Quarter to see their progress in the said subject. The data collected were presented in table form. The test results were interpreted and analyzed using a statistical treatment such as Mean Percentage Score (MPS), % of Mastery and Level of Performance such as High Proficiency Level (75% and above), Average Proficiency (50%- 74%) and Low Proficiency Level (50% and below). Grades in Mathematics were interpreted as Outstanding (90% and above), Very Satisfactory (85%-89%), Satisfactory (80%-84%), Fairly Satisfactory (75%-79%) and Failed (74%and below).

RESULTS

This study was completed to find out how effective HOTS is in enhancing the performance of Grade Four learners in Mathematics. These were the findings of the research. The results of the six weekly tests given every Friday during the Math class revealed that the MPS in the 1st test is 64.20 with 32% Mastery Level, the 2nd test has the MPS of 67.30 and with 50% Mastery, the 3rd test has the MPS of 69.20 and with 50% Mastery, the 4th test has the MPS of 68.40 and with 47% Mastery, the 5th test has the MPS of 70.80 with 53% Mastery and in the last test, the MPS is 73.48 and with 58% Mastery Level. So, with this findings, the % of Mastery and the Mean Percentage Score increased gradually every time the teacher gave a weekly test composed of HOTS questions. The status of the Enrichment Exercises given every Tuesday and Thursday by the teacher during the Study Period is presented in average per week of Number of Pupils who Reached the Mastery Level and % of Mastery. In Week 1, 12 pupils or 32% reached the ML. In Week 2, 18 pupils or 46% reached the ML. In Week 3, 19 pupils or 50% reached the ML. In Week 4, 24 or 63% reached the ML. In week 5, 25 or 67 % reached the ML. In the last week, 28 out of 38 pupils or 73% reached the ML. So, as revealed in the results of the Enrichment Exercises, the number of pupils who reached the mastery level and % of Mastery increased gradually through continuous exposure to HOTS questions in Mathematics. The researcher found that in the Pre-Test given, nobody reached the mastery level and all the 38 learners were under Low Proficiency Level. The Pre-Test has a Mean of 6.42 and MPS of 32.10. In the Post Test given, 20 pupils or 53% reached the mastery level, while 16 or 42% were under Average Proficiency and only 2 pupils or 5% were under Low Proficiency level. The Post Test has a Mean of 14.16 and an MPS of 70.80. The results of the Pre-Test and Post Test revealed that there's a great increase in the % of Mastery and the Mean Percentage Score from 32.10 to 70.80 with a difference of +38.70. It only showed that there's a great leap in the result of the Post Test over Pre-Test. In the

comparative analysis of the grades in Mathematics obtained by the learners, the researcher found that the number of learners with Outstanding Performance in Mathematics increased from 2 or 5% in the 2nd Quarter to 5 or 13% in the 3rd Quarter. The number of learners with Very Satisfactory Performance remained the same from 1st to 3rd Quarter. The number of learners with Satisfactory Performance increased from 19 or 50% in the 2nd Quarter to 22 or 58% in the 3rd Quarter. Upon the completion of the study, the number of learners with Fairly Satisfactory Performance decreased from 9 or 24% in the 1st and 2nd Quarter to 3 or 8% in the 3rd Quarter. Nobody failed in Mathematics. It was found also that most of the learners had Very Satisfactory and Satisfactory Performance.

SUBMISSION ID: R04A-LAGUNA-0387

“Have a Chip, Have a Reward” to Improve Students Mathematics Participation

Catherine Besas, Carmen National Agricultural High School

Abstract

INTRODUCTION

Motivating students in mathematics prove to be very challenging. Mathematics is a subject in which many students want to do well, but there are many hindrances that prevent them from doing so. While students' success in all subject areas is an issue of concern, mathematics has been a difficult subject for many students to effectively learn as cited by Merritt, (2011). In Carmen National Agricultural High School, one of the problems encountered is less participation in performance tasks during mathematics class discussion and activities.

METHODS

This study determined the performance rating of students in mathematics based on the performance task component in Carmen National Agricultural High School classroom situation of Grade 8 section Aries.

RESULTS

The assessment and evaluation during the first quarter revealed that out of 43 students, only 42% passed in the performance task component and the rest got below passing rate. After having the "Have a Chip, Have a Reward" intervention it was revealed that there is an increase of rating from the first quarter to the second quarter, which most of them got above half percent passing rate. It is very clear that the students are motivated and more interested to improve their mathematics performance.

DISCUSSIONS

Based on the findings, there is an increase of academic performance level of identified Grade 8 Aries students in mathematics based on the performance task component through the application of "Have a Chip, Have a Reward" intervention. Thus, reward affects the learning process that leads to positive outcomes.

KEYWORDS: "Have a Chip, Have a Reward".

SUBMISSION ID: R013-SURSUR-0034

Acceptability of Proposed Chi-square and T-Test (PCAT SOFTWARE)

Genilou Domingo, Hernan Cedrick Gamet, Reean Gay Alao, Sherlyn Tonife
Degam, Vince Paul Ronald Ruby, Quirino General high School
(Adviser: Edilyn Tomas)

Abstract

INTRODUCTION

Statistics is credible. The utilization of statistics in the field of education, business, commerce, and offices played a significant role in the exponential growth and economic development. Today, programming is a way to create presentations where one needs to express numerically - a factor for effective communication in the cyber world. Researches and innovations use statistics for scientific literacy, the strong command of research and development requires an innovative process to express data in the most convenient way. In this study, programming of statistical software (Chi-square and T-test) aids the students to compute and analyze data. Hence, student-friendly software was developed.

METHODS

This study uses descriptive quantitative research design. The creation of the Programmed Chi-Square and T-Test (PCAT) Software needed formulae and codes for input in Visual Studio and Database Management through the help of an IT programmer. PCAT demonstration was first conducted. System Usability Scale was used to collect data coming from 45 students of Grade 9 to 12; 5 science and mathematics teachers were also included as respondents of the survey.

RESULTS

To calculate the SUS score, odd number questions in the questionnaire is scaled position minus one, while for the even number questions, is 5 minus the scale position. Multiply the sum of the scores by 2.5 to obtain the overall value of system usability. From the SUS scores gathered, 71.64 from Grade 9 scores 65, Grade 10 scores 78.5, grade 11 scores 69.7, grade 12 scores 73.5 and teachers' scores 71.5. With that said, scores above 68 are considered above average that is qualified for system usability.

DISCUSSIONS

The use of system usability scale labeled the strengths and weaknesses of the software. From the scale of 71.64 that is greater than 68 of passing score concluded that the Proposed Chi-square and T-test software is accepted as useful by the respondents and researchers.

KEYWORDS: Software, PCAT, Chi-Square, t-test, System Usability Scale

SUBMISSION ID: R002-QUIRIN-0026

**An Analysis between the Environmental Factors and the Choice of Track
the Students in Camp Vicente Lim Integrated School S.Y. 2017 -2018**

Angel Kyla Lorenzo, Department of Education
(Adviser: Jocelyn Amoyo)

Abstract

INTRODUCTION

The Republic Act 10533 or the Enhanced Basic Education Act of 2013 aspires to improve learners' basic skills, produce more qualified citizens and fit graduates for life learning and employment. The K-12 programs covers kindergarten and 12 years of basic education: six years of primary education; four years in Junior High School; and two years in Senior High School (SHS), where students will go through a core curriculum and subject under their preferred track including academic, technical vocational and livelihood, arts and design, and sports, (Formoso, 2015). It is a decision that needs caution and serious advisement as the career choice can determine a huge part of the rest of students' life. But there are some environmental factors that affect the career choices of the students, and identifying these factors could give parents, educators, and industries an idea as to where the students place most of their trust in their career selection process (Ambong, 2017).

METHODS

This study used descriptive research design and quantitative analysis. Also, it utilized the survey questionnaires to determine the common track among the four options. The second part used Likert scale and WGA (weighted average mean) to assess the students' response about the six domains or environmental factors such as distance, job demand, family influence, peer influence, school quality, and financial capacity that involved chosen 43 respondents via purposive sampling technique. The study was implemented in the fourth grading period of the school year 2017-2018 at CVLIS.

RESULT

Of the 43 students, 34 or 79% the students preferred to enroll in academic track while 2 and 7 who wanted to take arts and design and technical vocational livelihood track respectively, while nobody wanted to enroll in sports track. On the other hand, of the six environmental factors affecting the choice of students, the highest weighted mean is the school quality with 3.87, followed by financial capacity with 3.60. However, the last two least tracks are the family influence and peer influence with 2.36 and 2.16 weighted mean.

DISCUSSIONS

The commonly preferred track of the students in the academic track. The students moderately agreed that environmental factors affect their decisions with a general weighted mean of 3.14. This study could help reach students in choosing the track of their own and lessen the mismatch between the skill and the course the students will choose to take.

KEYWORDS: Mathematics, Parental Involvement

SUBMISSION ID: R04A-CALAMB-0355

An Analysis on the Advantages of Taking HUMSS Strand for Senior High School in Camp Vicente Lim Integrated School S.Y. 2017 -2018

Crysandra Mae Carlao
(Adviser: Jocelyn Amoyo)

Abstract

INTRODUCTION

Education is the key to open endless possibilities. To be educated is the privilege of every child. The knowledge that an individual can gain from studying is a treasure that no one can take away from them. But to attain the goal, one must be ready and prepared in choosing the right track /strand for them. Mostly, students are still confused about what to take in senior high school due to some factors affecting their choice of track. Of the many strands, Humanities and Social Sciences (HUMSS) is not orbiting in the world of academic subjects only. This strand can be useful in dealing with the reality of life. In this study, the researcher analyzed the advantages of taking HUMSS as a strand for Senior High School.

METHODS

The descriptive research design was used in this study. The researcher conducted the first survey in 43 HUMSS students at Camp Vicente Lim Integrated School. 10 students per strand from Grade 11 for a total of 90 students responded for the second survey. It utilized the survey questionnaires and used a Likert scale and WGA (weighted average mean) to assess the students' response. The inventory conducted also used both quantitative and qualitative analysis for the data collected on the frequency of common advantages of taking HUMSS and the frequency of the most common difference of HUMSS to another strand.

RESULTS

The results revealed the following top three advantages of taking HUMSS: 1.) Students learn how to respect the opinion of others, which have a frequency of 35 out of 43, 2.) Students become open-minded to different religions, and 3.) Students become good listeners, which gathered a total of 29. On the conducted survey to 90 selected Grade 11 students who responded, the percentage of those who strongly agree was higher than those who agree, fair, disagree, and strongly disagree. The HUMSS strand has the highest percentage with 71% who answered strongly agree in each statement that the other strands. EIM strand has the lowest percentage which gathered 13%. Through the survey conducted, the researchers found out that the most common difference of HUMSS from what the other strand offers is that the students are able to see the different holistic aspects of life (spiritually, mentally, physically, emotionally, and psychologically).

DISCUSSIONS

HUMSS strand help students improve their skills to socialize with others because of its three common advantages as demonstrated in the results. It is very essential to consider HUMSS because of its uniqueness. It can teach the learners to give importance and value in the holistic aspects of life.

KEYWORDS: HUMSS, strand, advantages

SUBMISSION ID: R04A-CALAMB-0357

**Analyzing Mathematics Word Problems of Elected Grade Five Pupils of
Tomas Daguisin Elementary Project through Project MATH
(Mathematics Ay Aralin Tuwing Hapon)**

Christine Corceura, Victoria District Action Research Association

Abstract

INTRODUCTION

Mathematics is all around us and in everything we do. It is important because everything revolves around it like health, music, language, and logic to name a few. Teaching mathematics to young children is about developing strong number sense with mastering their facts, using vocabulary skills and providing concrete elementary math activities. Teaching mathematics is a big challenge for teachers because pupils are aloof to it. They think of mathematics as something very abstract, making it hard to comprehend. Teachers have devised different strategies to simplify the teaching of the subject. Pupils are even made to attend MTAP classes and join math competitions. But these are only true for a few numbers of pupils. In fact, Tomas Daguisin Elementary School got only 69.67% in NAT 2014-2015.

METHODS

This action research is purely descriptive in nature, which uses test results to address the pupils' problem. The used of teacher-made Mathematics Vocabulary Words (vocumath) as an intervention in understanding mathematical terms improved the vocabulary of the pupils and they are now familiar with the terms used in mathematical problem-solving questions.

RESULTS

As a result of this study, pupils can now solve mathematical word problems through various interventions. This learning strategy improves the skills in solving word problem of pupils, which require patience and passion for pupils and teachers. This strategy is a great help to pupils who find it hard to comprehend and solve a mathematics word problem.

DISCUSSIONS

Teachers need to continue to work on improving the pupils' comprehension skills as well as their math skills. They need to address these kinds of problems to develop pupils ready for the challenges of the 21st century.

KEYWORDS: mathematics vocabulary words

SUBMISSION ID: R04A-LAGUNA-0184

Attitudes, Anxiety, and Mathematics Performance of Grade11 Senior High School Students: Input to Instructional Materials Development

Esperanza M. Consuelo, Maximo L. Gatlabayan Memorial National High School

Abstract

INTRODUCTION

Various educational research has identified a number of factors that influence students learning in mathematics. Anxiety and attitudes of the students are often associated with their math learning and performance. Math becomes extraordinarily difficult for some that they begin to consider having a learning disability. This study determined the influence of the modularized and technology-based instructions to students' anxiety and attitudes towards Mathematics.

METHODS

Utilized descriptive-experimental designs with two experimental groups matched accordingly into three levels of abilities. Documentary analysis is done through the average grade of students during the first semester. There were 15 selected students matched per group, a total of 30 respondents for the two experiments.

RESULTS

Significant differences were noted on the negative and positive attitudes of the respondents for both methods of instructions used. There were significant differences observed on the students' level of anxiety in both modular and technology-based approaches. Students' overall performance for the competencies tested is verbally interpreted as "satisfactory" in the pretest to "very satisfactory" in the posttest.

DISCUSSIONS

Both modularized and technology-based instructions may be used to increase the positive values of students while decreasing levels of negative attitude, reducing mathematical anxiety, and increasing mathematical performance. Results posted an evident strong correlation between three variables (i.e. attitudes, anxiety, mathematics performance), as shown by strong correlation values exposed after the experiment. For the results of the two matched groups, results in the modularized instruction showed higher mean gains than in a technology-based approach.

KEYWORDS: Anxiety, Attitudes, Mathematics Performance, Modularized, Technology-Based, Descriptive-Experimental

SUBMISSION ID: R04A-ANTIPO-0028

BARATH Game: Peculiar Method of Teaching Addition and Subtraction of Integers

Ronald Villasin

Abstract

INTRODUCTION

In my two years of teaching mathematics in public high school, I observed that the performance of students in the subject is not that prepossessing. Most of the students find it difficult to solve complex number problems. Although they are now in high school, the only reason I know why those things are happening is the inability of the students to perform basic operations involving integers. They are so confused about how to deal with signed numbers. Most of them jumbled the results when they add, subtract, multiply and divide, unlike signed numbers. This is the reason the researcher came up with the development of BARATH GAME. This game will help the students to be familiar with signed numbers. The researcher decided to use cards as materials for the said game because he wants to change the perception of the young generation when it comes to *baraha*. We all know that if someone uses cards or baraha, the first thing that comes into our mind is gambling. The researcher thinks that this is also a good way to change the perception of young kids about cards.

METHODS

The researcher used an experimental design. The respondents of the study are the grade 8 students of Gumaca Integrated School, the school year 2018 - 2019. A number of statistical tools were used to analyze and interpret the data obtained in this study. The scores of the respondents were tallied, classified, and tabulated for better presentation. In determining the level of acceptance of the students to Barath game, the Likert Scale was used. To analyze the post- and pre-test presentation of the data, frequencies, and percentage means were used. To test the significant difference of students' mathematical performances during pre-test and post-test after using Barath game, the t-test was used.

RESULTS

The respondents of the study strongly agree that the Barath game is appropriate, relevant, and timely to use. The students realize that cards are not only used for gambling but can also be used as a tool to improve their skills in mathematics. The study also revealed that there was a significant difference in the performance of the students after using Barath game.

DISCUSSIONS

The results of the study showed the fact that this is the time for us teachers to think of a unique way to integrate something new and interesting in teaching their subjects. Let us all be creative so that we are able to produce the best materials that are suitable for the needs of our learners.

KEYWORDS: Barath Game: Gambling Cards in Mathematics

SUBMISSION ID: R04A-QUEZON-0243

Brain Gym: A Comparative Effect Analysis on Student Learning Outcomes in Mathematics Word Problems

Jan Marie L. Padilla, Department of Education
(Adviser: Oldric Licaros)

Abstract

INTRODUCTION

Brain gym is either mental or physical exercise designed by the teacher as an activity to be performed before the class session starts. Brain Gym is support for transporting cognizance, preferable mind functioning, and the enhancement of information understanding for those learners to embrace it and perform it as well (Cohen & Goldsmith, 2003). The basic problem of mathematics teachers is on how students' best learns word problems in the real classroom setting. Indeed, an inevitable question is "what quality teaching can facilitate utmost learning." This study was conducted to determine how effective brain gym in the progress of the students' learning outcomes in math word problems.

METHODS

This study applied quasi-comparative experimental research design. The comparative groups were taken from intact heterogeneous sections chosen randomly from the Humanities and Social Sciences Track. Brain gym was applied to one section every class session, while the other made use of a usual classroom setting. T-test was applied to measure students' equivalency in terms of prior knowledge and testing the differences between the learning outcomes of the comparative groups. However, eta square was used to determine the effect size of applying brain gym to the students' learning outcomes.

RESULTS

The study showed that the groups were comparable at the beginning of the experimentation (p -value = 0.20). Statistically, both groups displayed significant learning. However, the mean difference of -5.96 revealed that section with brain gym learned better. Usual teaching displayed small effect on student learning, while Brain gym revealed a large effect on the students' learning outcomes in math word problems.

DISCUSSIONS

Based on the results, both students in the comparative groups had improved learning outcomes; however, the group with brain gym performed better in the class. Brain gym was found very effective in the learning outcomes of the students. This result agreed with the study of Mahar et al, (2006) who found out that activity engaging bodily works in everyday classes arise the ability of decoding instruction that will be performed. It was supported by Coe et al. (2006) as it claimed that learners who rely on body contact activities have excellent grades in their class. Jean Blaydes (2001) discovered that the utilization of physical exercises does not just sharpen the mind in remembering but also turns on the protein that makes memory stability tougher.

KEYWORDS: brain gym, comparative effect analysis, learning outcomes

SUBMISSION ID: R012-COTABP-0003

Bridging Course Program for Low Performing Pupils in Mathematics

Jumilyn De Los Reyes & Mary Jane Halili

Abstract

INTRODUCTION

Mathematics is a subject that is vital for gaining a better perspective on events that occur in the natural world. This advocacy of the proponents is the inspiration to help pupils improve mathematical ability and remedy the pupils' difficulty. The study aims to provide pupils bridging course program for grade 6 and uplift the coping ability of the pupils in grade 6 mathematics competencies.

METHODS

This study focused on the effectiveness of alternative reinforcement course on Grade 6 low performing pupils in mathematics. The subject of the study was the Grade 6 pupils in Lores Elementary School. Ten (10) sections were utilized in the conduct of the study with a total of fifty-four (54) pupils. The following topics: addition of fraction, subtraction of fraction, subtraction of fraction, and division of fraction were considered to determine the respondents' performance. Pupils were evaluated using pretest to identify the strength and weaknesses of the pupils and administer post-test after the implementation to identify the performance and determine the improvement in learning and mastery level

RESULTS

The level of performance on the different topics has improved verbal interpretation from "Poor" to "Very Satisfactory." While the addition of fraction has a verbal interpretation of "Fair" to "Very Satisfactory, all topics have big improvement as revealed by the computed mean.

DISCUSSIONS

The mean obviously gained enough data to identify that the bridging course program has a big effect on the performance of the students. In connection to this, the performance of the students has a significant difference between the pretest and post-test with respect to different topics.

KEYWORDS: Keywords: Bridging Course Program, performance, Intervention, Low Performing

SUBMISSION ID: R04A-ANTIPO-0023

Bridging Numeracy Gap, a Quipper Intervention: Qi Effect in the Academic Performance in the Core Subjects in Mathematics of Grade Eleven ABM Students of Padre Garcia National High School

Maylene A. Mangurali, Padre Garcia National High School, Batangas Province

Abstract

INTRODUCTION

The study was focused on the effects of Quipper Intervention on the academic performance of Grade Eleven students in statistics and probability. Its purpose was to promote intervention in students with learning difficulties. If this problem was solved, learning will be simple.

METHODS

The study employed participatory action research where the subjects were involved in the process. There were 60 purposively chosen participants. The study made use of descriptive research. For quantitative data, simple experimental, where pretest and posttest were used, and for qualitative data, triangulation method, where documents were analyzed, e.g. teacher and student journals and portfolios, were analyzed.

RESULTS

It was found out that Quipper School provides a modern approach toward learning, especially for students who are at risk of dropping out and for those students who do not meet the learning standards vis-a-vis achievement. It was recorded that absenteeism is a factor that affects the performance of the students.

DISCUSSIONS

After the program, the participants succeeded in the accomplishment of math problems with pleasure, judging their performance from the assessment conducted and the reflection gathered.

KEYWORDS: education, learning, mathematics, quipper, school

SUBMISSION ID: R04A-BATANP-0127

Challenges in the Implementation of Mother Tongue-Based Education Instruction in Mathematics and Teacher's Coping Mechanism

Tito Maralli, Mamatid Elementary School

Abstract

INTRODUCTION

Policymakers, educators, and even learners are searching for the most appropriate medium of instruction that will provide improved education for diverse learners especially for those who are deprived of education (Benson, 2008). Further, the implementation of Mother Tongue as a medium of instruction in Math subject for Grades 1 to 3 pupils caused teachers and educators to strategize in order to comply with the mandate of MTBE. The study aimed to determine the challenges encountered by Math teachers in Grades 1 to 3 in the implementation of mother tongue-based instruction in Mathematics and identify the strategies adopted to cope with the challenges encountered.

METHODS

Adopting the phenomenology design of qualitative research, the study purposively selected four elementary schools in the District of Cabuyao, Laguna. Using an interview guide, 15 Math teachers from each school or a total of 60 representatives were interviewed to gather appropriate data used in answering the problems started.

RESULTS

It was found out that there were a lot of problems encountered in the implementation of MTBE specifically in Math subject. First is the lack of preparation prior to its implementation particularly in terms of conducting relevant training and seminars for the teachers in developing localized instructional materials and vocabulary development; lack of instructional materials; and the inconsistencies between and among the curriculum guide, learning, and instructional materials and the teaching guides were also considered challenges in the implementation of MTBE. To cope with these challenges teachers gave assignments.

DISCUSSIONS

Mother-Tongue Based Education in Mathematics is fully implemented but lacks the needed preparation among teachers and pupils. The consistency of curriculum design with the instructional materials, learning instruments and teaching guides; and the provision and availability of instructional materials, hence perceived by Math teachers to be very challenging. Math teachers are obliged to develop their own strategies to cope with the challenges being encountered. However, some strategies being adopted by Math teachers are contradicting with the objective of MTBE like the use of English language for those terminologies that are very hard to translate in Mother Tongue. MTBE is argued to be inappropriate and not advisable to be used as a medium of instruction in Mathematics because of the many technical terms that are more understandable in the English language than in Mother Tongue.

KEYWORDS: Mother Tongue-Based Education, Mathematics, Challenges, Implementation, Cope

SUBMISSION ID: R04A-CABUYA-0038

Competency Level in Solving Decimal Problems of Grade Five Pupils of Miranda Elementary School: Basis of Improvement

Richard Ortila

Abstract

INTRODUCTION

Problem-solving has been and will be a necessary skill not only in mathematics but in everyday living. However, today, most of the students are encountering some problems in solving problems in mathematics especially in using the four fundamental operations. Because of this fact, the researcher aims to discover and determine the Competency Level in Solving Decimal Problems of Grade Five Pupils of Miranda Elementary School and to make actions and plans for improvement.

METHODS

This action research made of descriptive research design attempted to determine the competency level of grade five pupils in solving decimal problems of Miranda Elementary School. The actual respondents were composed of 18 males and 20 females of Grade 5 pupils during the second grading period, the school year 2017-2018. No sampling was made in the study. The questionnaire was the main instrument of the study. The questionnaire for the pupils was collected immediately for consolidation. It was used to determine the competency level of the pupils through the use of frequency, percentage, and rank. The researcher distributed the questionnaire and sample test question in every competency so that they can determine the difficulty of it.

RESULTS

Based from the results, the last rank was (Competency number 1) solving routine problems involving addition and subtraction of decimal numbers including money, which showed that it is the easy competency for the pupils and the most difficult competency was solving non-routine problems involving division without or with any of the other operations of decimals and whole numbers including money (Competency Number 6).

DISCUSSIONS

The results demonstrate that when the pupils did not understand the concept and competency in addition and subtraction of decimals, they definitely experienced difficulty in understanding and solving multiplying and dividing decimals. If students are not able to master each skill as it is taught, they will be left behind as the teacher moves on. And when these problems are put into a real-life format, they are even harder for most students to comprehend.

Moreover, of the four operations, the division is the most difficult to perform. After the implementation of the proposed plan and intervention including the instructional materials and activities, the proficiency level of the class increased. It signifies better performance and achievement of the pupils, thus the materials made by the researcher were effective.

KEYWORDS: Competency Level, pupils, solving problem, improvement

SUBMISSION ID: R04A-BATANC-0210

Comprehension Skills in English as an Aid in Solving Word Problems in Mathematics

Salvacion Raquid

Abstract

INTRODUCTION

Comprehension skills among students are indispensable. The Grade V11 students in Cagmanaba High School was investigated on the impact of communication skills in English as an aid in solving word problems in Mathematics I. The study focused on the unlocking of difficult words first before the mathematics teacher continues the lesson. After several lessons, it was found out that there was improvement among students in solving worded problems. Open-ended questions were answered better by the learners. This indicated progress in their scores from a low score to a higher one.

METHODS

A 5-minute definition of terms was introduced by the teacher at the start of everyday Mathematics class. Terms that are found in the problem were given. This became a habit for several months of teaching worded problems. So the students were used already to the definition of terms and even knew the meaning of the term used in the problem. Thus, solving the worded problem in mathematics among students became a little bit easy as reflected in the result of their scores.

RESULTS

Many Grade VII students benefited from the study because as they continuously attended the mathematics class and gave much attention in the definition of mathematics words and other words included in the worded problems, solving problems became easy for them. Teachers also were used to the strategy of giving words to define before starting the discussion in a mathematics lesson. Problems were easy for students to understand and solve. Thus, all Grade VII students passed their mathematics class. This contributed to 100% in that grade level.

DISCUSSIONS

The result of this study implied the need of the students to be taught first how to comprehend through giving words to define and understand the definition which is then applied in worded problems. Comprehension skills in English can then be used as an aid towards solving worded problems in mathematics. Therefore, the skill in comprehension is very vital in understanding the language of mathematics. We must be guided by this very simple but meaty study for the students to acquire knowledge.

KEYWORDS: comprehension skills English aid solving word problems in mathematics.

SUBMISSION ID: R005-ALBAYP-0008

Computer-Aided Games Approach in Enhancing the Academic Performance in Mathematics of Grade 8 Students

Erald M. Hernandez & Emily B. Hernandez, Department of Education

Abstract

INTRODUCTION

Various tools have been introduced in the education process to enhance teaching and learning activities. These tools play an important role in enriching students' learning experience on the learned subject. Throughout the past few decades, technology has been viewed as a lodestone for improving student academic performance and for increasing the flexibility of public schools. The researchers intended to urge students to be more participative and involved in learning Mathematics. Interactive multimedia games or activities will enhance the students to work together. A collaborative effort among the group members will instigate effective flow of the learning process by encouraging "experimentation, hypothesis and synthesis" which are all higher level of thinking.

METHODS

The study employed the descriptive method of research and utilized a questionnaire as a data gathering instrument which was administered to 104 Grade 8 students. The researchers designed and utilized various computer-aided games to enhance the academic performance of students. The game varies on the interests, needs, and level of students. Based on the core skills assessment, the students had difficulties in the three areas of Math namely Geometry, Quadratic, and Variations. Each category had three levels: easy, average, and difficult. Each level will instill critical and creative thinking between and among the learners. Rewards will also be given to the fastest group to finish the task. It is also applicable to the individual category. If the answer is not correct, the designed game will reveal various ways to arrive at a given answer.

RESULTS

The respondents perceived that the designed computer-aided game is a valid learning material and assessed as an excellent learning tool by mathematics teachers. The effectiveness was reflected in the students' improved performance after its utilization. This promises a great improvement in the teaching-learning process and on the students' academic performance. It is believed that the motivational effects of these materials spearhead the students' desire to learn better and the encrypting effect could help in the students' retention of the material contents.

DISCUSSIONS

The results revealed that there is a need to constantly innovating our teaching strategies to enhance the performance of the students. This innovation should always suit the interest, level, and nature of the learner. Moreover, there should be an evaluation of innovation in order to address the changing needs of our learners.

KEYWORDS: computer-aided

SUBMISSION ID: R04A-BATANP-1451

Critical Thinking Skills of Junior Mathematics Students in the Province of Batangas

Maria Bellen Gaspar, Department of Education - Laiya National High School

Abstract

INTRODUCTION

The 21st-century learning and mathematics curriculum should integrate critical thinking in all lessons so that learning becomes more meaningful, purposeful, and great for the learners. The aim of this study is to determine the academic critical thinking skills among the three zonal settings namely, inductive, deductive, and blended reasoning suitable to the junior high school students in teaching Mathematics.

METHODS

In this study, the 7E learning cycles, a teaching method which has been used in Science will be tested if it will enhance the critical thinking skills of the junior students in Mathematics. The participants were divided into four groups consisting of 148 Grade 8 learners. The analysis of variance showed that the learning of four groups is homogenous before the intervention. By using the Solomon Four-Group design of experimental research, two groups were randomly assigned as experimental groups and the other two as control groups. The experimental groups were taught using the daily lesson log in 7E learning format in three zonal settings of inductive, deductive and blended. The pretest was administered in one control group and in one of the experimental groups while the post-test was administered in four groups after the treatment.

RESULTS

The analysis of variance showed that there was a significant difference among the four groups' posttest. The experimental groups got higher posttest results compared to the control groups. Among the three zonal settings, blended of inductive and deductive reasoning obtained the highest mean of experimental groups and high academic critical thinking performance. On the 7E learning format (explicit, engage, explore, explain, elaborate, evaluate, and extend), explain got the highest frequency of 7 out of 10 Mathematics teachers and 6 out of 10 grade 8 students included in the experimental groups. This showed the effectiveness of explaining the topics of lessons to the learners and contributed in critical thinking performance of the learners in Mathematics.

DISCUSSIONS

Some of the factors that contributed to the enhancement of the academic performance of the grade 8 students were the positive attitude of the students in the subject, the students' focus on the topics, eagerness to improve grades, the rewards they acquired from different activities, the challenges of how they passed the test given after every lesson, the availability of instructional materials, the teachers' students interaction, and the students' assistance to each other.

KEYWORDS: Critical thinking, Solomon Four-Group Design, 7E Learning Cycle, Academic Performance

SUBMISSION ID: R04A-BATANP-1283

DAMATH: Its Effect in the Computational Skills of Grade V Pupils of Salcedo

Nenita Ricafrente, Cavite Association for Research Educators

Abstract

INTRODUCTION

Many pupils find Mathematics as one of the difficult subjects in the school that's why teachers must be creative, artistic, and innovative in the different methods and strategies in daily teaching. Since I have a problem regarding my pupils' computational skills, 62 or 100 % didn't mastered the 4 fundamental skills in mathematics I choose DAMATH as "Basis for the Proposed Action Plan" because in its unique way, Damath board game ushers the Filipino school kids into the new millennium by equipping them with competitive life-long learning for understanding and ICT-fluency skills.

METHODS

The respondents of the study are pupils coming from Grade Five-Bayabas pupils of Salcedo Elementary School, Municipality of Noveleta, Division of Cavite, for the school year 2018-2019. The study will focus on the effects of Damath to be conducted on 29 pupils or 100 % of the total population for the full implementation of the program of Mathematics. The extent of the research will last for 3 months from July to October 2018. The post-test will determine the effectiveness of the intervention to be utilized.

RESULTS

The researcher utilized an interval of 10 to statistically group the data. It clearly means that the respondents don't have enough knowledge shows that the highest score in the pre-test is 32 and the lowest score is 12. Which have a mean score of 27.35 for Grade Five- Bayabas and standard deviation of 4.20. This and understanding about the whole number though they even utilized some of their stock knowledge on the stated topic on mathematics.

DISCUSSIONS

The researcher conducted post-test. The highest score was 50 and the lowest score is 25. The obtained mean score of 40.58 for Grade Five Bayabas and Standard deviation of 5.15 and. Its data shows that there an increase of 27 % for Grade Five-Bayabas in their performance in computational skills on the whole number.

KEYWORDS: DAMATH, computation,

SUBMISSION ID: R04A-CAVITP-1656

Developing Mastery in Multiplication among Grade Six Pupils through Games and Reward System

Weah Q. Base, Teacher
(Adviser: Weah Base)

Abstract

INTRODUCTION

This research was funded by the Basic Education Research Fund (BERF) for the school year 2016- 2017. The foundation of Mathematics are the fundamental operations namely addition, subtraction, multiplication, and division. Multiplication is one of the operations where students lag behind.

METHODS

The action research was conducted to aid Grade Six- Venus pupils in developing mastery of multiplication, which will help them in learning competencies such as mathematical word problems. The study specifically determined the effectiveness of games and reward system in developing mastery in multiplication. The researcher prepared games and developed a reward system to encourage pupils during class remediation. At the end of the games, the results were posted on the bulletin board so that pupils will know who performed well in the course of remediation.

RESULTS

Pre-test and post-test were conducted before and after the intervention. The mean score and the performance level in the pre and post- test were determined. To test the significant difference between the pre and post-test, t-test was used. The resulting mean was 0.175 and the performance level was 0.875%. After the implementation of the activity, the mean was 2.225 while the performance level was 11.125%.

DISCUSSIONS

The results clearly showed that the performance level of the Grade Six pupils had increased or improved. This could be attributed to the games and reward system developed by the teacher-researcher. It is recommended that studies using games and reward system should be conducted to two different samples or groups.

KEYWORDS: Mastery in Multiplication

SUBMISSION ID: R005-TABACO-0030

Developing Skills in Evaluating Functions through PAIR Strategy

Danife Engcoy, Department of Education - Hinatuan National Comprehensive High School

Abstract

INTRODUCTION

Evaluating Functions is one of the learning competencies in General Mathematics that require mastery of the pre-requisite skills like evaluating algebraic expressions and consequently basic skills in operations on integers. In the K to 12 Curriculum, subjects are taught from simple to complex as learners move to a higher-grade level. With this, learning competencies required per grade level must be mastered by the students before proceeding to a higher level so to avoid gaps in the teaching-learning process. However, the researcher found out that in her Grade 11-Parrot class, more than half of her students were below mastery level for Evaluating Functions after administering a check-up quiz during her formative assessment despite the varied strategies employed in the class. She then investigated the causes of such low performance using the problem tree. These students were found to have not mastered the basic skills in operations on integers thus they could not relate during class discussions, had difficulty in understanding the concepts and if not given immediate action would result to low performance and least mastered competencies.

METHODS

This study used "Peer-Aided Instruction and Reward (PAIR) Strategy" to develop skills in evaluating function. The respondents of this study were the 25 students who were below mastery level in evaluating functions after administering a 15-item teacher-made test during their formative assessment. The teacher-researcher then determined the causes of such low performance through data triangulation and found out that these students lacked mastery of the basic skills in operations on integers. In order to provide an immediate solution to these problems, PAIR strategy was employed.

RESULTS

Results showed that there was a significant increase in the scores of the respondents after administering a parallel 15-item teacher-made test and that their mastery in the competency had leveled up. This means that the skills in evaluating the function of the respondents were developed after employing PAIR strategy.

DISCUSSIONS

Based from the results, required competencies in the current grade level should be mastered by the learners before proceeding to a higher one to avoid gaps in the teaching-learning process; teachers should innovate or employ varied teaching strategies which could provide immediate responses to the instructional needs of the learners; and teachers who have ancillary assignments may use "PAIR Strategy" appropriately to their class.

KEYWORDS: Develop, Evaluating Function, Strategy

SUBMISSION ID: R013-SURSUR-0002

**Developing Skills in Simple Division through Mental Math among Grade VI
Pupils of Pedro A. Paterno Memorial Elementary School**

Rosemarie Magpile, Master Teacher

Abstract

INTRODUCTION

There has always been the stereotyping that Mathematics is being hated and feared by most of the students. As being observed, many people have negative opinions regarding Math, leading them to lose the courage to explore and to love it. Considering that elementary is the level where the courage to love Math has to be established, it was seen that most of the Grade six pupils struggle in it, specifically in the division.

METHODS

A pre-numeracy assessment was conducted to 19 pupils during the first quarter of 2017. The opinions of the students regarding Math were also recorded upon interview. After some intervention, as part of an action, a post-test was given to the students to check the effectiveness of the study.

RESULTS

Based on the results upon pre-numeracy assessment, the proficiency level of the students in Mathematics was 49.20% only. After numerous intervention and activities, the post-test was given and showed a rise in proficiency level resulting in 70.20%.

DISCUSSIONS

The results showed that there is a great improvement in the proficiency level of the students in division upon having numerous activities and innovative teaching practices.

KEYWORDS: action research, teaching strategies, pre/post assessment

SUBMISSION ID: R04A-BATANP-0392

**Developing the Skills in Solving Fundamental Operations in Integers Using
the Math Attract Board Game among Junior High School Students in
Infanta National High School**

Emmanuel U. Llanes Jr., Infanta NHS-SHS
(Adviser: Emmalyn Isla)

Abstract

INTRODUCTION

Tests are given to identify a certain level of quality-based education that the school generally executes. Findings, to such extent, reflect uncertain shifts of results regarding the students' poor Mathematical solving skills. Specifically, this may be rooted in weak absorption of the prerequisite area, Integers, before advancing to higher Mathematical concepts. Nevertheless, the student researcher developed the Math Attract Board Game and explored if this could be an effective means of remediation that would develop a student's solving skills through active learning.

METHODS

Different methods and instruments were used. Using an experimental approach, the student researcher performed a certain experimental procedure where he allotted multiple actual sessions of the board game that required utmost engagement; and subsequently administered relevant tests (pre-test and post-test) among the research sample (INHS Junior High School students), determined through stratified proportionate random sampling. A total of three hundred students across varying levels (Grades 7-10) responded to an evaluation survey, the Math Attract's Interest and Effectiveness Form. Moreover, quantitative analysis with appropriate statistical treatment was used for data interpretation.

RESULTS

Along with the processes, the researcher identified that the performance of INHS JHS students in Mathematics was in a decreasing manner, where the majority of them were far from the passing and even farther from the acceptable standard score. The performance of the students obtained thru the post-test was greater than that in the pretest. This was reflected in the increase in mean score, signified by the change in statistical measurement. Similarly, the board game's significant contribution to further improve students' solving skills was confirmed by the students' account where they found Math Attract a unique, attractive, more effective, essential, and interesting game that allows students to embrace learning in Mathematics, specifically Integers.

DISCUSSIONS

The results suggest that Math Attract Board Game has a significant contribution not only to improve students' solving skills but also to promote enjoyable means of learning Mathematics. Through said board game, students have found dealing with the fundamental operations in Integers a fun and easier way of learning the seemingly complicated concepts. It further has the potential to improve the school's performance in Mathematics and other related areas.

KEYWORDS: board games, integers, Math Attract, mathematics

SUBMISSION ID: R04A-QUEZON-0110

Development and Validation of Basic Numeracy Skills Instrument on Operations in Rational Numbers (Banusioran)

Lino Manalo, Department of Education

Abstract

INTRODUCTION

The present secondary school curriculum K-12 demands a variety of assessments to be carried out in the course of instruction to guide effective teaching. The study aimed to develop and validate an instrument which is a diagnostic test in Mathematics for Grade 7 students. The developed instrument can measure student's skills in fundamental operations such as addition, subtraction, multiplication, and division involving rational numbers like whole numbers, integers, decimals, and fractions.

METHODS

The researcher, together with the help of a pool of experts, examined the test items based on the learning competencies of Mathematics stated on the table of specification, the result of which became the basis in preparing the test blueprint. Based on the test draft, a set of 100 questions with four options was formulated. The draft of the instrument was submitted to a panel of experts for content validation. Also, the test underwent pilot testing and two try-outs. Item analysis like difficulty index, discrimination index, and distracters analysis was conducted after the pilot testing and tryouts. After the final administration, a total of 65 items were included in the final form of the test. To ensure reliability, the test underwent the process of internal consistency using the SPSS application to find Cronbach Alpha and KR-20 formula.

RESULTS

The constructed and proposed diagnostic test which is the Basic Numeracy Skills on Operation in Rational Numbers for Grade 7 students is valid and reliable. The students' mean score is 31.96 with a standard deviation of 12.13. The difficulty and discrimination indices of the instrument are average and are considered a good item. The final BANUSIORAN test was found to be valid and reliable. The BANUSIORAN test may be utilized as an assessment tool for incoming Grade 7 students.

DISCUSSIONS

Findings revealed that the instrument is valid and reliable, the students' mean scores and a standard deviation value indicates that the performance of the participants in initial and in the final form of the instrument was moderately satisfactory, still, intervention is necessary. The developed instrument somehow may help mathematics teachers in assessing student's basic skills in fundamental operations and the items were responsive to some of the abilities stipulated in K-12 Mathematics curriculum.

KEYWORDS: numeracy, development, validation, rational numbers

SUBMISSION ID: R04A-BATANP-0996

Development and Validation of Strategic Intervention Material on Least-learned Competency in Grade 8 Mathematics

Mercy Gamba

Abstract

INTRODUCTION

This study involved the development and validation of Strategic Intervention Material based on a least-learned competency in Grade 8 Mathematics. The study is conducted to five secondary schools in the Municipality of Bulan namely: Bulan NHS, Alcoba NHS, Gate NHS, J.P. Laurel HS, and San Francisco NHS. This study had 197 respondents during the conduct of pretest and 185 respondents for the validation of the developed strategic intervention material.

METHODS

The study employed the descriptive correlation method. The data were tabulated, checked, analyzed, and interpreted using the frequency count, weighted mean, and Likert scale.

RESULTS

The average result of the five high schools in the Municipality of Bulan has a performance level of 30.584 during the pre-test and 55.016 during the post-test, which has a low satisfactory rating for Grade 8 Mathematics on manipulating rational expressions and rational equations using the traditional method of teaching. The competency, solving a rational equation, is the least learned competency. The developed strategic intervention material was entitled "Mathworm Adventures Presents Rational Fairytales: Equating Rationally at Wonderland." The performance of the student's increases after utilizing the SIM.

DISCUSSIONS

Based from the findings, it was concluded that the performance level of the students in five schools on rational expressions and rational equations does not meet the standard set by the Department of Education of 75%, and this is alarming on the part of educators.

KEYWORDS: eldest son

SUBMISSION ID: R005-SORSOP-0035

Development of Science Worksheets on Mathematical Analysis Skills as an Aid to Poor Problem Solving in Science of Grade 10

Elvin Hernandez, Department of Education - Balayan

Abstract

INTRODUCTION

Mathematical analysis and performance of the students in Science are two correlated entities. Being mathematically competent means able to perform computations and solve problems in science critically. Mathematics and science as subjects have the following roles in the educational system: facilitating participation in productive life activities, serving as a means of communication, and operating as a gateway to national progress. 21st-century learners require stronger mathematical knowledge, skills to compete and be part of the technologically oriented workforce. And to connect mathematics and science to other areas of life, they must be proficient in computing, problem-solving, representing ideas and concepts.

METHODS

A non-probability purposive sampling technique was used to choose the respondents for this study. In the selection of the respondents for both the control group and experimental group, the researcher grouped the students into fast learners and slow learners. For data gathering, pre-test and post-test were prepared. The questionnaire and test papers were checked and analyzed. The post-test was given to the same respondents after introducing the worksheet to the students. The results were checked, analyzed, and compared to the results of the pre-test.

RESULTS

Administering Pre-Test and Post-Test is important to measure the mathematical ability of the students in science. Because of this, it reveals that there is a close relationship between mathematics and science with respect to the questions that require mathematical ability. Indeed, an effective strategic intervention material enhanced the mathematical ability and science performance of Grade 10 students. Therefore, to strengthen student's performance in topics that requires computation, appropriate problem solving should be given to them. In addition to this, a well-planned and developed intervention material should be made to cater to the needs of the students.

DISCUSSIONS

The study was designed to explore the effect of mathematics on the performance of the students in science and find ways on how to make mathematics be of help to improve student's scientific and mathematical ability. Its result will be beneficial to the students, teachers, and guidance counselors. This will encourage teachers and guidance counselor to provide innovations and other teaching strategies that will help students in different aspects of learning.

KEYWORDS: worksheet, mathematical ability, scientific ability

SUBMISSION ID: R04A-BATANP-2273/R04A-RIZALP-0087R04A-QUEZON-0156

Development, Validation, and Effectiveness of Higher Order Thinking Skills-Based Multimedia Materials in Geometry

Glicerio Penueco Jr, Department of Education -Pililla National High School

Abstract

INTRODUCTION

Developing critical thinking and problem-solving skills among students are some of the objectives of Mathematics in the education mainstream. Thus, the teachers have to find ways to realize this. In this study, the researcher aims to help students develop their higher order thinking skills through the use of the developed Higher Order Thinking Skills-Based Multimedia Material in Geometry.

METHODS

The researcher made use of the experimental method to determine the effectiveness of the developed Higher Order Thinking Skills- Based Multimedia Materials in Geometry and descriptive evaluative method to evaluate the developed instructional. The researcher made use of the purposive sampling over (56) fifty-six third year high school students since they were currently taking the subject Geometry as one of their subjects.

RESULTS

The findings revealed that the experimental group performed better in the posttest than the control group. Moreover, the findings show that there is a significant difference between the performance of the experimental and control group in Lesson 2, 3, 5, 6 and 7 while it fails to reject the null hypothesis in Lesson 1 and 4.

DISCUSSIONS

The results of the study demonstrate that the developed Higher Order Thinking Skills-Based Multimedia Materials in Geometry is an effective tool in developing the higher order thinking skills of the students in the study of Geometry.

KEYWORDS: Higher Order Thinking Skills (HOTS), Multimedia Materials, Geometry

SUBMISSION ID: R04A-RIZALP-0087

DI-GO-IN to Improve Students' Understanding of Operation on Integers

Emmalyn Isla, Infanta NHS-SHS

Abstract

INTRODUCTION

Many students enter high school level with poor concepts and skills in mathematics. One of these basic foundational skills and knowledge is the integers. The crucial foundation and pre-requisites skills to solve different equations like solving operations on integers involve signs of the numbers as well as the signs of required operation. This makes students confused when encountering questions that require performing operations on integers. Especially, when the students are asked to solve problems with integers within an allotted time to compute better and faster with conceptual understanding. The researcher developed the DI-GO-IN game to help and improve students' skills in fundamental operation on integers.

METHODS

This study aims to improve the understanding of Grade 7 students on integers. This is based on the pre-test result of 7th level students of Infanta National High School. The study revealed that students have difficulties understanding fundamental operations on integers. Twenty failed students from the different sections were chosen between the SY 2016-2017 as samples for study. The researcher believes in the importance of the study for motivation and at the same time as remediation help for the struggling students. Part of the evaluation was to find out the main problem encountered by the failed students on why they suffer difficulties in mathematics. The researcher sought ways to find out what particular topics in math were connected from the first grading to fourth grading. Comparing their test from first to fourth grading, they discovered that integers are the hardest part of their math.

RESULTS

There are higher passing turnout rates in the given post-test compared to the pre-test. Students performed better in integers as well as the post-test and pre-test, all point toward effective use of DI-GO-IN game in students' learning of integers. Results implied that students who engaged in the given activity have positive learning experiences and students achieved a better understanding of the concept.

DISCUSSIONS

Teachers should always ensure that the student's performance and skills are of passing rates, especially in mathematics. They must try to find ways to boost the students' learning process. Find their weaknesses and strength through activities. Providing tests is the best tool to assess the students' abilities, which may reflect if the activities from the teacher are very effective. The research study implies that the DI-GO-IN game helped and improved students in solving fundamental operation on integers better and faster with conceptual understanding.

KEYWORDS: Improve, Students, Understanding, Operation, Integers, DI-GO-IN (Dice, Goal Card and Integers)

SUBMISSION ID: R04A-QUEZON-0156

Difficulties Encountered by the Grade Six Pupils of Salong Elementary School in Adding and Subtracting Dissimilar Fractions

Imelda Pascua, Department of Education Calaca, Batangas

Abstract

INTRODUCTION

Some of the students consider Mathematics as their favorite, while some consider this subject as their weakness. It is because there are some topics in Mathematics that are challenging, an example of this is how to solve fractions, specifically adding and subtracting fractions, as observed by the researcher for years that passed.

METHODS

This research made use of the descriptive method of research because this design employs descriptive techniques to answer questions regarding current conditions. The respondents of this study were the selected fifty (50) Grade 6 pupils, batch 2017-2018 of Salong Elementary School. With the approval of the concerned principal, the instrument was personally administered to the respondents; the researcher prepared the necessary materials in gathering important data in the study. Questionnaires were used for data gathering and utilized a quantitative method of research, which includes frequency count and weighted mean. The test questions were validated by experts. Once validated, the researcher sought approval for the administration of the test. Upon approval, the researcher started administering the test.

RESULTS

It can be recognized that Grade VI pupils agreed that they find it hard to find the Least Common Denominator (LCD) as revealed with the highest weighted mean of 3.1. This was supported by the idea of Bezuk and Cramer (2016) that the difficulty children have with fractions should not be surprising considering the complexity of the concepts involved. Clearly, the way fractions are taught must be improved. Because of the complexity of fraction concepts, more time should be allocated in the curriculum for developing students' understanding of fractions. It can be perceived that Grade VI pupils strongly agreed that their teachers provide drill to enhance retention, as revealed with the highest weighted mean of 3.64.

DISCUSSIONS

The results of this study reveal that the application of drills is still effective for learners to better understand the lesson because the concept can be retained in their minds. The findings likewise show that Grade VI pupils have a hard time finding the Least Common Denominator; therefore, this study is significant for teachers to realize that in teaching fractions, the use of instructional materials that are visible anywhere is essential so that the learners can easily relate what they've learned in mathematics while giving focus on student-centered approach in teaching.

KEYWORDS: dissimilar fractions, manipulative, algorithm, fundamental operations, teaching, subtracting and adding.

SUBMISSION ID: R04A-BATANP-0862

**Difficulties of Grade Six Pupils of Emilia L. Malabanan Integrated School
in Mathematics Problem-Solving: Basis for Intervention Program in
Enhancing Mathematical Skills**

Analyn Ortega, Emilia L. Malabanan Integrated School

Abstract

INTRODUCTION

Improving the performance of the pupils in problem-solving should start from the teachers' initiative. Through proper encouragement, careful motivation, and appreciation of what students have acquired initially, learning may be sustained through the formation of a gainful experience leading to building a more intense desire to mathematics easily and creatively. In view of the foregoing, the researcher, being the public school teacher, aimed to conduct this study to provide basis for awareness and better understanding of the difficulties in performing the fundamental operations in solving word problems for the current performance level in mathematics by the thirty-eight pupils in Emilia L. Malabanan Integrated School for the school year 2018-2019. The researcher wants to discover the strengths and weaknesses of such interventions within the school that are to be retained or eliminated by the school and pupils themselves.

METHODS

This is descriptive qualitative research that aims to identify the existing phenomena on solving word problems in mathematics. The respondents are the grade six pupils of the researcher which composed of 38 pupils. A questionnaire was utilized to gather the responses. They are guided in answering the questionnaire. Scores were tallied using frequency, percentage, and ranking as a statistical tool.

RESULTS

The study shows that the respondents were all in the right age for their grade level. They were also either not too old or too young for their grade level to understand the lesson. It also shows that most of the respondents belong to a below average performance level in mathematics. This only means that most of the pupils regardless of age have difficulty in dealing with mathematics especially in solving a word problem. The subject of the study also manifested difficulties in reading comprehension, which is one of the factors that affect their ability to solve a word problem in mathematics.

DISCUSSIONS

The results demonstrate the needs of some interventions to enhance the skills of the pupils in solving a word problem in mathematics. Furthermore, they need to improve first their ability to comprehend word problem for them to be able to understand the problem and find the solution using the formula suited to the problem. They should focus on the reading comprehension of the pupils so they could easily perform their skills in solving word problems.

KEYWORDS: Love, faith, joy

SUBMISSION ID: R04A-BATANP-2203

Difficulties of Selected Grade VI Pupils in Comprehending Mathematical Problems Involving Subtraction of Dissimilar Fraction with Regrouping: Basis for Remedial Instruction Program for Solving

Illuminada Magsino, Department of Education

Abstract

INTRODUCTION

Word problems in mathematics often pose a challenge because they require that pupils read and comprehend the text of the problem, identify the question that needs to be answered, and finally create and solve a numerical equation. It seems reasonable to expect that pupil's performance in solving word problems is affected by difficulties in comprehension. In this study, the researcher is motivated to conduct action research to develop the comprehension of pupils in solving mathematical problems.

METHODS

The researcher used data gathering tools, namely questionnaires, checklist, and interview to attain the objectives of this study. The respondents of the study are the selected Grade VI pupils who were identified based on the following criteria: a. they are identified by their former teacher, b. they are the pupils who are low in grade in mathematics subject.

RESULTS

Results show that pupils encountered difficulties in comprehending mathematical problems due to their poor reading ability, comprehension skills, and unmastered usage of mathematical operations; that the common causes of their difficulties are lack of study habits, poor reading ability and comprehension skills, health problem, heredity, and pupils' behavior. Intensive follow-up at home of parents or guardians to their children regarding the problem helps them have a better understanding of numeracy skills, key terminologies used in mathematical problems, and on the application of the concepts learned. Giving enrichment activities and drills are of big help for them to be motivated to learn the topics presented. Program of remediation, regularly checking of assignments and providing a variety of activities uplift the pupils' interest and understanding on the topic and the Program MKT's Map is of great help to pupils to develop their comprehension skills in solving mathematical word problems.

DISCUSSIONS

The results demonstrate the importance of having an intensive follow-up at home, parental involvement in checking homework, follow-up discussion about the topics learned in school, attending school meetings and events, and discussing school activities at home. Conducting parental-assisted instruction of the take-home activities and exercises are of great help.

KEYWORDS: Illuminada S. Magsino

SUBMISSION ID:

**Difficulties on Addition and Subtraction of Dissimilar Fractions of Select
Grade Six Pupils of Dacanlao G. Agoncillo Elementary School**

Angelina Siete, Department of Education

Abstract

INTRODUCTION

Students often encounter difficulty in regard to fractions, especially in adding and subtracting dissimilar fractions. Research has shown some grounds as to how students find it challenging by trying to determine the factors affecting the students' performances with the end in view of designing intervention activities to improve their knowledge and skills in adding and subtracting dissimilar fractions.

METHODS

The researcher used the quantitative survey method of research because this study will focus on the problem and will deal with the pupils' difficulty on addition and subtraction of dissimilar fraction and the remedies and interventions done by the researcher to address the problem.

The researcher came up with 10 students to be the participants/source of the data and information for this research. She used a set of tests to determine the difficulty and factors that hinder the participants for their mastery of the concept. Short quizzes, weekly tests, summative tests, unit tests, and questionnaires were utilized to define the level of students' knowledge on how to add and subtract dissimilar fractions. The respondents' responses were tallied, ranked, and interpreted using the Likert scale.

RESULTS

As the data analysis was successfully executed, it showed that students find it really difficult. With 5 as strongly agree and 1 as strongly disagree, the composite mean of 3.18 means that they find it quite challenging. Out of the indicators used, the respondents are finding the language of instruction to be the main reason. Other difficulties related to the subject are finding the Least Common Denominator (LCD) and changing of mixed number to an improper fraction and vice-versa

After applying the interventions, the respondents were again asked to rate their difficulties on the subject. Data show the mean went down from 3.69 (difficult) to 1.69 (easier), which means that students find it now easier to add and subtract dissimilar fractions after the interventions such as group studies on memorizing the multiplication table and using a bilingual language in teaching were applied,

DISCUSSIONS

Through the 10 respondents of this study, the difficulties before and after applying the interventions were identified, together with the factors resulting in these difficulties; the researcher came up with the following conclusions: language of instructions, finding the LCD and changing of mixed numbers to fractions and vice versa, and overlapping of activities due to Extra Curricular Activities (ECA) was the main reason why the respondents are experiencing difficulty in the subject.

KEYWORDS: Keywords: extracurricular activities, intervention, quantitative, bilingual, overlapping

SUBMISSION ID: R04A-BATANP-0304

Discovering the Correlates on the Competencies of Teachers in Teaching Mathematics: A Strengthening Teachers' Development Program in Navotas Elementary School S. Y. 2018-2019

Pedro De Los Reyes

Abstract

INTRODUCTION

Teaching is a profession that needs basic competencies in achieving its ultimate mission of developing a well-rounded individual with relevant training and consistent social improvement. This is expected for competent teaching and teachers in light of the importance of the profession. An important factor to consider in the selection of teachers are the values that the teachers put on education, professional experience, and interpersonal relationships. These attitudes that are determinants of teaching competencies influence their development and competencies in the service. These observations become a challenge to the researcher and made him interested in discovering the correlates on the competencies of teachers in teaching mathematics as strengthening teachers' development program.

METHODS

Different methodologies were utilized to fully determine and understand the outcome of the study. Utilizing the descriptive method of the research described and interpreted what is concerned with the conditions or relationships that exist, opinions that are held, processes that are going on, effects that are evident, or trends that are developing as this study focuses on discovering the correlation of teaching competencies. Involved in this research are the fourteen teachers who are currently teaching Mathematics in Navotas ES.

RESULTS

The level of teaching competencies of teachers infers that teachers do their best in terms of teaching as far as diversity of learners is concerned. Responsible teachers consider different traits and competencies as instruments toward responsible teaching in the light of the educative process. Teacher's profile has no bearing on teacher's impressions with reference to instructional competencies as regards content and pedagogy and that dedication proves competence in teaching. The acquisition of knowledge of the learners in the classroom depends greatly on the dedication and of an effective teacher.

DISCUSSIONS

The results showed that the need for more Teacher Development Program should always be given priorities in order to increase the level of performance of teachers in teaching Mathematics. The improvement of learners' performance specifically in Mathematics depend greatly on the level and competencies of teachers. An intensive development program for teachers will surely give additional input or information to teachers on how pupils or learners learn the right way.

KEYWORDS: competency, competent teachers, teacher development program, teaching

SUBMISSION ID: R04A-BATANP-0853

Effect of Distributed Practice Testing on the MPS in Mathematics of Grade Ten Students of Rosario National High School

Beverly Gloria, Department of Education

Abstract

INTRODUCTION

The National Achievement Test (NAT) is an examination given annually to assess the competency of both private and public students. The students' knowledge and skills are tested in the subjects Mathematics, English, Science, Filipino and Araling Panlipunan in high school. The test is administered by the Department of Education's National Education Testing and Research Center (NETRC). The results are intended to guide the Department of Education in its efforts towards the improvement of the quality education in public schools to provide appropriate intervention for the students.

METHODS

The study employed a quantitative approach in obtaining data from the effects of distributed practice testing in the improvement of the NAT results of grade ten students in mathematics. The two groups' random selection pre-test post-test experimental design of the research was also used in this study. The participants of the study were Grade 10 student at RNHS during S.Y. 2016 - 2017. To be able to determine the outcome of research purpose all data gathered before, during, and after experimental period were tallied and statistically treated using Percentage Mean, Standard Deviation, Testing the Difference Between Two Means, and t-test.

RESULTS

The study reveals that the level of performance of the students in the pre-test of control and experimental group are both below average, and the students have the same understanding in the lesson before DPT is applied. There is no significant difference noted between the pre-test of control and experimental group. Most of the students in the control and experimental group passed the post-test, but the experimental group has a higher percentage of passing than the control group. Based on the level of performance of the experimental and control group after the pre-test and post-test, it was shown that both the traditional method and application of DPT method has an effect on their MPS in math. A significant difference was noted on the level of performance of the students before and after DPT. This indicates that the DPT method has an effect on the MPS of Grade 10 participants in mathematics achievement test.

DISCUSSIONS

The results establish a great impact in the kind of teaching strategy and methodology teachers are employing in teaching Mathematics, whether it is in traditional or in DPT method, still the results will vary during the administration of examination given to the students depending on the type of test to be administered.

KEYWORDS: National Achievement Test, MPS

SUBMISSION ID: R04A-CAVITP-0204

Effectiveness of Bilis - Talas Program in Improving the Numeracy Rate of Primary Pupils of Mariano C. San Juan Elementary School for SY: 2017-2018

Christine Dionisio, Department of Education

Abstract

INTRODUCTION

The study aimed to determine the effectiveness of Bilis- Talas Program in improving the numeracy rate of primary pupils of Mariano C. San Juan Elementary School for SY: 2017-2018. They were described in terms of sex, age, economic status and with their numeracy skills in basic facts of the four fundamental operations in mathematics. The goal of the study was to determine the effectiveness of Bilis- Talas Program in improving the numeracy rate of primary pupils of Mariano C. San Juan Elementary School for SY: 2017-2018

METHODS

This study made use of the descriptive survey method of research to attain its main purpose. Descriptive survey method is appropriate for the study since the aim is to determine the effect of Bilis-Talas Program in increasing the numeracy rate of the grade one to three pupils of Mariano C. San Juan Elementary school, School Year: 2017-2018. The study also used the quantitative method so this method is suited to this study since this focuses on the relation of the pre-test and post-test of the DD Cards administered to the pupils to determine the effect of the Bilis-Talas program.

RESULTS

The study found out that the program was found effective and useful as there was an increase in the numeracy rate of each grade from grades one to three. With that, the researcher believes that if the program will be implemented again on the next school year, non-numerates will be lessened if not totally eradicated.

DISCUSSIONS

Based on the findings, the study concluded that the pupils' age, sex, and socioeconomic status affects the performance of pupils involving the basic facts on the four fundamental operations. It also depicts that socioeconomic status of the pupils had something to do with the performance of the pupils. Pupils in low level based on their socio-economic status found to perform less in doing the DD Cards or the Bilis-Talas Program. They were not able to finish it on time. But as the program was continuously done, they gradually improved their performance. The program was found effective and useful, such that there was an increased in the numeracy rate from grades one to three.

KEYWORDS: Bilis -Talas Numeracy Mariano

SUBMISSION ID: R04A-RIZALP-0479

Effectiveness of Contextualized Learning Module for Grade 5 Mathematics

Novelle Samotia, Mamatid Elementary School

Abstract

INTRODUCTION

Pursuant to Republic Act 10533, Enhanced Basic Education Act of 2013, Section 10 of paragraphs d and h, the curriculum shall be contextualized and global and shall be flexible enough to enable and allow schools to localize, indigenize, and enhance the same based on their respective educational and social contexts. In the school where the researcher recently teaches, the students manifested varied types of difficulties in the different learning areas in Mathematics which prompted the researcher to conduct a study on the learning difficulties of the Grade 5 students from which might be designed a contextualized learning material that would enhance Mathematics instruction through minimizing the students' learning difficulties.

METHODS

The quasi-experimental research design was utilized. Two heterogeneous classes were used and they underwent a proportional random sampling technique. There are students exposed to teaching mathematics with the aid of contextualized learning module (experimental) and students exposed to conventional learning material (comparison). The data gathered from pretest, summative tests and posttest of the respondents were treated using mean, standard deviation, independent and paired t-test.

RESULTS

Based on the result of summative tests, experimental performed better than comparison; the posttest performance of the two groups significantly different from each other, the experimental performed better than comparison; both learning materials yielded a significant improvement on mathematics performance of the students. In spite of this, the higher mean gain score of the experimental than the comparison confirmed that the students who were subjected to contextualize learning module in teaching mathematics perform better than with those subjected to the conventional learning material.

DISCUSSIONS

The better performance of the experimental group could have been the result of an increase in motivation and decrease inhibitions while learning since modular instruction presents students with real-world scenarios that allow them to practice what they know and gain valuable hands-on experience. The success of the use of contextualized learning module in increasing student achievement may have resulted from the application of the principle "Learning by Doing" and what has been called local knowledge. Further study on contextualization to learning to test the effectiveness using a bigger sample or different grade level to verify the result of this study and may be done in other settings.

KEYWORDS: learning material, contextualized learning module, contextualization

SUBMISSION ID: R04A-CABUYA-0021

Effectiveness of Contextualized Learning Module in Basic Calculus for Senior High School

Israel Sandagon, Ungos National High School Extension-Llavac

Abstract

INTRODUCTION

Instructional materials have a significant role to help students understand and explore their lessons better. Although the teacher is the most effective instrument, they are on limited time when it comes to teaching. In addition, resources are limited. Consequently, the implementation of the new K to 12 curriculum lacks books and other materials to be used in teaching. This quasi-experimental study aims to determine the effectiveness of the use of contextualized learning module in Basic Calculus for Senior High School.

METHODS

The experimental groups were taught with the use of contextualized learning module. Four sections were randomly selected from the Science and Technology, Engineering and Mathematics strand from the Colegio de San Juan de Letran-Calamba City, Laguna. It composed of 150 Grade 11 students and 2 Basic Calculus subject teachers. Two sections became the experimental group and two were comparison group for the conduct of the Solomon four-group design. The student-respondents' diagnostic, formative test and summative test were differentiated.

RESULTS

The mean percentage score on the diagnostic test of the experimental group and comparison group has no significant difference ($p=0.051$) with 69.83 or interpreted as "Did not Meet Expectation" (below 75%). The mean percentage score informative test of the groups has a significant difference ($p=0.008$) with 89.23% or "very satisfactory" (85-89%). In addition, there is a significant difference in the summative test with less than $p=0.005$ was 75.77% or "fairly satisfactory." Lastly, there is a significant difference between the diagnostics and summative tests mean scores of the students who take the diagnostic test.

DISCUSSIONS

The result reveals that the use of contextualized learning module and teaching without the module in teaching Basic Calculus is effective although the use of contextualized learning module is better than teaching without using the module. Therefore, it is a significant improvement over textbook drill practice and use of contextualized learning module in Basic Calculus for Senior High School is effective. The development of contextualized learning module across the educational landscape and the enhancement of teachers' competencies are highly recommended for the authentic and holistic students learning experiences.

KEYWORDS: Education, Contextualized Learning Module, Basic Calculus, Senior High School, quasi-experimental design,

SUBMISSION ID: R04A-QUEZON-0049

in Selected Topics in Mathematics 10 on the Alternative Reinforcement Course (Project ARC)

Ailyn Masinsin & Mc Carlo Trinidad, Pililla National High School

Abstract

INTRODUCTION

Mathematical competency is of prime importance in everyday life and is necessary for simple but essential tasks. Unfortunately, based on the result of the National Achievement Test from the year 2004 to 2013, the performance of the students has not been satisfactory compared to the other disciplines. Many approaches were utilized to reduce poor achievement, including the adoption of appropriate methods of teaching appears to be more rewarding. The researchers decided to design a module in selected topics in Mathematics 10 that is used for the Alternative Reinforcement Course because they believe that this device will encourage the students to become interested in learning.

METHODS

This study aimed to test the effectiveness of the developed module on the performance of the students in the Alternative Reinforcement Course, so the researchers selected the one-shot experimental method of research since a single group of test units is exposed to an experimental treatment and a single measurement is taken. All data collected was evaluated through quantitative analysis.

RESULTS

The level of performance of the student-respondents on the selected topics in Mathematics 10 has a big improvement, from Poor/ Fair performance to Very Satisfactory as revealed by the computed mean. When it comes to the level of effectiveness, teachers evaluated the developed module as "Very Much Effective" and students also evaluated the same material and gave the same interpretation of "Very Much Effective". This explains that the developed module is very much effective. And the overall findings revealed that the performance of the respondents on the selected topics in Mathematics 10 has increased as revealed by their pretest and post-test scores.

DISCUSSIONS

The study concluded that the developed module for alternative reinforcement course developed the performance of the struggling grade 10 students and bridged the gap of the students learning; The resemblances in the evaluation on the level of effectiveness concluded that the applicability and effectiveness of the module can be used in teaching Mathematics subjects; as revealed by the pretest and posttest result, the use of module in teaching Mathematics 10 is sufficient to enhance the performance of the students.

KEYWORDS: Effectiveness, Developed Module, Performance, Reinforcement Mathematics, Secondary, Teaching, and Learning

SUBMISSION ID: R04A-RIZALP-0059

**Effectiveness of Embedded Multimedia on the Mathematical Performance
of the Grade Three Pupils in Kalinawan Elementary School, District of
Binangonan II**

Jovelle Cruz, Department of Education

Abstract

INTRODUCTION

Today's students are immersed in a variety of technologies even from a young age. Although it has been claimed that the students inhabit a much different world than in the past has been made throughout history, it is particularly true in this century. From a young age, today's children are already exposed to computers, the Internet, social networking sites, instant messaging, and cellular phones that provide communication that is instantly available locally and globally. The research was designed to improve the performance of Grade Three pupils in Mathematics with the use of embedded multimedia in teaching. In the recent First Periodical Test result given last August 2018, the pupils had low MPS with 75.73 in Mathematics. The purpose of the study is to find out the effectiveness of embedded multimedia in teaching Mathematics.

METHODS

The study used the Experimental Method of Research. A pre-test before the exposure to the instructional materials and post-test after the exposure to the instructional materials, consisting of forty (40) items of multiple choice, comprehension; application and matching type were used. To find the significant difference between the pre-test and post-test scores of the controlled and experimental group, independent t-tests.

RESULTS

The control group obtained a mean score of 31.13 in the pre-test with the verbal interpretation of Satisfactory. Similarly, the experimental group obtained a satisfactory performance in the pre-test with a mean score of 31.3. The computed standard deviation of 8.33 and 8.0 respectively revealed that there is a different level of learners on the group. The post-test the control group obtained a mean score of 33.83 verbally interpreted as Satisfactory. Likewise, the experiment group obtained a mean score of 41.43 and interpreted Very Satisfactory. The computed standard deviation of 8.42 and 8.25 indicate that the score of both groups is dispersed. The performance of the experimental in the Pretest the computed t-value of 2.015. This is greater than the tabular t- the value of 1.68 at .05 level of significance. There is a marked improvement in the performance in Mathematics of the pupils after they were taught with the embedded multimedia in Mathematics. This showed that the pupils comprehended and learned better.

DISCUSSIONS

There is a marked improvement in the performance in Mathematics of the pupils after they were taught using the embedded multimedia in teaching Mathematics. This showed that the pupils comprehended and learned better.

KEYWORDS: Embedded, multimedia

SUBMISSION ID: R04A-RIZALP-0307

Effectiveness of Prezi-Based Instruction on the Academic Performance in Geometry of Grade 10 Students: Development of Learning Package

Geraldine Elomina, Gen. Emilio Aguinaldo National High School

Abstract

INTRODUCTION

The potential of technology to support the teaching-learning process has created important implications for educators. However, technology alone will not improve education, it is how they are used in the classroom that will. Since Prezi is an emerging technology at present, few empirical studies have evaluated its instructional effectiveness. In this study, it was confirmed that Prezi-based instruction in teaching geometry is effective in improving the academic performance of grade 10 students.

METHODS

The quasi-experimental design was employed in this study. Two intact heterogeneous classes of the researcher out of four were randomly selected. These were grouped as experimental and control using draw lots method. Thirty students were selected in each class as respondents based on matched pairing technique of their average in Mathematics 9. In the conduct of the study, both groups were used the same lesson content. However, the experimental group was exposed to Prezi-based instruction while the control group was taught using the conventional teaching method. Pretest and posttest that composed of 40-item were administered to both groups.

RESULTS

The pretest results of both groups showed that students have the same baseline of knowledge in geometry, while the posttest revealed that there was an improvement in the performance of the samples. Also, the respondents in the experimental group performed better as compared to the other group. Although the conventional teaching method used was also effective in teaching Geometry as revealed of students after the use of Prezi-based instruction.

DISCUSSIONS

The findings of the study in teaching Mathematics subjects, students performed better than the students in the lecture-discussion method. Also, students showed evidence in the learning process that they had become more active in pursuing knowledge with the use of localized Prezi-based concepts and ideas. Finally, students have become engaged and inquisitive in exploring geometric relationships that can be used in solving mathematical problems. It was recommended that school administrators should encourage teaching innovations that will lead to quality education especially in science and mathematics.

KEYWORDS: Prezi-based instruction, Technology, Geometry, Academic Performance

SUBMISSION ID: R04A-IMUSC1-0065

**Effectiveness of Project SMILE on the Academic Performance in Algebra
Subject among Grade Seven Students in Gen. Vito Belarmino National
High School**

Auldy Rose Cortez, Gen. Vito Belarmino National High School

Abstract

INTRODUCTION

Teaching Algebra in the 21st-century learners is not about manipulating numbers and letters in an equation that does not make any sense but rather understanding the operations and processes. Also, an effective and efficient teacher involves the application of creative and innovative teaching strategies that will help their student motivation and meet individual needs. In this project, we will know what teaching approaches are suited and will help the learners learn easily and be able to develop their achievable goal that will increase the academic performance in Algebra. This study aimed to determine the significant effect of Project SMILE on the Academic Performance in Algebra among Grade Seven in General Vito Belarmino National High School.

METHODS

The pretest and post-test true experimental quantitative research design was used. There were 120 participants or 40 students per section selected using proportionate stratified random sampling techniques who perform fairly satisfactorily and did not meet expectation in Algebra subject. A researcher-made test in Algebra for Grade Seven was administered as pretest and post-test intervention. Mean and Standard Deviation was utilized to determine the pretest and post-test score, ANOVA, Tukey HSD, and t-test were also employed to determine the significant difference before and after the project SMILE intervention.

RESULTS

Results revealed that the majority of the three groups of individual, small group and the whole group performed fairly satisfactory before the intervention. After the intervention, those who exposed to small group instruction performed outstanding, while the whole group performed satisfactorily and individually performed did not meet the expectation. Moreover, there is a highly significant difference and relationship before and after project SMILE was administered.

DISCUSSIONS

The findings reveal that small group activity significantly contributes to enhance the academic performance in Algebra subject of Grade Seven students and to ignite their interest to participate and submit pertinent requirements on this subject.

KEYWORDS: Project SMILE, Effectiveness of SMILE, Algebra Check

SUBMISSION ID: R04A-CAVITP-1472

**Using Mental Technique in Solving One-Digit Divisor By Multiple-Digit
Dividend to Improve the Computational Skills of Grade 3 Pupils of
Binakayan Elementary School**

Ma. Rosalyn Pagtakhan

Abstract

INTRODUCTION

Division is an algorithm that is simply following a series of rote rules. But pupils in the elementary struggle to answer it. Teachers have long been teaching long division as a bunch of steps. Some kids are capable of doing it and get through long division without difficulty, though few, if any, give any thought to why any of it works. The same dilemma was experienced by Grade Three, section Mansanas of Binakayan Elementary School and the teacher felt the urgency of addressing the problem since the knowledge on long division has to be mastered being one of the basic operations in Mathematics.

METHODS

A. Population

The respondents of the study were selected pupils from Grade Three -Mansanas of Binakayan Elementary School, Municipality of Kawit, Division of Cavite for school year 2016-2017.

B. Data Collection

A permission was asked from the principal to administer the action research through a letter. A 20 item pre-test was given to measure the respondents' computational skill in Division using long method having modified D3 as material. The respondents answered it for 45 minutes in a complete solution using paper. The statistical treatment used was Mean and Standard Deviation.

RESULTS

a. Test Material Used (modified D3)

SUBMISSION ID: R04A-CAVITP-1369

**Effectiveness of Strategic Intervention Materials in Teaching Mathematics
for Grade Six Pupils in Bugarin Elementary School District of Pililla,
Division of Rizal**

Are-Pee Castalone, Teacher

Abstract

INTRODUCTION

One of the integrated systems of education in Mathematics instruction; it is one of the various aspects that need to be given emphasis because mathematics is considered as a major and difficult one. Mathematics is a complex subject. The tendency for most students is to consider the subject as one that is boring, thus, creating lack of interest in the topic being discussed. Especially in the primary and intermediate level, wherein a good study habit and a firm grasp of basic concept should be developed.

METHODS

The experimental research design was used. A pretest and posttest were used as main instruments in determining the level of performance in Mathematics of the two groups of respondents, the experimental and control groups. This was administered to the respondents before and after using strategic intervention materials and the traditional method in teaching Mathematics. The experimental group was exposed to strategic intervention materials, while the control group was exposed to the traditional method. Likewise, the experimental research design was utilized in this study to determine the effectiveness of strategic intervention materials in teaching Mathematics.

RESULTS

The study found out that there are more male respondents than females. The majority belong to low-income families with the average grades of 80-84. Grade six pupils obtained a satisfactory performance in the pretest and posttest. Performance in Mathematics of the experimental group in the pretest and posttest differs significantly. There is a significant difference between the performance in mathematics of the experimental group in the pretest and posttest. Performances in Mathematics of the two groups of respondents differ significantly as revealed in the posttest. Performance of the grade six pupils reveals that there is no significant difference when they grouped according to age, sex, sibling position, monthly family income, and academic performance on the performance of pupils.

DISCUSSIONS

The study concluded that pupils' performance in Mathematics improved after exposure to strategic intervention materials. Pupils exposed to strategic intervention materials have better performance in Mathematics than those pupils exposed to the traditional method of teaching as revealed in the posttest. And age, sex, sibling position, monthly family income, and academic performance are not determinants of the performance of pupils in Mathematics.

KEYWORDS: Strategic Intervention Materials, Academic performance, Mathematics Instruction, Pretest, and Posttest.

SUBMISSION ID: R04A-RIZALP-0045

Effectiveness of Teaching Support Materials to Students' Mathematics Performance

Ruel Ala-An, GNHS

Abstract

INTRODUCTION

The DepEd Surigao del Sur Division Memo. No.23, s. 2016, known as the Enhancement Training on Contextualization of Secondary Learning Materials, mandates math teachers to create local-based activity sheets based on the least-learned competencies of the students every quarter. The training aims to empower teachers to contextualize learning materials to alleviate low achievement. This conceptualization and localization of teaching materials are based on the alarming rate of the MPS which is 28.26% accompanied by the ML of 56.52% in math for the SY 2016-2017. The teacher must seek quick and efficient solutions to alleviate the present condition by crafting a supplementary material for teaching that aims to improve respective subject MPS.

METHODS

The study utilized a pre-test-post-test experimental research design. The test questionnaires used in the conduct of quizzes in the standardized test were based on the K-12 Curriculum Content and Standards of the 2nd quarter. The test questionnaires were validated and checked according to the contents of the curriculum standards. Using the simple random sampling, the experiment had 30 respondents and in the control with 30 respondents. Data were tallied and subjected to statistical analysis such as Weighted Mean, ANCOVA, and ANOVA.

RESULTS

It can be depicted that students under the experimental group using the supplementary teaching materials have low mean scores on the pretest and increased on the conducted post-test. It emphasized that the utilization of TSM among experimental group contributed to the increase in the students' scores. The mean gained scores of the students from the 2 teaching methods significantly differ with an F-value of 6.976 and a p-value of 0.011 ($p\text{-value} < 0.05$). This means that the null hypothesis that was earlier stated is rejected. The f-value of 6.326 and a $p = 0.017$ ($p < 0.05$), means that there was an interaction effect between the achievement of students when exposed using the 2 methods and when grouped according to their pretest scores.

DISCUSSIONS

Teaching methods have something to do with the performance of the students when those students will be grouped either in the upper group or lower group. The retention scores of the students are not dependent on the type of teaching methods used in the study. The use of teaching support materials can help improve students' achievement in math 8, thus it is recommended that math teachers integrate the use of the teaching support materials as tools in honing students to perform better in the subject.

KEYWORDS: Effectiveness, Teaching Support Materials, Conceptualization, Localization, Student's Performance.

SUBMISSION ID: R013-SURSUR-0201

Effectiveness of Worktext in Teaching Grade Seven Mathematics Students

Maredy Melo, Department of Education

Abstract

INTRODUCTION

Teachers believe that the utilization of instructional worktext could be one effective means of addressing the difficulty since it enhances knowledge, thinking skills, problem-solving abilities of all students, as well as incorporate recent advances in disciplinary content (Nicoll, 2008). However, the issue of lower than expected mathematics achievement is a persistent worry for education leaders and policymakers. In Jose Sanvictores Sr. National High School between 2013 and 2016, there has been no significant change in NAT results. To this result, the researcher found out that the students are experiencing difficulty in mathematics subjects, particularly in Mathematics 7 as usually reflected in their scores. With this problem, the researcher sought to find out if the use of worktext in teaching mathematics enhances the academic performance of the students in grade 7 mathematics.

METHODS

This study used the pre-test and post-test noncomparative quasi-experimental design to determine the implications of the strategies in teaching mathematics to students' academic performance in their mathematics subject. This design is the same as the Classic Controlled Experimental Design except that the respondents cannot be randomly assigned to either experimental or control group, or the researcher cannot control which group will get the treatment. In other words, participants do not all have the same chance of being in the control or the experimental group, or of receiving or not receiving the treatment.

RESULTS

There was a significant difference in the achievement of students in Mathematics Seven when taught using worktext and without using work text as teaching approaches. There was a significant difference in the achievement of students in Grade Mathematics when taught using the two teaching approaches and when grouped according to their Mathematical Level. There was a significant interaction effect in the achievement of the students when they are exposed using two teaching approaches and when grouped according to their mathematical level.

DISCUSSIONS

During the conduct of the study, it was observed that students who were taught using the worktext showed inclination upon receiving the worktext since they used the instructional material such as worktext as their primary tool in the learning process. Moreover, the students in the experimental group could study the lessons in the worktext repeatedly and made them obtain a significant increase in their mean score.

KEYWORDS: worksheets in mathematics

SUBMISSION ID: R013-SURSUR-0055

Effects of Math E-Blended Instruction on Grade 10 Students' Performance and Attitude Towards Geometry

Juvi Mula, Trece Martires City Senior High School

Abstract

INTRODUCTION

Today's society is one where progress in science and technology has led to a vast accumulation of knowledge. There is so much that is being discovered, rediscovered, invented, improved upon, changed that it is practically impossible to know everything there is to know. A student today is faced not only with a barrage of data, facts, and information but also with multiple and diverse choices and the different problems that accompany progress and development. Since one of the main functions of school is to provide students with skills they will need to better adapt to the environment, an important goal for schools would be to increase student's ability to recognize problems and their causes, to come up with alternative solutions to problems, to demonstrate flexibility and creative in thinking and in problem-solving, and to assume a certain amount of responsibility for problems they encounter.

METHODS

The quasi-experimental method of research was used in this study using the pre-test and post-test design. It involved two groups of respondents who were each subjected to the control group and the experimental group. The respondents have been randomly assigned between the groups, and the researcher only tested one effect at a time. In this research, a control group performance rating was compared to an experimental group performance to test the comparability.

RESULTS

The null hypotheses of no significant difference in the performance and attitude towards Geometry of the control and experimental groups before and after the experiment were rejected. This result revealed that students in the experimental group have higher performance and have a more positive attitude towards Geometry before and after the experiment. The comparison of the performance and attitude towards Geometry before and after the experiment making adjusted reading comprehension as the covariate.

DISCUSSIONS

The study revealed that the application of e-blended instruction improved the performance and attitude of the students towards geometry. In line with this, the researcher recommends the following: The school administrators should provide a venue for teachers to learn and practice the use of e-blended instructions. Likewise, mathematics teachers should be updated on the current trends in teaching so as to maximize the benefits of learning to the students. Lastly, future researchers should make a study on e-blended instructions to other mathematics subjects and other disciplines as well.

KEYWORDS: e-blended instruction, geometry, high school students

SUBMISSION ID: R04A-CAVITP-0081

Effects of Student-Initiated Questions on Reasoning Ability and Geometry Achievement

Benjie Buendicho, Department of Education – Laguna

Abstract

INTRODUCTION

This study used a quasi-experimental design to determine if there is a significant difference in the reasoning ability and geometry achievement of high school students who are deliberately taught to ask questions and answer them (experimental group), compared to those who are taught in the conventional way of teacher-posed questions (control group). Their level of ability to ask questions at the beginning and at the end of a 5-week experimental period was examined.

METHODS

Two average sections in a typical high school in Laguna were randomly assigned as experimental and control groups. Data analysis only included participants who were able to take all the tests. The final research sample consisted of 63 males and 53 females. Three instruments were used: A Questioning Skills Test; a Geometry Achievement Test and a Reasoning Ability Test. These instruments underwent content validation, item analysis, and reliability testing to ensure stability. Levene's test was used to test the two groups' equality of variances, while, t-test for independent means assessed their comparability. After the intervention, the t-test for independent sample means examined the significance of the differences between the two group's reasoning ability, geometry achievement, and questioning skills.

RESULTS

Before the intervention, participants in both groups were either not able to write questions, or their questions were unclear and incorrect. After the intervention, the questioning skill levels of the Teacher-Posed-Questioning (TPQ) Group and the Student-Initiated-Questioning (SIQ) Group were raised to factual and conceptual levels, respectively. Furthermore, SIQ had a significant positive effect on the students' questioning skills and reasoning ability. However, no significant difference was found in the two groups' geometry achievement.

DISCUSSIONS

Teacher-Posed-Questioning and Student-Initiated-Questioning strategies raised students' level of questioning skills to factual and conceptual levels, respectively. Student-Initiated-Questions affect the level of students' questioning skill and reasoning ability. Gagnon & Collay (2001) says that giving students a chance to formulate different levels of questions engage them in thinking activity that affects their quality of thought. Nowadays, mathematics classroom must focus on developing learners' questioning skills to help realize the twin goals of Philippine K to 12 Mathematics Curriculum, the development of their problem solving and critical thinking skills.

KEYWORDS: Questioning Skill, Reasoning Ability, Geometry Achievement, Mathematics Education

SUBMISSION ID: R04A-LAGUNA-0013

E-Games: An Intervention Tool to Boosts the Numeracy Mastery Level of Grade Six Pupils at Laurel Central School

Nieves R. Opeña, Filipino

Abstract

INTRODUCTION

Laurel Central School, true to its vision of providing quality education to its clientele, conducted a numeracy test to the pupils enrolled on grade six. The said test was given to the grade six pupils enrolled in (3) sections. To measure the pupil's enrolled in the scale of 0- 4 for non-numerate, 5-7 for instructional and 8-10 for numerate, the following are the significant findings. Out of 110 pupils, there were 91 or 82.73% belonged to non-numerate level, 17 or 15.45% were classified as instructional learners, and 2 or 1.82% were categorized as numerate learners.

METHODS

E-games, as agreed by the mathematics mentors of Laurel Central School, was an intervention tool of assessment adopted by grade six of Laurel School to help students improve their numeracy skills. This intervention tool was designed to respond to the results of the numeracy test administered to grade six pupils during their first week of classes for the school year. It was one strategy suggested by the researcher during the meeting of the grade six mathematics teachers with the school principal, subject coordinator and research coordinator. As the name suggests, e-games provided the grade six students an additional opportunity to gain supplementary knowledge, values, and skills in mathematics which was acquired during Mathematics class.

RESULTS

That upon the first week of classes in Laurel Central School, the majority of the grade pupils were non-numerate. After the implementation of E-games as an intervention shows that 39 or 35.45% grade six pupils became numerate, 63 or 57.27% of pupils became instructional, and 8 or 7.27% remained non-numerate. The variation in the pre-test and post-test scores give in the impression that the grade six students performed better in the post-test which was administered after the implementation of E-games. The t-test results in finding the significant difference in the pre-test and post-test scores of the respondents justified the claim of the researcher that e-games as an intervention tool for grade six was effective.

DISCUSSIONS

The numeracy level of e-games was measured by the researcher through a test is given to the enrolled grade six pupils at Laurel CS. The result of this action research led the researcher to recommend the continued administration of the numeracy test to grade six pupils. Results of numeracy test should be used addressing the pupil's needs in Mathematics. It is also recommended that e-games be continuously utilized as an intervention tool of Laurel Central School.

KEYWORDS: E-game, intervention tool, level of numeracy

SUBMISSION ID: R04A-BATANP-2246

Enhancing Performance of Students with Math Anxiety through the Writing-Out Strategy

Jennylyn Khe, Department of Education – Philippines

Abstract

INTRODUCTION

In today's technological and scientific society, the value of mathematics is highly significant. However, in spite of this, there are still a high number of students who are honest about their dislike of the subject. However, for some, the issue is more than disliking the subject but also could cause negative emotions like fear of failure. This fear is known as Math Anxiety. This study determined the prevalence of Math Anxiety among the three sections of Grade 11 Senior High School students. This research also determined the effectiveness of the Writing out Strategy in enhancing the performance of the students who were identified to be Mathematically Anxious.

METHODS

This research made use of the experimental method since its main purpose was to determine the effectiveness of the Writing out Strategy on the performance of the respondents identified to be mathematically anxious. The Abbreviated Math Anxiety Scale, modified (Mills, 2010) was utilized to determine whether a respondent has Math anxiety. From this, two groups were formed and were subjected to a pre-test. Then both groups were taught by the same teacher, with the same lessons using the same strategy. However, the experimental group was exposed to the writing out a strategy before the execution of the post-test.

RESULTS

From the total sample of 139, 104 respondents were identified to be mathematically anxious. The result of the pre-test among the respondents showed to be below the mastery level of 75% with a little difference in the mean level between the two groups. On the other hand, the results of the post-test in the controlled and experimental group both showed a significant improvement in the performance and are above the mastery level. However, it was also found out that the experimental group which was exposed to the writing out strategy yielded a higher mean score.

DISCUSSIONS

With the justification of the prevalence of Math Anxiety, it would be best that before any intervention should be done, a good assessment and evaluation of the students' status would be a great benchmark for each and every educator in terms of improving the performance of the students. The writing out strategy is also recommended since the results of this study also proved its effectiveness in relieving math anxiety which eventually improved math performance.

KEYWORDS: Math Anxiety, Writing Out Strategy, Abbreviated Math Anxiety Scale, modified (AMAS)

SUBMISSION ID: R04A-LAGUNA-0166

Enhancing Proficiency in Solving Word Problem in Mathematics of Grade Six Pupils at Leon M. Manigbas Elementary School

Lilma Ramos, Department of Education - Batangas

Abstract

INTRODUCTION

Mathematics is said to be part of our everyday life, there is no activity of mankind which does not involve Mathematics. It is also one of the major subjects in the elementary curriculum whose importance is imminent. There are many concepts and skills to be taught in the said subject. Many pupils hate Mathematics due to its difficulty. Nowadays many children find it so hard to learn these concepts and skills. One of the skills in Mathematics which pupils find difficult and taxing is problem-solving. However, it is more than a vehicle for teaching and reinforcing mathematical knowledge and helping to meet challenges.

METHODS

The researcher utilized the descriptive method of research. The rationale on the selection of this method lies in the fact that the study will focus on the problems encountered by pupils in problem-solving in Mathematics. The questionnaires were also used and administered to pupils on determining the common difficulties encountered by pupils. A total of 22 pupils from Grade 6 level from Leon M. Manigbas Elementary School during the stay 2017-2018 served as respondents of the study. All of them ages 11-14 years old and capable of answering the researcher- design questionnaires.

RESULTS

Based on the result of the research, many pupils have difficulties with comprehension, lack of interest in the subject matter, poor study habits, and inability to translate a problem. It was also revealed that the most effective strategy in teaching word problem in Mathematics is the integration of Information Technology in teaching word problem solving, the use of real objects/realia, then peer teaching and 4 A's Activity and TDAR technique. The skills to be developed among Grade 6 pupils are comprehension skills and mastery of the skills in the 4 fundamental operations.

DISCUSSIONS

The teachers should use locally contextualize instructional materials. The teachers should apply the Pedagogical Approaches (2C2I1R) which includes Constructivism, Collaboration, Inquiry-based, Integrative and Reflective approaches in teaching wherein pupils can share ideas. The pupils, should develop leadership qualities so that they may share this expertise in leading other pupils towards the effective performance of, and maximize participation in solving word problems. Remedial teaching is also highly recommended especially to the learners at risk so that they can cope up with the lesson to capacitate their abilities in solving a word problem.

KEYWORDS: taxing, contextualize, questionnaires

SUBMISSION ID: R04A-BATANP-0257

Enhancing the Mathematical Abilities of Grade Four Learners at Pamiga Elementary School

Ruby Ann Reyes & Shirley Sangalang

Abstract

INTRODUCTION

Mathematics is one of the subjects that is taken very seriously in the school system. It has been described as a model of thinking. Despite the recognition accorded to mathematics due to its relevance, pupils' exhibit unwanted attitude towards this subject, even when they know that they need for their everyday living.

METHODS

Descriptive method of research was used that seek the possible ways on how to enhance the mathematical abilities of the grade four learners at Pamiga Elementary School. Descriptive research involves the description, recording, analysis, and interpretation of the present nature, composition or process of the phenomenon. It involves some types of comparison or contrasts and may attempt to discover a cause and effect relationship that exists between non-violated variables.

RESULTS

Many of the Grade 4 pupils think that they don't possess mathematical abilities, Based on the checklist that we had, only 3 of the 18 mathematical abilities presented was given the highest score, which is 1) reads and writes numbers up to hundred thousand in symbols and in words, 2) compare numbers up to 100,000 using relation symbols and 3) orders numbers up to 100,000 in increasing and decreasing order. To support this result, we also presented different study habits and 6% of the study habits were always obtained by the learners, while 9% of them were often practiced, 30% were sometimes and 55% were never.

DISCUSSIONS

In order to enhance and improve the mathematical abilities of the Grade IV learners, teachers or even the school head may have an action plan wherein different interventions in Mathematics can be proposed and implemented. As a support to the interventions, study habits of the learners are required where the involvement of the parents are needed and should be imposed.

KEYWORDS: mathematical abilities, study habits, interventions

SUBMISSION ID: R04A-BATANP-1023/R04A-BATANP-1020

**Factors Affecting the Track Choice on Senior High School of Selected
Grade 10 Students in Camp Vicente Lim Integrated School, SY 2017-2018**

Judea Tagal, CVLIS
(Adviser: Jocelyn Amoyo)

Abstract

INTRODUCTION

Education is the process of learning, understanding, or the acquisition of knowledge, skills, values, belief, and habits that someone gets from studying. It has become a part of our lives, making it the key ingredient to becoming successful in life. Choosing and deciding the track suited for the students never become easy. In this current study, the basis of identifying the factors affecting the student's decision regarding what track to take for Senior High School will be assessed. There are several factors that influence their decision makings, such as their financial status, course availability, and the student's skills. This study aims to assess the factors affecting the chosen track of students in Camp Vicente Lim Integrated School.

METHODS

This study used a descriptive survey method as Research Design. Five percent of the total population of Grade 10 students in Camp Vicente Lim Integrated School were chosen using sample random techniques or fishbowl method. A survey questionnaire was constructed in light of the problems stated and aligned with the information needed in the study. The inventory conducted also used both qualitative and quantitative methods for the data collected concerning the factors affecting the track choice of the students. The researcher used the frequency count and percentage formula to impose all the questions.

RESULTS

After conducting a survey, the researcher found out that the most commonly chosen track of the students in Camp Vicente Lim Integrated School is Technical-Vocational Livelihood (Tech-Voc/TVL). Nevertheless, there were many factors that influenced the decisions of the students, but the researcher focused on the major predictors, which include financial status, course availability, and the student's skill. Based on the summary of findings, most of the students were depending on their skills for choosing the track to take. It only states that the most common factor that affects student's decision in choosing Senior High School track was their skills.

DISCUSSIONS

There are different strands and tracks students can choose from that is aligned with the course they want to pursue in college. Since students are knowledgeable about what each track and strand entails and offers, then there is a chance that they are able to choose the best track and strand for them. Schools should, therefore, offer career guidance and other assistance to help students decide. After all, it's all about preparation and the readiness of students in moving to the next stage in high school.

KEYWORDS: Track choice, Factors, strands

SUBMISSION ID: R04A-CALAMB-0354

Flip Card Drill to Improve the Mastery Level of Grade 7 Archimedes Students of Agsam Integrated School in Adding and Subtracting Rational Numbers

Miraflor Bejante, Teacher 1

Abstract

INTRODUCTION

The Philippine educational system is designed to provide learners with adequate time for mastery of concepts and skills that will enable them to achieve the standards they are capable of. In mathematics, learners need to learn one basic skill at a time and- at their own pace-up to their potential until they have it mastered. Conceptual understanding and applied knowledge build upon each other. Due to mathematics building upon itself, with each new mastered domain opening the door for a developmental understanding of another, students cannot afford to grasp concepts at levels beyond their current understanding. To address the issue, the researcher designed an intervention activity to improve the mastery level of these students in adding and subtracting rational numbers.

METHODS

Descriptive method was used in this research. Analysis as to who were the respondents to be selected was done based on the result of the pre-test conducted. Twenty-one student was identified. Two (2) sources of data were used: the number of correct answers of the identified students during the pre-test and the number of correct answers of the identified students during the post-test to generate possible target respondents for the intervention and level of mastery of the competency through their weighted mean.

RESULTS

After giving the pre-test, 48% were identified as possible respondents because they scored below 75% of the passing score. According to the survey answered by these students, it was found out that the main cause of low mastery level was lack of enrichment activities. They also identified some factors such as lack of conceptual and procedural knowledge, poor retention, and unavailability of learning materials. After the intervention activity provided by the researcher, results showed that there was a significant increase in the average pre-test and post-test scores of these students. Based on the findings, there was an improvement in the students' ability to perform addition and subtraction of rational numbers. They were able to master the concepts and skills necessary in performing addition and subtraction of rational numbers through the enrichment activity given to them.

DISCUSSIONS

The results show that through repeated action and practice learners may master basic concepts and skills that are prerequisite to learning complex mathematical concepts and skills. Students benefit from drills and practice because it deepens their understanding and increases familiarity with concepts.

KEYWORDS: mastery, flip card drill, adding, subtracting rational numbers

SUBMISSION ID: R013-SURSUR-0220

Generalized Solutions for Quadratic Inequalities

Christopher Corder, Department of Education

Abstract

INTRODUCTION

Today, Mathematics is typically not the most preferred subject among students in the Philippines and perhaps in other countries. Based on the study of Gafoor and Kurukkan (2015), one of the reasons why students lose their interest in the subject is complex methods or ways in solving Mathematical problems. The main thrust of this study is to present an easier way of solving certain mathematical problems involving inequalities. Inequalities are one of the topics in Algebra, which is a fundamental subject in basic education. In one way or another, it may contribute to the development of mathematics by solving the generalized solutions for quadratic inequalities and providing an easier method.

METHODS

The researcher used an inductive reasoning method to find a pattern to make a conjecture in certain cases. Then deductive reasoning was also utilized in proving the conjecture using sign chart method to assure the generalization of the claim that is true for all. The results are the baseline of new methods of finding the solution set of quadratic inequality. Finally, the researcher used this method and other existing methods to solve some examples involving quadratic inequalities and compare the results.

RESULTS

Result 1. The generalized solution for quadratic inequality $(x-r_1)(x-r_2) > 0$ where $r_1 < r_2$ and element of real numbers is $\{x \in (-\infty, r_1) \cup (r_2, +\infty)\}$ however if $(x-r_1)(x-r_2) = 0$ the solution set is $\{x \in (-\infty, r_1] \cup [r_2, +\infty)\}$. Result 2. The generalized solution for quadratic inequality $(x-r_1)(x-r_2) < 0$ where $r_1 < r_2$ and element of real numbers is $\{x \in (r_1, r_2)\}$ however if $(x-r_1)(x-r_2) = 0$ the solution set is $\{x \in [r_1, r_2]\}$.

DISCUSSIONS

Since the solution set for quadratic inequalities was generalized, the method of solving for quadratic inequalities will be shortened and easier, for instance, Step 1. Determine the distinct roots of quadratic inequality. Step 2. Determine the intervals $(-\infty, r_1)$, (r_1, r_2) , and, $(r_2, +\infty)$. Step 3. If $(x-r_1)(x-r_2) > 0$ based on result 1, the solutions set is $\{x \in (-\infty, r_1) \cup (r_2, +\infty)\}$. Also, if $(x-r_1)(x-r_2) = 0$ the solution set is $\{x \in (-\infty, r_1] \cup [r_2, +\infty)\}$. Otherwise if $(x-r_1)(x-r_2) < 0$ based on result 2, the solution set is $\{x \in (r_1, r_2)\}$. Also, if $(x-r_1)(x-r_2) = 0$ the solution set is $\{x \in [r_1, r_2]\}$.

KEYWORDS: Inequality, Quadratic Inequality, Solution Set, Inductive Method, Deductive Method

SUBMISSION ID: R04A-BATANC-0011

Heuristic Approach vs. Polya's Algorithm in Problem-Solving among Grade Seven Students

Geovanni Delos Rey, Secondary School Teacher II

Abstract

INTRODUCTION

Students find it difficult when it comes to solving word problems. They tend to start the solution of the problem and stop midway and end up without any answer or solution. This happens especially when the problem requires more than just the application of a rule or algorithm. This study explored the effectiveness of Heuristic approach against using Polya's algorithm in solving word problems in Mathematics.

METHODS

This study used the pretest-posttest experimental research method utilizing the matched pair design in determining the effectiveness of the heuristic approach and Polya's algorithm. It involves selecting groups, upon which a variable is tested, with a random selection process wherein individuals having the same level of mathematics ability were selected from five sections and grouped into two, the experimental and control group. The experimental group was taught using the heuristic approach in solving word problems, while the control group was taught using Polya's algorithm in solving word problems.

RESULTS

Comparison of post-test means by t-test for dependent samples revealed that the two groups were significantly different as shown by absolute t-value of 2.79 which is greater than the tabular value of 2.015 at 0.05 level of significance. The result shows that the students who were taught using the heuristic approach in solving word problems performed better than those who were taught using Polya's algorithm. It was evident during discussions of word problems in mathematics using the heuristic method that students were very interested and eager to draw the problem and follow a model or pattern in solving it. Since they came from the intermediate level where they were taught Polya's method in solving problems, they found heuristic approach as a new and easy process of solving word problems and as an alternative solution in dealing with difficult problems.

DISCUSSIONS

The result shows that Heuristic approach in solving word problems in mathematics is effective since students taught with it performed better than those taught using Polya's algorithm in solving word problems in mathematics. A heuristic approach in solving word problems in mathematics captures students' interest than Polya's algorithm in solving word problems in mathematics. It is suggested that teachers may adopt Heuristic approach to improve students' academic performance, and researchers may conduct a similar study in other areas of mathematics.

KEYWORDS: heuristic approach, Polya's algorithm

SUBMISSION ID: R04A-QUEZON-0111

Impact of Cooperative Learning and Peer Tutoring to Students who are Experiencing Anxiety in Mathematics

Trixia Ruzia Gacula

Abstract

INTRODUCTION

Students are facing difficulties and experiencing Mathematical anxiety. It's been a burden to mathematics teachers since one of our goals is to uplift the students' confidence when it comes to numbers and problem-solving. Math must be looked upon in a positive way to reduce numbers anxiety. This research determined the creative teaching through cooperative learning and peer tutoring to help students' who experience mathematics anxiety and build up their confidence level in working with numbers.

METHODS

Mathitude Survey was used. A survey conducted to the students chosen in relation to the students' attitude in Mathematics. Then, the participants who had high mathematics anxiety were selected based on the responses from the survey. Data were collected from the four stages: Stage One: Peer Tutoring Model, where each participant have an assigned tutor of their own. The tutor had to give suggestions and provide explanations and check and report the student's works. Stage Two: Cooperative learning Model, where the teacher prepared tasks that will be accomplished in cooperative groups. Stage Three: Observation, was a teacher as the researcher listened, observed, and analyzed the focus groups. Stage Four: The Interview, which was carried out again after the conduct of the research.

RESULTS

The result of this study revealed that the students' mathematics anxiety was reduced when they worked together with their friends. They tried to face and challenge it because they really learned to become better in mathematics in cooperative learning. It makes the students understand their own as well as their friends' learning process. In connection to this, the students have gained self-esteem and confidence in working with mathematics since their anxiety level have been overcome.

DISCUSSIONS

Teachers should encourage students to work cooperatively through peer tutoring because collaboration is useful and able to reduce stress and tension in mathematics learning. However, the creating of peer tutoring and cooperative learning environment for students does not mean that it allows the teachers to escape from their responsibility. The teachers play a very important role as the facilitator and coordinator for the tutoring and cooperative discussing learning activities.

KEYWORDS: cooperative learning, peer tutoring, mathematics anxiety, tutors, tutees

SUBMISSION ID: R04A-CAVITP-0835

Implementation of Numeracy Assessment Tool to Devise Grade 11 Learner's Numeracy Self-Assessment Kiosk

Mindaluz Anciado, Imelda Jonso, Nelfredo Sevilla, & Melanie Torre

Abstract

INTRODUCTION

A numeracy skill among learners is very essential in dealing with different learning areas. Its use should be reflected in how learners can improve their ability to enhance their performance. In the Pre-Test result in General Mathematics subject, the mean percentage score obtained by Grade 11 students is 37.24% showing that a need to provide a solution is necessary. In this study, the use of numeracy assessment tool to assess the learners' capabilities in numeracy was implemented. Competencies with the lowest correct response for written numeracy and speed and accuracy for oral numeracy were explored to assess the performance of the learners.

METHODS

This action research, both quantitative and qualitative in nature, utilized averaging of the number of correct response and mean percentage of the speed of numeracy skills of the respondents. The study utilized thirty randomly selected Grade 11 learners of SHS in Lian in Lian, Batangas. From the seven competencies included in the oral and written numeracy, summaries of data were used in analysis and interpretation and in devising an innovation called Learner's Numeracy Self-Assessment Kiosk. The further interview was done to determine its impact on the learners.

RESULTS

In all the competencies included in the written numeracy, the average number of correct responses for each competency belonged to satisfactory and outstanding. Ranked first in the competencies is Solving Exponential Equation and lowest is Solving Logarithm. The mean number of correct responses for all competencies, which is in the range of eight to ten, showed that the learners are inclined in written mathematical computation. Exhibited in the performance of the learners for the oral numeracy, three competencies with a mean percentage of 65%, 67%, and 42% are in "did not meet expectation" performance. This means that among seven competencies, learners have difficulties in answering mathematical calculations orally in most of the items given. The Learner's Numeracy Self-Assessment Kiosk was found to be beneficial in improving learners' skills in the strategic way of monitoring the learners' performance, in the automatic set-up for summarizing and interpreting the input of the learners, and in measuring the speed in numeracy.

DISCUSSIONS

Both written and oral numeracy skills should be enhanced to obtain a greater level of accuracy among learners through different teaching practices and explorations.

KEYWORDS: numeracy, assessment tool, kiosk, implementation

SUBMISSION ID: R04A-BATANP-0819

The Implication of Interactive Math Notebook (IMNB) on the Academic Performance of Grade 11-ABM Students of Dagatan National High School

Kathrine Beld & Reynaldo Nanson, Dagatan National High School

Abstract

INTRODUCTION

At a young age, children develop fondness in learning Mathematics. When they reach the age of 11 onwards, they somehow think that Mathematics is an obstacle resulting in their poor performance. This study determined the implication of utilizing Interactive Math Notebook (IMNB) on the academic performance of Grade 11-ABM students in general mathematics of Dagatan National High School.

METHODS

The researchers utilized the quasi-experimental type of research that analyzed the before and after results of the teaching strategy in improving the performances of the students in Mathematics. The samples were composed of 14 students that were purposively chosen. The before and after results were compared using a t-test to determine if there is a significant relationship between the scores.

RESULTS

There was an increased mean score of the students, which indicates that there is an improvement in the performance of Grade 11 ABM students in General Mathematics after the administration of teaching strategy. With the computed t-value of 9.8, the teaching strategy was found to be effective.

DISCUSSIONS

The teaching method, which is using Interactive Math Notebook, can be a strategy that can enhance and significantly improve the students' performances in General Mathematics.

KEYWORDS: Interactive Notebook, academic performance

SUBMISSION ID: R04A-QUEZON-0009

Improvement on the Least-Learned Competencies in Mathematics among Grade 8 Students Using Different Strategies

Laarni Rebon, Department of Education

Abstract

INTRODUCTION

Teaching strategies are a combination of instructional methods, learning activities, and materials that actively engage students and appropriately reflect both learning goals and students' developmental needs. Schools improve teaching strategies with the desire to increase performance in examinations. The learning competencies designed by the Department of Education ensure that all students succeed in building college and career readiness; cooperative and discussion approach are used as experimental teaching strategies.

METHODS

The control groups undergo the discussion of teaching Mathematics and the experimental group the cooperative strategy. The research instruments used in the study were the achievement test (used for pre-test and post-test). The statistical treatment used are mean, standard deviation, and t-test for independent samples to compare the pre-test and post-test between the two groups.

Research Design is an overall strategy that chooses to integrate the different components of the study in a coherent and logical way, thereby, individual persons. The quasi-experimental control group pre-test, post-test would consist of two groups, the experimental and control group. These two group constitutes the blueprint for the collection, measurement, and analysis of data, ensuring the researcher will address effectively the research problem.

RESULTS

As the difference of discussion and cooperative group result shows, in the controlled group, a mean difference of 9.63 was observed while 15.67 on the experimental group. A t-stat value of -10.687 was registered based on the pre-test and post-test results of the student in the controlled group. A p-value of .000 attested to the significance of the difference between the pre-test and post-test result of the students in the controlled group.

DISCUSSIONS

Since K-12 Mathematics curriculum is based on cooperative learning theory, teachers are encouraged to prepare more activities that will enhance the cooperativeness of each student and use cooperative strategies to improve the least learned competencies in Mathematics subject.

KEYWORDS: cooperative, improve, encourage

SUBMISSION ID: R04A-LAGUNA-0260

Improving Knowledge of Mathematics Vocabulary among Selected Grade V Pupils at Dacanlao G. Agoncillo Elementary School

Nilda De Torres

Abstract

INTRODUCTION

According to Winsor as cited by Solomon (2009), understanding the mathematics vocabulary can be challenging for students. This can be especially challenging for those students who do not have a firm grasp on the English Language. This study aims to improve student usage of the mathematics vocabulary with more accuracy and fluency both in oral and written communication. Through the use of different strategies, the students will have the chance to be more confident in explaining math problems even if it is oral or written.

METHODS

In this study, the researcher made use of the quantitative method of research with the questionnaire as the main tool in gathering the data. The results were tabulated, analyzed, and interpreted using frequency tables, percentage, and weighted mean. The researcher administered the questionnaires to 50 respondents of the study that were selected through random sampling. The respondents were guided in answering the question by reading aloud of the instruction by the researcher. An intervention plan was crafted based on the result of the study.

RESULTS

It was found out that the Grade V pupils agreed that they find it hard understanding concepts in Mathematics when English is used as a medium of instruction, as revealed with the highest weighted mean of 2.7. The data also revealed that Grade V pupils agreed that their teachers provided drills to increase their retention of Mathematics vocabulary with the highest weighted mean of 3.2.

DISCUSSIONS

The researcher recommended that the teacher should read word problems slowly and carefully several times so that all students can understand the vocabulary used in the problem. Allowing students to act out the word problems and providing them manipulative materials could help students visualize the problem. Making drawings or diagrams will also aid the pupils in better understanding of the mathematics vocabulary used in the problem.

KEYWORDS: firm grasp, quantitative, divulged, tabulated

SUBMISSION ID: R04A-BATANP-0586

Improving Mathematical Skills of Grade V Pupils of Bilogo Elementary School through Collaborative Learning

Janette Mercado & Azenith Talamo, Teacher III

Abstract

INTRODUCTION

Collaborative learning is an umbrella term for a variety of educational approaches involving a joint intellectual effort by student and teachers together. It engages students in challenging tasks or questions. A significant shift away from a typical teacher-centered or lecture-centered type milieu in a classroom. In this regard, the researcher intended the aftermaths of collaborative learning. In this study, the researcher integrates the use of collaborative learning in teaching Mathematics among Grade Five pupils.

METHODS

This study used a descriptive type of research; the researchers include all Grade v pupils no sampling technique was utilized. A lesson plan was used as a guide in the presentation of topics. Written and practical tests served as the main data gathering instrument in this study. Frequency, percentage, and ranking were the statistical treatment used to tabulate the data gathered.

RESULTS

Collaborative learning activities immerse students in challenging tasks or questions and help create new ideas to develop higher-order reasoning and problem-solving skills. Majority of the respondents had high performance in addition and subtraction using collaborative learning. In this note, collaborative learning can be applied in teaching addition and subtraction of the whole number.

DISCUSSIONS

The results demonstrate that collaborative learning is a useful tool for better Mathematics classroom management. It is also an active strategy in teaching pupils to arouse their interest in Mathematics

KEYWORDS: Assessment, Collaborative learning, game-based learning, Mathematics

SUBMISSION ID: R04A-BATANP-0990

Improving Mathematics Performance in Code M4 NS-Ic 43.7 through Stick Multiplication

Teodora Alumo, Department of Education

Abstract

INTRODUCTION

The study was conducted to determine the effectiveness of using stick multiplication method in Mathematics Code M4NS-Ic 43.7.

METHODS

The Static-Group Pretest-Posttest Design was used to answer the problems in the study. The comparison group was exposed to the traditional method, while the experimental group was exposed to stick multiplication method. The pretest and posttest were administered to both groups.

RESULTS

1. Both groups' pretest performance was in the level of Poor (P); 2. There was no significant difference between the pretest result of the comparison and experimental group; 3. The posttest performance of the comparison group was Fair (F) while the experimental group was Excellent (E); 4. There was a significant difference in the posttest result between the comparison and experimental group; 5. a.) In the comparison group it revealed that there was no difference in the improvement of pretest and posttest result of the comparison group; b.) In the experimental group, it gleaned that there was a significant difference in the pretest and posttest scores.

DISCUSSIONS

Stick multiplication is more applicable to millennial pupils because it is more visual than following the long step by step process of multiplication.

KEYWORDS: Stick Multiplication, Pupil Performance

SUBMISSION ID: R04A-CAVITP-0906

Improving Mathematics Solving Skills through Problem-Solving Activities

Jolan Dela Cruz, Department of Education

Abstract

INTRODUCTION

The purpose of this action research is to improve the Mathematics problem-solving skills of our pupils in grade 5 who are having difficulties in reading and analyzing mathematics word problem. We keep on findings some solutions and strategies on how to help our pupils to improve their mathematics problem-solving skills.

METHODS

This action research utilized output-based design in order to solve the difficulty in problem-solving. Provide unlocking of difficulties through vocabulary development before the beginning of the Math class. Establish a tutor-tutee relationship in reading comprehension and problem-solving wherein good pupil tutors a slow classmate assigned to him. Substitute large numbers by simpler numbers and use them instead of what is given in the problem. Problems can also be restated in much simpler terms. Evaluate pupils' progress through problem-solving exercises. Develop the pupils' techniques in solving word problems. Make representation of objects so they will be able to visualize the problem clearly. Another technique is to translate the problem into a dialect most understood by the students.

RESULTS

The progress of the summative test result of 10 pupil-respondents is average. Out of 20 items, 12.1 was the average scores of the respondents in summative test 1. Then an average score of 12.6 out of 20 items in the summative test 2. Lastly, 14.2 out of 20 items was the average scores for the summative test 3. Moreover, an average score of 24.6 out of 50 items from a periodical test taken by the pupil-respondents. From the results of summative test and periodical test of the ten Grade, 5 pupil-respondents was below average although there was a progress from the first summative test up to the periodical test given by their Mathematics teacher during the school year.

DISCUSSIONS

By the end of this action research, pupils improved their limited vocabulary words in Mathematics, enhanced their problem-solving ability, and developed techniques in solving word problems. Extensive training programs, seminars, and workshops should be organized by the educators of Mathematics in elementary schools to employ problem-solving methods in the classroom. Educators of Mathematics in elementary schools should be trained to use problem-based learning approach for the 21st-century pupils.

KEYWORDS: problem-solving, Mathematics, Research

SUBMISSION ID: 04A-LAGUNA-0183

Improving Skills in Solving Word Problems by Enhancing Reading Comprehension Skills of Grade Vi Pupils in Bancod Elementary School

Teresa Rodi, Department of Education - Bancod Elementary School

Abstract

INTRODUCTION

The problem-solving process is defined as a complicated process requiring the use of multiple skills together. It is thought that the first and key step in problem-solving is reading comprehension. As a public-school teacher of sixth-grade mathematics for eight years in Bancod Elementary School, I have encountered pupils who are poor in both comprehending and analyzing math word problems. Specifically, in my 2018- 2019 class, only 7 out of 37 pupils could successfully solve word problems with or without help from the teacher. The rest is needed to be guided to understand the problem. Approximately 80% find it hard to picture the situation indicated in the problem they are trying to solve. Some pupils would even ask the meaning of a certain word in the problem. When they have understood it, it is only then that they fully grasp the situation pictured in the problem. Obviously, the bane of these pupils is the understanding of the contents of the math problems correctly and connecting the ideas expressed in it to fully grasp and find a way to successfully solve the problem.

METHODS

The action research aimed to improve skills in solving Mathematical word problems through enhancing reading comprehension skills of 30 out of 37 or 81.08% of Grade VI pupils of Bancod Elementary School S.Y. 2018-2019 throughout the five-month time period. The following interventions and strategies were utilized in teaching problem solving: (1) enhancing vocabulary (2) develop reading comprehension skills (3) analyze and solve word problem.

RESULTS

After the implementation of the project, the number of pupils who are needed to be guided to understand and solve Math word problems was reduced from 81.08% to 43.24%. The result also showed that there are still some pupils who need to be guided or need more intervention materials to fully grasp and find a way to successfully solve the problem.

DISCUSSIONS

To conclude, the following observations in the study contributed to the success of the project: Enhancing vocabulary by a tutor-tutee relationship wherein good pupil tutors or teaches slower pupils; developing vocabulary before the beginning of the math class, establishing classmate assigned to him in areas of understanding mathematical keywords; and providing interesting and challenging vocabulary activities involving mathematics vocabulary, such as contests and games. Developing reading comprehension skills by identifying the keyword/s used in the problem, providing interesting and challenging vocabulary activities involving Math vocabulary, using object representation or illustration to visualize word problems, restating the problem in simpler terms. Analyzing and solving word problems by knowing what is asked for in the problem, choosing the required information among the data, thinking the operation to be used in solving the problem, and making a number sentence out of the word problem. It was suggested to continue the implementation of the listed interventions in the next school year to help more pupils solve Math word problems easily.

KEYWORDS: problem-solving, reading comprehension, analyzing, interventions, enhancing vocabulary

SUBMISSION ID: R04A-CAVITP-0460

Improving Students' Mastery Level on Fundamental Operations of Integers through Five-Minute Flashcard Drill

Ramil Viduy, Secondary School Teacher

Abstract

INTRODUCTION

Math is one of the most difficult subjects for students. Many students enter high school level with severe gaps in their concepts and skills in mathematics. They fail to realize that the mastery of fundamental operations is the most important skill for one to be good in math. One of these skills is the integers, a necessary prerequisite skill to solve equations. A common problem on the basic foundational knowledge that the students face is that they can add and subtract positive integers with ease but have difficulty in numbers with different signs, and more so in multiplying and dividing integers. In this study, to mitigate the existing problem, the researcher conducted remediation supported by evidence and theories.

METHODS

Using a validated pretest, students were asked to take the test and those who did not reach the 75% rating underwent the five-minute flashcard drill on fundamental operations of integers in improving their performance on the competency for three months. According to Silbert, Carnine, & Stein, 1981, using the Direct Instruction (DI) flashcard system has been a successful academic intervention strategy. After the three-month period, students underwent a post-test and data collected were analyzed through quantitative means like frequencies, and Mean Percentage Score (MPS) formula and standards.

RESULTS

Out of 45 students who took the pretest, only 14 (31%) mastered the competency. Three of the students were within the nearing mastery level and 28 students were beginners. The 31 (69%) of the 45 students underwent the said remediation. In the post-test, 38 of the students (93%) were able to reach the mastery level and only three students (11%) were within the nearing mastery level. Moreover, those from within the beginning mastery before the intervention was conducted had improved so much that most of them mastered the competency. Lastly, the MPS of all students on the pre-test was relatively lower than that of the post-test. Evidently, the MPS in the post-test increased more than half from the pre-test. From 57.33 in the pre-test, it rose to 86.75 with an overall increase of 29.42.

DISCUSSIONS

The results show that the utilization of the five-minute flashcard drill was proven to be effective in improving students' mastery of the competency. Constant practice on the fundamental concepts will also lead to a full understanding of the competency. Math teachers should not forget to always go back to fundamentals if there are difficulties in mastering the current competency.

KEYWORDS: Fundamental Operations, Integers, Five-Minute Flashcard Drill, Signed Numbers Difficulties

SUBMISSION ID: R013-SURSUR-0137

Improving the Basic Multiplication Skill of Grade V-1 Pupils through Project LIN (Learn in Numeracy)

Ma. Lina Azupard

Abstract

INTRODUCTION

Numeracy skill is an integral part of education. The more pupils know the skill, the more they can understand the lesson and apply the skill in everyday living. Mastery of multiplication facts and its process is one of the most existing problems in mathematics. The Grade V-1 class of Bogabong Elementary School got a performance level of 45% with a mean of 22.5% during the first quarter examination for the school year 2017-2018 which is very much below the passing rate of 75%. There is a need to provide the pupils with knowledge and skills in basic multiplication facts to improve their mathematical learnings and ability. This is why the researcher focused on improving the Basic Multiplication Skill of Grade V-1 pupils through Project LIN (Learn in Numeracy). This action research was funded by the Department of Education through the Basic Education Research Fund (BERF).

METHODS

All grade V-1 pupils were included as respondents. Thirty-four pupils of Grade V-1 underwent the pre-test and the post-test. This study utilized the descriptive survey research using the instrument prepared by the researcher, which was validated by the expert from Tabaco South Central Elementary School and dry run at Comon Elementary School. The interventions were provided through audio-video lessons, multiplication strategies, computer-based instruction, and pencil-paper aid activities. The interventions were conducted before the afternoon session every day.

RESULTS

Findings show that the 33.16 % performance level obtained during the pre-test can be attributed to the fact that it was due to the low ability in terms of basic multiplication facts. The 52.24% performance level during the post-test was obtained due to the implementation of Project LIN (Learn in Numeracy). This implies that mastery of the basic multiplication facts forms learning of any multiplication skills. It is a pre-requisite for further mathematical learnings.

Since the t computed value of -4.9482 is beyond the t critical value of -2.035 at 0.05 level of significance with 33 degrees of freedom, the null hypothesis is therefore rejected. This means that there is a significant difference in the performance of Grade V pupils after the implementation of Project LIN.

DISCUSSIONS

It was found out that the pupils' percentage of learning during the pre-test, which was equivalent to 33.16%, was raised to 52.24% during the post-test. It was proven that there was a significant difference between the pre-test and the post-test results.

KEYWORDS: Improving the basic multiplication skill of grade v-1 pupils through project LIN

SUBMISSION ID: R005-TABACO-0003

**Improving the Level of Performance in the Four Fundamental Operations
in Fractions of Grade-8 Emerald Students of San Isidro National High
School Using the P-T2 Project**

Ma. Gloria Flancia, Department of Education

Abstract

INTRODUCTION

Since third grade, students have been taught fractions, but why is it that they are still having difficulty in it now that they are already in Grade 8? I, as a Grade 8 Mathematics teacher, and as a personal experience as I teach rational algebraic expressions, I was motivated by this question to conduct this action research aiming that its result will positively affect the teaching-learning process.

METHODS

Project p-T2 was implemented. A combination of peer-teaching approach and strategic intervention material (SIM) called "Fractions Combo Pack" was used. I focused my study in doing pre and post-test, peer-remedial session for 6 weeks involving 29 students (non- randomized sampling was used), paired as tutor-tutee using SIM as tutorial material. Statistics identified the significant difference in the students' pretest and post-test result (questions properly validated by the school head) after the 6 weeks implementation of the P-T2 project and identified their level of understanding in performing fundamental operations in fractions before and after the project is implemented.

RESULTS

Scores show a 0-2 range of difference, which implies consistency in their scores except one with -1 difference which I found out that it is just due to typographical error. The table also shows a 3-9 range of difference to those students that were tutored. When the pre-test mean score was compared with the post-test mean score, it showed a notable overall increase. This means that the tutorial sessions had a positive effect on their ability to perform operations on fractions.

Over-all MPS, it shows a big positive difference which reflects G8- Emeralds level of performance on fractions before and after the implementation of the P-T2 project. The test of hypothesis resulted in the obtained t-value that is greater than the critical t-value, therefore, the null hypothesis is rejected.

DISCUSSIONS

Peer-teaching and Strategic Intervention Material are appropriate to use for the needs and interests of the learners and can be an effective strategy to make them understand not only the specific topic. It can be of great help to provide students a strong foundation in understanding and manipulating rational algebraic expressions. This research can also implicate other researchers to conduct more research about the effectiveness of developing more Strategic Intervention Materials in different subjects.

KEYWORDS: Performance, Fundamental, Fractions

SUBMISSION ID: R04A-LUCENA-0032

Improving the Mastery of Multiplication Facts of Grade III Diamond in San Luis Central School

Gennette Casilao

Abstract

INTRODUCTION

Multiplication is one of the four elementary mathematical operations; with the others being addition, subtraction, and division. The purpose of my action research is to determine the extent to which three different strategies help increase student's memorization of the multiplication facts. Completing an action research project with this focus will help me "gain insight, develop reflective practice, effect positive changes in (the success of my students), and improve students' outcomes" (Mills, 2007, p.5). This research project will provide useful information, allow me to analyze the results, and then use the results to improve my classroom next year. All research will be completed in my Grade III classroom. Each strategy will be implemented in regular education classrooms.

METHODS

In order to increase my pupils' skills in memorization of multiplication facts, I will implement three different strategies in my class in three separate sessions. In one session, I will implement the daily use of flashcards. In a second session, we will be playing interactive games once a week. In a third session, we will learn multiplication songs and chants and use these to begin class each day. These are based on strategies other professionals have used and have recommended.

RESULTS

As a result of this research project, I learned that the most effective method (and for many students the fastest) to help students memorize the multiplication facts is through the daily use of flashcards. As many pupils entered class each day, they were expected to quiz themselves using homemade flashcards for five minutes. This provided to be more effective than playing interactive games each week or beginning class with a multiplication song.

DISCUSSIONS

Based on the results, the fastest way of mastering multiplication was through singing the basic multiplication facts, using games, having contests in multiplication facts. Daily implementation of this makes them mastered the skills.

KEYWORDS: arithmetic, multiplication, memorization

SUBMISSION ID: R04A-BATANP-2162

Improving the Math Word Problem Solving Skills of Grade 6 Pupils in Gregorio A. Herradura Elementary School

Gina Herradur, Department of Education

Abstract

INTRODUCTION

Teachers and Pupils are generally acknowledging that word problems are difficult to solve. Most pupils typically did better on computational skill exercises than word problems. Unsuccessful encounters with word problems early in their elementary school's experience may well have lasting negative effects on the mathematical development of many pupils. In fact, initial work with word problems could be the source of mathematics anxiety for many people.

METHODS

The respondents of this action research composed of 20 Grade 6 pupils out of sixty-eight (68) from the total enrolment in Gregorio A. Herradura Elementary School during the School Year 2016-2017. The author will utilize the purposive sampling technique from the total enrolment of the pupils to select the target of this study. The NAT result will be the basis of the study. A checklist in the form of the questionnaire will also use to get the greatest number of factors that contribute to the pupil's comprehension skills that need to be addressed. Pre-test and Post assessment test will also use to measure the effectiveness of the project upon utilization

RESULTS

The following results were derived. 1. Result of the National Achievement Test

The current result of the National Achievement Test is 53.15 which is lower than the previous which is 58.27. This connotes that the information prompt to make an action in which will improve the pupil's performance in Mathematics.

Weakness Encountered by the Pupils in Word Problem Solving

It can be said that the highest percentage among the indicators is Mathematical Vocabulary which gathers 30% followed by literacy or comprehension and the third is transforming written word problem to mathematical operation.

Result of the Pre-Test and Post Test

The data on the pre-test and post-test shows that upon utilizing a strategy to improve the pupil's performance in their problem-solving skills shows an increase in the mean level right every post-test.

DISCUSSIONS

The research shows that a major source of difficulty experienced by children in the problem-solving process is transforming the written word into mathematical operations and the symbolization of these operations. Literacy and mathematical skills need to be taught in combination to help pupils improve their math abilities and their comprehension and reading skills. Strategies will help pupils decipher what is important information, decode the mathematical vocabulary, and apply the mathematical skills that they know.

KEYWORDS: I am interested in Mathematics only as creative art.

SUBMISSION ID: R04A-LAGUNA-0114

Improving the Numeracy Skills of Grade Six Pupils through Peer Teaching

Maria Cecilia Balague, Department of Education

Abstract

INTRODUCTION

This action research has been made possible through the help extended by the Department of Education (Department of Education) through the Basic Education Research Fund (BERF). The researcher had observed that teaching Mathematics is interesting to those pupils who loved numbers yet the opposite to others. Some pupils faced difficulty in solving problems involving fraction. The concepts need to continuously evolve for gradual learning. It is a must that pupils get extra help at one time or another in the educational setting; some need more than others do (Topping, Ehly 1998). The researcher comes up with the idea that pupils who have mastered a subject area or pupils having difficulty themselves in learning a skill or concept have the capacity to be a helpful tutoring resource.

METHODS

The quarterly pre-assessment was the baseline of this study. Seven low performing pupils (5 boys and 2 girls) who served as tutees were evaluated using validated answer sheets on competencies relatively focused on fractions. Seven performing pupils who served as tutors were taught ahead by the teacher-researcher with the lessons to be used in peer teaching intervention. This study was done after classroom discussions in the afternoon.

RESULTS

The researcher found out and concluded that the performance level of grade six pupils in the pre and post-test was improved. The performance level in pre-test was 24.28% and, in the post-test, it was 43.71%. There is a significant difference in the performance level in the pre - and post-test of grade six pupils after the peer teaching intervention.

DISCUSSIONS

With the intervention used in this study, the teacher-researcher proved that: a. peer teaching strategy improves the performance level of low performing pupils with teachers' encouragement to both tutors and tutees, guidance, supervision, and dedication should go with the strategy to come up with the best result; b. pupils could easily convey ideas and comprehend more with their peers, hence, peer teaching is an effective way for further understanding of the lesson; c. peer tutoring is effective in improving tutees and tutors academic achievements, they improved academically, developed self-confidence at the same time and; d. teachers should undergo intensive preparation and time management for the easy application of this intervention.

KEYWORDS: improving numeracy skills through peer teaching

SUBMISSION ID: R005-TABACO-0018

Improving the Performance of Guinayangan Elementary School Grade Six Purple in Addition and Subtraction of Dissimilar Fractions through Ladder Method

Ma. Louella Oliva, TRAQ; RACE

Abstract

INTRODUCTION

The researcher conducted this study to address the problem of her pupils regarding fractions, specifically on addition and subtraction of dissimilar fractions. Previously, the researcher allowed the use of any method in finding the GCF and LCM, both prerequisite skills in addition and subtraction of dissimilar fractions. She noticed that majority of the Grade VI pupils only employed the Listing Method. Doing that meant taking too much of their time to answer one item, thus leading them to fail in the summative tests usually composed of 15-20 items, and more so of the 50-item Quarterly Test. With this situation year after year, the teacher-researcher thought of adopting a single method in teaching GCF and LCM. She focused on the Ladder Method, with the hope that pupils will be able to accurately solve fraction problems in lesser time.

METHODS

This study employed a quasi-experimental method of research to compare the performance level of the respondents before and after using the Ladder Method. A set of 30-item questions was administered to all pupils enrolled in Grade Six-Purple at Guinayangan Elementary School. The whole process lasted for one month.

RESULTS

The MPS before using the Ladder Method was 16.76%, while the MPS after using it was 70.69%. The findings also revealed that there was a significant difference between the pretest and the post-test results justified by the computed t-value of 18.36 which is 16.325 above the critical value of 2.035. This led to the decision of the researcher to reject the hypothesis set at the standard 0.05 level. The result also showed the performance level of each learner. From "Did not meet Expectation" level during the pre-test, five pupils leaped to "Outstanding" level, three reached the "Very Satisfactory" level, six were "Satisfactory," and five to the "Fairly Satisfactory" level. Although 15 pupils remained at the "Did not meet Expectation" level, the difference between their pre-test and post-test was remarkable. Hence, we can say that using the Ladder Method helped the pupils perform significantly better in addition and subtraction of dissimilar fractions.

DISCUSSIONS

These positive results may be credited to the use of the Ladder Method, which was also similar to the findings in the study conducted by Nikjeh in 2012 entitled "Effectiveness of Ladder Method of Finding LCD for Learning Operations on Fractions." This method helped the pupils with their difficulties with fractions. Using the method helped them not only to find the GCF and the LCM but to solve addition and subtraction of dissimilar fractions accurately in lesser time. This action research has proven the effectiveness of the Ladder Method in improving the performance of pupils in addition and subtraction of dissimilar fractions.

KEYWORDS: Improvement, Ladder Method, Mathematical Performance

SUBMISSION ID: R04A-QUEZON-0034

Increasing the Numeracy Level of Grade 7 Students of Dagatan National High School through Duolog Math Technique

Amor Bat & Nieva De Castro, Dagatan National High School

Abstract

INTRODUCTION

One of the essential components of Mathematics in everyday life is the ability to master the basic operation and to solve basic problems. Dagatan National High School conducts numeracy test yearly, and the result constantly falls under low numeracy level. Thus, the Mathematics department came up with the study of using Duolog technique as an intervention to increase the numeracy level of specifically Grade 7 learners.

METHODS

Descriptive-comparative method of research was used in the study. 41 non-numerates Grade 7 students were considered in measuring the effectiveness of Duolog technique in improving the numeracy level. They were purposively selected based on the numeracy test conducted upon admission to the school. Advanced learners provided assistance during the implementation of the intervention as Duolog means peer-assisted learning. Supplemental activities used were from varied sources and others were self-made. After the implementation numeracy test was conducted (posttest).

RESULTS

Grade 7 learners who were non-numerates upon admission marked improvement based on the numeracy test conducted after the implementation of Duolog technique as an intervention. 11 out of 41 learners became numerates. Thus, Duolog Math Technique was proven effective.

DISCUSSIONS

The result showed that using the Duolog Math technique really helped the learners to improve their numeracy skills. This proved that learners easily learn when working together to teach one another.

KEYWORDS: Level of Numeracy, Duolog Technique

SUBMISSION ID: R04A-QUEZON-0117

Innovative Intervention Activities for Grade 4 Struggling Learners in Mathematics to Enhance Strategies and Technique in Teaching

Leonides Chumacer, Department of Education

Abstract

INTRODUCTION

The West District Cluster 2 is composed of ten schools with a total population of 4505 learners and 160 teachers. The teachers have performed well based on their performance ratings; however, the result of the 2018-2019 First Periodical Examination Mean Percentage Score was not satisfying especially the subject Mathematics. In order to improve the Mean Percentage Score in Math, the proponent decided to conduct further study in order to give a solution to the problem. Based on the results of the First Periodical Exam MPS and PBF, the data revealed that Math got the lowest MPS among the eight learning areas. The participants of the study are composed of 200 Grade 4 struggling learners coming from five schools in the cluster, which got the lowest MPS in the previous First Periodical Exam of SY 2018-2019.

METHODS

In order to remedy the existing problem in academic performance of the learners in Math, a meeting was conducted with the school heads together with the Grade 4 Mathematics teachers in order to craft a suitable assessment tool. Conducted the PBF among Grade 4 Learners and provided intervention activities from 12:30-1:00 pm in five schools. The following were the innovations implemented to improve performance of Grade 4 pupils: utilization of ICT Resources in Teaching Mathematics which encouraged the learners to think, engage, and participate in the classroom discussion and the utilization of video clips in teaching Mathematics.

RESULTS

1. The Mean Percentage Score of the Grade 4 learners in Mathematics in the West District Cluster 2 got the total average of 65.59% based from the result submitted by the five schools which is below the National standard MPS of 75%.
2. The Mean Percentage Score of the Grade 4 learners in Mathematics in the West District Cluster 2 got a total average of 70.76% after the implementation of the intervention among Grade 4 learners. The percentage of increase in the learners' Mean Percentage Score is 7.88%.

DISCUSSIONS

The Grade 4 Mathematics teachers should continue the intervention using the different activities such as the utilization of ICT in teaching Mathematics and the use of video lesson in teaching and the remedial lesson every 12:30-1:00 pm. The school heads should continue giving wide-ranging technical assistance. The Public Schools District Supervisor should continue monitoring and giving technical assistance to school heads to enhance and improve the Grade 4 Mathematics teachers' competencies in teaching and to increase the MPS of the learners.

KEYWORDS: Innovations

SUBMISSION ID: R04A-LIPAC1-0136

Innovative Materials Towards the Mastery of Multiplication of Low-Performing Grade Seven Students in Anselmo A. Sandoval Memorial National High School

Melinda De Mesa, Mylyn D. De Torre, & Jonel F. Palubon, Department of Education

Abstract

INTRODUCTION

Multiplication is the basic fundamental operation for all time. In this generation, we are always faced with problems and have to make decisions that are associated with the understanding of quantities. These quantities are merely additive or multiplicative in nature. The trend today is that not all learners entering grade 7 have mastery of multiplication, which is very important before learning higher Mathematics subject. This paper wanted to identify those low-performing students in multiplication specifically in Grade 7 of Anselmo A. Sandoval Memorial National High School and to find more innovative/intervention materials that will hasten their mastery on multiplication.

METHODS

This action research applied a combination of descriptive and inferential statistics. Data was gathered from 150 grade 7 students as respondents who were identified as low performing in multiplication by grade 7 mathematics teachers. The information gathered from the respondents were analyzed and used to make suggestions regarding the different activities to supplement the use of innovative materials. The data sources gathered over a period of four weeks included the preliminary investigation through identifying low performing grade 7 students in the lower section class, surveys about students' difficulties towards memorizing the multiplication factors from 1 to 12, surveys on the different kinds of innovative materials the respondents have known, surveys on the importance of innovative materials to the students, written and oral pretests and post-tests containing multiplication of numbers from 1 to 12, and student interviews.

RESULTS

The results of this action research indicate that the use of innovative materials is very effective in addressing the low performing grade 7 students in the mastery of multiplication. Innovative materials such as bookmarks, flashcards, modified multiplication table, video presentation of the multiplication table, and e-games pertaining to multiplication factors were made by the researchers. Recommendations based on the results of the investigation include the continuous use of innovative materials, and the strict implementation of utilizing such kind of intervention to the school, thus helping students become better mathematical problem solvers.

DISCUSSIONS

Based on the results of the t-test between the pre-test scores and post-test scores of written and oral examinations, it turns out that the innovative materials are very effective in addressing the low-performing students in the mastery of multiplication. Recommendations based on the results of the investigation include the continuous use of innovative materials and the strict implementation of utilizing such kind of intervention to the school, thus helping students become better mathematical problem solvers.

KEYWORDS: Innovative materials (numeracy tools), e-games (electronic games)

SUBMISSION ID: R04A-BATANP-1134

Integrating SIMATRICS to Improve Retention of Grade 9 Students in Mathematics

Jovelyn Bulas

Abstract

INTRODUCTION

Retention in education can be defined as the ability to retain and retrieve information. It is crucial in the learning process since knowledge primarily starts with simple recall (Bloom,1956). Baculin Integrated Secondary School has this problem. Of the 33 Grade 9 students, only 6 belongs to "High", 12 belongs to "Average", and 15 belongs to "Poor" based on the pretest conducted on the month of November. Students response when asked points to unable to recall the previous lesson, lack of textbooks, exhausted in earning money, the class is boring, Math is complicated among others. The Lack of continuity of learning from classroom to home is one of the primary contributors to poor retention.

METHODS

CAIMS (Computer-Aided Instructional Material) will be utilized to address problems regarding the negative perception of Math as boring and complicated. It is an MS PowerPoint lesson facilitated by the teacher in lieu of traditional teaching. Two (2) interventions shall simultaneously run until the posttest, the SIM (Strategic Instructional Material) and the TRIADS. This program involves a strategic grouping of students (TRIADS) and the use of modules (SIM) to ensure that learning continues after classes. The "Triad" shall consist of one (1) student from the three classifications of the level of retention (High, Average, Poor). The intervention shall be from Monday until Friday, for one (1) hour only.

RESULTS

The pretest results revealed that the level of retention of Grade 9 students is significantly low. In fact, 15 or 45.45%, is categorized under "Poor Retention." That is almost half of the class which is so alarming. In addition, only 6 or approximately 18% is categorized as "High" in the level of retention. However, the posttest had shown that 18 of the students were elevated to High Level of Retention when previously there were only 6. Fifteen (15) of the students in Low Level of Retention was dramatically reduced to only 6. This would enunciate to the effectiveness of the SIMATRICS intervention in improving the retention of the students.

DISCUSSIONS

The study implies that the program is an effective remedy for poor retention by the following grounds: CAIMS have broken the monotonous traditional teaching method shifting it to a more interactive and visually inviting teaching approach. The TRIADS have to mend the gap of the continuity of learning from school to home. The buddies have made home works an activity to look forward to. The incorporated SIM made the TRIADS a more guided activity.

KEYWORDS: Retention, Integration, Intervention

SUBMISSION ID: R013-SURSUR-0309

Intensify the Performance of Grade 5 Pupils through the Use of Numeracy Tools of Jose Zabarte Elementary School

Winchelle Sangalang

Abstract

INTRODUCTION

Most failures in Mathematics is due to the sole memorization with devoid understanding. Pupils lack the application of skills and techniques that help them develop their critical thinking, reasoning power, and creative minds which they use in working independently in any kind of Mathematics activities. It was observed that pupils easily get bored in solving pure numbers during their Mathematics period. They enjoy more in their other subjects that have something to do with drawing games and coloring pictures. In Jose Zabarte Elementary School, Mathematics had been noted as one of the most difficult subjects since it consists of a collection of facts and skills to be memorized or mastered by a relatively heterogeneous group of pupils. The researcher in his role as a Mathematics teacher concerned himself on how to help the pupils perform better in the field of Mathematics.

METHODS

The researcher used Numeracy Tools as a strategy that would enhance the performance of Grade 5 pupils of Jose Zabarte Elementary School in Mathematics during the school year 2018-2019. Numeracy Tools is an excellent strategy. This makes use of instructional approaches that attempt to make the process of learning mathematics more enjoyable, more exciting, and more meaningful. It significantly improves mastery of key concepts and vocabulary. It helps the pupils relax and reduce the stress, which many of the pupil's experience as a result of Math boredom.

RESULTS

The teaching competencies enhanced the learning of the Grade 5 pupils in Mathematics. During the teaching of Mathematics, different individual and group activities were used to add, subtract, multiply, divide decimals, identify prime and composite numbers, find equivalent fractions, determine GCF and LCM, change fractions to lowest terms, reduced fractions, add, subtract, multiply and divide similar and dissimilar fractions.

Table 1 shows

That the two quarters- the first quarter and second quarter periodical test. Periodical Test Result 1st

Quarter 2nd Quarter

MPS 78.00 79.07

The increase 1.07 in the mean score that indicated a great difference between the periodical test evidently validated the claim that pupils exposed to creative, exciting, and varied activities had better retention and had mastered the lessons.

DISCUSSIONS

According to Rivera and Sambrano (1982), as cited by Ducayso (2004), the slow learners have a short span of interest, hence, they easily get bored. Because of this, the teacher should set a more interesting environment through discussions, games, puzzles, arts and other exciting activities. It is then the role of a teacher to make the teaching-learning process effective and successful by improving his teaching strategy instead of typical intermediate papers or chalkboards.

The use of Numeracy Tools was a very effective strategy, where it provided different art activities which they enjoyed doing while computing and analyzing mathematical sentences and mathematics word problems.

KEYWORDS: critical thinking, instructional approaches, teaching-learning process

SUBMISSION ID: R04A-BATANP-2006

**Jenga Blocks Game: A Tool to Develop the Mastery Level of Grade 2 Pupils
in Multiplying 1-Digit Number**

Ignacio Salazar II, Teacher I

Abstract

INTRODUCTION

Moments of frustration are common for pupils with math problems and for the adults who work with them. Teachers cannot assess the pupils' prior knowledge when they directly teach the pupils. But when instruction is incorporated with educational games learning is more effective. Applying Mathabbles game helped pupils simply know how to solve math problems using the four basic operations (Johnson, et.al. 2011). One of these games is the use of Jenga Blocks Game. This game is crucial to pupils who have a complication in solving problems, especially in multiplying numbers. In the scenario of Caras-an Elementary School has a total population of 24 grade, 2 pupils for the recent school year encountered difficulty in multiplying 1-digit number resulting in low scores in MPS in Mathematics. At the start of the lesson, a pre-test was conducted that resulted in 13 out of 24 pupils who are not acceptable in terms of their mastery level. As observed, these pupils have less interest and got bored in answering multiplying numbers even if the subject is scheduled for the first hour in the morning.

METHODS

This study used Jenga Blocks Game as the primary intervention material to develop the mastery level of grade 2 pupils in multiplying 1-digit number. This study utilized the Comparison Group Pre-test/Post-test research design to assess the effectiveness of Jenga Blocks Game. The identified grade 2 pupils who are not acceptable in terms of their mastery level were given a 20-item test to determine the baseline data. Post-test was given after the completion of classes that determined the mastery level of pupils' achievement in answering multiplication of the 1-digit number of the groups of the respondents under study.

RESULTS

Distribution of Pupils' mean scores in the Pre-test and Post-test		Type of Test	Mean	Mastery Level
Pre-test	10.15	NOT	ACCEPTABLE	
Post-test	15.69	BELOW	MASTERY	
Increased of Mean Scores		5.54	-	

DISCUSSIONS

The table shows an increase in the mean score of the two tests conducted. Before implementing the Jenga Blocks, it was 10.15 particularly and was raised to 15.69 after implementing the Jenga Blocks. It further implied that the result of pre-test increased by 5.54 after the conduct of post-test.

KEYWORDS: jenga blocks, mastery level, pre-test, post-test

SUBMISSION ID: R013-SURSUR-0203

Learning Difficulties and Understanding in General Mathematics among Grade 11 Learners in Lobo Senior High School

Noli C. Florindo
(Adviser: Noli Florindo)

Abstract

INTRODUCTION

Learner's engagement in Mathematics refers to the student's eagerness to learn Mathematics and their confidence and emotional condition inability to succeed in Mathematics. In the learning process, it refers to their tendency to learn more and be more reactive in further learning. Thus, it has an impact on upper course selection, educational pathways, and later career choices of the students. This study will identify the level of understanding and ascertain the reasons why students encountered difficulties in learning Mathematics such as memory, understanding Mathematical problems, and attention problems that can struggle in the learning process.

METHODS

This study used the descriptive correlation method. This study used as respondents the Grade 11 learners of Senior High School in Lobo to determine the difficulties encountered in learning General Mathematics.

RESULTS

The study recommends that teachers should provide different kinds of activities that can catch the learner's interest and test the critical thinking abilities of the learners to have a good level of understanding toward general mathematics. Researchers used different strategies in teaching General Mathematics to further understand the lesson and used different kinds of learning resources that can motivate and increase student's interest in learning general mathematics. Teachers may use the proposed instructional activities to overcome the difficulties encountered by the students in learning general mathematics.

DISCUSSIONS

To obtain a good level of understanding towards General Mathematics, learners must have the interest in the subject matter and have the ability to practice their skills in solving word problems so they can do their assignment or activities on time because they have the interest to perform it. Students must participate in the discussion, answer the exercises, watch some videos related to the topic, and have advance reading on the topic. Study habits as a desired repetitive pattern of studying subject. Good study habits, therefore, will make learners rational in thinking, curious, open-minded, objective, honest, humble, and never suspicious. It also enhances cognitive abilities that help the students to perform better. In order to have a good level of understanding towards general mathematics, students must attain good perception skills, where the students can use this ability to elicit a different kind of problems so they can easily identify the right process in solving the equation or problem. Students must be active in the discussion so they can remember and understand all the information given by the teacher and it can be their tool to analyze different kinds of equations, expressions, and problems. Perception skills help a lot in order to understand General Mathematics. Teachers who have good teaching skills help students feel at ease in their environment. Teachers who are able to use both verbal and non-verbal communication help learners understand. The purpose of this is to align the learners' understanding of the topic with current knowledge, learn a different concept, and familiarize different formulas in Math. It also teaches them to control and monitor their thought processes to facilitate learning.

KEYWORDS: Interest, study habits, and teaching skills.

SUBMISSION ID: R04A-BATANP-1787

Learning Module: A Key to Develop Mathematical Problem-Solving Ability

Sherlie May Guiu, Paula Joyce M. Digma, & Celerina C. Perina, Department of Education

Abstract

INTRODUCTION

Problem-solving as one of the distinguished methods in learning mathematics helps the students to comprehend concepts in the subject. However, teaching students about problem-solving is a very challenging task. In this study, we want to determine if a module is effective in learning the competency of translating English phrases to mathematical phrases and vice versa as a solution to the poor mathematical problem-solving ability of grade 9 students of Lucsuhin National High School in the school year 2017-2018.

METHODS

The study employed One Group Pre-Test Post Test Design. Purposive Sampling Method was utilized with a population of 43 grade 9 students who did not obtain any percentage on the items of the first periodic test that focused on the learning competency dealing with solving problems involving quadratic equations and rational algebraic equations. The t-test for dependent means was used to test whether the pretest and posttest mean scores significantly differ before and after the intervention.

RESULTS

The study revealed that there is a significant difference between the pre-test and posttest scores of the participants before and after employing the learning module. Based on the result, it can be said that the module can help the students to have a good foundation in solving mathematical problems.

DISCUSSIONS

In the present study, there is a significant difference between the pre-test and the post-test scores of participants, it can be said that learning module is effective in helping the students to develop their skills in translating English phrases to mathematical phrases as prerequisite skills in solving mathematical problems. In the study of Andrews et al. (2014), the knowledge of learners involving stem concepts was improved through the development and implementation of STEM modules. A modular approach can be used to learn various competencies in mathematics, especially the skills that are a prerequisite in learning bigger concepts. Since the use of this approach should be given ample time to implement, such preparation should be done.

KEYWORDS: Learning Module, mathematical problem-solving ability, student achievement

SUBMISSION ID: R04A-CAVITP-0003

**Level of Effectiveness of Reward System in Teaching Mathematics for
Grade IV Pupils in Pililla Elementary School Central S.Y 2017-2018**

Analiza Ilocos

Abstract

INTRODUCTION

The researcher conducted the study to determine the level of effectiveness of the reward system on the level of performance of Grade 4 pupils in Mathematics. The study considered three groups of respondents: the 15 pupils in the untreated group, the 15 pupils in the group treated with intangible reward, and the 15 pupils in the group treated with a tangible reward. These pupils were from one section who were grouped into three using random sampling and utilized a toss coin to determine the group they represent

METHODS

The study employed an experimental research design utilizing a parallel type of test in the form of preliminary and secondary quiz. The experimental design employed two treatments: the intangible and tangible rewards and compared its effect to the level of performance of pupils based on their obtained mean score before and after the treatments.

RESULTS

The performance of the untreated group and group treated with intangible reward in the preliminary test was "Satisfactory" and retained to "Satisfactory" during secondary quiz through the mean scores increased during the secondary quiz. The performance of the group treated with tangible reward improved to "Very Satisfactory" in secondary quiz from "Satisfactory" in the preliminary quiz.

DISCUSSIONS

The findings of the study implied that the tangible reward improved the performance of the pupils compared to those pupils in the untreated group and in the group treated with intangible reward. The study served as a basis in the development of an action plan to enhance the use of a reward system for the improvement of the performance of pupils in Mathematics

KEYWORDS: Tangible intangible reward untreated group treated group

SUBMISSION ID: R04A-RIZALP-0067

Libro ng Numero: An IRF Integration in a Booklet to Improve Mastery and Performance of Grade 8-Amethyst Students in Addition and Subtraction of Fractions

Bofel Trugillo, Teacher

Abstract

INTRODUCTION

In a real classroom setting, it is undeniable that some students struggle with fractions. And with the heterogeneous types of learners in a class size of 45-50, no one can expect that one teaching approach on the concepts on fractions can be grasped by 100% of the learners. Having believed in the principle of individual differences, the researcher understood that every learner has a unique style of learning. Remediation/intervention would be then effective when it suits the learner's way of understanding. For this, the researcher came up with intervention through the creation of LNN (Libro ng Numero), a booklet designed and indigenized by the teacher herself, with the integration of IRF (Initial, Revised, Final).

METHODS

LNN was used by the researcher to solve one of the prevailing problems in Mathematics 8. This intervention focused on a provision of a teacher-made booklet with IRF integration which the respondents had to answer. The booklet contained lessons on fractions which were followed by exercises every after sub-topic. These exercises were contextualized by the researcher for an easy understanding and comprehension on part of the respondents. The whole intervention process lasted for two weeks, one hour every after last period of the afternoon class sessions. In which, during the sessions, the identified learners would have 25-30 minutes allotted time for discussion with the subject teacher and the remaining 30 minutes would be for answering the exercises. In the IRF pages, a uniform set of questions from the Initial to the Final were used. The Initial Phase solicited student's prior knowledge, Revised Phase was answered after a lesson was taught wherein the learners encountered difficulties still, and the Final Phase was done after the whole concept was taught and learned.

RESULTS

After the two-week intervention process, it was noted that there were great increases in the students' performance and mastery levels. Thus, this proved the efficacy of the applied remedy to help the recipients improve their levels of learning. Improvement ratings ranged from 15%-30%.

DISCUSSIONS

In its effort to cater quality education, the school administration may urge stakeholders to extend efforts in realizing programs on the indigenization of LMs to heighten the drive in helping and remediating learners who need utmost attention and care.

KEYWORDS: Booklet

SUBMISSION ID: R013-SURSUR-0008

Mathematical Misconceptions on Selected Topics in Statistics and Probability among Grade 11 Students of Lumampong National High School-Indang Annex Senior High School

Jesmine Mojica, Department of Education - Cavite

Abstract

INTRODUCTION

Statistics and Probability is one of the core subjects in the Senior High School which equips students with numerical competencies that will be beneficial in conducting quantitative researches. Quantitative research, specifically Practical Research II in senior high school, utilizes both descriptive and inferential statistics. Students should be knowledgeable about these statistical competencies to ensure proper decision making in research. Mathematical misconceptions in the subject should be properly addressed so that the teacher could enhance one's teaching approaches.

METHODS

The mixed method research design was used in determining the different mathematical misconceptions on selected topics in Statistics and Probability in the 3rd Quarter of S.Y 2018-2019. Twenty grade 11 students of Lumampong NHS- Indang Annex participated in the study. Respondents were given activity sheets on the 3 very least mastered competencies in the subject (computing confidence interval, getting the mean and variance of a random variable and solving problems involving normal distribution). Chi-square test of independence was used to determine the significant relationship between respondents' demographic profile and nature and frequency of mathematical misconceptions.

RESULTS

Most of the respondents lacked comprehensive knowledge on the given statistical concepts and processes (confidence interval, random variable, and normal distribution). 90% of the respondents inaccurately gave at least one example or description of the given concept. They gave ideas not related to the given concept. Also, 16 out of 20 students wrongly performed the given statistical operation (computing confidence interval, getting the mean and variance of a random variable and solving problems involving normal distribution) although these topics were already discussed last quarter. In terms of the relationship between respondents' demographic profile and nature and frequency of misconception, the following data were obtained at 0.05 significant level: $\chi^2 = 2.4$ for age; $\chi^2 = 3.8$ for track and strand; $\chi^2 = 4.2$ for gender; and $\chi^2 = 2.6$ for final grade in the 3rd quarter.

DISCUSSIONS

Most of the mathematical misconceptions on the selected topics in Stat fall under inaccurate statistical concepts and processes retention. Also, respondents' demographic profile has no significant relationship to the nature and frequency of their misconceptions. Teachers should reflect on these findings and devise teaching strategies that could address these misconceptions.

KEYWORDS: mathematical misconceptions statistics and probability senior high school mathematics

SUBMISSION ID: R04A-CAVITP-0794

**Mathematics Self-Concept and Academic Performance of Grade 10
Students: Basis for the School Improvement Program**

Nickson T. Derrac, Department of Education - Pulo National High School

Abstract

INTRODUCTION

Mathematics is an important tool for all scientific and technological researches. The practical application of Mathematics to daily life is felt and seen in everyday undertakings. It serves as a tool of precision, money, insurances and standard time, information needed for intelligent buying and selling. It is also an indispensable learning area on quantitative tools that are important in other fields. The study focused on describing the Mathematics Self-Concept and Academic Performance of Grade 10 STEM students in Mathematics at Pulo National High School. The study described the self-concept and the academic performance of Grade 10 STEM students in Mathematics.

METHODS

The study used descriptive-correlational research design. It was conducted at Pulo National High School during the first quarter of the School Year 2016-2017. Three sections of Grade 10 junior high school students were selected through purposive sampling. The Mathematics Self-concept Inventory validated by the experts was given to one hundred sixty-nine Grade 10 STEM students. Two instruments were used in this study: Mathematics Self-Concept Inventory and the First Grading Grades in Mathematics 10.

RESULTS

It was found out that most of the Grade 10 students have low self-concept in Mathematics and have fairly satisfactory performance in Mathematics. It also yielded a result that the Mathematics Self-Concept has a significant relationship to the Academic Performance in Mathematics. Furthermore, it was found out that Pulo National High School has no existing School Improvement Program in Mathematics to boost student's Mathematics Self-Concept and improve Academic Performance in Mathematics 10.

DISCUSSIONS

The results demonstrate that academic performance is greatly affected by Mathematics self-concept. This means that students who perform well in academic performance also possess high self-concept in Mathematics and vice versa. This only shows that to become a good performer in Mathematics, one must be able to improve his or her Mathematics self-concept since they are significantly correlated. Teachers should regard self-concept as an important part of personality development. Schools should provide more opportunities for Mathematics teachers to develop school-based improvement program in Mathematics that will raise students' Mathematics self-concept to improve students' academic performance in Mathematics 10.

KEYWORDS: Self-concept, Academic Performance, Relationship

SUBMISSION ID: R04A-CABUYA-0066

Mathemind Map: Improving Problem-Solving Skills of Low Performing Grade 9 Students of Padre Garcia National High School

Mary Grace Escuet, Department of Education - Padre Garcia National High School

Abstract

INTRODUCTION

The Conceptual Framework of Mathematics Education in K-12 shows that the main goal of the updated curriculum is to strengthen and focus on problem-solving and critical thinking skills of the students. However, students were having difficulties in solving problems. The purpose of this research is to improve the problem-solving skills of low-performing students in Mathematics 9.

METHODS

The study employed a descriptive-correlation method with twenty (20) low-performing students of Grade Nine (9) in Padre Garcia National High School. Purposive sampling techniques were utilized to arrive at the desired number of subjects. It was conducted for one grading period. The data were obtained from the administered pre/post-tests, survey method and semi-structured interviews.

RESULTS

The results indicated that mathematics mind maps have a significant effect on students' problem-solving performance. It revealed that low-performing students enjoyed solving problems and developed a sense of skill in solving mathematics problems. Correspondingly, the researchers got a 2.71 level of achievement. Hence, the difference is significant. These findings suggest that utilizing mind maps on problem-solving was effective to the low performing students. Although rarely used in mathematics, the utilization of mind maps on this holistic research implies that it can be an intervention tool for students who are performing poorly in mathematics.

DISCUSSIONS

This study gave significant implications in addressing learning problems in mathematics education. Our findings complement the results of previous studies like the study conducted by Long and Carlson (2011) which reveals that students who utilized mind maps or thinking maps were able to achieve greater understanding than those students who used traditional strategies. Lastly, Mathematics Mind Maps are effective learning interventions in improving problem-solving skills of low-performing learners. The study revealed that mind maps have a significant effect on students' problem-solving performance.

KEYWORDS: Mathematics, problem-solving, mind maps

SUBMISSION ID: R04A-BATANP-0274

MOTIVATION (Mathematics Innovation) in Multiplying Numbers to Academic Performance among Grade Four Pupils in Taysan Elementary School

Bernadette Umal, Department of Education - San Jose, Batangas

Abstract

INTRODUCTION

Mathematics is one of those disciplines greatly influenced by the process of change in our world today. Multiplication tasks seem to be a stumbling block among pupils' mathematical progress. In this study, we seek for possible solutions that could assist pupils to enhance their level of performance in mathematics, particularly in multiplying numbers.

METHODS

Experimental research design and descriptive method of research were applied in the study. The researcher utilized the construction of the lesson plan, discussions, and administration of the test and procedure. A diagnostic test was given to 35 pupils in grade four Ilang-Ilang of Taysan Elementary School during the academic year 2017-2018, as well as the survey questionnaire. Frequency, percentage, ranking, and T-Test were the statistical tools used in the study.

RESULTS

The findings show that the instructional materials used by the teacher in teaching multiplication are charts, counters, drill board, flashcard, Illustrations, pictures, realia, e-games, PowerPoint presentation, and video clips. The study also shows that the difficulties observed by the teacher are attitudes of the pupils in learning multiplication, the pupils' prior knowledge, the instructional materials used, and the time allotment for the classroom activities. On the other hand, the study reveals that the current performance of grade four Ilang-ilang pupils in multiplying numbers was evidently poor based on the pre-test, and they performed well during posttest. It shows also that there was a significant difference between the result of the pre-test and posttest given among the grade four Ilang-Ilang pupils.

DISCUSSIONS

Based on the findings, supplementary material and activity through MATHVATION were developed. The MATHVATION offered video clips, power point presentation, and E-games as supplementary materials and multiplication morning exercise by means of video clips, drills, and exercises during remedial classes and E-games are the supplementary activities under this program that other teachers can utilize to improve the pupils' performance in multiplying numbers. The said materials used in MATHVATION enhance the pupils' interest in learning the lesson. The results show also that the difficulties observed by the teacher must be addressed by the teacher immediately to avoid further problems and complication with other lessons in Mathematics.

KEYWORDS: difficulties, innovation, instructional materials, Mathematics, MATHVATION, multiplication, performance, supplementary materials

SUBMISSION ID: R04A-BATANP-1360

Multiplication Skills among Intermediate Learners through Game-Based Learning Strategy in Laurel Elementary School, Taysan District

Lyka Ellaine Rabano & Ana Manal, Department of Education

Abstract

INTRODUCTION

This paper aims to determine the effectiveness of Game-Based Learning strategy applied in each lesson to improve multiplication skills of intermediate pupils in Laurel Elementary School. Pupils frequently find multiplication tasks to be a stumbling block in their mathematical progress because of poor multiplication fluency. They experience difficulty in dealing with larger single digit operands.

METHODS

The study used descriptive research technique. Personal observations of the researchers and other teachers in the same school were also utilized to obtain facts associated with the actual teaching experiences. Tests were also given to collect the needed data for quantitative analysis. For clearer visualization and interpretation of data, the researchers used descriptive statistics through different statistical treatment tools.

RESULTS

Results were gathered through the interpretation of score obtained from the pre-test and post-test. The score of the pre-test showed the average number of pupils having poor basic multiplication fluency. To treat the problem, Game-Based Learning Strategy was used since some studies presented how games enhance learning and performance of a child in the class. A post-test was given after applying the strategy and it proved that games became a really effective approach to improve multiplication skills of the intermediate learners since they obtained outstanding performance compared to satisfactory which they had previously.

DISCUSSIONS

Findings revealed that Game-Based Learning (GBL) is an interactive pedagogy that has a great impact to improve the multiplication skills of the learners. The use of games helped the learners improve multiplication skills and enhance the retention of the concept learned. Games to be applied in each lesson involving multiplication skills should be designed well based on the three elements of the game-competition, engagement, and immediate reward. However, studies should not stop here. More research should be conducted to continuously improve the skills of the pupils that will help them shaping their lives and securing a better future.

KEYWORDS: games, strategy, multiplication, learners

SUBMISSION ID: R04A-BATANP-1012

Numeracy Tool with E-Games: An Intervention in Enhancing Mathematics Instruction

Mariel Austria & Irene M. Caringa, Department of Education

Abstract

INTRODUCTION

Agoncillo Senior High School offers different strands like STEM, HUMSS, ABM, and TVL; all of which has a General Mathematics subject. Mathematics teachers encountered difficulties in teaching this subject. Many strategies were applied but then students really find the subject very hard. The Division of Batangas Province conducted a Division Wide Roll-out in Crafting the Numeracy Tools with e- games as an intervention in enhancing mathematics instruction. The researchers crafted and utilized this intervention to know if this is effective in teaching mathematics.

METHODS

This study explored the impact of numeracy tool with e-games intervention had on twenty-five Grade Eleven Accountancy, Business Management (ABM) learners in Agoncillo Senior High School compared to their growth to those of their peers not receiving intervention to determine the positive impact providing a response to the intervention had on the respondents. A quantitative method of data was used in knowing the effectiveness of the intervention. Independent sample t-tests were used in knowing the difference between the achievement of both groups, and the descriptive method in the elicit learners' perception in numeracy tool with e-games.

RESULTS

Over a five-week intervention cycle, each of the twenty-five students improved their ability in General Mathematics specifically in the key concepts of functions and rational functions as a result of using numeracy tool with e-games. The majority of the students, about 93 % of them mentioned that they learned a lot using numeracy tool with e-games and were able to form better connections between previous learning and new learning. About 80% Of students said that they were excited about using the numeracy tool with e-games. They also enjoyed learning mathematics much more when using the numeracy tool with e-games, however, some students reported that they were not so confident when using the said intervention.

DISCUSSIONS

The numeracy tools with e-games can be used as an intervention in enhancing mathematics instruction specifically in teaching General Mathematics, as there was a significant increase in experimental students' conceptual understanding of mathematics as compared to the control group. When students were asked how the intervention affected them, they had many things to say, such as it made them more engaged in learning and enabled them to think higher levels. In this study, the Numeracy Tools with e-games has proven to be an effective intervention in enhancing mathematics instruction.

KEYWORDS: numeracy tool, e-games, intervention, mathematics, instruction

SUBMISSION ID: R04A-BATANP-0111

On Hamiltonian-Connected Graphs

June Tuona, Senior High School Teacher - Tanza National Trade School

Abstract

INTRODUCTION

Graphs are present in almost all sciences, mathematics, and engineering. From the ground, as to how geologists map the world and dig the minerals beneath the grounds, to how biologists and chemists answer how life exists and works, and to how astronomers discover and uncover the mystery of the universe. Indeed, graph theory has one of the broadest and widest applications. Thus, studies of graphs will not only contribute to the existing theories of scientific knowledge but as well as to industries and society.

METHODS

This study is an investigation of the properties and conditions for Hamiltonian connected graphs to be Hamiltonian connected bipartite graphs. Novel results on these graphs were presented and proved.

RESULTS

Theorem 3.2: Let G be a complete bipartite graph, G is Hamiltonian-connected if and only if G has a bipartition. Proof:

To show that complete bipartite graph with bipartition is Hamiltonian-connected, let G be a complete bipartite graph with u and v .

Since each vertex in V_1 is connected to V_2 (See Figure 1), then we can construct a Hamiltonian-connected graph with u and v .

We now show that a complete bipartite Hamiltonian-connected graph has bipartition. By contradiction let G be a Hamiltonian-connected complete bipartite graph with bipartition. Suppose u and v , then. If u and v , let u and v , since it is a complete bipartite graph, every element in V_1 is connected to each element in V_2 , that is, we cannot see any cycle in the resulting graph, so, therefore, it is not a Hamiltonian graph; hence, not a Hamiltonian connected graph. Similar results follow for any. Therefore, by contradiction a Hamiltonian-connected complete bipartite graph G has bipartition.

DISCUSSIONS

A graph, as defined in graph theory, consists of a pair (V, E) where V is a nonempty finite set whose elements are called vertices and E is a set of unordered pairs of distinct elements of V . One interesting kind of graph is the Hamiltonian graph, named after William Rowan Hamilton, who invented the famous icosian game, which is the game of finding a Hamiltonian cycle. A graph G is said to be Hamiltonian if it has a Hamiltonian cycle, and for a Hamiltonian graph G to be Hamiltonian-Connected, there must be a Hamiltonian path between every pair of vertices in it. The result gives us sufficient condition for a Hamiltonian-connected graph to be a complete bipartite graph.

KEYWORDS: Graph, Hamiltonian Graph, Connected Graph

SUBMISSION ID: R04A-CAVITP-0089

On Square-Triangular Numbers

Ivy Joy Livet, Trece Martires City Senior High School

Abstract

INTRODUCTION

In mathematics and physics, there are lots of integer sequences, which are used in almost every field of modern sciences. Admittedly, the Fibonacci, Pell and Pell-Lucas sequence are some of the most famous and curious numerical sequences in mathematics and have been widely studied from both algebraic and combinatorial perspective. Also, there is the Square-Triangular sequence, which is as important as that sequence. Square-Triangular sequence $\{ST_n\}$ is defined by recurrence $34ST_{n-1} - ST_{n-2} + 2$, $n \geq 2$ with $ST_1 = 1$ and $ST_2 = 36$. The main objective of this study is to discuss properties, relationships, and applications of Square-Triangular sequence.

METHODS

This study utilized the expository and descriptive methods of research. Descriptive research was used to describe and discuss in detail the concepts related to Square-Triangular Numbers. In this study, the theorems involving generators, properties, and relationships of Square-Triangular numbers were proven, presented and discussed comprehensively. All data and information were described and verified through illustrations or examples.

RESULTS

There are three ways to determine the Square-triangular numbers such as the recurrence relation, the Binet's formula, and Pell's Equation, solutions to this equation produce Square-triangular number. This number has captivating relationships to other forms of numbers such as Pell numbers, Pell-Lucas numbers. The ratio of consecutive Square-Triangular numbers is approaching to the silver ratio as n gets large. These numbers have properties showing significant results when its terms are added and interesting relationships when its terms are manipulated. These properties were proven using the algebraic method, limits and mathematical induction. These numbers can also generate Pythagorean triples. The area of a Square-Triangular right triangle and the solution of the Diophantine equation can also be computed using the Square-triangular number n . These numbers have application in the Cryptography.

DISCUSSIONS

The square-triangular sequence has three generators such as recurrence relation, Binet's formula, and Pell's equation. Adding or multiplying the terms of Square-triangular numbers results in interesting properties that produced certain patterns. The square-triangular number revealed unusual relationships to other forms of numbers such as Pell number, Pell-Lucas number, Silver ratio, Pythagorean triples, and Diophantine equation. These numbers had useful application in cryptography.

KEYWORDS: Recurrence relation, Binet's formula, Diophantine equation, Pythagorean triples

SUBMISSION ID: R04A-CAVITP-0328

On the Determination of Happy Numbers

Sannielyn L. Roxa, Cuenca Senior High School

Abstract

INTRODUCTION

The primary objective of the paper is to focus on happy numbers. It intends to present the iteration of the set of positive integers, determines the fixed points and cycles of positive integers, and develop a computer program.

METHODS

The researcher consulted peers and experts on happy numbers and read books, journals and electronic referencing in conducting the study. Microsoft Visual Studio was also utilized.

RESULTS

The researcher determined different fixed points and cycles through iteration to the sum of its fourth power. Through a computer program, happy numbers were identified and it was proven that when the interval becomes larger, the density of happy number becomes smaller.

DISCUSSIONS

Through a computer program, happy numbers were identified; and it was proven that when the interval becomes larger, the density of the happy number becomes smaller.

KEYWORDS: Happy Numbers, Fixed Point, Cycle, Intervals, Density of Happy Numbers

SUBMISSION ID: R04A-BATANP-1583

Oral and Written Numeracy Assessment Tools and E-games: Its Effectiveness as an Approach in Teaching Mathematics in the District of Sta. Teresita Division of Batangas, Philippines

Arnel Alcantara, Department of Education - Batangas

Abstract

INTRODUCTION

Since Mathematics is an indispensable tool for the technological age, it is the role of Mathematics teachers to provide opportunities to learners to learn materials which may be considered new or modern. Unfortunately, despite all the changes and initiatives, there are still problems in Mathematics education. Generally speaking, many learners even see Mathematics as a difficult subject. Some learners tend to hate numbers, while some show no interest in learning about it at all. This action research would be useful and effective in making learners enjoy as they learn Mathematics easily.

METHODS

The descriptive method of research was used with a questionnaire as the main data-gathering instrument. The researcher personally administered the instrument to the learners from nine public elementary schools in the District of Sta. Teresita. Data were tallied and interpreted with the use of percentage and weighted mean.

RESULTS

The effectiveness of oral and written numeracy assessment tools and E-games were evident as disclosed by the overall average mean rating of 3.08. Enjoying while learning was the topmost in the rank as revealed with the highest weighted means of 3.88 as assessed by the pupils themselves. This indicated that learning took place while the learners are enjoying and they performed well in Mathematics classes while using the said innovative program. However, learners themselves encountered problems dealing with this program. This meant that teachers should find ways and means to improve their methods on planning and crafting oral and written numeracy assessment tools and E-games so that the learners could cope up with the topic difficult for them. Moreover, the proposed action plan focused on the weak findings of this study. Corollary to these it was highly recommended that the positive attitude and interest of the learners towards Mathematics must be holistically inculcated to their minds and heart.

DISCUSSIONS

The results demonstrate that E-games was an effective approach in teaching Mathematics suited to the needs and abilities of the learners coupled with activities within their experience and interest in the stress-free and comfortable environment. This was congruent with the study of Paraskeva (2010) stated that the use of games is a fun, engaging, motivating, interesting and encouraging way of teaching. In line with this, the use of Oral and Written Numeracy Assessment Tools is a must when teachers want an effective evaluation of learning outcomes.

KEYWORDS: Numeracy, assessment Tool, E-games, Technology, Innovation

SUBMISSION ID: R04A-BATANP-1290

**Performance in Mathematics Competition in Public Elementary Schools in
the District of Binangonan II, Division of Rizal**

Ma. Monette D. Rios

Abstract

INTRODUCTION

Through the years, the Philippines has been actively emphasizing the need to integrate math quiz competition in school to measure its student ability to solve mathematical problems. The Department of Education, as well as other line agencies, completely promotes mathematics as a means of measuring students' ability by initiating division, regional, and national quiz competitions and eventually sending prospective students to international competition.

METHODS

The descriptive research design was used in this study. The design is believed to be the most appropriate because it involves the collection of data that is in the present condition and looks for any possible relationship between the variables used in the study. Descriptive research uses quantitative methods to describe what describing, recording, reading, analyzing and interpreting conditions to exist. It involves some types of comparison or contrast and attempts to discover the relationship between existing non-manipulative variables.

RESULTS

Based on the findings of the study, it was concluded that the male and female coaches with different educational attainment, position, and length of service do not differ on the strategies they apply in preparing the pupils for Mathematics competition. Different age groups of coaches differ in the use of review materials and problem-solving techniques. Similarly, married and single teacher-coaches differ in their use of review materials.

DISCUSSIONS

Teacher-coaches must be exposed to techniques of training the pupils for competition. The pupils' English language proficiency must be improved for them to better understand directions and the problems thrown at them during competition. Enough review materials including electronic resource must be provided for the use of the coaches. The proposed action plan may be implemented to improve the performance of the pupils in Mathematics Competitions, and further studies may be conducted especially in the best practices of schools with good performance in competition.

KEYWORDS: Performance, Competition, Mathematics

SUBMISSION ID: R04A-RIZALP-0298

**Practices of Mathematics Teachers in Relation to Pupils Performance in
Enhancing Teaching at Balayan East Central School: An Assessment**

Maryann Abrugena, Department of Education - Balayan East

Abstract

INTRODUCTION

The world today recognizes the importance of achieving high levels of literacy and numeracy. Studies have shown that societies with high levels of literacy and numeracy have lower levels of poverty. It has been accepted that good education leads to economic growth hence reduced. This study considers the investigation of teachers' perceptions of classroom assessment in mathematics and their current classroom assessment practices. Specifically, the study seeks to understand the methods and tools teachers use to assess their students. The researchers observe closely how classroom assessment is being carried out in the classroom by focusing on the strategies and tools the teachers used to assess the learners. In addition, the researcher investigated teacher perceptions of the role of assessment in teaching and learning mathematics

METHODS

This study used naturalistic inquiry and the descriptive method of research and field survey. The naturalistic inquiry that focused research endeavors on how the respondents behave in natural settings while engaging in life experiences. It is descriptive in nature since the data are presented in a descriptive form and described using basic statistics. It is a field survey since the survey instrument is a questionnaire, which will be administered to the respondents.

RESULTS

The classroom assessment practices of the Mathematics teachers in Balayan East Central School and their strategies were high extent while the level of achievement of the selected pupils was under the category of developing. In this level, the pupils possess the minimum knowledge and skill and core understanding but need help throughout the performance of authentic tasks. There is a significant relationship between the teacher's classroom assessment practices and the achievement of their pupils in mathematics.

DISCUSSIONS

Classroom assessment practices as it affects greatly the achievement or performance of every pupil in Mathematics class should be the core of interest in classroom teachings of every Mathematics teachers in any school. The fact that it is really difficult to transfer knowledge in mathematics on the part of the learners, teachers are always expected to extend patience in dealing with slow learners, especially.

KEYWORDS: practices, pupil's performance, assessment

SUBMISSION ID: R04A-BATANP-1905

Problem-Solving Ability: Its Related Factors and Academic Performance in Mathematics for an Enhanced Teaching Program

Rufina Rosales & Amparo R. Conocido, Teacher III

Abstract

INTRODUCTION

In the study of Mathematics, two aspects are given emphasis: the computational skills and the problem-solving ability. It is in the problem solving that computational skill is shown. In learning how to solve problems in Mathematics, students should acquire ways of thinking, habits of persistence, and curiosity. The researchers witnessed the interest level of the students when it comes to problem-solving in mathematics. In this scenario, the researcher would like to conduct a study about the problem-solving ability and its related factors that are related to the students' academic performance in Mathematics that will enhance the teaching program.

METHODS

This action research employed the descriptive- survey and correlation research design method. Descriptive research methods are used when the researcher wants to describe specific behavior as it occurs in the environment. Descriptive studies are usually the best methods for collecting information that will demonstrate relationships and describe the world as it exists. These types of research are often done before an experiment to know what specific things to manipulate and include in an experiment. Correlation research explores relationships between variables, it links between different things.

RESULTS

Generally, the learners' level in problem-solving ability, reading comprehension ability, translating word phrases into mathematical symbols, and attitude towards mathematics are at a fair level. Generally, the learners' level in performing fundamental operations is at a moderate level. The respondents' level in academic performance is at a satisfactory level. There are significant relationships between learners' academic performance and problem-solving ability, learners' academic performance and reading comprehension ability; learners' academic performance and translating word phrases into mathematical symbols; learners' academic performance and performing fundamental operations and between learners' academic performance and attitudes towards mathematics

DISCUSSIONS

The results show the continuous implementation of the different programs and projects to enhance the problem-solving ability of the learners because Mathematics is intimately connected with everyday life and necessary to the successful conduct of affairs. It is an instrument of education found to be in conformity with the needs of the human mind. Mathematics helps the child in developing analytical and reasoning skills with logical and structured thoughts.

KEYWORDS: problem-solving, ability, factors

SUBMISSION ID: R04A-BATANP-1797

Problem Solving Involving Fraction Using Four Fundamental Operation (F4F): An Intervention Material in Mathematics 5

Dorie Magsumbo, Teacher

Abstract

INTRODUCTION

The study aimed to address the least-learned competency in Math V specifically in solving word problems involving fraction using the four fundamental operations among the Grade 5 pupils of Maitim Elementary School. This study further proved the impact of the utilization of the module as an intervention material in improving the pupils' academic performance in Mathematics.

METHODS

This study utilized the descriptive method which is mainly focused on pre-test and post-test as an indicator of the improvement of academic performance of pupils in Mathematics. A 20- item test was utilized as determinants in improving the pupils' academic performance in Math V as a result of the teacher- made intervention material.

RESULTS

There was a significant increase in the performance of the pupils during the post-test as compared to the results of the pre-test. With a percentage Mean of 34% in the number of pupils under Above the Mean, it can be gleaned that 54% significant increase was noted, which can be attributed to the utilization of the teacher-made intervention material.

DISCUSSIONS

The utilization of teacher-made intervention material is a vital factor in improving the pupils' academic performance. This is evident with the significant increase in the Weighted Mean of the Total number of pupils tested. Otherwise, other factors which affect the learning competency of the learners which are not cited in this study are subject for a recommendation.

KEYWORDS: teacher-made intervention material, academic performance, fundamental operation, learning competency

SUBMISSION ID: R04A-CAVITP-0981

Problems in the Implementation of the K to 10 Mathematics Curriculum of Maddela District II

Winston Tanglo, Department of Education

Abstract

INTRODUCTION

The twin goals of the K to 12 Mathematics Curriculum in the basic education levels are Critical Thinking and Problem Solving. Yet the curriculum implementation process faces problems and issues that need to be addressed. In fact, the performance of the learners in their classroom assessments based on the Quality Management System (QMS) and in the latest National Achievement test revealed low mastery of the desired skills and content. Thus, this study determined the problems encountered by Grade 1 to 10 Mathematics teachers in the implementation of the K to 10 Mathematics Curriculum and the solutions they offered to address such challenges.

METHODS

Descriptive method was used and a validated survey questionnaire was employed to determine the teacher-respondent's problems and solutions offered. Seventy-four teachers participated and the data gathered were categorized, analyzed using the weighted mean, and interpreted using a Likert Scale.

RESULTS

Problems were identified and were categorized into four which includes: (1) problems on instructional materials and facilities, (2) problems on teaching techniques and methodologies, (3) problems on learners' attitude and performance, and (4) problems on parents, community and the environment. The findings also revealed that mathematics teachers were offering solutions to the identified problems for each category. The most often solutions applied for each category were: (1) downloaded available LMs & TMs, (2) used cooperative learning, (3) conduct of remedial classes, and (4) home visitations, respectively.

DISCUSSIONS

The results demonstrate the need for the teacher who is the direct implementer to be properly clarified and capacitated about the program. Innovativeness of the teacher and ample support from the school head and the community ensures the success of the implementation.

KEYWORDS: Problems, Implementation, K to 12 Mathematics Curriculum

SUBMISSION ID: R002-QUIRIN-0102

Project Advanced Mathematics Intervention Program among Grade 11 Learners

Rose Anne V. Villone, Taytay Senior High School

Abstract

INTRODUCTION

For the last two years in Taytay Senior High School, General Mathematics has the lowest MPS in all the subjects taken during the first semester. The data showed that the problem was on the teaching-learning process. It showed that many of the students had poor performance and not competent to meet the learning competencies. In this study, the researcher aimed to identify the level of mathematical competencies of grade 11 learners after the utilization of the developed Project Advanced Mathematics Intervention Program.

METHODS

Descriptive research was used in this study to describe the mathematical competencies of the participants. On the other hand, the experimental method utilizing a single group design was utilized to determine the effect of the program to the participants. Pre-test and post-test were used to gather data and descriptive statistics such as frequency, percentage, standard deviation, and dependent t-test to analyze the data. A total of thirty (30) learners from grade 11 were purposively selected as participants of the study. They are selected based on the result of their diagnostic test and their general average in Mathematics 10.

RESULTS

The gathered data reflect the following results: (1) participants of the study were "Less Competent" in Functions and Their Graphs and Business Math while "Not Competent" with respect to Logic before exposure to the Project Advanced Mathematics Intervention Program; (2) after exposure to the program, most of the learners in "Functions and their Graphs" and "Basic Business Math" became "Moderately Competent" level and "Highly Competent" in "Logic"; and (3) there was a significant difference on the level of mathematical competencies in General Mathematics of the participants of the study as revealed in the result of the diagnostic test and achievement tests with respect to all contents.

DISCUSSIONS

It could be inferred in this study that the implementation of the program greatly contributed to the increase in the level of mathematical competencies of the participants of the study. This proved that the Project Advanced Mathematics Intervention Program possessed the characteristics of a good intervention program. This study can be used as a basis in the School Learning Action Cell Session (SLACs) giving emphasis on the adaptation of the program in addressing the needs of the learners better learning outcomes.

KEYWORDS: grade 11 learners, General Mathematics, Intervention Program, mathematical competencies

SUBMISSION ID: R04A-RIZALP-0404

**Project BILANG: An Intervention to Reading and Writing Numbers
through 1000 using Mother Tongue-Based Instruction**

Ailene Marasigan, Maricel T. Delgado, & Gina A. De Los Reyes, Department of
Education

Abstract

INTRODUCTION

Based on the Republic Act 10523 otherwise known as the "Enhanced Basic Education Act of 2013, Mathematics is taught in mother tongue from kinder to grade three. Specifically, reading and writing numbers through 1000 were taught in mid of June. It is obviously observed that even the instruction is in Mother Tongue, they always tend to answer using English numeracy. It is also difficult for the teachers to deepen the learning on how to read and write numbers in Mother Tongue. Project BILANG (Basic Inculcation of Literacy and Numeracy through Guidance) An Intervention to Reading and Writing Numbers through 1000 using Mother Tongue-Based Instruction is designed to improve pupils' performance in reading and writing numbers. In this project, it is a tandem responsibility between home and school. Teachers prepared and provided modules- list of numbers 1-1000 in symbol and in words and exercises.

METHODS

This project attempts to investigate the effectiveness of Project BILANG in developing reading and writing numbers through 1000 to which parents are involved. This study used the descriptive survey method. Pre and posttest were used to determine the pupils' performance.

RESULTS

From the result of pre-test, only 32% of the Grade II pupils can recognize numbers in Mother Tongue. Through the use of Project BILANG, post-test was conducted, 74% of the pupils can read and write numbers in Mother Tongue. There was a 42% increase in the performance of the pupils.

DISCUSSIONS

Based on the percent of increase gained by the researchers using Project BILANG, the modules and activities were found effective with regard to increasing performance in reading and writing numbers through 1000 using Mother Tongue-Based Instruction. Close guidance on the implementation of the project is a must. Also, parents' participation really helps to achieve this progress.

KEYWORDS: numeracy, performance, Mother Tongue

SUBMISSION ID: R04A-BATANP-1133

Project Coin: Acceptability of Contextualized, Original, and Innovative Instructional Materials in Mathematics

Fannie Villacarlos, Rose Ann R. Nuestro, & Aiza B. Gonzales, Department of Education

Abstract

INTRODUCTION

With the very few local instructional materials in the teaching of Mathematics using MTB-MLE at Tua Elementary School and with the end in mind that the provisions on the use of contextualized or localized reading materials in its delivery of instruction, the researcher came up with the idea of preparing localized activities in Mathematics specifically for the primary grade. Accordingly, when teachers can create their own teaching activities, this boosts their own critical and creative thinking and their skills in translating curriculum content into relevant learning activities also grows. Student learning will also improve because the teachers will be more systematic and better contextualized to the learning needs of pupils.

METHODS

The descriptive method was utilized.

RESULTS

The following instructional materials were prepared: Kwentong Pambata entitled "Ang Alkansyang Bumbong ni Popon", module "Hati Tayo", "FASE2ME", "Alpabetong Tore ng Karunungan", Math Foldables." These instructional materials were compiled by the three (3) teacher-researchers from the locality by interviewing the folks and from exhausting all the means of any information that could be found in the City Library and from web sites for translation purposes.

DISCUSSIONS

Based on the table presented, the acceptability of the contextualized activities based on content, appropriateness, and visual appeal were understood and appreciated.

KEYWORDS: contextualized, big books, localized

SUBMISSION ID: R04A-CAVITP-1501

Project Fostering Positive Attitude in Mathematics to Level Up Academic Achievement of Selected Grade 5 Pupils

Ma. Salome Bayle, Emelita S. Rubi, & Raquel E. Vid

Abstract

INTRODUCTION

Basic education serves as a foundation of a child's learning whether it is academically or socially. During these years, children gradually acquire academic knowledge and begin to develop a positive or negative attitude toward their studies. Basic education set certain standards for each grade level through assessments given at the end of each quarter, but pupils failed to reach the standards given. The Learners Outcome Assessment result manifests that Mathematics always has a low mean percentage score. It shows the necessity for a study that can help pupils to be highly motivated until the improvement in interest and performance are already evident.

METHODS

The study employed a descriptive survey design using questionnaires as instruments. The purposive sampling was used to determine the respondents of this study. They got the least average in their final rating in Mathematics during their previous grade level. The respondents underwent a program entitled "Project Fostering Positive Attitude in Math." Games, manipulative materials, videos, and rewards were included in the program.

RESULTS

The majority of the pupil respondents' Academic Performance before the implementation of the program falls on the description of fairly satisfactory. The result of the questionnaire which serves as the basis for the attitude of the respondents in Mathematics before the intervention program shows that the majority are not fond of answering word problems and show less interest in the subject. The result using the level of significance 0.05 with a degree of freedom of 16 signifies that critical value 0.23 is less than the computed chi which is 15.29 which implies that there is a significant relationship between the attitude and the achievement level. After the intervention program, the result of their first quarter grade reveals that half of the class got a satisfactory rating. Majority of the pupils' level of interest towards Math increased and love to acquire mathematical skills.

DISCUSSIONS

Arising from the findings of this study, it is noted that the attitude of pupils in Mathematics in Grade 5 has a significant effect on the academic achievement for the first grading period. Pupils should perceive the subject as an enjoyable and interesting one by putting some tricks, games, and good motivation thus bringing a very lively class atmosphere. It has been realized that if pupils show a positive attitude, the achievement level will be better than before.

KEYWORDS: Fostering positive attitude, student achievement, intervention program

SUBMISSION ID: R04A-CAVITP-0411

**Project Fowega: Improvement of Pemdast Mastery of Grade Six Pupils of
Sampaga Elementary School through Fundamental Operations Using
Worksheets and E-Games**

Ramona Arroyo, Department of Education - Batangas

Abstract

INTRODUCTION

Mathematics instruction has become an essential part in all levels for it is where initial and foundation is laid and basic mathematical concepts are first developed. Thus, mastering them is one of the keys to progressing in an understanding of math. No matter how simple it is, still, there are pupils who are struggling and have a dilemma in numbers. The condition is definitely present among all schools and Sampaga ES is not exempted from this. It has been observed that 15 out of 68 pupils have low performance in Mathematics based on their summative assessments. They find difficulty in performing either in individual or group activities related to numbers.

METHODS

The result of the pre-test administered must be gathered to serve as baseline data. The result of item analysis is also taken into consideration to be able to identify the least mastered competencies in Mathematics Six. This is to justify that an intervention material is of great importance to address the difficulty. To analyze the gathered data, the Quasi-Experimental design under Quantitative method must be used. This is designed to compare the test results before and after utilizing the intervention material. This is for the purpose of determining the efficacy of the Project FOWEGA in improving the PEMDAS mastery of 15 Grade 6 pupils.

RESULTS

The study presented the performance of pupils during post-test. Fifteen Grade 6 pupils have mastered the competencies. Four of them got 15 points or 75%, 6 of the pupils had scored 80% while 17 points or 85% was the score of the four respondents, and pupil number 4 has only 2 mistakes out of 20 item post-tests.

DISCUSSIONS

As presented in the comparative results of the efficacy of the intervention materials used in enhancing the mastery level of 15 Grade 6 pupils in Mathematics, positive effect of PROJECT FOWEGA gives 25% increase in the test result of pupil 3, 40% for the pupil. Pupils 2, 10, 12, 14 experienced an additional 45% in the test while a half increase to pupils 1, 6, 8. A great change in the assessment result for pupils 7, 9, 13 since 55% is gained. Pupil 15 got a 60% difference. A big impact is observed to pupils 4 and 5 as their test results increased to 65% and 70% respectively. Since millennial pupils are highly technical learners, they are able to make their own knowledge by manipulating things. Thus, the utilization of PEMDAS worksheets with manipulating activities absolutely can deliver a commendable result in making the pupils understand the lesson in Mathematics.

KEYWORDS: PEMDAS

SUBMISSION ID: R04A-BATANP-1185

Project ICY: Improve Computational Skills of Young Learners

Rianette Ydia, Proponent

Abstract

INTRODUCTION

One of the most important skills that need to be developed in children is computational skills. It is certainly imperative for survival not only in the world of schools but in adult life as well. Math can be a fun and imaginative activity for children and can open doors to all kinds of activities in the modern world. The main goal of having math subject in school is to equip pupils not only in simple computational skills but also with higher order and thinking skills whether for fact gathering, learning new skills, or for pleasure. In Grade III class of Kaytapos Elementary School, it was found out that 6 out of 27 or 22.22% pupils were identified below average and 11 or 40.74% were poor in the mastery of multiplication table for SY 2016-2017. Thus, the 17 Grade III pupils who were poor in the mastery of multiplication table were also identified as pupils at risk in computational skill. Project ICY (Improve Computational Skills of Young Learners) was developed to improve the computational skills of pupils at risk in mathematics specifically in multiplication and division.

METHODS

Project ICY aimed to improve at least 75% on the computational level of the 65% or 17 Grade III pupils from poor to the average level for the period of four months. It utilized different interventions namely: (1) mastery of the multiplication table, (2) use of fuller technique, (3) constant recitation of multiplication table, (4) tapping fast learner for intensified peer tutoring, (4) giving take-home math exercises materials, (5) sufficient supply of exercises, drill cards, and activity sheets, and (5) conducting of award merit system.

RESULTS

The salient findings after the project implementation showed that 14 or 82.35% of pupils from 17 under poor computational skills had improved. Although there were still remaining 3 pupils in below average computational skills, the result exceeds 7.35% more than the expected target.

DISCUSSIONS

Constant monitoring, validation, and tracking of pupils' computational skills level, training of teachers on techniques and appropriate strategies in mathematics, giving take-home math exercise materials, intensified peer tutoring during free time and remediation, and merit and reward system contributed to the success of the project. Through the interview, observation and feedback system validate that Project ICY showed a great help for pupils at risk in computational skills and served as an avenue for enjoyable and amiable time to learn mathematics. It was suggested to have a continuous implementation of Project ICY in all grade level.

KEYWORDS: Project ICY: Improve Computational Skills of Young Learners

SUBMISSION ID: R04A-CAVITP-0985

PROJECT MVES: A Math Intervention for Grade Five Pupil of Cabangaan Elementary School

Leah Mendoz, Cabangaan Elementary School

Abstract

INTRODUCTION

The primary source of this research is to identify whether the math intervention PROJECT MVES (Mathematical Vocabulary for Easy Solving) could address the difficulties of the students in solving a word problem. The said intervention is expected to help increase comprehension of students' mathematics vocabulary, ability to solve word problems, and their views in the project.

METHODS

This study is pursued because the researcher wanted to help the respondents of this study (n-28) from grade 5 level of Cabangaan Elementary School who obtained scores ranking below grade level expectations during Quarterly Tests. The researchers made use of Quasi-Experimental Design where in 2 groups were selected, the first group acted as the control group and the other group undergoes vocabulary instruction.

RESULTS

From the data gathered and observed by the researcher, she can conclude that Project MVES (Mathematical Vocabulary for Easy Solving) is indeed a good math intervention for grade 5 participants since it has significantly increased students' performance before and after the series of word problem-solving practices. It also reflects that the problem-solving skills of the students improved through the program. To support the positive results, the views of the student about the intervention were also tabulated to show the positive impact of it to students.

DISCUSSIONS

Although the researcher has a high belief on the study's result it is still highly recommended to have a further study for this type of intervention since there are also other factors that can be considered that can affect mathematical vocabulary comprehension. The output of this paper can be used as enhancement reference of the school.

KEYWORDS: Mathematical Vocabulary, Word Problems

SUBMISSION ID: R04A-CAVITP-0231

Project Stemathics (Improvement of Skills in Mathematics of STEM Students): Addressing the Least Mastered Basic Mathematical Competencies of Grade 11 Students

Yolanda Ramirez, Department of Education - Batangas City

Abstract

INTRODUCTION

Mathematics encourages practical learning and helps promotes intelligent decision-making. Teaching and learning mathematics are at the heart of education. Learning mathematics has increased lifelong learning skills since it links school to everyday life, provides skill acquisition, prepares students for the workforce, and fosters mathematical thinking. However, in the K-12 curriculum, learning Mathematics faces academic challenges. Hence, this study aims to provide needs-assessment on competencies in General Mathematics with the aim of improving the mathematical skills of STEM students and their academic performance in Mathematics Subjects.

METHODS

In order to identify the least mastered competencies of Science and Technology Mathematics (STEM) students, a teacher-made test pre-assess the competencies of the students in General Mathematics and Pre-Calculus to nineteen (19) presently enrolled Grade 11 STEM students of Conde Labac Integrated School. Mean, percentage, and ranking was utilized to analyze the data.

RESULT

Based on the performance of STEM students in General Mathematics and Pre-Calculus, it was shown that students are classified in the satisfactory level in areas of computing simple interest and solving exponential functions and equations.

However, most of the students were below the satisfactory level and did not meet expectation on solving arithmetic and geometric progressions, finding the slope of a line, and factoring.

DISCUSSIONS

The data demonstrated that the least mastered competencies can be attributed to the difficulty in learning the subject, interest, and lack of basic numeracy skills. Therefore, the program will address those factors by introducing mathematical exercises and basic mathematical operations tutorial sessions to be given to STEM students. Through Project STEMathics (Improvement of Skills in Mathematics of STEM students), quality math instruction for the initial years in the senior high school inculcate in learners a positive attitude about mathematics and connecting mathematics to other subjects. STEM students are pushed to discuss mathematics, use appropriate mathematics vocabulary, and extend their learning through Project STEMathics.

KEYWORDS: Mathematics, senior high school, competencies, project, numeracy

SUBMISSION ID: R04A-BATANC-0513

Project TIMES: to Improve Academic Performance in Mathematics of Aguadorian Pupils

Rizel Glorioso

Abstract

INTRODUCTION

This study aimed to improve the academic performance in Mathematics of Aguado pupils. Teachers conducted the Mathematics assessment drill, and they found out that among the 358 pupils in grade 3, 80 of them fell under poor category of the test, which means these pupils need help to improve their mathematical skills because there's a big chance that they will fail in mathematics at the end of the school year.

METHODS

This study employed a descriptive type of research, a survey questionnaire was distributed to the participants and the unstructured interview was also conducted. The data was interpreted by Pearson correlation of coefficient, weighted mean, and percentage.

RESULTS

The result of the data revealed the program project TIMES was effective to help improve the academic performance of Aguadorian pupils. The performance of these 80 pupils from grade was recorded and studied by the teachers until they reached the grade 5 level. After the study of their academic performance from grades 3-5, a t-test was employed by the teachers to determine if the intervention is effective or not, and luckily, in grade 3 they obtained a mean increase of 1.00 before and after the intervention and a standard deviation of 1.53. In grade 4, they got a mean difference of 2.83 and a standard deviation of 2.01. And in grade 5 they got a standard deviation of 2.35 with a mean difference of 2.84.

DISCUSSIONS

Lastly, since the program was found effective among Aguadorian pupils the researchers, school administration, and the mathematics teacher recommended that the program can be adopted by other schools in the District or the Department of Education Cavite to help the Kabataang Cavitenos to improve their academic performance in mathematics.

KEYWORDS: Academic performance, mathematics, intervention, mathematical assessment

SUBMISSION ID: R04A-CAVITC-0064

Project: 3R-M1

Garylen Amoroso, Maria Victoria L. Digo, & Nelfe P. Palacios, Bulalo Elementary School

Abstract

INTRODUCTION

The Ontario Ministry of Education (2003) maintains that "a positive attitude towards mathematics, an understanding of key concepts, and mathematical skills must be developed in the early grades" (p.1). Students can be very much affected by the attitudes and beliefs of their teachers. Teachers should promote positive attitudes and actions about mathematics (Ontario Ministry of Education, 2003). With these perspectives, the teacher researchers tried to use the 3R strategy for the pupils in Grade One to realize that Mathematics is not difficult to understand and not that difficult to master. The primary purpose of this research was to improve the academic performance in Mathematics of Grade I pupils of Bulalo Elementary School and Bulalo Annex for the school year 2017-2018 through Project 3R (Review, Reteach, Reinforce).

METHODS

The respondents of the study were 17 Grade One pupil of Bulalo ES and 23 of Bulalo Annex for S.Y. 2017-2018 and the sample was chosen using Purposive Sampling Technique. The descriptive method of research was used in the study to find out the academic performance of the pupils. The data gathered were tabulated, evaluated and analyzed using percentage to improve the academic performance in Mathematics. Moreover, the t-test is used to determine the significant correlation between the Pretest-Diagnostic Test and Posttest-Quarterly Assessment results in Mathematics.

RESULTS

In the findings, the obtained difference is 16.75 between the pre-test score and the post-test scores of the pupils in word recognition is significant, as indicated by the t-value which is 20.7607 with probability less than .05 level of significance. This means that the post-test mean score is significantly higher than the pre-test mean score. This implies that the pupils improved significantly in Mathematics I through Project 3R.

DISCUSSIONS

Project 3R helped in the improvement of the scores in the first quarterly assessments in general. Based on the findings and conclusions made, the following recommendations are suggested: the project should be applied continuously to the next quarter till the fourth quarter of this school year and it can also be used in teaching other subjects and another grade level to raise the achievement level of the students and ultimately the school.

KEYWORDS: mathematics, Project 3R-M1, pre-test, post-test, Grade 1, assessments, Bulalo Elementary School

SUBMISSION ID: R04A-CAVITP-0467

**Proposed Supplementary Materials to Enhance Instruction in Algebra at
City College of Tagaytay, Tagaytay City: A Bridging Approach**

Rosario Reyes, Tagaytay City Science National High School

Abstract

INTRODUCTION

The study is conducted to identify the difficulties of freshmen students in Algebra so that an intervention measure can be proposed to identify the students' difficulty and availing of the supplementary instructional materials in Algebra for college freshmen so that the researcher can offer both the proposed supplementary instructional tools as an intervention measure.

METHODS

The study is descriptive in nature where 5 college administrators and 9 faculty of Math or a total of 14 from City College of Tagaytay (CCT) participated and responded to the study. Using a combination of the purposive-convenience procedure, 50 freshmen students were also chosen after they were classified using sets of indicators. Sets of validated-survey questionnaire complemented by interviews and observations were also used to generate the data in the study.

RESULTS

The following are the conclusions: The Proposed Supplementary Materials (PSI) in the form of practice exercises for the use of freshmen students helped both administrators and faculty and served as bridging instructional materials in the teaching of Algebra; The performance of the freshmen students in Algebra has improved after using the instructional materials; The PSI Materials in Algebra helped improve knowledge and skills of the students in the study of Algebra since they will not only help improve the difficult areas in the study of the subject but will also offer specific plans of actions and instructional strategies using supplementary instructional tools on Algebraic Competency Skills, to be undertaken by joint initiatives of college administrators and faculty of the CCT.

DISCUSSIONS

Based on the data gathered, the researcher offers PSI materials in Algebra to further enhance the computational skills of the pupils found wanting in the study of Algebra. The result of the pretest proved to help enhance the algebraic knowledge and skills of both groups of subjects since their performance had improved from poor rating to very satisfactory performance for the experimental group; and from poor to satisfactory performance of the control group, respectively. 3) When coefficient correlation (r) statistics is applied, the computed $r = 0.856$ for the control group; and $r = 0.713$ for the experimental group are indicative of strong and high positive correlation, the computed t -values resulted way above the significant level ($t = 12.039$ for the control and $t = 5.330$ for the experimental), or $t = 2.069$ that the research H_0 is rejected.

KEYWORDS: Supplementary Materials for Algebra

SUBMISSION ID: R04A-CAVITP-1506

Proving that the Area of the Trapezoid is Equal to the Area of the Parallelogram Formed from It

Gemola, Kessiah Aura B; Gemola, Paul Jacob; & Sotoniel, Rogemie R;
Department of Education
(Adviser: Myracell Buenaflor)

Abstract

INTRODUCTION

Two of the most frequently used geometric shapes are the trapezoids and parallelograms. A trapezoid is a 4-sided figure with one pair of parallel sides. Finding the area equals the sum of the bases, b_1 and b_2 is divided into two and is multiplied by height h . The perpendicular distance between the bases is known as the height. The sides that are not parallel are called legs, and a line from the midpoint of one leg to the midpoint of the other is called the median. A parallelogram is also a four-sided polygon in which each side is equal in length to its opposite side, and are parallel to each other. The area is the product of one side, taken as a base, times the shortest distance to the opposite side. These are two different figures. Thus, they have different formulas in finding their area. The end in mind of the proponents is to prove that the area of the trapezoid is equal to the area of the parallelogram formed from it.

METHODS

Three different trapezoids of different measures are to be used for the three conjectures and each trapezoid will be cut in the median in order to form a parallelogram. Procedure: (1) Draw a trapezoid of any shape or size on a piece of colored paper. (2) Cut out the trapezoid. Label the bases and height. (3) Measure the lengths of b_1 and b_2 . Measure the height. Record the measurements. (4) Fold b_1 onto b_2 . Unfold. (5) Cut the trapezoid on the fold line. Then form a parallelogram. (6) Measure the height and base of the parallelogram formed from the cut-out trapezoid. Record the measurement. (7) Compute the Area of the Trapezoid and Area of the Parallelogram.

RESULTS

Following the procedure, three geometric shapes have been formed-three parallelograms were created from the trapezoids by folding b_1 onto b_2 and cut out the trapezoid in the folded portion. The bases and height of the parallelograms were being measured and the area had been computed. Upon looking at the data collected, we can observe that the Area computed using the Trapezoid has the same value to the Area computed using the Parallelogram.

DISCUSSIONS

After a thorough investigation using the three trials of different measures of a trapezoid, we can therefore conclude and have proven that the area of the trapezoid is equal to the area of the parallelogram formed from it. This finding would enable us to solve directly the area of a parallelogram formed from a given trapezoid. When a particular trapezoid is given, just form a parallelogram out from it, measure the base and the height, we can already solve for the area.

KEYWORDS: translating a complex solution to a simple one (geometry), new mathematical possibilities

SUBMISSION ID: R013-SURSUR-0009

Raising the Academic Performance in Mathematics through Multimedia-Facilitated Instruction

Michelle Ambunan, Department of Education - Cavite (GMA)

Abstract

INTRODUCTION

The integrated use of multiple modern information technology in education requires the learning and teaching process to become effective to both teachers and learners. There is no doubt that incorporating multimedia facilitated instruction (MFI) in teaching Mathematics has caused a persuasive effect towards optimizing student's access to information. Complementing the desire to facilitate the varying problems in teaching mathematics, the researcher come up with this study on finding ways to raise the academic performance using MFI.

METHODS

The researcher used the descriptive-comparative research, Vizcarra (2003) referred to as a different form of other research design in relation to the processing of data because of research needs to explore the nature, characteristics, relationship, and difference of one or more variable to observe effects on results. It was designed to assess quantitatively the pre-test and post-test score of grade 11 student respondents in Mathematics subject. The use of pre-test and post-test through descriptive-comparative design, alternative hypothesis have been tested.

RESULTS

Based on the results prior to the use of MFI, the range with the most frequency is 18.60-27.39 with 38 students followed by 27.40-36.19 with 33 respondents and 2 students with 1-9.79. It differs to those students in the traditional group with 24.64 Mean (M) which falls in the average level almost similar to the mean of those students in the experimental group (23.46). T-test score is .764 with a p-value of .099 < .05. Therefore, the difference between the two groups is not significant. After the use of MFI, it shows that 49% got a high score of 40.20+ followed by 30.40-40.19 with 46 respondents and 20.60-30.39- (5%) of the total number of respondents for the low scorers. The difference in the levels of performance of two groups shows that the experimental group got a higher score (M=43.98, SD= 4.39) than those from the traditional group (M=36.50, SD=4.49). Therefore, the scores are statistically significant with a p-value of .000, rejecting the null hypothesis.

DISCUSSIONS

As it was implied, academic performance in mathematics among grade 11 is below par prior to use of MFI. Mathematics teacher who used the MFI should determine the factors that enhance its effectiveness. School administrators should provide seminars/training especially to old teachers in utilizing available technology. Future researchers are encouraged to conduct more experimental research design on the use of technology.

KEYWORDS: Multimedia Facilitated Instruction (MFI), Academic Performance, Experimental-group and Control-group, Pre-test and Post-test, Mathematics

SUBMISSION ID: R04A-CAVITP-1398

Real Life Problem-Based Learning Module in General Mathematics for Grade 11 Students' Conceptual Knowledge and Skills

Michael Eric Nombrefi, RACE Associate Member

Abstract

INTRODUCTION

The researcher found that there is an existing weakness in mathematics education as reflected in the MPS of his school. Analyzing this result, it could be surmised that the school needs to have a stronger mathematics foundation parallel on the current curriculum and also points to real-world application and connections. Besides not having such real-life applications, there is also an inadequate number of instructional materials in General Mathematics. Realizing this scenario, the researcher banked on the potential of combining real-life applications with problem-based learning in order to develop a manual or module to enhance student learning in mathematics. In the same light, the activities and examples in the Real-Life Problem-based Learning Module (RL-PBLM) aimed to increase the mastery of the target competencies in General Mathematics.

METHODS

The non-experimental pre-test post-test design was used in order to determine the significant difference in the performance of students before and after the use of the RL-PBLM. The respondents were the students who scored poorly (less than 65%) in the target score for both knowledge and skills test based on the results of the diagnostic examinations for knowledge and skills. The average percentage of students who got the correct answer was 23% in knowledge examination and 22% in skills examination, which both fall under "Low Mastery." Thus, the RL-PBLM in General Mathematics was developed and used as an instructional tool.

RESULTS

Based from the findings in terms of the level of acceptability of the module as to content, clarity, originality, and appeal to target users, the grand weighted arithmetic mean is 3.85, interpreted as "Highly Acceptable" to mathematics teachers. Comparing the scores, there was a significant difference between the pretest and posttest scores of students since the computed t-test for knowledge and skills (17.300 and 18.591) are greater than the critical value (1.9996).

DISCUSSIONS

The results concluded that the combination of real-life connections and applications as well as problem-based approaches is an effective way of teaching mathematics. The developed RL-PBLM is also highly acceptable among mathematics teachers and Grade 11 students. It is recommended that the developed RL-PBLM may be adapted by other schools to enhance least mastered competencies and to promote effective learning outcomes.

KEYWORDS: conceptual knowledge and skills, real-life problem-based learning module

SUBMISSION ID: R04A-QUEZON-0282

Reducing the Cognitive Load (RCL) of Mathematics Test Items: Its Effect on Students' Performance and Test Anxiety

Oldric Licaros, Department of Education

Abstract

INTRODUCTION

Assessment of learning is an integral component of the teaching process. It is a tool in obtaining feedback on the quality of their learning. The researcher investigated the extent of applicability of Cognitive Load Theory (CLT) to the educational measurement for improving test score validity and fairness. This study further aimed to evaluate a series of systematic item modifications rooted in CLT that teachers and test developers can use to reduce construct-irrelevant variance when writing mathematics assessment items.

METHODS

The study employed Quasi-Experimental Research Design using intact groups to comprise both experimental and control (comparison) chosen randomly from each section. The research method applied was adapted from the study of Gillmor, S., et. al (2015). In the particular study, the comparison group was given a Traditional Test Item (TTI), while the experimental group received a modified set of the same test items called Reducing Cognitive Load (RCL) adapted from the cognitive load studies as cited by Gillmor, S, et. al (2015).

RESULTS

The study indicated that there was a highly significant difference in terms of score performances in the two sets of test items. It also showed that RCL test item had a large effect on the test performance of students. The study also manifested that students felt nervous, had butterflies in the stomach, nauseated, and troubled in choosing answers while taking TTI. However, students in RCL had never felt nauseated, rarely felt nervousness, and rarely troubled in choosing answers.

DISCUSSIONS

The results demonstrate that the students taking Reducing Cognitive Load of Test Item (RCL) performed better than the students taking Traditional Test Item (TTI). Further, Reducing the Cognitive Load of Test Items (RCTI) had a large effect on the students' performance in taking the test. Furthermore, students in the RCTI displayed a lower level of test anxiety than the students who took TTI. In contrast, students in TTI displayed higher test anxiety. The level of test anxiety of the students was a good predictor to the students' test performance. The result agreed with what Miller (2011) had said that because math anxiety is widespread and tied to poor math skills, educators must understand what they can do to alleviate it. Hence, reducing extraneous cognitive load shall alleviate student stress or anxiety. This result agreed of what Chen and Chang (2009) said that both anxiety and cognitive load are inversely correlated with performance.

KEYWORDS: cognitive load, students' performance, test anxiety

SUBMISSION ID: R012-COTABP-0000

Reinforcing Basic Numeracy Skills of Grade 10 Students

Laurel Panaglima

Abstract

INTRODUCTION

It cannot be denied that many of the high school learners even Grade 10 students are unprepared for learning higher Mathematics because of their low-level numeracy skills that result in low performance in this subject. This saddening fact would have a great impact on the students for those numeracy skills are basic and fundamental to higher level Mathematics. In order to address this problem, starting the school year 2016-2017, Department of Education Laguna initiated the Numeracy Inventory Tool for Laguna Learners (NIT2L) which consists of 3-level test items in the following topics: Whole Numbers, Rational Numbers, Decimals and Integers. These are basic topics which require mastery of skills.

METHODS

The researcher administered the Pre-Test of the Numeracy Intervention Tool for Laguna Learners (NIT2L) kit to 33 Grade 10 students to determine their level of Numeracy from levels 1 to 3. The identified Non-numerate and Numerate students had their intervention, while the Advance and Highly Numerate students proceeded to the next level. Series of remedial teaching, guided or independent intervention was given to those students who had lower numeracy skills than the desired. The results of Post Tests were utilized to identify students who would proceed to the next level once the student reached desirable numeracy skill.

RESULTS

The implementation of NIT2L to 33 students demonstrated progress in the numeracy skills of the students. Records showed that after undergoing a series of remedial teaching, guided or independent intervention, students under the Non-numerate and Numerate level reached the desirable numeracy level of advance or highly numerate. There was also a significant improvement in the MPS from Pre-Test to Post Test of levels 1 to 3. The students' grades in Mathematics had a drastic increase of 6 points at an average after the program. This only implied that the implementation of the program helped the learners to perform better in Mathematics.

DISCUSSIONS

The results demonstrate that the basic numeracy skills are vital aspects of learning that will always be enriched and enhanced so students will strengthen their problem-solving capacities. Mathematics teachers may employ NIT2L so that students may better understand the subject-matter and be highly numerates accordingly to their grade level. Extrinsic rewards and motivations may also be used to encourage students to optimize their numeracy skills.

KEYWORDS: NIT2L, numeracy, numeracy skills, non-numerate, numerate, advanced, highly numerate, guided intervention, independent intervention

SUBMISSION ID: R04A-LAGUNA-0167

Remember, Analyze, Compute, Examine (RACE): A Mnemonic Device in Teaching Mathematics

Ranel Villanueva, Teacher 1

Abstract

INTRODUCTION

Student nowadays encounters difficulties in solving mathematical problems and equations. The study aimed to prove the efficiency of the utilization of RACE as a mnemonic structure in teaching Mathematics among the Grade Six pupils of Mariano C. Anacay Memorial Elementary School (MCAMES). Specifically, this study focused on strategic intervention to address the learning difficulty of learners in Mathematics.

METHODS

This study utilized a descriptive survey method. A fifteen-item teacher-made questionnaire will be used as determinants in finding the extent of efficiency of using RACE as a strategic intervention in teaching Mathematics. Percentage-mean and frequency were used to identify the extent of efficiency of the variable being used.

RESULTS

85% of the pupils strongly agreed that Mathematics can be learned thru mnemonics, which indicates that RACE is the most effective and efficient intervention technique employed by the teacher in the teaching-learning process. This further proved that RACE (Remember, Analyzed, Compute, Examine) can be an effective strategy in teaching Mathematics and is evident by maximum pupil's participation in class discussion and a remarkable increase in proficiency level of learners.

DISCUSSIONS

RACE is applicable to Mathematics only since the term "Compute" is applicable only to Mathematics. However, the strategy that applies to RACE can be utilized across other disciplines since Remembering, Analyzing, Comprehension, and Examination can also be done. Utilization of RACE as a strategic intervention improves the Mathematical technique of learners in solving mathematical equations. Relevant shortcut methods and other techniques in Mathematics is vital in improving pupil's academic performance in Mathematics as evident by the utilization of RACE.

KEYWORDS: Strategic Intervention, Academic performance, Remember, Analyze, Compute, Examine

SUBMISSION ID: R04A-CAVITP-0982

Self-Motivation and Learning Competencies in Mathematics

Donalyn L. Saclamita, Saguday National High School

Abstract

INTRODUCTION

Mathematics anxiety is the result of the student's negative attitude that will result in poor performance to acquire different mathematical skills and processes that are useful in their everyday lives. A positive attitude towards Mathematics among students is an important goal of Mathematics education. The study was conducted to assess the self-motivation to learn and the learning competencies in Mathematics of Grade 7 students in the public secondary schools in Cabarroguis, Division of Quirino.

METHODS

The study utilized a structured questionnaire to gather the data and information needed in the research. It is divided into three parts:

1. Checklist on the profile of respondents; 2. Assessment of the respondents' self-motivation to learn Mathematics that comprises 23 motivations lifted from Githua and Mwangi (2003). 3. The test questions lifted from Nivera (2012) composed 50 items taken proportionately from the 33 basic competencies of the first and second quarter of the Mathematics course for Grade 7. The data were analyzed using frequency counts and percentages, mean, t-test, ANOVA and Pearson-r.

RESULTS

In their learning competencies, however, they are "beginning" in "Sets," "Algebra and Irrational Numbers" and "Algebraic Expressions" while they are "developing" in "Measurements." Respondents' ethnic affiliation affects their agreement on the self-motivation statements to learn Mathematics along with interest; type of school enrolled in along satisfaction and relevance; while sex, fathers' level of education and type of school graduated from along perceived probability of success. Agreement of the respondents on the self-motivation statements to learn along interest and relevance are significantly correlated with their competency level in "Sets," while their agreement on the self-motivation statements to learn along satisfaction is significantly correlated with their competency level in "Sets" and "Measurements." The higher their agreement on the self-motivation statements to learn along with interest and relevance and satisfaction, the higher is their competency level in Mathematics along "Sets" and "Measurements."

DISCUSSIONS

The results validate the essential of self-motivation of the students in the competency level of Mathematics. The learner should always develop a positive attitude and habits towards Mathematics. Learning opportunities and evaluation provided by the teachers must be within the reach of students' ability and that could stimulate higher order thinking skills.

KEYWORDS: competency, learning competency, Mathematics anxiety, self-motivation

SUBMISSION ID: R002-QUIRIN-0033

SIM-BI (Strategic Intervention Material Based-Instruction) and CooLe (Cooperative Learning) Strategy in Teaching Grade-10 Mathematics

Lenie Tumaming, Padre Garcia National High School

Abstract

INTRODUCTION

The current performance of students in Mathematics as reflected in the results of the National Achievement Test (NAT) is far below the national standard. In the Division of Batangas, the result of NAT in Mathematics was on the average of 48.42 MPS during the year 2014-2015. Padre Garcia National High School (PGNHS) got an MPS of 37.88 during the same year, a score which when compared to the national standard of 75% means very low and needs a lot of improvement. For these reasons, mastering competencies are

METHODS

The study employs a descriptive-correlation method.

RESULTS

The results indicate that a significant increase in Mathematics performance is achieved; the use of SIM-BI is effective in terms of improving student's performance in mastering competencies in Mathematics and SIM-BI can be used in classroom teaching. The data further reveals that SIM can also be answered solely by a student or a group of students through cooperative learning.

DISCUSSIONS

The purpose of this study was to determine the effectiveness of Strategic Intervention Material-Based Instruction (SIM-BI) and Cooperative Learning (CooLe) Strategy in teaching Mathematics-10. Our findings complement the results of previous studies like that of Salviejo, et al. that the use of SIM-BI is effective in terms of improving student's performance and learning approach in mastering competencies in Chemistry. Dio, R. and Diaz, E. (2017) revealed on their studies about the effectiveness of Tri-in-1 Strategic Intervention Materials for Grade 9 Mathematics with the SIM composed of different activity cards about the parts of right triangle and other topics suggested that when students were exposed to Tri-in-1 SIM, their Mathematics achievements are better and higher, and SIM is better than using Mathematics Learners' Material (LM). Other findings of the study were the SIM can be used to classroom teaching. This study is significant in addressing learning problems in mathematics education.

KEYWORDS: SIM, intervention, Cooperative Learning Strategy

SUBMISSION ID: R04A-BATANP-0311

Six Dimensions of Pupils' Responsiveness: Relationship to their Performance in Mathematics

Erue! Paul Peralta, Member of RACE

Abstract

INTRODUCTION

Participants of the study were grades five and six pupils of Maximino V. Pangilinan Elementary School, District of Tanza, Division of Cavite. The following null hypotheses were tested at .05 level of significance: "The six dimensions of pupils' responsiveness towards mathematics are not interrelated," "No significant relationship exists between pupil's academic performance in mathematics and six dimensions of responsiveness"; and "Male and female pupils do not differ in their responsiveness towards mathematics along the six Dimensions".

METHODS

This study utilized the descriptive method involving the collection of data through surveys and interviews in order to test the hypotheses or to answer questions concerning the current status of the subject of the study. The reliability of the checklist used was subjected to a test-retest to 25 pupils in the research locale who were not included as respondents in the final survey.

RESULTS

The following findings were arrived at: The pupils are high to very high in their responsiveness in terms of assigned tasks and teacher quality; high in driving force, confidence, sense of duty and perceived competence; the six dimensions are interrelated; pupils' academic performance is related to assigned tasks, teacher quality, confidence, and perceived competence; and, male and female pupils do not differ in their responsiveness along the six dimensions.

DISCUSSIONS

Teachers should exert efforts to enhance pupils' responsiveness in terms of driving force, perceived competence, and sense of duty by coming up with more varied motivating styles, a more comprehensible presentation of subject matter to enhance pupils' perceived competence, and the setting of clear and understandable directions of what pupils have to expect in the subject

KEYWORDS: Responsiveness, academic learning performance, six dimensions

SUBMISSION ID: R04A-CAVITP-0777

Status of Grade Six Pupils' Skills in Solving Mathematics Word Problems in San Cristobal Elementary School

Aileen A. de Villa, Harold A. Beladas, & Jean P. Beladas

Abstract

INTRODUCTION

Mathematics plays a very important role in our daily living. It is a subject that deals with problems that involve a process of analysis, computation, and other mental skills. Historically, learning mathematics and teaching it has been motivated by the belief that a study of mathematics helps individuals to learn, to reason, and to apply such reasoning to everyday problems. Mathematics develops the mind to think critically and analytically. It is more than counting, measuring, and computing. It is an eye-opener to all sciences. As far as mathematics instruction is concerned, the major goal is the involvement of the students in the process of discovering mathematical ideas and formulating a process. One of the interesting concerns about learning mathematics is the fact that it develops the mind to solve problems that need higher order thinking skills.

METHODS

This study used experimental research design in determining the status among grade 6 pupils with ninety (90) respondents. A questionnaire was prepared, validated, distributed, tallied, and interpreted to identify difficulties encountered by the pupils and used frequency and percentage to interpret the data.

RESULTS

The Performance Level of Grade Six pupils in solving word problems was low with a percentage of 68%. Most of them were specifically poor in solving word problems. Only eight (8) of the pupils fell under excellent level, ten (10) pupils fell under good level, 16 pupils fell under the average level, and 56 were low. The difficulties of the Grade Six (6) pupils in solving word problems reveals that most of the respondents marked the difficulties given to the highest extent, which means they are incompetent in acquiring many mathematics skills and lacking in cognitive abilities of learning. Only a few of them found it easy to solve word problems, at a percentage of 2%.

DISCUSSIONS

The performance level of Grade Six Pupils in San Cristobal Elementary School was low. The reading and understanding the language used within a word problem has the greatest number of respondents. This is the greatest number of difficulties encountered by Grade Six Pupils. The researchers came up with the proposed activities: a. Big Brother/Peer Teaching Approach, b. Trial and Error Approach, c. Use of Instructional Materials, d. Create a table or a graph, and e. Problem of the Day. The students should establish good study habits and a healthy studying environment. They should attend makeup classes and seek the assistance of the parents to cope up with less mastered skills in mathematics.

KEYWORDS: "Status of Grade Six Pupils' Skills in Solving Mathematics Word Problems in San Cristobal Elementary School"

SUBMISSION ID: R04A-SANPAB-0083

Status of Grade Three-Recto Skills in Basic Multiplication in Taysan Elementary School

Gina Aguila, Taysan Elementary School
(Adviser: Gina Aguila)

Abstract

INTRODUCTION

The study was conducted by the researcher to develop their understanding of numbers and calculating strategies and associating them with daily life problems of Grade Three Recto pupils in Taysan Elementary School. The researcher plan to conduct remediation during free time, implement teaching strategies suited to the learners' interests and availability of the materials and give interventions to develop the pupils' numerical understanding and fluency. The results obtained will be of great help to pupils in Taysan Elementary School as well as teachers to determine the skills in basic multiplication among the lower grade level.

METHODS

The descriptive method was used in this study, and the respondents were the 33 learners who are identified based on the following criteria: they are identified by the researchers as the pupils who got low grades in Mathematics with basic multiplication, they would like to continually enhance their multiplication basic skills, they manifest interest in mathematics, and they are willing to take part in the study. The researcher gathers data using pre-test/post-test result, questionnaire, recitation, and window cards.

RESULTS

The researcher gave the pupils a teacher-made multiplication pre-test. Out of 33 pupils, 23 failed. They completed 2-6 questions correctly. Ten pupils who scored above 10 out of 16 questions had a good understanding of multiplication facts. They taught two lessons as remedial to that class in week 2 and 3. Almost half of the class did not master the multiplication concept and skill at the beginning of the lesson in week 2. They gave the pupils a post-test when the lesson concluded. 19 students passed the post-test with grid numbers. The fourteen pupils that did not pass understood the process of multiplication, but their inability to master basic facts keep them from getting the right answers. The implementation of the activity was guided by the researcher made rubrics for genuine evaluation on the learner's response.

DISCUSSIONS

The strategies planned are a great way to help pupils to learn multiplication facts. They definitely plan to use these strategies in future years during their works. They believe it will help their pupils understand the multiplication facts better because they will have activities that help them master the concepts. These strategies use such a step-by-step process that makes it easier for the pupils to understand. The different colors of beads also help the pupils to visualize their multiplication. They also learned that it is not an easy process to teach in the beginning. Each step must be done slowly and understood before moving on to the next level of the tree. Overall, they really like these strategies and plan to improve it.

KEYWORDS: Basic multiplication, Numerical understanding, calculating

SUBMISSION ID: R04A-BATANP-1965

**Strategic Intervention Materials in Teaching Mathematics for Grade Two
Pupils in Doña A Susana Madrigal Elementary School**

Josephine Laviña, Department of Education - Rizal

Abstract

INTRODUCTION

Teaching Mathematics is challenging because many of the concepts are abstract and most math problems require multiple steps for completion. There are many rules to remember and pupils may have trouble recalling or knowing which ones to apply to each skill. As a result, strategies are being made to resolve the problems. The Strategic Intervention Materials in Mathematics help teachers provide pupils who need support to make progress. It tries to increase and deepen skills, knowledge, and understanding from concrete to what is more abstract. Furthermore, the intervention materials meant to recall the concepts and skills to help the learners master a competency-based skill which they were not able to develop during classroom discussion.

METHODS

Experimental research method utilizing matched group design was applied to determine the effectiveness of strategic intervention materials on the level of performance in Mathematics of grade two pupils and a Descriptive Method of research for teacher-respondents to determine the level of effectiveness of strategic learning materials with respect to motivation, understanding the lesson, retention and skills development. The control group was exposed to the traditional method of teaching, while the experimental group was exposed to teaching with the utilization of strategic intervention materials. Pretest and posttest were used as an instrument to determine the performance of pupils in Mathematics.

RESULTS

The level of performance of the pupils before and after the exposure to the strategic intervention materials is significantly different as revealed in the pretest and posttest. The level of effectiveness of the developed strategic learning materials as perceived by the teacher-respondents with respect to motivation, understanding the lesson, retention and skills development is found to be effective. There is a gain in the performance of both the exposed and unexposed group after the teaching-learning process. The level of performance in Mathematics of the group exposed to the intervention materials is significantly better than unexposed.

DISCUSSIONS

Teachers may be given incentive and support in pursuing their graduate education for their professional growth. Pupils may be exposed to more challenging activities in Mathematics utilizing varied instructional materials. Enhance and sustain progress in primary Mathematics teaching through the utilization of the developed intervention materials. Similar studies may be conducted using other variables.

KEYWORDS: Exposed Group, Level of performance, Post-test, Pretest, Retention, Skills Development, Strategic Intervention Materials, Unexposed Group

SUBMISSION ID: R04A-RIZALP-0292

Strategic Intervention Using "Broken Line Method" in Teaching Mathematics among Grade Six Pupils: A Case of Selected Elementary Schools in Bato East and West Districts

Bert Timbal-Teacher

Abstract

INTRODUCTION

The study investigated strategic intervention using "broken line method" in teaching mathematics among grade six pupils: a case of selected elementary schools in Bato East and West Districts. It determined the difference in academic performance in Mathematics after being exposed to traditional and strategic methods.

METHODS

The study employed the descriptive comparative method of research and utilized teacher-made questionnaire in data collection. It covered four (4) schools headed by Elementary School Head Teachers in Bato East and West Districts with the grade six pupils as the subject of the study. It involved forty-one (41) pupils.

RESULTS

For the results of the study, grade six pupils after using the traditional method in solving inverse proportion got a mean score of 3.24 equivalent to "did not meet the expectation" while after using strategic intervention method in solving inverse proportion they got a mean score of 8.88 equivalent to "satisfactory." There is a big number of grade six pupils who got a low score in solving word problems with hidden questions both in the traditional and strategic method of solving an inverse proportion. On the other hand, there were 12 pupils who got an average score equivalent to satisfactory after using the strategic method. There is a significant difference in the academic performance of grade six pupils according to the method of solving an inverse proportion. For the conclusion: The academic performance of grade six pupils in 4 schools, headed by head teachers in Bato East and West district is on the did not meet the expectation level if they were using traditional method while in the satisfactory level if they were using strategic intervention method.

DISCUSSIONS

The gathered data further unveiled the weaknesses of the grade six pupils in problems with hidden questions both in Traditional Teaching Method and Strategic Intervention Method. Therefore, this researcher recommends further attention to address the said weaknesses of the grade six pupils by designing another method that may intensify the analytical skills of the grade six pupils and solve various mathematical types of word problems.

KEYWORDS: 02091976BT

SUBMISSION ID: R005-CATAND-0004

Students' Difficulties in Translating Worded Problems into Mathematical Symbols

Leah Adona & Maritess E. Arellano

Abstract

INTRODUCTION

Problem-solving has been and will be a necessary skill not only in Mathematics but in everyday living. Part and parcel of problem-solving are to translate word problems into a mathematical equation. However, students, especially in grade school, have difficulties in analyzing and interpreting word problems. Students most especially in grade school can easily perform an indicated operation but when this is given in verbal forms, students need to first identify what operation is involved by translating this into a mathematical sentence before actually performing the operation and arriving at the correct answer. In this study, I sought to identify the difficulties encountered by students in translating worded problems into mathematical equations. The study examined the students' difficulties and level of performance in translating worded problems into mathematical symbols.

METHODS

The study made use of both quantitative and qualitative methods. Thirty Grade five students were chosen as respondents. The data of the study was obtained through a researcher-made test. The test consisted of twenty (20) items involving four fundamental operations in which every operation consisted of five (5) items. A table of the specification was also used to ensure that the number of items was equally distributed. Each item was given a weight of one (1) point. This researcher made the test measured the performance level of Grade 5 students in translating worded problems into mathematical symbols.

RESULTS

Results in the analysis revealed that students have difficulties in translating worded problems into mathematical symbols and these can be classified into 6 categories. These were as follows: 1.) misinterpretation of the problem, 2.) lack of comprehension of the problem posed, 3.) incorrect use of operation, 4.) carelessness, 5.) interchanging values and 6.) unfamiliar words

DISCUSSIONS

The findings showed that the students' ability in solving worded problems depends on how they translate phrases into mathematical symbols. The results demonstrate the need for students to hurdle the challenges in going from one step to another although the steps may not necessarily have to be taken in a sequential manner. Some of the processes in solving word problems involving reading comprehension and how students make a plan. This is where the study focused on because it includes the ability of the students in translating worded problems into a mathematical sentence.

KEYWORDS: mathematics difficulties; problem-solving skills; translating worded problems into mathematical symbols

SUBMISSION ID: R04A-BATANP-1028

Teaching Practices in Solving Word Problems Employed by the Mathematics Teachers: Its Implications to Administration and Supervision

Flordeliza Cadara, Department of Education

Abstract

INTRODUCTION

The researcher deeply expresses her interest in Mathematics especially in solving word problems as her study due to issues she encountered during her teaching from the previous year up to present like pupils having difficulty in understanding the given word problems and the like. The researcher would like to find out the implication of different teaching practices employed by mathematics teachers to administration and supervision. It is then that the researcher wants to determine an effective practice for a proficient outcome.

METHODS

This study employed a descriptive method of research. The foregoing purposes of this study were attained by utilizing this method of research as the researcher use fact-finding instrument, the questions which were so framed as to elicit data and information that the teacher respondents answered honestly and correctly. The response of the teacher respondents to individual questions spelled out in the instrument, surface their attitudes, practices, behaviors, opinions, judgments and perceptions that this study will describe, analyze and interpret in the light of the statement of the problem and hypothesis of the study, hence the appropriateness of the descriptive method of research.

RESULTS

The following conclusions were drawn by the researcher: That the Mathematics teachers are educationally qualified and experienced in teaching the aforementioned subject due to the number of years in teaching and the number of MA units earned. That is teaching practices, teacher respondents very often prepare daily lesson log, use prescribed textbook and sometimes involved mathematics teacher. Often use challenging/tricky questions and very often give exercises in executing the lesson. They evaluate the pupil's activity by means of seat-work and homework. There is no significant relationship between the profile of the teachers and their teaching practices in solving a word problem. The very much serious problem that was encountered by the teacher respondents were recitation and encouraging pupils to respond or react during the lesson. There is no significant relationship between the teaching practices and problems encountered by the Mathematics teacher.

DISCUSSIONS

The results show that the very much serious problem that was encountered by the teacher respondents were recitation and encouraging pupils to respond or react during the lesson and that there is no significant relationship between the profile of the teachers and their teaching practices in solving word problems.

KEYWORDS: practices, administration, attitudes, perceptions, appropriateness

SUBMISSION ID: R04A-BATANP-0651

**Technological Advances as Applied in Mathematics of Selected Grade 10
Students in Camp Vicente Lim Integrated School S.Y 2017-2018**

Anncharish Santiago, CVLIS
(Adviser: Jocelyn Amoyo)

Abstract

INTRODUCTION

Nowadays, technology keeps on elevating, especially the devices that others use in order to do their stuff. Generally speaking, all cellular phones, laptop, computers, and all machinery or equipment from the application of scientific knowledge belong to technological devices. Truly through these technological devices' students have become more active in using such because it has been very beneficial to them for their everyday lives. There are many possible effects of using technology. Still, it depends only on the way the users use it. Technology is not a primary need that everyone needs to depend on. This study will give a framework for the advantages and disadvantages of using technology in the classroom.

METHODS

The researcher used descriptive design and both quantitative and qualitative analysis. Also, it applied the 2 different five-point Likert scales to determine the frequency of using technological devices in mathematics. Second, to determine the effects of Technological Devices on the interest of the student to Mathematics chosen 30 respondents through purposive sampling technique.

RESULTS

The data gathered for the chosen 30 respondents indicated that the first Likert scale determining the frequency of using Technological Devices in Mathematics mostly of the respondents used a calculator when solving mathematics problems based on the weighted average mean of 4.63. On the other hand, using cellular phones did not really contribute to the students when taking down notes based on its average mean of 2.27. Furthermore, the second Likert scale showed that most of the respondents inferred that technological devices help the respondents enhance their ability in solving Mathematical Problems with the weighted average mean of 3.77. Moreover, watching videos about learning solving problems has the least contribution to the learning of the respondents with the weighted average mean of 3.

DISCUSSIONS

Based on the results, the study established the fact that most of the student use technological devices, especially the calculator. In addition, technological advances help students in the field of mathematics subject. Also, the result revealed that most of the students improved their abilities in solving mathematical problems. Furthermore, respondents may become more interested when technological advances are applied such as PowerPoint Presentation when teaching, and watching videos when it comes to mathematics doesn't contribute much with the interest of the respondents.

KEYWORDS: Technology, Scientific Knowledge, Technological Devices

SUBMISSION ID: R04A-CALAMB-0356

The Correlation of Motivational Activities with its Characteristics in Teaching Mathematics in San Juan East District, Batangas: A Basis for Enhanced Motivational Activities

Christine Joyce Triviño, Department of Education Laiya National High School

Abstract

INTRODUCTION

In the 21st century learning, students are characterized as being innovative and changing. Their ways of learning change together with their levels of motivation. In this sense, it is clear that the learning of motivation is indispensable because the two go together. The critical components that make students participate in academic activities in and the information exposed to when students are motivated to learn, they use their higher cognitive processes and their enthusiasm are heightened (Please rephrase accordingly). When teachers prepare goal-oriented activities and encourage students to strive for success not only for academic grades but also for the interest value and practical importance of the activities, the drive to learn becomes stronger. The motivation of school learning depends on the factors on the learner's purpose or intent to learn. It is the job of the teacher to find the atmosphere desirable for the learners to learn.

METHODS

In this study, the researcher used the descriptive type of research. This design was the best method of motivational activities for teaching mathematics. For this purpose, a questionnaire was used by the researcher in gathering data so as to provide an adequate interpretation of the problems under the study.

RESULTS

The profile of the respondents in terms of Age were 39-42 years of age who taught Mathematics. The motivational activities being used by the teachers Teaching Grade 7 Mathematics is creating a geometry star that has a frequency of 60 and has a rank of 1 with 25.21%. In teacher's assessment on the motivational activities, materials relate facts to a few basic ideas and concepts rank 1. In implementation which teachers assess the motivational activities, establish a positive teacher-student relationship which ranks 1. The weighted mean of 4.64, the verbal interpretation is greatly evident. In alignment which teachers assess the motivational activities, fit with the objectives of the course, unit plan and lesson plan which rank 1. The weighted mean of 4.74, the verbal interpretation is highly evident. Motivational activities can help gain the interest of the learner and make the task relevant to the learner.

DISCUSSIONS

Results suggested that student participation is malleable rather than stable, and emphasized the potential of teacher practices to both support and undermine the development of student work habits.

KEYWORDS: correlation, Mathematics, motivation

SUBMISSION ID: R04A-BATANP-1247

The Effect of Project BALSA (Basic Learning of Students in Arithmetic) on the Performance of Grade 7 Students in Four Fundamental Functions

Analyn Racuya

Abstract

INTRODUCTION

The objective of this study is to improve the skills of the selected Grade 7 students on the basic fundamental operations in Mathematics specifically on whole numbers. In six years of the students in Elementary, basic Mathematics skills have already been taught. But despite those years, there are still students who are not skilled or struggle in basic Mathematics computation. It is important for students to know the four fundamental operations of Mathematics. Through this study, the performance of the students with the fundamental operations can be improved through the help of their teachers and peers and the teachers could focus on the lesson instead of re-teaching the four fundamental operations.

METHODS

Pretest-posttest Design was used in the study. It is the simplest method of testing the effectiveness of an intervention. This design, which uses two groups, one group is given the treatment and the results are gathered at the end. The control group receives no treatment over the same period of time but undergoes exactly the same test. Students who got a percentage score of 75% and below based on the Pretest in Four Fundamental Operations were given the treatment.

RESULTS

The aim of this study is to determine the effectiveness of the Project BaLSa on the performance of the Grade 7 students in Four Fundamental Operations in Naic Coastal National High School year 2018-2019. The scores of the participants were obtained and upon computing the mean and standard deviation of their scores, the values showed that there is a significant difference between the scores of the participants in the Post-test after the program. 109 out of 109 participants got a score of 75% and above after the Program BaLSa. The highest percent difference is 28 % while the lowest percent difference is 6.67%. Moreover, the average percent difference shows a positive 18.34% which means that the scores of the participants generally surpassed 75%.

DISCUSSIONS

Each of the students has different abilities in Mathematics. Despite the interventions done by the teachers still, there are students who are not able to do the tasks as per time frame. Since there is a significant difference in the Posttest scores of the Grade 7 participants after the Program BaLSa, it could be an effective way to improve and help the students who struggle with fundamental operations in Mathematics. This research could be a program implemented in school, district, division level to further improve the basic skills of students in fundamental operations.

KEYWORDS: basic learning of students in arithmetic

SUBMISSION ID: R04A-CAVITP-0318

The Effect of Teacher-Made Digital Flashcard Tool on Basic Arithmetic Skills of Grade Three Pupils in Dona Nieves Songco Memorial School

Cecilia Acosta, Department of Education - Rizal

Abstract

INTRODUCTION

The Department of Education supports the use of technology by providing public schools with appropriate technologies that would enhance the teaching-learning process and meet the challenges of the 21st century (DO 78, s. 2010). The emergence of teacher-made digital flashcard tool, which cannot be downloaded on any other website, enable the teachers of Doña Nieves Songco Memorial School to provide suitable and appropriate computerized math intervention, particularly to the identified grade three below performing pupils who lacked the required competence on basic arithmetic skills. During the conduct of the study, there were 20 out of 49 or 40.82% Grade III pupils who demonstrated difficulty on basic arithmetic facts as indicated by the diagnostic test results.

METHODS

This study utilized the one-shot experimental research design wherein a single group of respondents were exposed to an experimental treatment and a single measurement was taken afterward. Purposive sampling was used to determine the forty-three grade, four pupil respondents. A five-minute timed test, utilizing the digital flashcard tool, was administered for four consecutive weeks to determine the effectiveness of the designed tool. For the period of four weeks, the tool covered adding, subtracting, multiplying and dividing two 1digit numbers. Another research instrument was the pre-test, which was given before the exposure of the respondents on the said tool, and the post-test, given after the fourth week of the study. Both of the tests contained 100 items basic arithmetic facts. A chart was provided to record the daily progress of the pupils.

RESULTS

The effect of teacher-made tool was very evident because there was a big difference in the mean scores of pre-test and post-test. The findings imply that the daily exposure of the pupils on a digital flashcard tool has a positive effect on basic arithmetic skills of grade three below performing pupils. The result explains that there is a significant difference in basic arithmetic skills of grade three pupils before and after exposing them to teacher-made digital flashcard tool.

DISCUSSIONS

The statistical computations emphasized the necessity of implementation of the teacher-made tool to further improve their numeracy skills. It is hereby recommended to integrate the digital flashcard tool in everyday lessons in mathematics. A parallel research study may be conducted considering the positive effect of the teacher-made digital flashcard tool.

KEYWORDS: digital, flashcard, teacher-made, addition, subtraction, multiplication, division

SUBMISSION ID: R04A-RIZALP-0399

The Effectiveness of Mother Tongue-Based Instruction in Developing Strategic Intervention Materials in Mathematics for Grade One

Floriza A Celestra, Teacher
(Adviser: Floriza Celestra)

Abstract

INTRODUCTION

Developing pupils' skills across all subject areas involves well-planned and hands-on activities prepared by the teacher each day. Through mother tongue-based instructions, learners were now given an opportunity to gain knowledge and ideas. Non-performing pupil ends up as a failure if they were not able to well understand instructions written in the English language since the group of learners in grade 1 Compassion are mainly categorized as slow readers and difficult readers.

METHODS

The present research work was based on experimental research utilizing pretest and post-test. An experimental design was used in which one section of the school acted as a control group was traditional teaching method was applied. The other section was considered as the experimental group, which was taught through Strategic Intervention Materials approach.

RESULTS

This presents the result and reflection based on the questions of the study. Data processing and analysis were done. The study mainly concerns the pupils and the teachers where they will all be benefited.

DISCUSSIONS

The discussion based on the questions of the study. The level of performance in Mathematics of the two groups of respondents in the pretest and post-test. The significant difference in the performance in mathematics of the two groups of respondents as revealed in the post-test.

KEYWORDS: Mother tongue strategic intervention materials effectiveness

SUBMISSION ID: R04A-RIZALP-0300

The Effectiveness of Student-Generated Visualization Strategy in Increasing Students' Participation and Attitudes Towards Mathematics

Wendie Ecleo, April Joy Bangalisan, Marnie Ann Alonzo, Rosana Dorado, Jessica Fenis, Avegail Gonzales, & Riza Ramilo, Department of Education - Masbate Province

Abstract

INTRODUCTION

Educational researches sought to overview the usage of teaching approaches that proved useful in gaining deeper understanding, concepts, and skills of students in mathematics. However, these attempts drove students' learning outcomes rapidly declining and lessened their interest in lessons. In our research, visualization in mathematics had successfully increased students' learning engagements. In this study, we explored the extent of effectiveness using student-generated visualization strategy to cope up more interactive and visual class discussions inclusively grounded with constructivism and cognition theory.

METHODS

The researchers employed multiple methods design and descriptive-correlation survey to 368 grade 7 students. Two types of data were collected. First, a transcription of participation records from observations, and second, the obtained analysis of attitudes through rating scale instrumentation in the semi-structured survey. Pearson product moment correlation was used to measure the extent of the relationship between dependent variables (visualization strategy) and independent variables (participation and attitude).

RESULTS

To ascertain the appropriate scoring and data interpretation, researchers used means and standard deviation. Gathered data were analyzed, tabulated, and interpreted to measure the effectiveness of visualization strategy. Purposeful visualization was both highly and effectively increased students' attitudes of 4.40 mean (Positive), and 89.56% (very evident) for participation. This is notably higher than without visualization with 3.62 for students' attitudes and only 49.50% rate of participation. Overall findings revealed remarkable progress in participation analysis for Independent Cooperative Learning (I.C.L.) with 90.94% (very evident) compared to previous 53.56%.

DISCUSSIONS

Results illustrate how visualization effectively increased grade 7 students' participation and attitudes in mathematical discussions. There is a remarkable realization of teaching effectiveness. First, a realization for teachers of challenging mandate to advocate active learning atmosphere in a classroom context. Second, it is in relevance for educators nowadays that visualization strategy has the potential to increase interest and decrease frustration levels of academic learners.

KEYWORDS: Mathematics, Visualization Strategy, Attitudes towards Mathematics, Class Participation, In-class Discussion

SUBMISSION ID: R005-MASBAP-0016

The Effects of Digital Drill in Teaching Mathematics VI for Non-Numerates

Vilma Cabungan-Mathematics

Abstract

INTRODUCTION

Teachers of Gulod Malaya Elementary School use technology integration in their daily teaching-learning process. One of the teaching strategies of the researcher with the aid of technology is the digital drill at the start of the lesson. It served as a drill in the lesson. It was a 15-item test which focused only on the four fundamental operations instead of using DD cards drill.

SUBMISSION ID: R04A-RIZALP-0272

The Impact of Mathematics Learner's Material (MLM) on Students' Performance

Aries Magnay, Department of Education - Calamba City Senior High School

Abstract

INTRODUCTION

This paper investigates the impact of Mathematics Learner's Material (MLM) on the performance of Grade 7 students of Camp Vicente Lim NHS.

METHODS

This study used quasi-experimental design research. A total of 92 students were involved in the study. The instruments in the data collection were the pre- and post-assessment. The data were analyzed using descriptive and inferential statistical tools such as mean, MPS and z-test.

RESULTS

Results revealed that Mathematics Learning Material (MLM) for Mathematics improved the learning abilities of students to understand and appreciate the subject. Significant differences in achievement were identified between students using MLM on their performance.

DISCUSSIONS

The experimental group showed a better performance than the controlled group. Similarly, suggesting that (MLM) was a potential predictor of academic achievement in Mathematics classes. Future studies may be done to replicate the present study using variables and approaches that could further amplify the findings of the research.

KEYWORDS: Impact of Mathematics Learner's Material (MLM), students' performance, Quasi-experimental design

SUBMISSION ID: R04A-CALAMB-0349

The Performance of Grade 10 Students of Gov. Feliciano Leviste Memorial National High School in Mathematics During School Year 2017-2018: An Analysis

Amorfina Villanueva, Couples for Christ

Abstract

INTRODUCTION

This research paper focused on the analysis of the performance of Grade 10 students of Gov. Feliciano Leviste Memorial National High School in Mathematics during the school year 2017-2018. In this research, the teacher's effectiveness and efficiency, teaching strategies in Mathematics and presentation of data through the final grades of Grade 10 students as mentioned above, determines the students' performance in the subject. Moreover, the teacher's positive expectation to the student's performance, classroom management, and the mastery of the lesson and concepts of learning, comprehensiveness, innovativeness, creativeness, and resourcefulness were accentuated including research, symposia, seminars, and conferences as the approaches and instruments of teaching advancement.

METHODS

The descriptive method was employed in analyzing the performance of the Grade-10 students in frequency and percentage of weighted mean in the presentation of the data.

RESULTS

The research demonstrates that all the Grade 10 students of Gov. Feliciano Leviste Memorial National High School passed the subject. However, there's still so much to be improved since the highest percentage of grades of the students was 85 which was 8.417 % of the total number of students which is 689.

DISCUSSIONS

Although the performance of most of the Grade-10 students of GFLMNHS in Mathematics was classified the performance development of the students is still critical as it needs to allow students to participate actively to ensure that test and assignment objectives are met. Mathematics teachers should develop positive expectations from the students' performance; appreciate all their effort; and encourage them to study hard and join to MTAP classes to enhance their innovativeness, creativeness, and resourcefulness.

KEYWORDS: Performance Attitude Weakness, Innovation, Grade 10 Students

SUBMISSION ID: R04A-BATANP-2025

The Preparedness, Readiness, and Necessity of MTAP Review: Inputs to a Strengthened Guidelines for a School-Based Review Implementation

Janeth Corder & Margie Rillone, Department of Education

Abstract

INTRODUCTION

A Review Course Guideline is a set of instructions that are methodically put together to form a plan that the students can follow be their map as they journey through their chosen vocation. Without a formal Review Course Guideline, the students and teachers would not have a clear guideline to follow other than just suggestions from instructors, relatives, friends, schoolmates, and others who know about the process. Sometimes, however, these suggestions are inappropriate or somewhat of the course. Initially, the MTAP review class came into existence as a result of extreme necessity to strengthen the teaching of Mathematics, which is plaguing both public and the private school offering elementary and high school. In this study, the researcher focused on the practices during the review of MTAP-Department of Education Saturday Classes, where being a reviewer teacher the researcher encountered some difficulties in the implementation of the procedure.

METHODS

This research used the descriptive method to gather and describe information about the strengthened review guidelines for MTAP. The respondents were Eighty-Two (82) teachers, One Hundred Seventy (170) pupils, and One Hundred Seventy (170) parents, a total of Four Hundred Twenty-Two (422) respondents. They were all given a set of questionnaires that were then interpreted using different statistical treatments such as percentage, weighted mean, and t-test.

RESULTS

Based on the data gathered, results were as follows;

All group of respondents felt the necessity of MTAP Review, but it seemed that they are not properly motivated on its importance.

All groups of respondents were only fairly prepared and ready on the conduct of MTAP Review.

All groups agreed to develop a formalized review guideline for MTAP Review to strengthen the success of the review classes.

DISCUSSIONS

Extensive dissemination of information regarding the conduct of the MTAP Review should be conducted to attract more parents and pupils to join the review classes to attain its primary objective of giving skills in the field of Mathematics. Further studies and evaluation on this line should be conducted to keep track of the strength and weaknesses of MTAP Reviews.

KEYWORDS: Course Guideline, MTAP Review

SUBMISSION ID: R04A-CAVITP-0479/R04A-CAVITP-0481

The Problem-Solving Abilities of Grade VI Pupils

Rebecca River, Department of Education

Abstract

INTRODUCTION

Numeracy skills are the common waterloo of the elementary pupils at present. Results of the National Achievement Test and Numeracy Test conducted among grade six pupils in the elementary in the past years showed a declining rate. Teachers conducted several interventions but still, the deteriorating grades of pupils persist. The researcher found out that the pupils are low in solving word problems. That made way for the researcher to conduct this action research study. In this study, the researcher identified the problem-solving abilities of grade VI pupils and the solving skills by which the pupils find it hard to develop.

METHODS

This action research utilized the descriptive form of research. All teachers were asked to answer the questionnaire and all grade six pupils were the participants of this study. After the collection and gathering of numeracy results of pre-test and post-tests, the researcher identified the performances of pupils in problem-solving using the mean percentage score.

RESULTS

After further investigation of the result, it was found out that most of the errors committed by the grade six pupils were on the problem-solving competencies and skills. In terms of the problem-solving skills used by the teachers, it can be observed that four of the items were marked to a great extent. The result shows that the teachers are using the competencies, skills, and knowledge required in teaching problem-solving in Mathematics. As shown by the result, the length of problem-solving can also affect the result of the performance.

DISCUSSIONS

The results showed the problem-solving skills of grade VI pupils. Teachers, school heads, and stakeholders design school programs and interventions to remove the gaps in problem-solving deficiencies of pupils and enhance the reading skills of pupils for further comprehension and understanding. Teachers should also employ different strategies and methodologies in teaching Mathematics.

KEYWORDS: Problem-solving skills, Analysis, intervention

SUBMISSION ID: R04A-BATANC-0084

The Relation between the Riasec Results and Preferred Tracks of Grade 10 Students in Camp Vicente Lim Integrated School

Ma. Bernadette O. Santo, CVLIS
(Adviser: Jocelyn Amoyo)

Abstract

INTRODUCTION

Education is key one's success in life. As Department of Education added two more years of learning on the K-12 Program under Republic Act 10533 (2013), choosing the right track is one of the problems that grade 10 students are facing today. This study assessed the relation between the RIASEC (Realistic, Investigative, Artistic, Social, Enterprising, and Conventional) results and choosing the preferred track to the students their career path and future.

METHODS

This study used descriptive research design and both through quantitative and qualitative analysis in collecting data. Thirty students, selected among ten sections using purposive sampling technique, responded to a self-constructed assessment test. A RIASEC assessment test consisting of 42 descriptions associated with tracks was conducted and consolidated immediately to identify if the RIASEC results and preferred tracks matched or otherwise.

RESULTS

The relation of the RIASEC results and the preferred track of students is that when these two factors matched, the students are well-guided on the career path they were taking; however, when these factors are mismatched, the students are misguided. The result shows that the common factor that the students considered from the six factors (Realistic, Investigative, Artistic, Social, Enterprising, and Conventional) is Artistic that gathered most of the responses. Furthermore, most of the students matched the RIASEC result to their preferred track, therefore a big number of Grade 10 students in Camp Vicente Lim Integrated School are guided on their career path.

DISCUSSIONS

Personalities and skills play a huge role in choosing one's career. It is better for an individual to know his/her characteristics and abilities to have a stable and firm life. This study could help students distinguish their skills and personalities and have those serve as a guide on going the right path when choosing their career.

KEYWORDS: RIASEC, Preferred Track, Mismatched

SUBMISSION ID: R04A-CALAMB-0358

The Teaching of Multiplication of Fraction Using Differentiated Instruction in Grade V of Benigna Dimatatac Memorial Elementary School

Edith Talamayan & Madonna C. Estino, Department of Education - San Jose
District

Abstract

INTRODUCTION

One of today's most trending issues that need to be given much attention is the proficiency of students with regards to fractions and related forms as well as its operations. The difficulty that students have with fractions should not be surprising considering the complexity of the concepts involved. In any classroom, students will have a range of abilities, needs, and interests. Differentiated instruction is an instructional strategy that recognizes and supports individual differences in learning. The process maximizes learning by considering the students' individual and cultural learning styles, recognizing that some students will require adjusted expectations, and offering different ways for them to explore curriculum and demonstrate learning. Students from Benigna Dimatatac Memorial Elementary School are no exceptions to this dilemma. They tend to develop a negative attitude towards Mathematics since most of them found difficulty in this. The researchers believed that there is a need to overcome whatever difficulties that occur.

METHODS

The study used a descriptive method of research. Documentary analysis was also applied to describe differentiated instruction. The subjects of the study were the 118 grade V pupils of Benigna Dimatatac Memorial Elementary School.

RESULTS

The distinct feature of differentiated instruction was to help the pupils acquire skills in mathematics especially in fractions. Visualizing multiplication of fractions, multiplying fractions and whole numbers, and multiplying fractions with fractions were the lessons in which differentiated instruction was used. Majority of the pupils had high performance in visualizing, multiplying fraction and a whole number, and multiplying fraction and another fraction. The proposed supplementary activities are games, role plays, and dramatization.

DISCUSSIONS

The results suggested the use of the proposed supplementary activities to improve pupils' performance in Math. The use of differentiated instruction as an alternative approach in teaching fraction may be often used by Mathematics teachers to motivate pupils to understand fractions and other related concepts. Moreover, the use of these supplementary materials will ensure the pupils' mastery of the lessons and concepts.

KEYWORDS: differentiated instruction, multiplying fractions, supplementary materials, pupils' performance

SUBMISSION ID: R04A-BATANP-1855

The Use of Key Strategies in Answering Mathematics Questions for Grade III Pupils

Julie Ann Icar, Department of Education - Cavite Province

Abstract

INTRODUCTION

Education plays a role in the advancement of society. It is a fact that education is a very effective tool for societal transformation. It is therefore imperative that before aspiring for economic development, human resources should be developed first. To do this, educational institutions are needed and one of this is Labac Elementary School, an institution of learning, whose objectives as stated in its academic vision and mission statement is to develop an integral human formation. With the school's ongoing process of curriculum development which the school has undertaken over the years, the researcher has decided to conduct this research entitled "The Use of Key Strategies in Answering Mathematics Questions for Grade III Pupils."

METHODS

The study adopted an experimental design format with the Grade 3 pupils in the elementary who will be utilized as experimental and control groups respectively. The control group will be exposed to the traditional approach where pupils learn by using their own schedule. The descriptive-comparison approach will be the basic pattern to be employed. The control group and the experimental group will be separately described on the basis of the results of the pre-test, post-test, and their feedback to a similar schedule in which they are subjected.

RESULTS

The computed t-values of 3.551 and 2.266 respectively showed that they are greater than the tabular value of 2.014, thus evidence was laid down to reject the null hypothesis stating that "there is no significant difference between the pre-test and post-test result of the control and experimental groups." Therefore, there is a significant difference between the pre-test and post-test performances of the control and experimental group.

DISCUSSIONS

The result of the research showed that there is a significant difference between the pre and post-test performances of the control group and the experimental group. The findings provide proof that the use of key strategies is effective in answering Mathematics questions for Grade III pupils. Thus, it formalizes the need to adopt the use of key strategies even in other subjects for grade schools.

KEYWORDS: key strategies, mathematics questions, grade iii pupils

SUBMISSION ID: R04A-CAVITP-0129

The Use of PALS (Peer Assisted Learning Strategy) to Improve the Monthly Test Results in Mathematics of Grade 10 Students of ANHS Annex for SY 2016-2017

Lailani Linggo, ANHS Annex

Abstract

INTRODUCTION

The researcher noticed a disturbing trend in the classroom where the students are too reliant on teachers. The researcher observes that when students work with a partner, they had someone else to ask for help. The researcher decided to use the idea of students working with partners. The purpose of this study is to determine if using PALS will improve the performance of students in Mathematics. Peer tutoring has been shown to be highly effective in enhancing both tutor and tutee achievements. This is an instructional method that uses pairings of high-performing students to tutor lower-performing students under the supervision of a teacher.

METHODS

The following methods were used: Identify and orient potential student tutors. Implement PALS. Reinforce Peer Tutored Groups. Supervise and Monitor tutors and tutees. Record monthly test results. Evaluate. The respondents were the ANHS Annex: 52 Grade 10- Gemini students (26 pairs). After checking their first and second monthly tests, the researcher created the mentoring pairs. I grouped the class into two, where the first group was students who could easily understand the lesson and they were the "tutors." The second group would be the so-called "slow learners."

RESULTS

After implementing the strategy for two topics, two monthly tests were administered. The scores were recorded. The students were still placed with the same peer tutors. A baseline was set to observe and compare the results. The criterion for evaluating a student's performance included not only their scores from the tests but also their active participation during board work and discussion. In the first long test when there was no peer assistance. There were many students who got a score below 25. During the monthly tests administered after PALS, there was a shift in the result. The slow learners got a score higher than I expected. In the result, almost 90% of the students got 85% percent of the test. After implementing PALS, there was a difference in student performance in their monthly test. However, once the student was taught by another student, fewer students were asking me about the topic.

DISCUSSIONS

The students I assigned to be tutors also gained and improved their level of confidence. As for the tutees' group, they really improved so well. After analyzing the result of the test before and after the implementation of PALS, I realized that this might help lessen my frustrations with my other classes. The increase of their result proved that this strategy of encouraging them to learn with the help of their peers is somewhat successful.

KEYWORDS: Pals, Improve, Results

SUBMISSION ID: R04A-STAROS-0064

The Use of Singaporean Block Diagram Approach in Teaching Grade 7 Mathematics in Rural Setting

Mary Grace Calanog, Department of Education- Candelaria, Quezon

Abstract

INTRODUCTION

Learning Mathematics in classrooms has always been a challenge for both teachers and students most especially if it involves solving problems. It usually requires not only patience but more importantly an effective approach and efficient methods in delivering the subject, which is very essential in order for students to both appreciate the subject and improve their performance.

METHODS

The study made use of experimental research design with the teacher-made test and the Post-Test Only Control Group Design. This design follows all the same steps as the classic pre-test/post-test design except that it omits the pre-test. There are many situations where a pre-test is impossible because the participants have already been exposed to the treatment or it would be too expensive or too time-consuming. The respondents of the study were 50 grade 7 students enrolled during the school year 2016-2017. Data were interpreted using the following statistical tools: percentage and t-test.

RESULTS

Pre-test score reveals that most of the respondents have a fairly satisfactory level on understanding and solving math problems, but this study found out that the students' performance was increased in the post-test after the use of Singaporean approach and there's a module constructed in teaching Mathematics to improve the students' performance. Furthermore, there is a significant difference in the academic performance of the students during the pre-test and post-test.

DISCUSSIONS

The results reveal that using the Singaporean block diagram approach in teaching mathematics in rural setting enhances the students' performance and identifying their weaknesses. Through this study, administrators can provide teachers more training and seminars to enhance the teaching-learning process, especially in mathematics. Future researchers may find this study useful as an effective tool and reference for the researchers who intend to gather relevant study in public secondary Mathematics curriculum program. Students can be more interested and enjoying while learning and enhancing their knowledge in solving mathematics.

KEYWORDS: pre-test/post-test, Singaporean block diagram, strategy, rural

SUBMISSION ID: R04A-QUEZON-0145

Touch Math: A Method of Introducing Basic Mathematics to Kindergarten Pupils

Reynelyn Palconit & Ronalyn Garci, Department of Education

Abstract

INTRODUCTION

At present, teaching mathematics to young learners is challenging. Teaching basic mathematics needs strategies and methods for the children to fully understand the lessons. Mathematics lessons start from counting, and the goal of the kindergarten math curriculum is to prepare pupils for Grade 1. Some of the objectives and goals for kindergarten math is to count by rote at least one to ten as well as recognizing numbers. In this juncture, the researchers thought of applying touch math method with kindergarten pupils in introducing number recognition, simple addition, and subtraction.

METHODS

The Touch Math method was used is a multi-sensory Math program designed for Pre-Kinder to Grade 3. This approach included auditory, visual, and tactile strategies for understanding numbers and operations. Each touch math numeral has a corresponding number of touch points placed uniformly upon the numerals and used the same pattern consistently. Its goal is to teach the pupils the correct pattern by having them count aloud, at first, following the uniform touching. This method was used to teach and determine whether the 53 kindergarten pupils will recognize the number and count and add and subtract numbers mentally and confidently. In this study, the researchers aimed to develop the mathematical thinking of early learners and to develop their love for mathematics.

RESULTS

Results reveal that during the 3rd quarter of the school year, 49 kindergarten pupils were able to identify, count, add, and subtract numbers. This leaves only 4 pupils who were unable to identify numbers.

DISCUSSIONS

The results show that the use of touch math method has improved the basic mathematics of kindergarten pupils. It is clear that this method is an effective technique as a multi-sensory method. Finally, based on the findings, touch math should be accepted as a research-based technique to teach number sense and simple mathematical operations and therefore be introduced to all kinder teachers as an effective method to implement in their classes.

KEYWORDS: Basic Math

SUBMISSION ID: R04A-CAVITP-1605

**Tuonilla: An Enriched Flipped Classroom Strategy among Grade 11
Students of Tanza National Trade School, the School Year 2018-2019**

Maricel T. Oropill, Tanza National Trade School Na-Na

Abstract

INTRODUCTION

The need to improve mathematical instruction to enhance learning is a necessity and intelligent action to improve students' performance in Mathematics. There are many factors affecting how students are able to comprehend the lessons in Mathematics. The researchers hypothesized that one of these is the language used in teaching Mathematics which is English. With this, researchers made videos using student's language (Taglish) to get the students' interests, where they incorporated cartoons in the videos for most of the 21st-century learners are hooked with cartoons and anime instead of downloading PowerPoint or videos to use in discussion.

METHODS

The study employed a quasi-experimental pre-test-post-test research design, which determined the positive gain in the achievement level of the students. The researchers used simple random sampling in selecting the respondents. Respondents were given a pretest and the sections with the closest or homogeneous mean scores were selected. The videos made by the researchers were uploaded on their Facebook page and the respondents watched the videos at home or in the computer shop. The usual classroom routines were used in the study such as discussion of activities, correction of misconceptions, assessments and performance activities. For the Control group, the traditional method was done. After the implementation of the strategy, post-test was given to the two groups followed by the analysis of data using the t-test.

RESULTS

The study resulted that the mean scores of the post-tests increased compared from the pre-tests and as the mean increased the level of proficiency improved from "moving towards mastery" learners to "closely approaching mastery" level of learners. These shown from the 11.00 mean score of the control group and 16.09 mean score for the experimental group. The standard deviations of the two groups were 3.72 and 3.64 also indicate that the scores of the students were closed with the scores of their classmates.

DISCUSSIONS

The implementation of the enriched flipped classroom strategy has a significant effect on students' achievement. The improvements in the academic performance of the students on the selected topics were not just evident in the result but as well as how they interact in classroom activities and discussions. Most of them showed confidence in giving their answers in recitation, in answering assessments, and in doing performance activities especially the experimental group. They can work both as a group and an individual without the guidance of the teachers.

KEYWORDS: Flipped Classroom, 21st Century Learners, Cartoon, and anime

SUBMISSION ID: R04A-CAVITP-0071

Usage of Interactive Whiteboard in Teaching Mathematics for Grade 6

Ma. Virginia Adorable, Classroom Teacher

Abstract

INTRODUCTION

Since mathematics is learning by doing, the children must be provided with enough exercises to develop skills. The examples given by the teachers and in the textbooks are not sufficient to enhance the acquisition and development of mathematical concepts. There should be instructional aides that will serve as supplementary materials to the textbooks. Mathematics, which is a skills-oriented subject, needs sufficient instructional materials like workbooks, textbooks, modules, and other visual instructional materials like an interactive whiteboard in order to help pupils master the necessary skills. Knowing the importance of interactive whiteboard in mathematics instruction, the researcher contemplated in pursuing the study of interactive whiteboard in teaching mathematics for grade six.

METHODS

The researcher used the descriptive method of research. Simple random and purposive sampling was used in the selection of the participants who were from Grade six level of Pulong Sta. Cruz Elementary School, Sta. Rosa City enrolled for the school year 2017-2018. Two sections were selected from the ten sections of grade six. Using the teacher-made test method and conducting a validated test questionnaire, the researcher gathered data from the 104 grade six pupils. The data were quantified using the weighted mean, Analysis of Variance, and Pearson Correlation to get the significant relationship of the data given.

RESULTS

Based on the interpretation no significant relationship on the performance of respondents in terms of different areas, which means that all hypotheses are accepted. Correlational relationship between the performance and the use of an interactive whiteboard to the pupils as respondents. Pearson's Coefficient of Correlation, -0.04 computed r-value which shows negative very weak as strength of value in multiplication, -0.24 computed r-value with a negative weak strength of the relationship in the division, 0.07 computed r-value that also projects very weak strength of the relationship, in addition, all hypothesis in different areas are accepted.

DISCUSSIONS

The pupils performed proficiently in all tested areas, namely multiplication of whole numbers, division of whole numbers, and addition of simple fractions and mixed numbers. It is clear from the data given that the interactive whiteboard as an interactive learning tool in learning mathematical competencies is effective.

KEYWORDS: Usage of Interactive Whiteboard

SUBMISSION ID: R04A-STAROS-0077

Use of ACE (Act, Compute, and Explore) Sim in the Performance of Grade 7 of Pablo S. Villafuerte National High School on Basic Operations of Fractions

Emelou Sabana, Pablo S. Villafuerte High School

Abstract

INTRODUCTION

The study was developed to realize the advocacy of the writer to help her students who encounter difficulty in some mathematical concepts especially in dealing with operations of fractions. The researcher finds it significant to make a study and provide intervention to solve this problem. Five series of SIM on Operations of Fractions were made to provide the necessary skills in operations of fractions. SIM 1 contained activities for finding the GCF and Equivalent Fractions, SIM 2 covering conversion of Improper to Proper Fractions and vice versa, SIM 3 was restricted to adding Similar and Dissimilar Fractions, SIM 4 was all about Subtraction of Similar and Dissimilar Fraction, and SIM 5 confined to Multiplication and Division of Fractions

METHODS

The study was guided by the qualitative study using descriptive evaluative research design. A series of paper and pen tests were administered to measure the level of performance of 30 Grade 7 of Pablo S. Villafuerte National High School on basic operations of fractions. For the descriptive part, t-test was used to determine the significant difference between the pre and post-test. The level of confidence was set to 95% or 5% margin of error.

RESULTS

A pre-test was administered to the group and after that, they were given SIMs in replacement of the conventional way of instructions. SIM 1 was given for three days, SIM 2, 3, 4 and 5 consumed two days each. The group was pre- and post-tested. Furthermore, detailed data collection was conducted for statistical analyses. After using the SIMs, post-test was given to the respondents. The t-value of 19.302 and t- the tabulated value of 1.699 is an indication of the significant difference between the scores of the participants from post-test against-test. This shows that the use of SIMs is an effective way of improving the achievement of the students in their Mathematics subject especially in operations of the fraction.

DISCUSSIONS

The study shows that there is a significant difference in the performance of 30 respondents after giving the SIMs. A big difference of 8.57 from the pre-test result of 7.30 to 15.87 was calculated after giving the intervention. The study recommends teachers to develop and use SIM as an intervention and remediation tool to improve the academic performances of students with difficulty in other subjects and also for enhancement for those students who are in the average type. It also encourages the administrators to provide training on the importance of developing SIM to the teachers.

KEYWORDS: SIM, Intervention, Least Mastered-Skills, Academic Performance

SUBMISSION ID: R005-CAMNOR-0017

Use of Game-Based Activities Towards Improving Students' Performance in Mathematics

June Kate Subi, Bondoc Peninsula Agricultural High School

Abstract

INTRODUCTION

Mathematics deals with numerical values, data, symbols, and shapes. The discipline encompasses a myriad of sub-disciplines that have been taught in academic institutions nowadays. A variety of teaching strategies have been used however failed in the long run. In this study, the researcher compared the Non-Game based activities and Game-based activities method of teaching and determine the effectiveness of these two methods in improving the students' performance in General Mathematics particularly in the topics about functions and their graphs.

METHODS

The experimental design was used. The researcher utilized the experimental method through pre-test and post-test to compare the traditional method and the use of non-game-based activities and game-based activities in teaching General Mathematics. The control group came from tourism/cookery class consisting of 40 students and was exposed to non-game-based activities method of teaching, while the experimental group came from tourism/food and beverages services class consisting of 39 students and was exposed to game-based activities method of teaching.

RESULTS

Both the control and experimental group had the same level of Mathematics performance described as fairly satisfactory before the start of the experiment. After using the game-based and non-game-based activities method of teaching, both groups improved their performance but using game-based activities can enhance better.

DISCUSSIONS

Thus, the results show that workshop training on creating mathematical games that are aligned to the Mathematics curriculum in all levels are advised to be conducted by the administrators to help teachers in utilizing game-based activities. Furthermore, a follow-up study using computer-assisted or online mathematical games may be conducted to validate the findings of this study.

KEYWORDS: game-based activities, students' performance, mathematics

SUBMISSION ID: R04A-QUEZON-0101

Utilization of Explicit Direct Instruction (EDI) on Grade 10 Mathematics: Basis to EDI Supplementary Instructional Material

Erlinda Martine, Department of Education - Lumbangan NHS

Abstract

INTRODUCTION

The study aimed to assess the utilization of explicit direct instruction on Grade 10 Mathematics in Area 1, Batangas. Specifically, the study sought to answers on the demographic profile of Mathematics teachers in relation to age, sex, highest educational attainment, years in teaching mathematics, seminars attended, and research involvement. Also, the study determined the extent do the respondents utilize Explicit Direct Instruction (EDI) approach in teaching Grade 10 mathematics in terms of explaining, modeling, demonstration, and checking for understanding. Moreover, the study assessed the topics in Grade 10 Mathematics, which utilized an Explicit Direct Instruction (EDI) approach. Also, the findings of the study aimed to develop explicit direct instruction based instructional material.

METHODS

The study used the descriptive method of research with the questionnaire as its main tool in gathering data complemented with an unstructured interview to substantiate the analysis of data gathered from the questionnaire. The respondents of this study were Grade 10 Mathematics teachers in Area 1 of Batangas Province. The statistical tools used in the analysis of data were a percentage, weighted mean, and standard deviation.

RESULTS

The findings of the study showed that most of the teachers are 30-39 years old, female, with MA units, have 1-5 years teaching Mathematics, all of them have 0-5 training attended, and have no research involvement. Moreover, Grade 10 Mathematics topics that least utilized explicit direct instruction approaches were Sum of Geometric Sequence, Remainder Theorem and Factor Theorem, Introduction to Chords, Arcs and Angles of a Circle, Relation Among Chords, Arcs and Angles of a Circle, and Tangents and Secant Segments, Combination, and Decile for Grouped Data, which all utilized modeling approach.

DISCUSSIONS

Mathematics with regards to explaining, demonstration, and checking for understanding while the moderate extent of utilization of modeling approach. Also, the comparison on the extent of utilization of explicit direct instruction approach revealed that the approaches were utilized more by those 50-59 years old, female, with bachelor's and master's degree, with 16-20 years of experience, and with no research conducted. Lastly, the study developed Explicit Direct Instruction (EDI) based supplementary instructional material for the enhancement of this approach being utilized in Grade 10 Mathematics.

KEYWORDS: Explicit Direct Instruction, explaining, modeling, demonstration, checking for understanding, and supplementary instructional material.

SUBMISSION ID: R04A-BATANP-1755

**Utilization of Math Apps in Developing the Automaticity in Multiplication
Table among Grade Three Pupils in Tagpos Elementary School
Binangonan Rizal**

Jomar D. Castañeda & Phil Van Vyke T. Andes, Department of Education - Rizal

Abstract

INTRODUCTION

Most students have a very weak foundation in mathematics specifically elementary pupils. They do not have mastery of basic operations specifically in multiplication which will also result in difficulty in dealing with the division. They do not even memorize the multiplication table. It will take a lot of time for them to think about the right answer, and some are struggling to give the right answer when they are asked by their teachers. The purpose of this study is to develop the automaticity in the multiplication table of grade three pupils in Tagpos Elementary school and to give the teachers effective techniques to develop automaticity in the multiplication table to their pupils. The researchers also conducted this study for the students to have a better result in Quarterly Examination and ELLNA (Early Language, Literacy, and Numeracy Assessment) which aims to not just to assess the language proficiency of the pupils but also their numeracy skills.

METHODS

There were 47 grade three pupils. The respondents were selected by the result of the pre-test given to them. Purposive sampling was employed since the focus of the study was to develop the automaticity of grade three pupils specifically the low-performing pupils in the multiplication table. The researchers utilized a variety of math apps such as Tux of Math, Recentest, and multiplication games, to develop the automaticity of the respondents in the multiplication table. This was done every day during the period of 10 weeks of implementation. After this, post-test was given with questions reordered to determine student's growth and to find out whether the intervention is effective.

RESULTS

The result of their pre-test shows that they consume a lot of time in answering the 60-item test in multiplication table with mean of 34.62 (minutes). In terms of accuracy, the respondents got low scores with a mean of only 22.02. In their post-test, they got a mean of 12.06 (minutes) in terms of speed and a mean of 43.19 in terms of accuracy.

DISCUSSIONS

The result shows that after the exposure of the respondents to the math apps, their automaticity in the multiplication table in terms of speed and accuracy has developed. There is a significant difference between the results of pre-test and the post-test in the multiplication table. The math apps are an effective way to develop automaticity in the multiplication table. Teachers should utilize the math apps in teaching multiplication and undergo training on how to utilize the apps properly.

KEYWORDS: automaticity, math apps, tux of math, recentest, multiplication games

SUBMISSION ID: R04A-RIZALP-0162

Utilization of Math Journal to Increase the Student's Performance in General Mathematics

Vergel Ballesteros & Necilyn B. Angele, Pila Senior High School

Abstract

INTRODUCTION

Through the years, mathematics has been the school subject that elicits the greatest challenge among students. Majority of the students believe that mathematics is difficult. This belief is confirmed by several studies conducted on mathematics learning that show that students learn only one-third of what they are supposed to learn in mathematics (Paragas, 2009). During the implementation of K to 12 Basic Education Curriculum in the Philippines, different intervention tools were developed and adopted by the school system. Intervention tools can serve as supplements for the enrichment and additional learning for better retention and understanding of the lesson. It can also be used as a form of remediation for the students who find difficulties in Mathematics. The purpose of this research was to determine the effectiveness of using math journals in increasing students' performance in General Mathematics.

METHODS

The research study utilized the descriptive method since the researcher wanted to see if there is an effect of using math journals in increasing students' performance in General Mathematics. The researchers administered fifty-item multiple types of test to make a profile of their students. After the pre-test, they utilized the use of math journal to determine its effectiveness. After the intervention made, a parallel posttest was given to their students. A survey form of a questionnaire was also used in the present study to check the status of the use of math journal as perceived by Grade 11 students.

RESULTS

This study revealed the following findings:

The mean level of the pre-test and post-test results of Grade 11 students in General Mathematics was 14.09 and 25.56 respectively.

The computed r-value 0.9843. The p-value was less than at 0.05 level of significance, which interpreted as Significant.

The overall mean and standard deviation of 4.84 and 0.35 revealed the status of math journal as perceived by Grade 11 students in General Mathematics was Strongly Agree.

The computed t-value 13.00805. The p-value was less than at 0.05 level of significance, which interpreted as Significant.

DISCUSSIONS

Based on the findings and results of the study, it revealed that the use of math journal has a significant effect on the student's performance in General Mathematics. Mathematics teachers are accountable for their student's performance. Teachers should be knowledgeable and responsible enough to meet the needs of their number one client: the students. Teachers must be resourceful to use more varied instructional strategies and teaching interventions so that they will be able to cater to all students' needs. So, it is the teachers' responsibility and duty to motivate their students to develop good study habits and learn to appreciate and love Mathematics.

KEYWORDS: math journal, intervention tool, student's performance

SUBMISSION ID: R04A-LAGUNA-0147

Very Least Mastered Competencies in General Mathematics: A Basis for an Intervention Program in Senior High School Mathematics

Haydee Mojica, Lumampong National High School - Indang Annex Senior High School

Abstract

INTRODUCTION

The mathematics curriculum in the senior high schools (SHSs) in the Philippines under K to 12 aims to provide mathematical content and competencies that will prepare and empower students to the different career exits after graduation. General mathematics is one of the core subjects in SHS that include competencies in solving algebraic functions, business mathematics and logic and its application in real life. Very least mastered competencies in this subject should be addressed properly through an innovative intervention program to ensure that the students meet the required mathematical competencies.

METHODS

The very least mastered competencies (VLMCs) in General Mathematics last First Semester of S.Y. 2018-2019 were identified using the developed learning outcome assessment (LOA) tool of Department of Education-Cavite. Intervention materials that focused on these VLMCs were validated by three SHS mathematics teachers (mean=4.57 Very Acceptable). Fifteen Grade 11 students who failed in General Mathematics were subjected to quasi-experimental research design for one month to determine the effectiveness of the program. Twenty-item teacher-made tests (based on VLMCs) were administered to compare the performance of respondents before and after the program.

RESULTS

Learning outcome results in General Mathematics showed an overall Mean Percentage Score (MPS) of 31.99% and 39.27% for the first and second quarters respectively, which fall below the target of above 80%. Nine VLMCs, 7 from the first quarter and 2 in the 2nd quarter, were also identified. These competencies were on solving problems involving rational, exponential, and logarithmic functions and business mathematics (Percentage of Correct Response < 20.49%). The designed intervention program which focused on the 9 VLMCs resulted in a pre-test mean score of 4 and a standard deviation of 1.6, and the post-test mean score of 11.6 and a standard deviation of 2.3. Using paired sample t-test to compare the pre and post-test scores of respondents, a t-value of 12.84 and p-value=0.00 were obtained.

DISCUSSIONS

Results show that the very least mastered competencies in General Mathematics in Indang Annex SHS involved problem-solving. Also, the mathematical activities in the intervention program that enhanced problem-solving addressed the VLMCs and improved the performance of respondents. Similar studies on General Mathematics should be conducted to further validate the results.

KEYWORDS: very least mastered competencies, general mathematics, senior high school mathematics

SUBMISSION ID: R04A-CAVITP-0063

Using Count and Match Charts to Develop the Number Literacy of Kindergarten-Elena S.Y 2018-2019

Eguaras, Anjanette, Bagumbayan Elementary School

Abstract

INTRODUCTION

Numeracy is about more than just counting, be familiar with patterns, sorting and categorizing objects, talking about time and the patterns of the day, measuring and calculating amounts, arranging objects in space and identifying shapes, are all examples of mathematical thinking that contribute to numeracy. Materials and resources that allow children to problem-solve and explore the world "mathematically" are therefore key elements in the development of numeracy. Blocks and other construction materials, puzzles, and opportunities for patterning and sorting using, for example, found materials such as shells, seeds or leaves, all provide experiences that encourage mathematical thinking and the use of mathematical concepts and language. Children need opportunities to learn and experience numbers. Learning to count, recognizes numbers, and comprehend quantity are a few of the significant concepts. Repetitive experiences build understanding and fluency with numbers. These experiences help expand understanding and learn new concepts. A strong number sense is vital for future understanding of more complex math topics. The researcher believed that the conduct of this action research will be of great help to develop the number literacy of Kindergarten-Elena in Bagumbayan Elementary.

METHODS

Simple random sampling technique employed and forms a population parameter of ten (10) pupils of Kindergarten-Elena. Accordingly, to Easton and McColls (2009), it is the basic sampling technique when we select a group of subjects (a sample) for a study from a larger group (population). Each individual is chosen entirely by chance and each member of the population has an equal chance of being included in the sample. Their names were listed on small slips of paper, put in a bowl, then jumbled thoroughly without looking at the slips on the paper, the researcher had drawn the desired sample size of ten (10) kindergarten pupils as actual respondents of this study. The study was to develop the number literacy of pupils from Kindergarten; a pretest was given to know their prior knowledge on numbers. Count and match chart utilized to check the progress on pupils number literacy. At the end of the treatment, a posttest was given.

RESULTS

The study demonstrated that pupils who used the count and match chart made a growth on early numeracy assessments and in pupil's work. Pupil's received six weeks of using count and match chart and were able to make strong gains as compared to their last performance in recognizing numbers. The researcher gained a clearer understanding of how positive early numeracy intervention can have on kindergarten students when students received targeted instruction that matched their learning needs.

DISCUSSIONS

The purpose of this study was to explore the impact of using the count and match chart in kindergarten pupils. The participants were a small group of kindergarten students who ranged in ages from four to five years old. Each of the 10 pupils made significant growth between their pre-test and post-test, after using count and match chart. Forming a strong mathematical foundation amongst children in school is not an easy task. The teacher must have enough knowledge how to deliver it properly and how the pupils will understand it easily. Effective teaching practices such as hands-on learning experiences will make a huge help in developing their number literacy. Without a strong numeracy foundation, the mathematical concept will be difficult and more challenging for kindergarten pupils. It is the hope that this early numeracy intervention will ensure the growth of these kindergarten pupils throughout their education.

KEYWORDS: COUNT AND MATCH CHARTS, DEVELOP NUMBER LITERACY

SUBMISISON ID: **R04A-LAGUNA-0399**

Use of Video Clips in Enhancing Mathematical Skills of Students At Risk of Dropping Out (SARDO)

Leonelle Joy V. Morana, Department of Education - Sarangani

Abstract

INTRODUCTION

This study focused on the effectiveness of the use of video clips in enhancing the Mathematical skills of the Grade 10 students-at-risk-of-dropping-out (SARDO) enrolled in Kiamba National High School during SY 2017-2018.

METHODS

One group was randomly assigned as the experimental group who was taught with the help of video clips while the other is the control group who was taught using the traditional method of teaching.

RESULTS

Based on the results, it was found out that the Grade 10 students who are at risk of dropping out who were taught with the help of video clips on the topics discussed that were shown during the teaching and learning process significantly performed better than those students who were taught using the traditional lecture teaching method. Similarly, the traditional lecture method of teaching also significantly improved the Grade 10 students who are at risk of dropping out learning performance in Mathematics. Moreover, utilizing video clips in enhancing Grade 10 who are at risk of dropping out had similar effect on male and female learning performance in Mathematics.

DISCUSSIONS

With these findings, the school administrators should encourage teachers especially those teaching groups of students who are at risk of dropping out to utilize available video clips during their teaching to enhance students' learning performance.

KEYWORDS: video clips, Mathematical skills, Grade 10, students-at-risk-of-dropping-out (SARDO), Kiamba National High School, Sarangani Province, General Santos City

SUBMISISON ID: R012-SARANG-0221

**Used of Tangible Objects in Identifying One Half of the Elements of a Set
of Objects for Grade One - Magalang Pupils**

Escarcha, Maryjoy, Bagumbayan Elementary School

Abstract

INTRODUCTION

Mathematics learning in early childhood is essential. One important way that young children gain learning in mathematics can be enhanced is through adult support and instruction that is connected to and extends their preexisting mathematics knowledge. These kinds of mathematics learning opportunities help children learn to mathematize or engage in processes that involve focusing on the mathematical aspects of an everyday situation, learn to represent and elaborate a model of the situation, and use that model to solve problems. Understanding their needs will help teachers to assist pupils in their learning capabilities.

METHODS

The study will focus on identifying one-half of the elements of a set of objects using tangible matters. Discuss the problem to the pupils. Rico has eight marbles. He wants to give half of them to his brother. How many marbles should he give to his brother? Ask the following questions so they can easily understand the problem: (a) who has marbles? (b) How many marbles does Rico have? (c) What does he want to do with the marbles? d. How many marbles does he should give to his brother? Let the pupils act it out using tangible objects like marbles.

RESULTS

Used of tangible objects in identifying one half of the elements of a set of objects engage the pupils actively in the activity. You gain the interests, self-confidence of the pupils and at the same time, they are learning in positive outcomes of the activity.

DISCUSSIONS

The result of the study could help the pupils to engage in Mathematical activities in identifying one-half of the elements of a set of objects. Through this learning, they will have a clearer idea of the effectively using tangible objects in engaging Math activities. The teachers will have a positive result in doing activities to the pupils.

KEYWORDS: TANGIBLE OBJECTS, IDENTIFYING ONE HALF OF THE ELEMENTS, SET OF OBJECTS

SUBMISISON ID: R04A-LAGUNA-0409

Use of Multi-Media in Increasing Mathematical Skills in Adding and Subtracting Dissimilar Fractions of Grade- Four Pupils in Bagumbayan Elementary School

Olea, Merlie, Bagumbayan Elementary School

Abstract

INTRODUCTION

Having fun in Mathematics inspires one to learn how to think very logically and to solve problems using that skill. It instills on their mind how to be accurate in thoughts and words. Mathematics also teaches life skills. No one can find any part of their life that is not touched by mathematics because we are surrounded by it and by people who do know math. It also guides them to discover their full potential in learning Mathematical skills despite of some difficulties in doing it. In K-12 curriculum especially in Mathematics IV, some competencies need more attention and intervention as well. Some of them are addition and subtraction of Dissimilar Fractions wherein most of the pupils are not familiar with the topic. Thus, it results failure in their Mean Percentage Score in their Periodical Test. Regardless of various activities given and presented by the teacher to the pupils, most of them were not able to get the correct answer and could hardly solve it. This situation is very alarming that leads the researcher to conduct an action research to improve the competency of grade four pupils in addition and subtraction of Dissimilar Fractions hence get sufficient knowledge in determining the appropriate techniques and strategies needed to increase their capability and skills about dissimilar fractions.

METHODS

The researcher used the descriptive research method to attain information concerning the status of the K to 12 curriculum in different learning situation. The strategies to be accomplished to gain the mastery of the lesson are for the benefit of the pupils. The comparable study, which examined the results of the given tests, pursued to determine changes over time. This design helped the researcher to accomplish all the essential data for the pupils.

RESULTS

The passing Mean Percentage Score rate of grade four pupils in Bagumbayan Elementary School to add and subtract dissimilar fractions within the grade level accepted the fact that using multimedia presentation, the teachers in Mathematics enhanced the interest of the pupils to improve their mathematical skills.

DISCUSSIONS

To uplift the computation skills of the pupils in adding and subtracting dissimilar fractions, one of the most important duties of the teacher is not to give his/her pupils the impression of doing too much activities but to apply technique/strategies that is appropriate to their level of thinking. This study proved that using multimedia presentation as one of the best intervention to be applied by the teacher in teaching lessons in Mathematics, high MPS rate was obtained.

KEYWORDS: Multi-Media, Mathematical Skills in Adding and Subtracting Dissimilar Fractions

SUBMISISON ID: R04A-LAGUNA-0410

The Use of Desmos Graphic Calculator in Teaching Rational Functions

Nathaniel Galopo

Abstract

INTRODUCTION

Various computational software programs and applications have been developed and improved in the recent decades up to the present, which have been used in the teaching and learning of Mathematics. The development of these technologies allows learners the opportunity to engage themselves in a more responsive and in-depth learning and accountable for their learning through creative and stimulating investigation. Primarily, this study determined the effectiveness of Desmos graphing calculator apps in teaching Rational Functions to Grade Eleven (11) students under Humanities and Social Sciences (HUMSS) classes for SY 2017-2018.

METHODS

The study employed a quasi - experimental, non-equivalent control group design. It involved two groups, one served as the experimental group and used iPads with installed Desmos graphing calculator apps while the other as the control group learned using the traditional approach. Each group comprised 30 students selected through simple random sampling. The two groups were given pretest and posttest constructed by the researcher and validated by Mathematics Master Teachers. The internal consistency of the instrument established using the Cronbach's alpha. A dependent sample t-test was used to determine the significant differences between the pre-test and post-test scores within a certain group, whereas, an independent sample t-test was conducted in order to determine whether significance differences exist between those using the traditional approach and those using Desmos graphing calculator.

RESULTS

Comparing the pre-test results, both groups performed poorly in Rational Functions, implying that the two groups did not differ in the level of performance before the experiment was conducted. After five weeks of delivery of the lesson, the experimental group that was aided with Desmos had a significant improvement in their posttest performance as compared to the pretest. In like manner, the control group, which was taught merely by lecture method of instruction, also showed significant improvement in their performance. However, the mean gain score of the experimental group was significantly higher than the mean gain score of the control group.

DISCUSSIONS

Results obtained show that the experimental group, which was aided by Desmos graphing calculator during the teaching- learning process, performed significantly higher than the control group. This indicates that the use of Desmos graphing calculator had elicited as a positive result on students' understanding in Rational Functions. Other researchers who viewed supported this that android-based educational applications can be used to increase or enhance mathematical comprehension, speed up the graphing process, free learners to analyze and reflect on the relationships between data. Thus, the need to integrate Math applications such as Desmos graphing calculator in Mathematics classroom is deemed essential.

KEYWORDS: Desmos graphing calculator application, Rational Function, Quasi-experimental, Philippines

SUBMISISON ID: R012-SARANG-0167

**Schedule Math Drills to Enhance Problem Solving Skills in Mathematics of
Grade Two- Yakal S.Y. 2018- 2019**

Marinas, Sonia, Bagumbayan Elementary School

Abstract

INTRODUCTION

Elementary Grades Teachers are liable for a child's strong educational foundation. The willingness to provide him basic knowledge, which includes Mathematics, is expected to progress later on if addressed at an early stage and would surely have a carry over to the next years of his studies. The younger the pupils are, the easier is the task to develop among them toward certain skills and build up the competencies they must possess. The quest for quality education needs effective and efficient teachers as well as skillful learners. However, it has always been the pupil's difficulty to solve word problems in Mathematics starting in the primary grades. With the forgoing ground, the Grade Two- Yakal pupils of Bagumbayan Elementary School in the District of Santa Cruz are no exceptions. Based on the performance of the said group of pupils, despite the eagerness to learn, they still fall short particularly in problem solving as reflected in their previous formative and summative tests. The recorded trend is only about 27% out of 33 pupils only 9 of them reached the mastery level. The mention situation prompted the proponent to conduct this action research. The ability to solve problem is a basic life skill and is essential to our day-to-day lives, at home, at school, and at work. We solve problems every day without really thinking about how we solve them. Problem solving for Grade Two- Yakal is not easy. The Researcher decided to make this Action Research to help the learners.

METHODS

The research developed expressive techniques since the researcher used the results of the first periodical test to compare for their second periodical test. Increase number of pupils attain 80- 85% Mastery Level

RESULTS

The result of this action research shall be reported after the Grade II- Yakal Pupils Achieved 80-85% MPS in the posttest.

DISCUSSIONS

Schools have an obligation to provide all students with high quality mathematics instruction. Each student learns differently and has different strengths and weaknesses in regards to their learning needs, especially on collecting data on Mathematics. Students helps educators make solid, data based decisions. When individual student need have been identified quality core mathematics instruction using differentiated instruction, flexible, student groupings, and team teaching needs to take place. Teaching the basic mathematics facts to mastery level is a crucial part of any mathematics program. Using an instructional sequence that moves from concrete instruction to representational instruction to abstract instruction is effective and highly recommended.

KEYWORDS: SCHEDULE MATH DRILLS, ENHANCE PROBLEM SOLVING SKILLS IN MATHEMATICS

SUBMISISON ID: R04A-LAGUNA-0420

Problems Affecting the Numeracy Skills among Grade Four Learners of Selected Schools in Malapatan 1 District

Jivielyn Vargas-Nalangan

Abstract

INTRODUCTION

Numeracy is the skill to apply math concepts in all areas of life. A child's low numeracy skills may result in detrimental performance towards higher mathematics. Many children experience difficulty bridging informal Mathematics knowledge to formal school Mathematics. The use of structured, actual materials is significant to secure this association, not only in the early primary grades but also during idea development stages of higher-level Mathematics. Some learners require particular emphasis in translating between various written forms and different ways of understanding the various representations of objects or drawings. Thus, it needs long-term appropriate remedial attention in order to support successful life adjustment in adulthood. This study determined the problems affecting the numeracy skills of Grade IV learners of selected schools in Malapatan 1 District. The categories of these problems were home, personal, emotional and problems on teacher's instruction.

METHODS

This study utilized descriptive-correlational method of research. The problems affecting the numeracy skills were correlated to the level of numeracy skills in Mathematics of the learners. Such problems were categorized into home problems, personal problems, emotional problems, and problems related to teacher's instruction. There were 100 respondents chosen through simple random sampling using fish bowl technique to identify the names of the learners from the four selected public elementary schools in Malapatan 1 District. The researcher used statistical tools such as frequency, percentage, mean, and Pearson r.

RESULTS

The result of the study showed that Grade IV learners are moderately affected by home problems, personal problems, emotional problems and problems on teachers' instruction. The level of numeracy skills in Mathematics of Grade IV learners is satisfactory. There was a 4.69 difference between the numeracy skills of male and female learners. Lastly, emotional problems of the Grade IV learners and their problems with their teacher's instruction, slightly affected their level of numeracy skills in Mathematics.

DISCUSSIONS

The result implies that the more the Grade four learners are affected by their emotional problems and teachers' method of instruction problems; they tend to have a low level of numeracy skills in Mathematics. Moreover, remediation instruction may be conducted for poor performing learners in Mathematics. This is to prevent their poor learning levels and schools must conduct in-service trainings, seminars, or workshops. This may also help to develop teacher's strategies, techniques, and methods for a more effective Mathematics teaching. These are recommended to avoid problems affecting numeracy skills of the learners.

KEYWORDS: Numeracy skills, mathematics, remediation instruction

SUBMISISON ID: R012-SARANG-0129

**Mathematical Analysis of Unidentified Blaan Costume Designs: Basis for
School of Living Tradition(SLT) Curriculum Integration**

Clarence Kate V. Granada, Ermella Sheen M. Dionisio, Jeffrey V. Ruto, , &
Malungon NHS

Abstract

INTRODUCTION

The main issue to be addressed in this action research was the problem of current Blaan weavers to decode the designs of their elder Dreamweavers. The transfer of knowledge from generation to generation done in the School of Living Tradition (SLT) is the current challenge of the SLT teachers. It is believed that the designs were imparted to the Dreamweaver through l'nilong (fairies) who were considered guardians of nature. Every design is unique as each Dreamweaver dreams of different designs. Currently, the weavers are not dream-designed dependent. SLT teachers taught how to preserve the Blaan designs. According to the Gumusek president, Rebecca S. Ayao (2018), the number of Blaan designs as of the moment was not added nor subtracted. However, they found five (5) designs that were very complicated to copy, identified, and duplicated. Thus, the SLT teachers were not able to teach these intricate designs to the SLT next generation weavers. The main purpose of the study was to determine the patterns of unidentified Blaan costume designs in a mathematical way. The researcher was interested in teaching strategies to be crafted and which part of the teaching aids needs enhancement. The researchers used the inductive analysis with the aid of isometry, wallpaper guide of Fisher, G.L. (2010) and the international union of frieze & crystallography (IUC). The Blaan weavers in Lamlifew, Datal Tampal, Malungon, Sarangani Province were interviewed on the designs that they considered unidentified, responses were transcribed.

Designs which were not considered crystallographic nor frieze were not included in the investigation. Two unidentified designs were present on the l'bong "Slah. The first was identified as Pmm2 and the second was Pm11. One unidentified design was present on the l'bong Nsif and it was identified as Pm22. The last two unidentified designs were present at the Salwal Nsif. One was identified as P111 and the second was identified as Pm11. From the findings, the strategies to be crafted was the teaching aids: brochures and video animation. A brochure is a three-folded form printed in a letter size while the video is a 2:45 (min: sec) presentation. Evaluations were conducted with the IPED representatives (IP Education), Tourism officer, and Gumusek President. In general, the brochure and animation were above average on organization, knowledge-based, and appropriateness. The front page pixelated photos of the brochure and the captions of the video needs to be enhanced. Teaching aids were now ready to be used by the SLT weaving teachers. Evaluation of the effectiveness of teaching aids is recommended.

SUBMISSION ID: R012-SARANG-0206

Logic Games in Mathematics

Cabral, Mizpa Grace R. & Laguna Senior High School

Abstract

INTRODUCTION

Logic and math games can be very powerful educational tools which stimulate and motivate learning. Logic Games in Mathematics was a developed learning material consisted of different logic games and math puzzles modified by the researcher. It promoted understanding and use of math and the development of logical thinking, encourage the development of self-esteem, explains math with fun situations and boosts the development of collaboration and teamwork.

METHODS

The descriptive research design was used in testing the hypothesis and systematically analyzed the data gathered from the ratings for developed learning material on logic games. Mean and standard deviation was used to compute the mean ratings of the teachers and experts on the validation of components of logic games and technicality of the game. The T-test for correlated samples was used to determine the difference between the ratings of the teachers and experts.

RESULTS

The overall mean rating of the teachers and experts on the validation of the components of logic games in terms of description (4.73 and 4.28); players (4.69 and 4.36); objectives (4.72 and 4.36); and instructions (4.70 and 4.28) which are all interpreted as very evident. On the other hand, the following were the evaluators' rating on the validation on technicality of the game: the overall mean rating of the teachers and experts on the validation on technicality of logic games in terms of clarity (4.72 and 4.30); appropriateness (4.69 and 4.48); attainability (4.74 and 4.49); and adaptability (4.72 and 4.32) which are all interpreted as very evident. It is concluded that there is no significant difference among the ratings of the teachers and experts on the assessment on the components of logic games in terms of descriptions, objectives ,and instructions. While, in terms of players, there is no significant difference among the ratings of the teachers and experts on the assessment on the components of logic games. Moreover, there is no significant difference among the ratings of the teachers and experts on the assessment on the technicality of the game in terms of attainability. While, in terms of clarity, appropriateness ,and adaptability, there is no significant difference among the ratings of the teachers and experts on the assessment on the technicality of the game.

DISCUSSIONS

It is recommended that primary and secondary teachers are encouraged to develop highly acceptable learning material through the help and guidance of experts and authors in order to cater to the needs of the students. Administrators must also be creative and resourceful in implementing programs and seminars for teachers in developing different instructional materials for the benefit of the students.

KEYWORDS: Logic Games, Mathematics, Teacher, Education, Intervention

SUBMISSION ID: R04A-LAGUNA-0427

Hots on Enhancing the Performance in Mathematics of Grade Four Learners

Arcas, Pilita D., Gatid Elementary School

Abstract

INTRODUCTION

Instructional supervision is one of the roles of the school principal. Being an instructional leader, she always sees to it that each teacher is sensitized to his/her instructional problem. She is very much concerned with the improvement of instruction inside the classroom, so she called the key teachers and the Master Teachers to a meeting to conduct some problem census and the possible solutions to them. I told the principal that my greatest difficulty is that the pupils can't respond to Higher Order Thinking Skills (HOTS) questions in Mathematics. Based from the results of the summative tests and quarterly tests given, I found that only 12 out of 38 pupils or 32% passed the quarterly test, Summative test results showed that only 8 out of 38 pupils or 21% passed the tests whenever HOTS questions are given. It seems that the pupils are not exposed to this kind of question. The situation gave me an idea of enhancing the performance of the pupils in Mathematics by exposing them to Higher Order Thinking Skills questions. This study aimed to develop the critical thinking skills of Grade Four Learners through HOTS questions in Mathematics. It also helps enhance the learner's performance in the said subject through continuous exposure to HOTS. It is conducted in the 3rd Quarter of the school year 2018-2019 in Grade Four-Lanzones class. The result of the study will also serve as a guide for the teachers in facilitating HOTS questions in Mathematics lesson.

METHODS

This research was purely Descriptive. The researcher used simple Statistics in the form of frequencies and percentages to analyze quantitative data collected such as Raw Scores of the learners in the Pre-Test and Post Test (20-item test) composed of HOTS questions that were administered before and after the actual study and the six Weekly Tests (10-item test) given composed also of HOTS. The researcher monitored the weekly progress of the class through the results of the Enrichment Exercises given every Tuesday and Thursday during the 30- minute Study Period. She also recorded the learners' grades in Mathematics from 1st to 3rd Quarter to see their progress in the said subject. The data collected were presented in table form. The test results were interpreted and analyzed using a statistical treatment such as Mean Percentage Score (MPS), % of Mastery and Level of Performance such as High Proficiency Level (75% and above), Average Proficiency (50%- 74%) and Low Proficiency Level (50% and below). Grades in Mathematics were interpreted as Outstanding (90% and above), Very Satisfactory (85%-89%), Satisfactory (80%-84%), Fairly Satisfactory (75%-79%) and Failed (74%and below).

RESULTS

This study was completed to find out how effective HOTS is in enhancing the performance of Grade Four learners in Mathematics. These were the findings of the research. The results of the six weekly tests given every Friday during the Math class revealed that the MPS in the 1st test is 64.20 with 32% Mastery Level, the 2nd test has the MPS of 67.30 and with 50% Mastery, the 3rd test has the MPS of 69.20 and with 50% Mastery, the 4th test has the MPS of 68.40 and with 47% Mastery, the 5th test has the MPS of 70.80 with 53% Mastery and in the last test, the MPS is 73.48 and with 58% Mastery Level. So, with this findings, the % of Mastery and the Mean Percentage Score increased gradually every time the teacher gave a weekly test composed of HOTS questions. The status of the Enrichment Exercises given every Tuesday and Thursday by the teacher during the Study Period is presented in average per week of Number of Pupils who Reached the Mastery Level and % of Mastery. In Week 1, 12 pupils or 32% reached the ML. In Week 2, 18 pupils or 46% reached the ML. In Week 3, 19 pupils or 50% reached the ML. In Week 4, 24 or 63% reached the ML. In week 5, 25 or 67 % reached the ML. In the last week, 28 out of 38 pupils or 73% reached the ML. So, as revealed in the results of the Enrichment Exercises, the number of pupils who reached the mastery level and % of Mastery increased gradually through continuous exposure to HOTS questions in Mathematics. The researcher found that in the Pre-Test given, nobody reached the mastery level and all the 38 learners were under Low Proficiency Level. The Pre-Test has a Mean of 6.42 and MPS of 32.10. In the Post Test given, 20 pupils or 53% reached the mastery level, while 16 or 42% were under Average Proficiency and only 2 pupils or 5% were under Low Proficiency level. The Post Test has a Mean of 14.16 and an MPS of 70.80. The results of the Pre-Test and Post Test revealed that there's a great increase in the % of Mastery and the Mean Percentage Score from 32.10 to 70.80 with a difference

of +38.70. It only showed that there's a great leap in the result of the Post Test over Pre-Test. In the comparative analysis of the grades in Mathematics obtained by the learners, the researcher found that the number of learners with Outstanding Performance in Mathematics increased from 2 or 5% in the 2nd Quarter to 5 or 13% in the 3rd Quarter. The number of learners with Very Satisfactory Performance remained the same from 1st to 3rd Quarter. The number of learners with Satisfactory Performance increased from 19 or 50% in the 2nd Quarter to 22 or 58% in the 3rd Quarter. Upon the completion of the study, the number of learners with Fairly Satisfactory Performance decreased from 9 or 24% in the 1st and 2nd Quarter to 3 or 8% in the 3rd Quarter. Nobody failed in Mathematics. It was found also that most of the learners had Very Satisfactory and Satisfactory Performance in

SUBMISSION ID: R04A-LAGUNA-0387

MATERIALS SCIENCE

**Alternative Decorative Paper Made from *Saccharum spontaneum* (Talahib)
Dyed with Organic Materials**

Jhaymie Ann Agustin, Biñan Integrated National High School

Abstract

INTRODUCTION

Paper production continues to increase due to public demand. According to www.ecology.com, there has been a 35% increase in the number of trees that were cut down due to paper production. This causes adverse effects in our ecosystem. This study seeks to find an alternative source for decorative paper production. The researcher came up with an alternative non-wood plant, which is *Saccharum spontaneum* (Kans Grass) or talahib. Talahib has its properties that can produce good quality of the decorative paper; and since it is considered a weed, it grows easily anywhere, it is easy to harvest and is beneficial to farmers.

METHODS

The researcher used an experimental and observation method. Using an experimental approach, the researcher experimented with the talahib and made at least 3 pieces of 8x14 inch design. Each design had a color of red, orange, and green. Furthermore, the dye that was applied was purely organic. In order to produce a nice decorative paper, the researcher used fibers or pulp that is needed to produce a decorative paper.

RESULTS

The decorative paper is purely organic. It has a rough texture; the fibers can be seen through the naked eye. Its appearance is similar to that of abaca mat which is commonly used in arts and crafts. The talahib paper was proved to be efficient in terms of appearance, durability, cost of production, and availability. The quality of the decorative paper is satisfactory albeit limited to a couple of designs. Since its texture is not like that of ordinary writing paper, using it for writing purposes is not recommended.

DISCUSSIONS

The *Saccharum spontaneum* (Kans Grass) or talahib is a good alternative source for paper crafts production. This can surely help the environment and will lessen the trees that will be cut in the future. Furthermore, it can also help farmers since talahib is considered as a pest to their crops. In terms of cost, quality, and efficiency, talahib is a credible material for producing craft paper and the natural dye proved effective in producing varieties of colors. It is recommended to find a way to smoothen the texture as well as lighten its color in order to be used as an ordinary writing paper.

KEYWORDS: Paper, Talahib, Arts and Crafts

SUBMISSION ID: 04A-BINANC-0010

Ammonia Gas Detection Using Fabricated Zinc Oxide Nanoparticles on Glass Tube Substrates

Kurt Brian Daine B. Punzalan, San Pablo City Science High School
(Adviser: Franz Kevin manalo)

Abstract

INTRODUCTION

Ammonia (NH₃) is useful to various fields especially in agriculture wherein 80% of it is used as fertilizer. Even so, its toxic nature along with its sharp and pungent smell may irritate the eyes, skin, and lungs; brief exposure to concentrations higher than 5000ppm may lead to death. This case brings a strong need to establish sensors that are capable of detecting ammonia. However, commercially available gas sensors are highly expensive and can only register NH₃ in high concentrations. Thus, there is a demand for a reliable and cost-effective yet sensitive gas detector that requires inexpensive fabrication techniques.

METHODS

Substrates were prepared from glass tubes before being subjected to sonication in ethanol and in distilled water. Zinc oxide (ZnO) films were fabricated via successive ionic layer adsorption and reaction (SILAR), which involved alternate dipping of substrates in sodium zincate solution and hot water bath. The films were annealed at 250Å°C, 300Å°C, 350Å°C, and 400Å°C and were put inside a sealed container while being connected in a Wheatstone bridge circuit. Ammonium hydroxide (NH₄OH) was used as a source of ammonia gas. Volumes of NH₄OH yielded concentrations of 595ppm, 793ppm, 991ppm, 1189ppm, 2378ppm, and 3946ppm. All films were tested against ammonia with four trials per concentration.

RESULTS

The gas response was due to a change in film resistance, thus modifying the voltage output. When NH₃ was introduced, the initial voltage went down rapidly, until it reached its lowest point. Upon gas release, the voltage went back to its initial reading. The concentrations were plotted against the average change in voltage. A linear trend was observed during 595ppm, 793ppm, 991ppm, and 1189ppm. However, no trend occurred in 2378ppm and 3946ppm due to film saturation, indicating an upper limit of 1189ppm. Consequently, films having R₂ values closest to 1 were the most accurate. The films annealed at 250Å°C, 300Å°C, 350Å°C, and 400Å°C provided R₂ of 0.997, 0.994, 0.904, and 0.999; sensitivity based on concentration increments tested (mV/200ppm) were 27, 10, 23, and 15, while the resolution (ppm/mV) were 3.7, 9.9, 4.4, and 6.6, respectively.

DISCUSSIONS

Results showed that ZnO is a potential candidate for detecting ammonia due to high sensitivity and wide range of detection. The films also provided accurate readings. For further improvement of this study, parameters such as concentrations and film fabrication technique may be varied.

KEYWORDS: Ammonia, SILAR, zinc oxide, gas sensing, sensitivity

SUBMISSION ID: R04A-SANPAB-0048

Cassava (*Manihot esculenta*) Peels and High-Density Polyethylene as Wood Plastic Composite

Joecel Cate C. Titan, Pedro Guevara Memorial National High School
(Adviser: Daracan Virgilio Jr.)

Abstract

INTRODUCTION

This experimental study aimed to physically create a "Cassava (*Manihot esculenta*) Peels and High-Density Polyethylene as Wood Plastic Composite.." It is to be used for interior design on walls and floors. Wood composites are also known as engineered wood, man-made wood or manufactured board when using wood fibers and thermoplastics. Not only can it use cellulose-containing fibers, but they can also make use of lignin-containing materials. They are usually fixed using adhesives in order to have diverse characteristics. Most wood composites traditionally use solid woods. On the other hand, cassava, which is also called manioc, mandioca, or yucca, is from the spurge family Euphorbiaceae. The said plant is edible and generally grown in tropical places. More possibly, cassava was first cultivated by the Maya in the Yucatan.

METHODS

Cassava peel is obtained from the cassava itself. The cassava peel and high-density polyethylene plastic are cut into pieces and is bonded using heat press with temperature ranging from approximately 180 degrees Celsius to 200 degrees Celsius for the production of the wood plastic composite. The size of the produced particle board is 12 inches x 12 inches with a thickness of 0.6mm, gentle light brown in color.

RESULTS

Based on the results of the experiment, it showed that Cassava (*Manihot esculenta*) Peel and High-Density Polyethylene as Wood Plastic Composite has been potentially accepted as a wood plastic composite particle board.

DISCUSSIONS

This study seeks to determine other uses and utilization of Cassava peel and to test if it is a possible candidate for the creation of a wood plastic composite. The latter is relatively determined by the water absorption test and impact test prepared beforehand by the researchers.

KEYWORDS: Cassava Peels, Wood Plastic Composite, High-Density Polyethylene Plastic.

SUBMISSION ID: R04A-LAGUNA-0060

Cow Manure Fiber Reinforced Hollow Blocks for Structural Application: Modeling and Testing

Aldave Quisay, Maeryniel Orbina, & Melliah Plata, TNCHS

Abstract

INTRODUCTION

Nowadays, various disasters such as earthquakes and typhoons give problems in the structural capability of concrete hollow blocks produced in our country so the improvement of durability of hollow blocks is being studied. Due to this, the researchers produced a concrete hollow block reinforced with cow manure fiber for structural application. The purpose of the study is to strengthen concrete hollow blocks that can be used to make bridges, buildings, houses, and other structures to prolong and ensure the stability of those infrastructures.

METHODS

The cow manure was collected in the field. The fiber was obtained from the cow manure by boiling the manure. Cheesecloth was used to extract the fiber from the cow manure by pouring some cold water after boiling. The extracted fiber was mixed with concrete cement with a different amount. 0.5% and 1.5% of fiber, concrete cement, sand, and water were used to make reinforced hollow blocks. The two reinforced hollow blocks were tested together with a concrete hollow block to differentiate the results.

RESULTS

For compressive strength test, fiber reinforced hollow blocks together with the commercially produced one was brought to the Testing Center Corporation to test if cow manure fiber is an effective aggregate on hollow blocks. Hollow blocks were brought to the materials testing laboratory and were placed in the universal testing machine (UTM). Then the UTM applied force to the hollow blocks. Data was gathered until the hollow blocks collapsed. The results showed that the 1.5% cow manure fiber reinforced hollow block has the highest psi, followed by 0.5% and the commercial hollow blocks. The 1.5% has a compressive strength of 209 psi while 0.5% has 170 psi and the commercial hollow block got the lowest compressive strength which is 85 psi.

DISCUSSIONS

Therefore cow manure fiber is an effective aggregate that increases and improves a load of hollow blocks, which makes it tougher compared to commercial hollow blocks. This study still has various fields of improvement to enhance its composition and make it another turning point for our country and also in our environment.

KEYWORDS: CHB, cow manure, fiber, UTM, aggregate

SUBMISSION ID: R04A-CAVITP-1310

Effect of Precursor Solution on the Hydrothermal Synthesis of CQDs as Co-Sensitizers for Solar Cell Applications

Alexandria Kiara M. Flordeliz, Aliah Rose P. Danseco, Hanstevan A. Selfa,
Hyacinth Jade U. Santos, & Jilliana Bianca S. Barretto, Pasig City Science High
School
(Adviser: Nicole Castro)

Abstract

INTRODUCTION

A dye-sensitized solar cell (DSSC) is one of the latest trends in the production of green energy that uses organic dye to convert solar energy to electrical energy at a low cost. However, despite its advantages, the device has recorded the lowest power conversion efficiency (PCE) but holds one of the highest efficiency potentials among other photovoltaic cells. Hence, this project proposes a way to amplify the power generated by DSSCs by using an organic dye from Mayana leaves (*Carolous blumei*) and adding co-sensitizers, which help in widening of the absorbance range of a material, in the form of Carbon Quantum Dots (CQD) synthesized using Calamansi peels (*Citrofortunella microcarpa*).

METHODS

In this project, CQDs were made using 1.5 g of dried Calamansi peels and were hydrothermally synthesized in an autoclave for 1 hour with a.) 25mL of pure ethanol, and b.) 25mL of distilled water, respectively. It then underwent different characterization techniques such as Fluorescence Test, UV-Vis Spectrophotometer, and Particle Size Analysis to determine its properties. Lastly, these CQDs were added to the DSSCs containing organic dye from Mayana leaves to increase its voltage output.

RESULTS

The CQDs synthesized using water showed green coloration upon exposure to UV light and exhibited a maximum absorbance of 1.5 a.u. at 400 nm in the visible region of the UV-Visible spectrum whereas, CQDs synthesized using ethanol in the same process exhibited a yellow coloration and has recorded maximum absorbance of 2 a.u. at 400 nm with peaks of 545 nm, 605 nm and 670 nm as shown in the absorption spectrum of the UV-Visible region. In addition, particle size analysis (PSA) reveals quantum dots with an average size of ~1500 nm thus, confirming the successful synthesis of CQDs. Meanwhile, the extracted dye from Mayana leaves exhibited a maximum absorbance of 3.5 a.u at around 400 nm - which is inclusive to the range of wavelength needed to exhibit photovoltaic effect or the generation of voltage upon exposure to light.

DISCUSSIONS

Altogether, the 3 fabricated DSSCs containing no CQD, CQD-water solution, and CQD-ethanol solution were able to produce less than 10 mV, 19 mV, and 25 mV respectively in a multimeter. From these data, the researchers were able to successfully increase the power generated by DSSCs and greatly recommends the addition of CQDs as co-sensitizers to amplify its efficiency.

KEYWORDS: Dye-sensitized solar cell, Carbon Quantum Dots, Photovoltaic Cells, Hydrothermal Synthesis

SUBMISSION ID: NCR1-PASIGC-0000

Effectiveness of Reading Materials in Science in Relation to Grade 7 Students' Academic Achievement

Shiela Lizardo, Department of Education

Abstract

INTRODUCTION

The reading materials in science is designed to help the student at risk of dropping out and those students who are recommended by the subject teacher to take remedial classes and to enhance academic achievement. To determine the effectiveness of reading materials in science in relation to grade 7 students' academic achievement in different learning areas. The research was conducted using one group of respondents consisting of 30 students.

METHODS

The research is conducted to determine the effectiveness of reading materials in science in relation to grade 7 students' academic achievement in selected topics in science during the school year 2017-2018. The respondents were identified by their subject teacher in terms of their grade in the first grading period. The respondents are 30 students.

RESULTS.

The findings of the study revealed that the use of reading materials in science is an effective tool in enhancing the students' academic achievement in different learning areas in science. This implies that the said activity in science can contribute better to the learning process of the student.

DISCUSSIONS

Reading with understanding is an essential tool in the learning process. In science, comprehension is one of the basic needs in order to understand the different concepts and to increase the performance of the students. This study provides reading materials in science and was proven effective in the academic achievement of grade 7 students in different learning areas. Academic achievement of the students means that they would be able to pass their grade in science because of this intervention.

KEYWORDS: Science Reading Materials, Enrichment Activity, Academic Achievement

SUBMISSION ID: R04A-RIZALP-0215

Extraction of Silver from Used X-ray Films

Jeanilyn M. Malahito, Pedro Guevara Memorial National High School

Abstract

INTRODUCTION

Every country's economy depends on how it acquires its income. The income is used for the development and growth of the country. Some Asian countries like the Philippines are getting their income from different waste materials. They are practicing the "trash to cash" system in order to gain more income. They invest and earn from waste materials and they are making waste materials more meaningful and more productive.

METHODS

The study used the experimental method of research as the basic purpose to discover the influence of one or two factors upon a condition, group or situation, the purpose of which was to discover "what will be." It describes and analyzes the variables under the controlled condition as a basis for inferring or conducting. Used x-ray films were utilized in conducting the experimental study for the extraction of silver. The primary data gathering instrument was a scorecard, which was used in determining the weight and rate of extraction of silver from used x-ray films. The statistical treatment used in the study is the One-Way ANOVA to compare the weight of silver based on the amount of caustic soda used as well as the rate of extraction.

RESULTS

Based on the data given for the weight of silver extracted from three different concentrations, the mean of grouping information using the Tukey Method and 95% confidence of extracted silver are 6.45, 5.95 and 5.10 using 2 cups of caustic soda, 1 ½ cups of caustic soda and 1 cup of caustic soda respectively. The probability for the F-value is 0.290. Based on the analysis of the data given, the researcher proved that the weight of silver extracted from used x-ray films is not significant. The data shows that there is no significant difference in the amount of caustic used in extracting silver from used x-ray films.

DISCUSSIONS

Based on the experiment, it turned out that the amount of caustic soda and the time elapsed in extraction are not significantly different. The silver can still be extracted no matter how long the soaking process or the amount of caustic soda used. The researcher observed that the greater the amount of caustic soda used in soaking, the faster the rate of extraction will be.

KEYWORDS: silver, x-ray, films, extraction, recycling

SUBMISSION ID: R04A-LAGUNA-0089

Feasibility of Green Mussel (***Perna viridis***), Subtrigonal Oyster (***Crassostrea malabonensis***), and Blue Swimmer Crab (***Portunus pelagicus***) Crushed Shells as Additive in Strengthening the Hollow Blocks

Daniela Evangelista

Abstract

INTRODUCTION

The researchers conducted the study about the feasibility of green mussel (*Perna viridis*), subtrigonal oyster (*Crassostrea malabonensis*) and blue swimmer crab (*Portunus pelagicus*) as an additive in strengthening the hollow blocks. Different testing is conducted to obtain the objectives.

METHODS

The researcher gathered the shells. Crushed and mixed to the cement and sand for the sample hollow blocks. There were 2 treatments and each had 3 replicates. First, it contained 25% crushed shells, 40% cement, and 35% sand. For control, 50% sand and 50% cement. It underwent the drying process and proceeded to test in FPRDI-DOST Los Baños, Laguna.

RESULTS

As a result of the laboratory testing, which included compressive strength, water absorption, and modulus of rupture, we found out that the crushed shells cannot strengthen the hollow blocks. Therefore, the said shells do not have many characteristics of being hard. This shell has strength, but it takes time to learn and study its value.

DISCUSSIONS

The result discussed the feasibility of the said crushed shell as an additive on hollow blocks. It contains different content such as calcium carbonate and limestone that strengthens and lower the water absorption level of the hollow blocks. The crushing of shells is one of the ways of strengthening concrete as the municipality innovates along with the technology.

KEYWORDS: Hollow Blocks, Green Mussel, subtrigonal Oyster, Blue Swimmer Crab, Shells

SUBMISSION ID: R04A-CAVITP-1371

Natural Fibers from Tobacco (*Nicotiana tabacum*) Stalks as Reinforcing Filler for Recycled LDPE

Geordee G. De Guzman & Mari Leenor D. Ong, Pedro Guevara Memorial
National High School
(Adviser: Daracan Virgilio Jr.)

Abstract

INTRODUCTION

Tobacco (*Nicotiana tabacum*) is an annually grown herbaceous plant. It is usually up to 2.5 m or 8.2 feet high and has large green leaves and long trumpet-shaped white-pinkish flowers. The cultivation of tobacco plants can be seen globally. Tobacco plants are widely used for its leaves as it is processed into tobacco. It is usually used as the main component in the production of cigarettes, cigars, and other products for smokers. Since there is a big production of tobacco here in the Philippines, there are also a lot of tobacco stalks that were turning into wastes. That's why the researchers thought of a way to transform those unused stalks into a useful product.

METHODS

The flat-pressing process was the method that was followed in the production of the natural fiber composite. The crushed tobacco stalks and the LDPE plastic were first mixed together and was placed in a molder with a size of 30cm x 30cm. The compounded mass was placed between a two-piece aluminum plates. The mold was pressed using a flat pressing machine wherein the temperature was set to 150°C for 20 minutes. Weights were then put on the boards to ensure that the mixture was really compressed. The boards were then trimmed to remove excess mixture that flowed out of the molds.

RESULTS

The strength properties (MOR and MOE) of the boards are very low comparing to the standard set by the PNS 230-1989. In water absorption 0:100 have the highest percentage with 55.94%. In thickness swelling, all the boards passed the standard set by the PNS 230-1989. Lastly, for the moisture content the 30:70 and 50:50 passed the standard, while the ratio of 0:100 had a higher percentage than the set standard value.

DISCUSSIONS

The study has produced composite boards from the mixture of LDPE plastics and tobacco stalks. The boards manifest great dimensional stability, the mixture of 30:70 and 50:50 shows low moisture content while the mixture of 0:100 shows high moisture content. All mixture shows low thickness swelling after 24 hours immersion in water. They are all (30:70, 50:50, 0:100) poor in strength properties. Therefore, these types of boards can be used for the exterior but non-load bearing applications, examples are walls, ceiling, and kitchen partitions.

KEYWORDS: Native Tobacco stalks, LDPE plastic, Natural fiber composite, Non-load bearing panels

SUBMISSION ID: R04A-LAGUNA-0075

Physical Property, Water Repellency, Antibacterial Activity and Ultraviolet Protection of Silk Fabric Treated with Silkworm (*Bombyx mori*) Sericin-Capped Silver Nanoparticles

Johanna Katherine De la Cruz, Negros Occidental High School
(Adviser: Russell Gorre)

Abstract

INTRODUCTION

Negros Occidental produces some of the best quality silks in the world. However, silk absorbs moisture and is easily affected by microorganisms. Making silk resistant to microbes can be achieved using antimicrobial agents such as silver nanoparticles (AgNPs). This motivated the researcher to synthesize AgNPs using sericin from silkworm cocoons and utilized them as a coating agent of silk fabric.

METHODS

Sericin was extracted from silkworm cocoon and was used as a capping and reducing agent in the synthesis of AgNPs. Then, the silk fabrics were coated with AgNPs, dried, and laundered. Silk fabrics with or without AgNPs were tested for various physical properties, water repellency, and protection against UV rays as per standard methods of the Philippine Textile Research Institute. The antibacterial property of the fabrics was also done using the Kirby-Bauer Disc Diffusion Sensitivity Test.

RESULTS

UV visible analysis of sericin-capped samples showed peak absorption at 430 nm, which was used as a monitor for the formation of AgNPs. SEM analysis confirmed the formation of spherical AgNPs. Silk fabric treated with sericin-capped AgNPs had a higher tensile strength (760 N vs. 670 N) piling resistance (Grade 3 vs. Grade 1), colorfastness to laundering (Grade 4 vs. Grade 3.5), rubbing (Grade 4 vs. Grade 3), perspiration (Grade 4.5 vs. 3.5) and light (Grade 7 vs. 4), water repellency and UV Protection than the untreated silk fabric. Moreover, it also exhibited antibacterial activity in terms of the zone of inhibition of *S. aureus* and *E. coli* when compared to the untreated fabric, which did not inhibit the growth of the test microorganisms.

DISCUSSIONS

The improved physical property of the fabric with AgNPS is due to its tiny size, which can enter between the polymer molecules and act as filler, thereby contributing to the load sharing phenomenon during load applied to the cloth. The water-repellent property of the treated silk fabric can be attributed to the filling out of AgNPS in the spaces between the fibers, which allows the water to remain on the surface of the fabric. The high UV protection of AgNPs incorporated finished fabrics is due to the large refractive index of AgNPs resulting in very efficient UV scattering while its antibacterial activity is due to the AgNPS destroying the bacterial wall and cause cell damage. The findings of this study could be a breakthrough in the textile industry since sericin-capped AgNPS can be used to make antibacterial, UV protected, and strong silk fabrics.

KEYWORDS: sericin, Silver nanoparticles, silk fabric, physical properties, UV protection, antibacterial

SUBMISSION ID: R006-NEGROS-0007

Potential Use of Rambutan (*Nephelium lappaceum*) Seed Starch as a Component of Bioplastic Product

Christian Mangco, Don Ramon de Jesus, & Rovic P. Elli, Gen. Juan Castaneda
Senior High School
(Adviser: Mary Ann Aquino)

Abstract

INTRODUCTION

The problem with plastic waste is not only about it's taking up large amounts of space, but also include chemical contaminations, environmental issues, and the like due to its slow decay rate. In reducing the problem of plastic waste, bioplastics that came from renewable sources were developed (Woodford. 2014). As an alternative, the use of bioplastics is being promoted in obtaining natural polymers from agricultural products, cellulose, or potato and corn starch waste. This study explored the possibility to extract starch from rambutan seeds and determine its potential use as a component for bioplastic product.

METHOD

In extracting starch from rambutan seeds, the following procedures were followed: Immersion of seeds in 2%NaSO₄ for 72 hours, milling, sieving, decantation and washing, centrifugation (3,000 rpm for 3 minutes, washing in 95% ethanol and centrifugation for 3 times and air drying of the extract for one week at room temperature. Starch extracted was a total of 125.1 grams from 623.4 grams of rambutan seeds giving a total mean yield of 20%. Further, the starch was characterized by its density, and iodine test, ethanol emulsion test. The extracted starch was used to produce a bioplastic. The product was tested by its tensile strength, density and water uptake, and biodegradability.

RESULTS

Starch extracted was a total of 125.1 grams from 623.4 grams of rambutan seeds giving a total mean yield of 20%. The computed density of the rambutan seeds starch is 0.76 g/cm³ from its mass of 76 g and volume of 100 cm³. The FTIR spectra show a stretch of a hydroxyl group (O-H) from 3,200 cm⁻¹ to 3,650 cm⁻¹ and a peak of C-O bond ranging from 1,050 cm⁻¹ to 1250 cm⁻¹, attesting the purity of the extracted rambutan seed starch. The computed tensile strength of the bioplastic film product of the study is 1,296.875 Pa. Its density is 1.29 g/cm³ when dry and after soaking in water for 6 hours, density was computed to be 1.4 g/cm³, its computed water uptake is 10%. A soil test shows that for a maximum average of 12 days, the bioplastic film completely degrades in any kind of soil.

DISCUSSIONS

Rambutan seeds starch extraction is feasible and has high potential as a material or component for the production of bioplastic materials. The FTIR result shows the purity of the rambutan seed starch sample, and the biodegradability test exhibits positive result since the bioplastic film can degrade in a span of two weeks in any kind of soil.

KEYWORDS: Potential, Bioplastic, Starch

SUBMISSION ID: R04A-IMUSC1-0093

Production of Low-density Particle Board Reinforced with *Eichhornia crassipes* (Water Hyacinth)

Erika R. Pareja & Faith Laurence M. Sarmiento, Cavite National Science High School

Abstract

INTRODUCTION

For the past century, water hyacinth has been a nuisance and considered as "natural waste" due to its rapid propagation in tropical continents (Intermediate Technology Development Group, n.d.). Therefore, its utilization is much needed. Fortunately, water hyacinth contains high cellulose content, one of the most readily available biomass in existence and can be used as a reinforcement for composite products like particleboard. Hence, this research focuses on the use of cellulose from water hyacinth as reinforcement for particle composite boards.

METHODS

Water hyacinth was gathered. They were dried under sunlight for 3 days then cut into fine pieces. Three formulations were prepared, with 0%, 10%, and 20% water hyacinth, respectively. According to the corresponding amount per set up, sawdust, water hyacinth, and urea formaldehyde were hand-mixed in a basin. Then, they were molded and subjected under hot press machine for production with accurate density. They were cured for three days before testing. The tests done were water absorption, thickness swelling, screw holding, and moisture content.

RESULTS.

For the conducted water absorption test, set up C held the least amount of water, with 210.8831% water absorption. Thickness swelling was the opposite, in which set-up A swelled the least after being submerged for 24 hrs. Compared to the other two, the setup with the greatest amount of water hyacinth yielded to better particle board in terms of hygroscopicity but swells more when subjected to water. Water hyacinth easily swells to water because it has high fiber surface area (Indian River Lagoon Species Inventory, 2007). As for the screw holding, setup A yield the best results, reaching up to 33.8% pullout load. The same is the result for the moisture content, wherein setup C held the most moisture. The increase in moisture content may also be attributed to the ability of water hyacinth to hold water.

DISCUSSIONS

These results may be attributed to the addition of water hyacinth. The volume that water hyacinth occupies and its water-proof skin can have helped the blocking of water. Nevertheless, the particle board passes the furniture grade of wood of 12% moisture content. This means that the particle board is not prone to decay by fungi, this is because fungi need liquid water to grow and wood with moisture content lower than 28%, water will not be available to support decay. (DeWitt, 2002).

KEYWORDS: water hyacinth, cellulose, particle board, urea formaldehyde resin, water absorption, thickness swelling, screw holding, moisture content

SUBMISSION ID: R04A-CAVITP-0167

Prototype Sineguelas Water Purification System on the Presence of Unwanted Particles in Drinking Water

Justine Joey Gabrillo, SDO DNHS
(Adviser: Jaybert Cabanero)

Abstract

INTRODUCTION

Inadequacy of potable water supply is one of the major problems in developing countries. Many researchers conducted experiments to make contaminated water transformed into drinkable and clean water for everyday use. In this context, the researchers wanted to introduce a cheaper solution, which is the ceramic water filter. This innovation adopted the concept of production of activated carbon from sineguelas seed and preparation of an alternative for colloidal silver, which is known as essential materials in producing water filter.

METHODS

Material engineering involves designing, developing, and application of material to produce a predetermined set of properties, leading to the creation of new products or systems using existing materials in the development of new material processing techniques. This study focuses on determining the effectiveness of singular as a material with the anti-microbial component. Thus, this study employs an experimental method of research.

RESULTS

Cultured *E. aerogenes* mixed with distilled water was treated using the introduced sineguelas water ceramic filter and sawdust water ceramic filter applied with an improvised alternative of colloidal silver which is a mixed of silver nitrate and sineguelas extract. Treatment using the introduced sineguelas water ceramic filter was tested positive as there was the observance of *E. aerogenes*. The other treatment using sawdust water ceramic filter applied with an improvised alternative for colloidal silver was tested negative as there is no observance of *E. aerogenes*. As there were two kinds of water ceramic filter used in the study, the study was recommended to undergo the physical quality test. The result shows that both devices have an effect in removing color in the water, but sineguelas was seen as more effective in removing metallic content than sawdust. Overall finding asserts of the activated carbon from sineguelas seed as effective in removing color or contaminants from water in reducing metallic formation while the improvised alternative colloidal silver or essential nanomaterials using silver nitrate and the sineguelas extract is effective in removing bacteria.

DISCUSSIONS

The result of the study exhibits the remedies for lack of potable water or expensive process to purify water. It recommends adopting the application of activated carbon from sineguelas seed and improvised alternative colloidal silver or essential nanomaterials using silver nitrate and sineguelas extract for water filter as another possible step.

KEYWORDS: water filter, sineguelas, nanomaterials

SUBMISSION ID: R002-QUIRIN-0061

Rambutan (*Nephelium lappaceum*) Peels as Alternative Material for Biosorption of Copper in Water through Filtering

Paul Stephen S. Reyes & Ralph Mackenzie M. Catignas, Pedro Guevara Memorial
National High School
(Adviser: Daracan Virgilio Jr.)

Abstract

INTRODUCTION

One of the ongoing problems in either urban or rural community is the pollution of heavy metals. Heavy metals are commonly found contaminated in water and soil areas especially those that are near factories, industries, and mining sites. Consumption or exposure to certain amounts of these metals are harmful and dangerous to us, humans, and to the environment, since it had led to different diseases and disorders in the past. Rambutan (*Nephelium lappaceum*) is one of the fruits that are common and abundant in our country, and the researcher tends to use its lignin properties for the biosorption of heavy metals.

METHODS

About 500 grams of Rambutan Peels (RP) from the fruit was collected and cut it into small pieces. It was washed thoroughly with tap and then distilled water. The collected peels were sun-dried by for 3 consecutive days and ground into smaller particles, 1mm to 5mm in size. The researchers initially secured the dried peels in an airtight container. A simple column model was prepared using plastic bottles which will contain the dried RP and the copper solution (10 ppm). 2 sets of experiment were prepared each with 4 columns (namely Cu 1, Cu 2, Cu 3, Cu 4).

RESULTS

In Set 1, the maximum adsorption capacity for 1g of rambutan peels was determined on Cu 2 consisting 150 ml of Cu²⁺ solution. Using the formula $q = [(C_i - C_f) * V] / W$, the adsorption capacity for the RP obtained was 0.3 mg/g. 1 gram of rambutan peels reduced the 10 ppm copper solution (150ml) to 8 ppm showing 20% reduction. For Set 2, Cu 1 had the lowest reduction rate of 40% which is an approximate of 4 ppm was reduced. In contrast, Cu 3 with 15g of RP and Cu 4 with the highest amount at 20 g showed the highest reduction rate of 70% which is approximately 7 ppm. Therefore, the results proved a direct relationship between the amount of dried RP and its reduction rate.

DISCUSSIONS

It was proved by the obtained results that rambutan peels are capable of filtering copper ions in a solution but in very low rates compared to other agricultural wastes like banana peels, which showed higher reduction rates in other studies. Significant changes weren't observed from the results and it may imply that better handling of the materials is required to enhance the capabilities of the peels.

KEYWORDS: rambutan peels, heavy metal, biosorption, adsorption capacity, lignin, filter

SUBMISSION ID: R04A-LAGUNA-0068

Rice Hull and Cement Plaster as a Main Component in Making Fire-Retardant Wall Boards

Nyah Kelly I. Valles & Zhanine Mariogne Z. Merjilla, Pedro Guevara Memorial
National High School
(Adviser: Daracan Virgilio Jr.)

Abstract

INTRODUCTION

Rice hull is the hard-protecting coverings of grains of rice. Rice hull also made up of opaline silica and lignin. Cement plaster is a mixture of suitable plaster, sand, Portland cement, and water which is normally applied to masonry interiors and exteriors to achieve a smooth surface. The researchers conducted the study to help people to lessen or prevent scattering of fire when it comes to fire accidents.

METHODS

The researchers gathered the ingredients or materials and started making the target density for the wallboard 0.75 g / cm³. The dried rice hulls were weighed by 680 g per board. They weighed the adhesive resin by 120 g per board. Then, the two components were mixed. After that, the mixed components were put on a board molder and pressed by bare hands. The molded boards were put in the machine and were pressed thoroughly. After the boards were pressed, the researchers applied 3mm and 6mm of cement plaster and waited for a month for curing.

RESULTS

The researchers tested it in an open fireplace. The researchers tried to test it for 15 minutes, 20 minutes, and 30 minutes. It only turned the cement black but it did not affect the quality of the board.

DISCUSSIONS

The researchers concluded that the board was fire-retardant because there were only a few damages during the testing. They concluded that the fire didn't pass through the other side of the board, which is a positive outcome of the testing.

KEYWORDS: Rice Hulls, Cement Plaster, Adhesive Resin, Fire-Retardant, Wall Board

SUBMISSION ID: R04A-LAGUNA-0067

Rice Husk Granules (RHG) with Eggshells as Insulation Material

Angel Margareth L. Reyes, Haina Mariz A. Sastado, Jed C. Tolentino, & Zaira Mae
G. Pasia, Batangas State University
(Adviser: Jed Tolentino)

Abstract

INTRODUCTION

Insulation in infrastructures and buildings provides resistance to heat flow and helps in reducing cooling costs. But due to the high cost of common insulation materials, families from the lower class cannot afford to install this in their homes. In this study, rice husk granules and eggshells, considered as wastes, were used in producing an insulation material. With this, an innovative, eco-friendly and low-cost insulation material was developed that has a possible impact on the industry and minimize discomfort among people.

METHODS

The researchers used experimental research design in the study. Two samples were produced and replicated; sample A ($\frac{1}{2}$ cup rice husk granules: $\frac{1}{4}$ cup wood glue), and sample B ($\frac{1}{4}$ cup rice husk granules: $\frac{1}{4}$ cup eggshells: $\frac{1}{4}$ cup wood glue) that were compared in terms of water absorption, flame resistance, and compressive strength. With the data gathered, a quantitative research approach was used to determine which among the two samples is more effective to be used as insulation material.

RESULTS

Findings of the study revealed that the water absorbed of Sample B with a mean of 4 grams is lighter than Sample A with 10 grams. The flame time of Sample A has a mean of 2.56 seconds and 36.67 mm for burn length after 12 seconds. Sample B has flame time and burn length of 2.17 seconds and 32.67 mm, respectively after 12 seconds. After 60 seconds, Sample A has a flame time of 2.70 seconds and burn length of 66.67 mm. On the other hand, Sample B has a flame time and burn length of 2.09 seconds and 61.67 mm, respectively after 60 seconds. It is evident that Sample B is more resistant to flame compared to Sample A. Also, it showed that there is a significant difference between the two samples in terms of water absorption and flame resistance. The data for compressive strength showed that Sample B with a mean of 0.53 psi is stronger than Sample A with 0.37 psi. However, the result of statistical treatment for compressive strength revealed that Sample A and Sample B are not significantly different.

DISCUSSIONS

With the results driven, Sample B which is rice husk granules with eggshells and wood glue is way better to be used as insulation material in terms of water absorption and flame resistance. Consideration in testing compressive strength again, as well with other tests including thermal conductivity shall be conducted, to further determine the capability of the material in insulation purposes.

KEYWORDS: compressive strength, eggshells, flame resistance, insulation, rice husk granules, water absorption

SUBMISSION ID: R04A-BATANC-0157

Screw Pine (*Pandanus odoratissimus*) as an Additive on Making Concrete for Better Structural Stability

Carmela Erin Elazeui, Laguna Senior High School

Abstract

INTRODUCTION

Concrete is one of the most widely used constructional materials. One of its properties is brittleness, which makes it poor when it comes to tensile strength. To improve its tensile strength, fibers are added to concrete, which is known as fiber-added concrete. One of the most noticeable applications of natural fibers is to replace man-made fibers as reinforcement in concrete production. Among these fibers that can be used for construction, purposes are the screw pine. The said natural fiber is extracted from the screw pine plant and is known to have excellent mechanical properties because it has been widely used for making traditional products. Additionally, the said fibers are considered to be even tougher compared to an orange. Pandan can be easily cultured in typical places. Durability is assured using pandan. Given the potential properties of screw pine that has as a natural fiber, the researcher aimed to examine the difference in the structural stability of concrete infused with screw pine and a 5-kilogram normal concrete.

METHODS

Seventy leaves of screw pine were collected and extracted by boiling and then soaking in 5% sodium hydroxide (NaOH) solution for 90 minutes. The leaves were dried under the sun for two days until it became ivory in color. The screw pine fibers were mixed along with the course, fine aggregates, and cement. It was thoroughly mixed. Six concretes were subjected to structural stability test: three screw pine-reinforced concretes and three normal concretes. The concretes were dropped from a two-foot height. The fragments of the concrete were separated and the remains were weighted and recorded. T-test was used to know which performed better between normal and screw pine-reinforced concrete.

RESULTS

After conducting the drop test, the average weight of the screw pine concretes went from 9.8 kg to 7.3556 kg, while the normal concrete became 4.8411 kg in weight. The variance of the screw pine concrete is 4.2169, which is lower than that of the normal concrete which is 12.2251. Substituting the values into the formula gave a t-value of $t = 1.8603$. Using the t-test tabular values, the critical value of t is 1.746, considering that the degree of freedom is 16. Since the calculated t exceeds the critical value, the null hypothesis was rejected.

DISCUSSIONS

The researcher concluded that the structural stability of the concretes with screw pine fibers was higher than that of the normal concrete since it makes the concrete stronger and enhances its resistance from breaking.

KEYWORDS: screw pine, concrete, structural stability

SUBMISSION ID: R04A-LAGUNA-0038

Solar Panel from Negative Postive Negative (NPN) Transistors

Jennifer T. Santos, Pedro Guevara Memorial National High School

Abstract

INTRODUCTION

The research study was conducted to determine the level of acceptability of solar panel from NPN Transistors in terms of appearance, durability, efficiency, and usefulness; the average duration time of solar panel from NPN Transistor at a given appliance with different wattage like light bulb with 5W, 7W and 18W, radio with 15W, television with 56W and electric fan with 65W; and the significant difference among the ratings given by the group of respondents on the level of acceptability of solar panel from NPN Transistor in terms of appearance, durability, efficiency, and usefulness.

METHODS

Product development and descriptive research design was used to test and analyzed the data gathered from the ratings of 30 respondents composed of the electronic technician and household head from Brgy. Jasaan and Brgy. Oogong Sta. Cruz, Laguna. The statistical tools used in this research study were the weighted mean, standard deviation, and T-test.

RESULTS

After the evaluation process, it found out that there was no significant difference on the ratings made by the electronic technician and household head on the acceptability of solar panel from NPN Transistor in terms of appearance, durability, efficiency, and usefulness. The overall mean ratings of 4.71, 4.24, 4.09 and 4.20 and 4.84, 4.42, 4.13 and 4.27 respectively, revealed that the electronic technician and household head rated the acceptability of solar panel from NPN Transistor in terms of appearance, durability, efficiency, and usefulness as "highly acceptable," "acceptable," "acceptable," and "acceptable" respectively; and based on the gathered data the duration time of one (1) fully charged solar panel increased as the wattage of appliance decreased. The solar panel from NPN Transistor can last long for at least four (4) hours fan an electric fan with 65 watts.

DISCUSSIONS

The findings gathered led to the formulation of the following conclusion: 1. The hypothesis stating, "There is no significant difference in the level of acceptability of solar panel from NPN Transistor in terms of appearance, durability, efficiency, and usefulness" was rejected. 2. Based on the result from the testing process the duration time of solar panel from NPN Transistor increases as the power rating or wattage of a given appliance decreases.

KEYWORDS: Solar Panel, Transistors, and Acceptability

SUBMISSION ID: R04A-LAGUNA-0084

Synthesis and Characterization of Lemon (*Citrus limon*) Peelings Derived Carbon Quantum Dots-Polyaniline (CQD-Pani) Composites

Gissele Monique G. Antipasado, Marbie Kate G. Peroja, Matthew Denwell R. Herrera, & Rodgina LC A. Mores, Pasig City Science High School
(Adviser: Rowana Angela Raymundo)

Abstract

INTRODUCTION

Carbon Quantum Dots (CQDs) are nanoparticles used by researchers in different fields of science. These materials are biocompatible and are conductive at the same time. Polyaniline (Pani) is a conductive polymer that is best known for its property that can synthesize the desired structure and properties of a polymer material. In this study, the two materials are synthesized and characterized together to explore the new properties that these materials could make.

METHODS

Modifications from Sedaghat's (2013) method were used in order to create CQD-Pani composite. First, lemon peelings were used as a carbon source and CQDs were synthesized through the hydrothermal method. The synthesized CQD was centrifuged, then the supernatant was collected. From there, the researchers made concentrations of 4ml, 7ml, and 10ml CQD then were added to Pani to create different concentrations of CQD to Pani. Ammonium Persulfate was then added to the mixture as it serves as an initiator. The polymerization process happened between 0-4th°C. These were then characterized using the Scanning Electron Microscope (SEM) for its surface morphology and Fourier Transform Infrared Spectroscopy (FTIR) for the fingerprinting of unknown substances present in the material.

RESULTS

The concentration of 10ml CQD-Pani and Pani were characterized using SEM. Both samples were observed in different magnifications. Under the magnification level of 300,000x, the 10ml CQD-Pani was observed to have "dots" on its surface. These "dots" are agglomerated CQDs on the surface of CQD-Pani while these "dots" are not present in Pani. The CQD-Pani appears to be more fibrous than Pani. The FTIR reported the presence of mainly citric acid across all of the samples which is a component used in the very start of the synthesis. This further validates the role of citric acid from lemon peelings as the carbon source in synthesizing CQDs. The samples also appear to have aromatic rings present in certain regions of the spectra, indicating the presence of aniline since it is a benzene ringed compound. Siloxanes are also present in the Pani.

DISCUSSIONS

From the characterizations done, the addition of CQD to Pani is evident based on the morphological testing. The functional groups used in synthesizing CQD-Pani are found in the samples as well. Siloxanes are present in the control group and were considered as a contaminant and should not be present in that sample. The researchers recommend performing a bioassay and more characterizations to the sample.

KEYWORDS: Carbon Quantum Dots, Polyaniline, composites, characterization, synthesis

SUBMISSION ID: NCR1-PASIGC-0012

The Feasibility of Snake Plant (*Sansevieria trifasciata*) Fiber as the Main Component in Paper Production

Sofhia Dianne T. Delos Santos, Pedro Guevara Memorial National High School
(Adviser: Daracan Virgilio Jr.)

Abstract

INTRODUCTION

Paper is used in a variety of application so its demand is increasing. Thus, environmental issues are also increasing. It is said that the consumption of paper has grown 400 percent in the last 40 years and a large number of trees are cut to use in paper industries. Paper pollutes air, land, and water because it contains dyes, inks, and other harmful chemicals. In this study, snake plant fibers were used in paper production since it has strong fibers that can withstand forces and can be an instrument of resolution on different environmental issues and can lessen the demand for paper.

METHODS

The materials needed were cleaned before using. Snake plants were collected from Santa Cruz, Laguna, and the potato starch that served as the binder for the snake plant fibers was bought at the local market. The snake plants were cut into thin and fine pieces and were prepared for boiling. The casserole was filled with 3L of water, 1 cup of potato starch and chopped leaves, and boiled and stirred constantly for an hour. Then it was removed from casserole using a strainer and then prepared for blending. The number of strained leaves and boiled potato starch were based on treatment combinations in experimental design. These were blended and the blended leaves were ladled onto the screen using a spatula and transferred onto canvas. And the sheet was placed under the sun for drying.

RESULTS

The quality of the produced papers was different from each other since different amounts of snake plant fibers were used. Based on observation of the researcher and conducted testing, the treatment combinations of snake plant fibers and potato starch were acceptable, but Treatment 2 or 50% snake plant fibers and 50% potato starch was the most acceptable among the treatments since the produced paper was smooth in texture, durable, light yellow in color and ideal in thickness.

DISCUSSIONS

From the conducted study, the amount of snake plant fibers used in paper production has a significant effect on the quality of the paper. The more the snake plant fibers used, the rougher, more durable and thicker it gets.

KEYWORDS: snake plant fibers, paper, acceptable quality

SUBMISSION ID: R04A-LAGUNA-0056

The Potential of Coffee Husk as an Alternative Material for Pencil Lead

Caterina Gabriella D. Peruzzi, Gerard Jocson, & Glenadine B. Lorenzana, Amadeo
National High School

Abstract

INTRODUCTION

The Philippines is facing a conflict of the continuous expansion of mining. Graphite is yielded from mining, and it is used in the production of different materials, such as in lubricants, moderator, electrolytic anodes, and pencil. However, the way it is extracted can be very destructive for our environment. On the other hand, Amadeo is rich in coffee production and produces a thousand tons of wasted coffee husk. The researchers found a way to lessen and utilize this waste where coffee husk was used as an alternative for graphite as the writing core of the pencil to prevent the expansion of mining and lessen its negative effects on the environment.

METHODS

The experimental method of research was used in this study. Coffee husk was carbonized and pulverized by applying heat and using mortar and pestle. Kaolin and bentonite clay were mixed together with carbonized coffee husk, 0.5mL epoxy, and 2mL water at different proportion - 70 parts of clay with 30 parts of the carbonized coffee husk, 50 parts of clay with 50 parts of the carbonized coffee husk, and 30 parts of clay with 70 parts of carbonized coffee husk. This was molded, dried, soaked with oil, and dried again for 3 days. The hardness of the pencil lead was obtained from ASTEC Material Testing Corporation through a compression test, while the survey was provided to determine its writing quality.

RESULTS

The compression test revealed that the 70 parts of clay with 30 parts of carbonized coffee husk have the hardest compressive strength. The p-value of 0.013256 is less than 0.05 and the ratio of F value of 9.676056 and F critical value of 5.143253 is greater than 1, which implies that null hypotheses are rejected. Based on the survey, 60% of the respondents agreed that pencil lead with 30 parts of clay with 70 parts of carbonized coffee husk has the best writing core among the three different proportion.

DISCUSSIONS

Coffee husk can be carbonized and can produce pencil lead with the hardness that is directly proportional to the amount of clay that it has. However, its writing quality is directly proportional to the amount of carbonized coffee husk. ANOVA shows that there is a significant difference between the different proportions of the pencil lead. The study proves that, according to M.C. Sousa and J.W. Buchanan (2000), the lead is harder as long as it has more clay. Thus, the study can be concluded that carbonized coffee husk has the potential to be an alternative material for pencil lead.

KEYWORDS: bentonite, kaolin, compressor, hydraulic press,

SUBMISSION ID: R04A-CAVITP-1571

MECHANICAL ENGINEERING

Automated Watering and Fertilizing System for Pechay (*Brassica rapa*) Plant

Fristian Lei Vidallo, & Aira Manalo, Bucal National High School
(Adviser: Riza D. Soberano)

Abstract

INTRODUCTION

An automated irrigation system provides the solution for watering the lawn and the garden automatically even in the absence of the human. No individual presence is needed for watering as the system is automated considering one or more of the various parameters available for irrigation scheduling such as soil moisture. This saves the greenery of the lawn and provides the proper amount of water needed in the garden. Soil-moisture-based irrigation system, timer-based irrigation system, drip irrigation, sprinkler irrigation, etc., are the types of the automated irrigation system available. At this phase, soil-moisture-based technology has been chosen. In this project, the system is controlled by using the soil moisture measuring sensor, which controls the flow of water. Main components required are soil moisture sensor, control circuit, gate valve, pumping unit, power supply, and programming guidance.

METHODS

The researchers first dealt with the design of the irrigation system. After completing the design of the device, the researchers dealt with the assembly of the components (based on the design). Next, is the development of the program using the Arduino platform and C++ Language. Stepping forward, loading the program to the hardware takes place. Then pilot testing is conducted. Lastly, the researchers deal with the final evaluation.

RESULTS

The experimentation took one week long. The device shows positive results as it gives data such as 1st day of experimentation: no signs of growth. The device releases the most amount of water. 2nd day: no signs of growth. The device releases a small amount of water because the soil is still moist. 3rd day: shows 0.5 inches of growth. The device releases a small amount of water because the soil is still moist. 4th day: shows 0.5 inches of growth. The device releases a greater amount of water than day 3 and 4. 5th day: shows 1 inch of growth. The device releases a very small amount of water because the soil is moist. 6th day: remains the size as the size of day 5. The device releases a slightly greater amount of water than day 5. 7th day: shows 1 inch of growth. The device releases a small amount of water because the soil is still moist.

DISCUSSIONS

Results show that the device has a 100% success rate in terms of functionality of its parts and accuracy in watering the set upon detection of low moisture level. Hence, the irrigation becomes automatic using this device.

KEYWORDS: Soil Moisture, irrigation system

SUBMISSION ID: R04A-CAVITP-1587

Development and Evaluation of Pollutant-Filtering Device for Gasoline-Powered Motorcycle

Margaret Grace Gracilla, Anna Mae J. Alfaro, & Christopher G. Maleo, Bucal National High School

Abstract

INTRODUCTION

Motorcycles emit smoke that contains hydrocarbons, carbon monoxide, and carbon dioxide, which are harmful to one's health and to the environment. Considering this information, the researchers designed, constructed, and tested a filtering device using crushed chicken bones and eggshells as adsorbing materials.

METHODS

The pollutant-filtering device was designed and constructed based on a pre-set specification. To come up with an exhaust pipe filter, the crushed eggshells and crushed chicken bones were combined inside the circled fine screen. Then, the circled fine screen containing the materials needed were put inside the can and then sealed. After sealing, the device was attached at the end of the motorcycle's exhaust pipe. A motorcycle with gasoline was subjected to the smoke emission test. With the use of Automotive Emission Analyzer, the hydrocarbon reading obtained without using the device and the number of hydrocarbons emitted with the use of the device were recorded and compared.

RESULTS

Results show that before using the pollutant-filtering device, the hydrocarbons content of smoke emitted by single gasoline-powered motorcycle was measured and the following means are obtained: HC ppm-702.66, CO%- 1.29, and CO₂ %- 1.8, and O₂ %-12.28. On the other hand, the means obtained when the device was used are as follows: HC ppm-65.66, CO %- 0.44, CO₂ %-0.9, and O₂ %- 20.46.

DISCUSSIONS

Results show the following success rates of each pollutant: HC ppm is reduced by 90.86%, CO is reduced by 62.02%, and CO₂ is reduced by 50%. What's interesting is that O₂ is increased by 66.61%. This only reveals that the device made from Crushed Chicken Bones and Crushed Eggshells is effective in filtering and absorbing. This means that the Pollutant-Filtering Device is effective in reducing hydrocarbons pollutants from a gasoline-powered motorcycle.

KEYWORDS: Pollutant-Filtering Device, Crushed Eggshells, Crushed Chicken Bones

SUBMISSION ID: R04A-CAVITP-1585

ES-QUAD: Efficient Supplementary Quad-Robot System for Farm Management Enhancement

Ian Merrel Patarat, Valenzuela City School of Mathematics and Science
(Adviser: Loreta Salvador)

Abstract

INTRODUCTION

Farming is one of the most well-known jobs in our society today. Due to the growing population, farmlands nowadays are growing larger. The large area of croplands makes it harder for farmers to do their jobs. Another large problem for farmers is the short shelf life of crops. Fruits and vegetables are considered as one of the most wasted categories of food. Also, a prominent problem regarding agriculture is a large number of agricultural wastes produced from farming crops. Robots are used to enhance the daily life of human beings. This research used four robots to assist farmers in their normal activities with higher overall efficiency.

METHODS

A quasi-experimental research design was used in this study. The robots were constructed using parts of the Lego Mindstorms Ev3 Kit and other easy to find materials. They were tested in miniature simulation fields intricately designed to portray the natural setting of farms. The accuracy and efficiency with relation to time were calculated in each robot.

RESULTS

The Soil Cultivator can plow 1.03m in 26.13s. The resulting rate is 0.04m/s. An ox can plow 1 ac of land a day (John, 2017). The ox can plow 63.61m (1 ac) per 86400s (24 hrs). Its rate is 0.0007m/s. From the acquired results, it is implied that the robot will make the farming system more efficient in terms of the time it takes to finish the job. The Fruit Picker can pick 9 fruits at different heights in 357.6s with 77.78% accuracy. Compared to a normal person picking the fruit, it uses less effort with the same results. The Fruit Organizer achieved 100% effectivity with 0.59s average reaction time. The Compost Creator was found out to take 48.13s in creating a compost pit. The average time of a farmer to create a 3ftx3ftx5ft pit is about an hour. Comparing the two, the activity with robot intervention is much faster than human effort alone.

DISCUSSIONS

The robots Fruit Picker and Soil Cultivator are efficient in lessening the time it takes to perform farming activities while maintaining the accuracy and assurance of high-quality fruits. Agricultural waste is also lessened through the Fruit Organizer and was made sure to be beneficial by the Compost Creator. Errors such as the inaccuracy of the sensors and hardware malfunctions may greatly affect the results of this study. In order to lessen these unwanted errors, the constant inspection of both the software and hardware components of the robot is practiced.

KEYWORDS: Farming, Agriculture, Robots

SUBMISSION ID: NCR1-VALENZ-0005

GARRISON: A GPS-Installed Robotic Anti-Theft Bag

Lance Millennard Berna, Ren Christian Penis, & Paul Ivan Olila, Cavite National
Science High School

Abstract

INTRODUCTION

The Philippines was ranked as the 14th country by robbery rate in the world. As of 2014, robbery in the Philippines was 43,726 that accounts for 2.38% of the world's robbery. Also, the Philippines was ranked as the 39th country by robbery rate in the world. As of 2014, the robbery rate in the Philippines was 44.1 cases per 100,000 population (Knoema, 2014). This study aimed to construct an android-controlled anti-theft bag using Arduino Uno Rev3 and android device that has enhanced security system and other features to protect valuable and important belongings of the user and to know if the system of the anti-theft bag is accurate enough and will work together and function well. This research study will prove that a simple bag can be innovated through Arduino systems and will be effective in diminishing the crimes rates. The bag will be password protected to secure the important belongings and GPS if it was stolen.

METHODS

The device was built by attaching electronic parts on the bag such as the Arduino Uno Rev3, breadboard, jumper wires, servo motors, GPS, modules, and power bank as the power source to the hardware layer of the bag. The anti-theft bag was programmed using the Arduino IDE and was made into an application installed to the android device to be portable. The device was created in the researchers' workplace. The research experimentation that included the tests was conducted in the school and the researcher's residence.

RESULTS

Results on the overall performance of GARRISON showed that it has a total of 100% success rate in its processes from start to finish. It showed that GARRISON is 100% accurate in different parameters such as response upon receiving the password from the android device, the connection of the GARRISON and Android device, rotation of the servo motors, program in opening and closing garrison, program in changing password, and program in locating the anti-theft bag.

DISCUSSIONS

The results demonstrate that GARRISON correctly responded to the programmed command of the software application. It also shows that there will be no problem with the owner of the robotic anti-theft bag when connecting GARRISON and the android application. Servo motors were used in locking and unlocking, and it shows that there were no errors in locking and unlocking of the GARRISON. There was also no error in the program when it comes to opening and closing the device and the password could be changed whenever the user wanted to. Lastly, the program located the device easily but with delay.

KEYWORDS: Arduino Uno Rev3, Arduino IDE, Servo motors, GPS, modules

SUBMISSION ID: R04A-CAVITP-0179

Stairway to Safety: Ramp-Turning Stairs Powered by Arduino-Based Accelerometer-Gyro MPU-6050

Patrick Ross Jasons Salgado, Valenzuela City School of Mathematics and Science
(Adviser: Loreta Salvador)

Abstract

INTRODUCTION

The anticipated Big One is fast-approaching; and being one of the countries lying on the Pacific Ring of Fire, Philippines is considered to be one of the most vulnerable places in the world. Aside from the expected effects of earthquakes, stampedes contribute to more casualties, which happen when panicky people evacuate an establishment during the occurrence of the catastrophe. Stampedes usually happen in stairs. The researcher, therefore, thought of building a prototype of ramp-turning stairs when a ground shaking is detected with the primary purpose of upgrading the stair system by transforming it into a ramp after earthquake detection. The proponent mainly used Accelerometer-Gyro: MPU-6050 to detect the ground shaking, thus limiting the study into being useful only during earthquake evacuation.

METHODS

A quasi-experimental design was used for the study. The researcher mainly used Accelerometer-Gyro: MPU-6050 to detect the ground shaking, while the servo motor SG-5010 was used to make the stairs turn into a ramp. The programming used was the Arduino IDE. The product was tested with varying intensity of ground shaking.

RESULTS

The researcher had assigned a value in which the sensor will recognize ground shaking an earthquake. Through the simulator, the values indicating intensity five were identified. When these values were not reached, the application used in testing only showed the sensor's position. On the other hand, when the values were reached, the application showed that an earthquake had been detected. After the testing, the mean and standard deviation values for the reaction time of the motor were attained for each intensity range respectively: (1) 4.2-5.1: 2.42 s, 0.42 sd; (2) 5.2-6.1: 1.67 s, 0.44 sd; (3) 6.2-7.1: 1.91 s, 0.41 sd; (4) 7.2-8.1: 1.54 s, 0.58 sd.

The functionality was tested three times for each intensity. For each trial, proponent was able to record time for the closest values for 5, 6, 7, and 8. This was due to the fact that on the earthquake simulator, one cannot start immediately on the desired intensity value.

DISCUSSIONS

Results show that the product has the capacity to detect an earthquake with intensity 5 and above and automatically turn into a ramp. The size of the product is a concern since it can affect the result. In order to lessen this error, following the standard size and proper angle of inclination should be highly considered.

KEYWORDS: Stairs, Arduino, Earthquake

SUBMISSION ID: NCR1-VALENZ-0009

The Use of Calcium Carbonate from Crushed Oyster Shells and Chicken Eggshells Mixed with Activated Charcoal for Hydrocarbon Particulate Filter

Airah Marie Gancayco, Maureen Mae Andulan, & John Nhilsan De Mesa, Bucal National High School

Abstract

INTRODUCTION

Air pollution is a perennial problem that keeps growing over the years. One of the main contributors to the high pollution level is the smoke coming from vehicles. In an attempt to decrease pollutants from vehicle exhaust pipes, the researchers investigated the use of crushed oyster shell, chicken eggshells, and activated charcoal as hydrocarbon particulate filter.

METHODS

Oyster shell and chicken eggshells were gathered, washed, pulverized, and set aside. Activated charcoal was bought. A filter that consisted of 100 g of oyster shells, 100 g of chicken eggshells, and 100 g of activated charcoal was prepared by encasing the oyster shells, chicken eggshell, and activated charcoal in a gauze pad and sealed using threads. The device was tested by getting the hydrocarbon and carbon monoxide values of the exhaust smoke before and after filtration.

RESULTS

Results show that the number of hydrocarbons present in the sample motorcycle before using the device was 43 PPmvol of hydrocarbon and 0.55 percent vol of carbon monoxide. After the filter was attached, the obtained data for hydrocarbons and carbon monoxide content was 16 PPmvol of hydrocarbons and 0.30 percent vol of carbon monoxide. In trial 2, 13 PPmvol of hydrocarbon and 0.28 percent vol of carbon monoxide. In trial 3, 12 PPmvol of hydrocarbon and 0.28 percent vol of carbon monoxide amount of carbon monoxide.

DISCUSSIONS

Results reveal that the hydrocarbon content of the smoke emission before and after the filter was used is 43.00 PPmvol and 12.00 PPmvol, making a difference of 31.00 PPmvol. On the other hand, the carbon monoxide content of the smoke emission before and after the filter was used is 0.55 percent and 0.28 percent, making a difference of 0.27 percent. This means that the hydrocarbon emission was reduced by 72.1percent, while the carbon monoxide was reduced by 49.1 percent.

KEYWORDS: Calcium carbonate, filter, exhaust

SUBMISSION ID: R04A-CAVITP-1607

Uninterruptible Power Supply Using Self-Adjusting Photovoltaic Blinds

Jordan Renz Anam, Valenzuela City School of Mathematics and Science
(Adviser: Loreta Salvador)

Abstract

INTRODUCTION

With the rapid increase in population and economic development, the problems in an energy crisis and global warming effects are today's cause of increasing concern. Solar energy is one of the primary sources that does not only provide alternative energy resources but also helps minimize environmental pollution. In this study, an Arduino board was used as the brain of the system for the solar panel blinds that will be self-adjusted. The conversion of sunlight to usable electrical energy has been dubbed as the Photovoltaic Effect. Photovoltaic blinds were assessed in terms of the blinds' efficiency and power output from the panels. This study may be implemented in different households, buildings, and offices to power CCTV cameras.

METHODS

The quantitative research design was used in conducting the study, specifically, experimental research. The researcher used Arduino, solar panels, and light sensors as the main components for constructing the prototype. Two setups were made, non-adjusting and self-adjusting blind, to establish efficiency. Voltage was measured in the morning, noon, and dusk in three days of data gathering. The t-test at 5% level of significance was used to analyze the significant differences between the two designs.

RESULTS

After a series of testing for 3 days, the collected data were then tabulated. The data collected by the self-adjusting photovoltaic blinds was higher than the non-adjusting photovoltaic blinds. It means that the self-adjusting blinds maximized more the sun's rays and the blinds collected the energy coming from the sun. Within three days, the mean of voltage that was collected from non-adjusting blinds was 0.66V and for the self-adjusting blinds was 1.08V. It was therefore found that the self-adjusting photovoltaic blinds increase the efficacy of the solar panel and that the adjustment of the blinds is accurate since it obtained a higher voltage.

DISCUSSIONS

The study proved that the self-adjusting photovoltaic blinds are much more effective in collecting energy from the sun than the non-adjusting photovoltaic blinds. The self-adjusting blinds were determined to yield greater voltage output and as well as the efficiency. The researchers, therefore, reject the null hypothesis of this study since the computed test statistic is greater than 2.35. Conducting the study in a more controlled environment will increase its efficiency and adding more solar panels were suggested.

KEYWORDS: renewable energy, solar energy, photovoltaic, blinds

SUBMISSION ID: NCR1-VALENZ-0008

MEDICAL EDUCATION

Diabetes Mellitus Patients' Coping Mechanisms

Frances Merriam M. Medalla, Student

Abstract

INTRODUCTION

As a serious and one of the most prevalent diseases, diabetes has increasingly become a global health issue. The causes of diabetes are a combination of genetic, autoimmune, and environmental factors. It has no cure. Most of these health problems are really hard to prevent or avoid. In every kind of disease, however, there is always different kinds of coping mechanisms or some ways on how patients survive and deal with their health situations. Different aspects have different coping mechanisms. The most important thing is that we know how to cope up in a different situation we may encounter. (Please work on the coherence of the sentences.)

METHODS

The study utilized the descriptive method using the quantitative approach in gathering information about the present condition. This study employed the use of a questionnaire as a primary and research instrument to gather data. Thirty (30) diabetes mellitus patients were chosen as the respondents, and they were chosen regardless of their age and gender. The given data was organized and an evaluation was made with the coping mechanisms of the different diabetes mellitus patients.

RESULTS

Many of the respondents were aged 41 above, both male and female. In the physical aspect, the respondents reported they kept doing things that they enjoy. In the social aspect, the respondents said they just wanted to be with their family and friends. In the mental/emotional aspect, the respondents explained they just accepted the fact about them having diabetes.

DISCUSSIONS

The results demonstrate that the respondents should be responsible for their health. Despite what they were experiencing, the patients pursued their dreams and wants for whatever factors that they may encounter in their life.

KEYWORDS: Diabetes Mellitus, Coping Mechanisms

SUBMISSION ID: R012-TACURO-0006

Smile Behind the Pain: A Phenomenological Study of Lived Experienced Breast Cyst Operation Survivors

Cristine Joy Caporad, Trece Martires City Senior High School

Abstract

INTRODUCTION

Women's health is one of the key issues in developing countries including the Philippines. The number of breast cyst survivors has increased since 1990 due to advances in biomedical technology that lead to an increase in early diagnosis and treatment. Despite the fact that more breast cyst survivors are currently enjoying a longer life span, there remains limited knowledge about the experiences and issues that these people are facing now. The goal of this study is to know the experiences of breast cyst operation survivors.

METHODS

Using a phenomenological research design, the researcher used a snowball sampling in choosing our respondents wherein the respondents are referred to the researchers. Three breast cyst operation survivors were interviewed using a set of semi-structured questions. The interview was transcribed by the researcher to interpret the data. Thematic analysis by Braun and Clark (2006) was used to code the data.

RESULTS

The result revealed that the survivors used to experience substantial problems specifically with 1) depression due to unstable condition, 2) physical body issues due to surgery and operation, 3) lack of self-esteem due to body changes, 4) financial problems due to hospital bills, and 5) fear of surgery and pain. The result also portrayed that these survivors used to rely on the support of their family, friends, and community because it gave the strength and courage through different stages of their treatment. The study also showed that because of what happened they build upon their spiritual, family, and social relationships.

DISCUSSIONS

This study shed light on the experiences of women living after their cyst operation on the breast. This also gave information that these survivors used to find their strength and courage from the support coming from their family, friends, and community.

KEYWORDS: breast cyst, survivors, cyst operation

SUBMISSION ID: R04A-CAVITP-0603

Students' Health Nutritional Status

Marivic Hernandez, LPT

Abstract

INTRODUCTION

Nutrition has a great impact on students' health. Proper selection of food is necessary to make them physically fit the whole day. Nutrition should be given priority.

METHODS

The author conducted a body mass index (BMI) monitoring from June 2018 to January 2019. The students are weighed and their height also is taken.

RESULTS

The Nutritional status last June 2018 has improved by January 2019. The number of students having a normal nutritional status increased. The number of students having an underweight nutritional status slightly decreased, while the overweight and obese remained the same.

DISCUSSIONS

The results demonstrate the importance of health education to the students. Students' academic performance has improved.

KEYWORDS: index, template, data, health

SUBMISSION ID: R04A-LIPAC1-0205

Through Psychoanalysis: A Phenomenological Study of the Lived Experience of General Surgeons in Conducting Surgeries

Faith Sterling Tubian, Student

Abstract

INTRODUCTION

General surgeons are physicians who have been educated and trained in the diagnosis and preoperative, operative, and postoperative way of patient care just like other professionals in the medical field. Currently, the Philippines has 130,000 licensed physicians and only 70,000 are active in the profession. General surgeons are one of the many outnumbered medical professionals in the Philippines. The purpose of this study was to determine the lived experiences of general surgeons in conducting surgeries and their coping strategies from these lived experiences.

METHODS

The study was qualitative research that described the lived experiences of general surgeons in conducting surgeries. The researcher sent an assent letter, and they identified the desired respondents using snowball sampling or referral sampling. The researcher interviewed three general surgeons with the use of a semi-structured in-depth interview. Thematic analysis was used to transcribe information from the semi-structured interview. Key quotes were highlighted, coded, and sorted into themes.

RESULTS

The thematic analysis revealed that the lived experiences of general surgeons in conducting surgeries include the following: uncontrollable internal suppression of unwanted thoughts, developing resilience and feeling of relief after hard working, time constraints, developing humility and self-assessment under ungovernable cases, needing professionalism and mental strength in dealing with unexpected cases, and social connectedness of people in creation of stronger community. The analysis showed that the general surgeons' coping strategies are as follows: developed personal and social aspect of being, personal improvement habit, enhancement of spiritual beliefs, building up of mental strength, developing acceptance of critics, finding value in the idea of others, having a good sense of judgment, and developing resourcefulness in dealing with difficult situations.

DISCUSSIONS

The results showed that the lived experiences and coping strategies of general surgeons in conducting surgeries vary from social, personal, and spiritual aspects of life. Their coping strategies fuels their drive in providing the best quality of healthcare to their patients. Therefore, general surgeons have a tough job to maintain composure, mental strength, professionalism, faith in God, and self-care despite being in a very demanding job.

KEYWORDS: Surgeries, Experience, General Surgeon

SUBMISSION ID: R04A-CAVITP-0515

MEDICINE

Accuracy Check: A Phenomenological Study on Lived Experiences of Radiologists Ensuring the Accuracy of Their Diagnosis

Krysztoffer Keanu Rimon

Abstract

INTRODUCTION

Radiology is one of the important professions in the medical field. Radiologists are those who practice this wherein they use radiation energy to detect and cure illnesses. One of its types is diagnostic radiology, which checks the functioning of the body and identifies if something is wrong within. Accordingly, there is a lack of studies that focus on radiologists that encounter some difficulties in ensuring the accuracy of their diagnoses and feeling pressure if they did an erroneous diagnosis. Hence, this study sought to fill the gap by knowing the lived experiences of radiologists ensuring the accuracy of their diagnosis.

METHODS

This phenomenological study conducted figured to find out the lived experiences of radiologists in ensuring the accuracy of their diagnosis. To do this one, an in-depth interview focusing on the difficulties they encounter to ensure the accuracy of their diagnosis and coping mechanisms from having misdiagnosis. The researchers used convenience sampling for selecting the respondents for the interview. Using the sampling method, three radiologists from the city of Trece Martires and General Trias were the ones interviewed. For the data analysis, the researchers used thematic analysis by the transcript of the interviews.

RESULTS

The researchers methodically read the data from each interview transcription with the participants. Consequently, this chapter showed the developed numerous themes under two fundamental sets, specifically, the difficulties radiologists encounter and the coping mechanisms of radiologists. This research used thematic analysis of Braun and Clarke (2006) for the analysis of data gathered from the radiologists. Miscommunication with physicians, incomplete clinical data, lack of communication with the patient, and poor equipment were the rising themes on the difficulty's radiologists encounter in making sure that their diagnosis or impression is correct. On the other hand, good communication with physicians, assistance from colleagues and self-encouragement were the appearing themes that radiologists do to cope up with the pressure they may feel after having a misdiagnosis.

DISCUSSIONS

From the results analyzed by the researchers, it showed that radiologists under diagnostic radiology do face some challenges in ensuring the accuracy of their diagnosis that leads to certain difficulties that affect their patients and them as well. However, they also have their coping mechanisms in order to solve and/or avoid any trouble regarding the accuracy of their analysis.

KEYWORDS: Radiology, Radiologists, Radiologists' difficulties, Radiologists' coping mechanisms

SUBMISSION ID: R04A-CAVITP-0785

**Antimicrobial Property of Periwinkle (*Catharanthus roseus*) Ointment
Against *Staphylococcus aureus***

Ervan Hale B. Jimene, Quirino General High School
(Adviser: Wilfreda A. Basco)

Abstract

INTRODUCTION

Medicinal plants are excellent antimicrobial agents because they possess a variety of chemical components that are antimicrobial in nature. Periwinkle (*Catharanthus roseus*) is a medicinal plant that belongs to the family Apocynaceae. The plant has been said to possess an efficient anti-bacterial, antioxidant (enzymatic and non-enzymatic), anthelmintic, antiviral, antifungal, and antimicrobial properties against *Staphylococcus aureus* but the community does not recognize the economic value of periwinkle that made the people term it as weeds.

METHODS

Experimental method using Complete Randomized Design (CRD) was used in this research. There were 4 treatments used which were replicated three times. The treatments were as follows: T0-Penicillin G (Positive Control), T1-25% periwinkle oil extract, T2-50% periwinkle oil extract and T3-75% periwinkle oil extract. Beeswax was added to all the treatments to make it as an ointment. Laboratory testing was done at Saint Mary's University, Bayombong, Nueva Vizcaya. Analysis of Variance (ANOVA) was the statistical tool used in this study to determine its significance difference and Least Significant Difference (LSD) to determine the best treatment on the antimicrobial property of periwinkle ointment against *Staphylococcus aureus*.

RESULTS

Treatment 3 has the largest zone of inhibition reaching a mean total of 18.27, followed by Treatment 2 reaching a mean total of 16.23, Treatment 1 reaching a mean total of 14.33 and lastly, Treatment 0 has a mean total of 13.47 in terms of zone of inhibition.

DISCUSSIONS

The result was statistically treated using Analysis of Variance (ANOVA) and Least Significant Difference (LSD) Test and revealed that there is an effect on the antimicrobial property of periwinkle (*Catharanthus roseus*) ointment against *Staphylococcus aureus* in terms of zone of inhibition.

KEYWORDS: oil extract, ointment, the zone of inhibition

SUBMISSION ID: R002-QUIRIN-0027

CoaSan: Utilization of Chitosan Isolated from *Trametes sp.* (Bracket fungi) as Potential Blood Coagulation Agent

Jhon Axcel Beltran, Mary Joy N. Prado, & John Vincent M. De Leo, Cavite
National Science High School

Abstract

INTRODUCTION

Achneck (2010) emphasized that in a great number of hemostatic agents applied in different field of medicine, hemostatic materials based on chitosan are the most effective in stemming acute hemorrhages, especially severe ones, and are of the first order significant in military and emergency medicine. Crustaceous shells are the main source of chitosan; however, mushrooms and fungi are also an elective hotspot for chitosan. This study aimed to determine the blood coagulation activity of chitosan isolated from *Trametes sp.* (Bracket fungi).

METHODS

The isolation of chitosan from Bracket fungi was carried out using alkaline and acid treatment. It was placed in a rotary evaporator at 60 for two hours. Concentrated isolate underwent evaporation using a water bath to be in a semi-solid state. Each level (0.5 g/mL, 1.0 g/mL, and 1.5 g/mL) of chitosan was dissolved in 100 mL of distilled water. On each vial, 0.2 mL of distilled water was put to serve as the negative control. In all set-ups, 0.2 mL of blood from male albino mice was introduced, one at a time. Two replicates were made for each set-up. The data were recorded and analyzed using One Way ANOVA.

RESULTS

Chitosan solutions exhibited an increasing blood coagulation time with the increasing concentration. Since the computed p-value (.005974) of the data gathered is less than the level of significance (.05) then the null hypothesis was rejected. Therefore, there was a significant difference between the blood coagulation time for the different concentrations of chitosan solution from Bracket Fungi and blood suspended in distilled water. It was verified since the 1.5 mL of isolated chitosan solution was significantly higher than the other set-ups (4.43 seconds). Meanwhile, the 0.5 mL of chitosan solution exhibited the slowest blood coagulation time (17.68 seconds). The results of this research study revealed that chitosan isolated from Bracket fungi can induce blood coagulation. The higher the concentration of chitosan solution, the faster the time of blood coagulation.

DISCUSSIONS

Keller, F. S. et al (2010) cited that the widely spread poly-positive charges of the NH_3^+ groups on the surface promote quick blood clotting due to the strong interaction with the poly-negative charges on the surface of platelets and red blood cells. The present findings of this study are useful for the future development of novel-chitosan based hemostatic devices and medicines. It is recommended to use the isolated chitosan from Bracket Fungi as a coagulation agent.

KEYWORDS: Chitosan, *Trametes sp.* (Bracket fungi), Blood Coagulation, Alkaline Treatment, Acid Treatment, Rotary Evaporator

SUBMISSION ID: R04A-CAVITP-0322

First Do No Harm: The Phenomenological Study of the Lived Experiences of Medical Practitioners in Adapting to Patients' Reaction to the Diagnosis of Disease

Frederick Aquino, Trece Martires City Senior High School

Abstract

INTRODUCTION

The great doctor William Osler once said, "The good physician treats the disease; the great physician treats the patient who has the disease." Healthcare professionals have all had their fair share of stubborn patients. Effective doctor-patient communication is a central clinical function in building a therapeutic doctor-patient relationship, which is the heart and art of medicine. Thus, this study was conducted to determine the lived experiences of medical practitioners while giving a diagnosis to patients.

METHODS

To describe the lived experiences of medical practitioners, qualitative research design and phenomenological method were used in the study. The interview on five participants was conducted to underscore their experiences and how they cope with the challenges as a medical practitioner while giving a diagnosis to patients. The data were coded and analyzed using thematic analysis.

RESULTS

The research resulted in two major themes namely, themes for common struggles and themes for common strategies. Chandra (2018) stated that the changing pattern in the doctor-patient relationship is becoming more of a challenge for healthcare providers that makes every physician develop their own strategy to deal with the growing issue. The common struggles of medical practitioners during the deliberation of diagnosis include communication difficulties, adapting to the patient's behavior, physical stress, hectic schedule, and personal problems that include psychological stress. On the other hand, the common strategies used by medical practitioners to cope with the said challenges include transcript review, effective communication, praying, self-assessment, and patience.

DISCUSSIONS

The results indeed proved that all medical practitioners are experiencing a lot of challenges. Majority of these challenges appear during the procedure of giving diagnosis itself. Moreover, it has stated that medical practitioners have their strategies in overcoming those challenges in communication.

KEYWORDS: Diagnosis, Medical Practitioner's experience, Medical Practitioner's strategies, and Challenges

SUBMISSION ID: R04A-CAVITP-0895

Hypoglycemic Property of Tibatib (*Epipremnum pinnatum*) Leaf Extract on Alloxan-Induced Albino Rats (*Sprague dawley*)

Ranjon U. Jonas, Mark Lorenz Q. Micor, & Raymond Daniel C. Garcia, Cavite
National Science High School

Abstract

INTRODUCTION

Diabetes is a common disease worldwide that can cause bodily damages (MedlinePlus, 2018). Even though modern medicine has found treatments for diabetes, alternatives are still needed because of the high cost of current commercial medicines. With that said, the use of traditional plants is commonly used to treat such an illness. One plant is Tibatib (*Epipremnum pinnatum*), traditionally used for treating dysentery, malaria, and diabetes. This study aims to test the hypoglycemic property of Tibatib leaf extract on alloxan-induced Sprague dawley rats as an alternative source of medicine against diabetes.

METHODS

First, three kilograms of Tibatib leaves were selected extracted. Then, fifteen albino rats underwent acclimatization before the induction of diabetes with the use of Alloxan. Oral gavage was used to administer the different Tibatib leaf extracts, metformin (250 mg/kg), and normal saline solution (NSS). The blood samples were then acquired using tail-snip method and were compiled and analyzed at the lab for the glucose levels. The equipment used was disposed under the care of the laboratory staff, and all animals that were used were humanely euthanized by the in-house veterinarian. All the data gathered from each group were subjected to One-Way ANOVA statistical test. There were three trials with no replicates done in the experimentation.

RESULTS

The results show that the Tibatib leaf extract can all lower the blood glucose levels of the albino rats but in different rates and/or effectiveness. The positive control (Metformin) consistently lowered the blood glucose levels of the albino rats to normal values from week 1 up to week 3. The 250 mg/kg concentration of Tibatib leaf extract decreased the blood glucose levels but only reached the normal range on the 3rd week. The 500 mg/kg concentration reached the normal values on week 2 and 3. The 1000 mg/kg concentration generally normalized the blood glucose levels as early as the first week. This is comparable to the effect of the positive control which also consistently decreased the blood glucose levels of the rats.

DISCUSSIONS

The results imply that the Tibatib leaf extract was able to generally lower the blood glucose levels of the rats as effectively as the positive control (Metformin) although a rat had a delayed reaction to it. For further studies, it is recommended to increase the number of replicates per group and to isolate the phytochemical hypoglycemic property of the Tibatib leaves for study.

KEYWORDS: Albino rats, Alloxan, Blood sugar level, Blood glucose, Diabetes, *Epipremnum pinnatum*, hypoglycemic activity, Metformin, Sprague dawley, Tibatib

SUBMISSION ID: R04A-CAVITP-0316

In-Vitro Effect of Serpentina (*Rauwolfia serpentina*) and Papaya (*Carica papaya*) Leaves Extract on Thrombocytopenic Rabbits (*Oryctolagus cuniculus*)

Jana Shemae Alcantara

Abstract

INTRODUCTION

There are blood disorders that can lead to the weakening of immune system and even to death, which can be a great threat for blood cell diseases specifically for a thrombocytopenic person, someone who suffers from below-normal number of thrombocytes. This study is significant to thrombocytopenic patients because both Serpentina and Papaya leaves have an in vitro effect such as increasing of thrombocytes and lessens thrombocytopenia cases coupled with it, such that they can be an alternative medicine for these cases.

METHODS

The experimental method was used by the researcher with five thrombocytopenic rabbits and five for the control group. The initial and final blood extraction of the rabbits were conducted at 709 A. Bonifacio, Cainta, 1900 Rizal in St. Francis Generic Drug with the supervision of a registered nurse while, the initial and final complete blood count results were undertaken at AccuCell Diagnostic Center at Femar, Room 219-221, street, Barangay, M. L. Quezon Ave, Antipolo, Rizal. Initial CBC was taken first then, extract with 0.5 mL were introduced and treated through the marginal ear veins of the rabbits and observed. CBC results were taken after 24 hours of observation. These processes were done for four consecutive weeks.

RESULTS

The average initial number of platelets was 78, and the average final number of platelets for four succeeding weeks after treating extract to the rabbits was 102. There was a difference of 24 thrombocytes between the average initial number of platelets and the average final number of thrombocytes.

DISCUSSIONS

The thrombocytopenic rabbits increased their thrombocytes with the use of Serpentina and Papaya leaves extract; and based on phytochemical analyses, both have phytochemical component, while Tannins has been reported to have other physiological effects, such as to accelerate blood clotting.

The study indicates that *Rauwolfia serpentina* and *Carica papaya* leaves extract effectively promote an increase in thrombocyte count and therefore a decrease in thrombocytopenia cases. Serpentina and Papaya leaves, which are widely available within the researcher's locality, were generally found helpful as alternative medicine. These plants help thrombocytopenic patients normalize their blood platelet counts and serve as a treatment to recover them from their conditions. The extracts can contribute largely to the medical field biology and pharmacology as alternative medicines.

KEYWORDS: Thrombocytopenia, Rabbits, Serpentina, Papaya leaves, In Vitro

SUBMISSION ID: R04A-CALAMB-0437

Lemongrass (*Cymbopogon citratus*) Extract as an Ointment for Skin Fungal Infection

Renalyn Bagsic

Abstract

INTRODUCTION

Skin fungal infection is a leading health problem in the world. Fungal diseases can affect anyone. To treat skin fungal infection, there are topical formulations applied directly to the skin like cream and ointment. Patil (2019) stated that lemongrass contains citral, which has anti-fungal and anti-microbial qualities. However, there were limited studies about lemongrass as an ointment for skin fungal infection. Thus, this study aimed to fill in the gap by producing ointment out of lemongrass for skin fungal infection.

METHODS

This study used a quantitative method experimental research design, which involved the manipulation of the lemongrass ointment by assigning different concentrations of lemongrass such as 50 ml, 60 ml, and 70 ml of infused lemongrass oil. Controlled treatment is the base ointment without infused lemongrass oil. These four treatments of ointment were used to apply directly on the affected skin, while three parameters such as the color, consistency, and effectivity were assessed by using survey questionnaire to determine the general acceptability of the ointment.

RESULTS

In assessing the most acceptable amount of lemongrass as an ointment for skin fungal infection in terms of color, consistency, and effectivity, T1 which is the 50 ml of infused lemongrass oil, was rated less acceptable with a mean score of 2.4. T2 which is the 60 ml of infused lemongrass oil has a 2.04 mean score which was rated also less acceptable. T3 which is the 70 ml of infused lemongrass oil, yielded a mean score of 1.82 which was rated acceptable and T4 which is the controlled treatment has a weighted mean of 2.66 which was rated not acceptable. Based on the 3-point Likert scale, the ointment with the lowest mean score has the most acceptable concentration of lemongrass. Thus, the lemongrass ointment with the most effective concentration is the T3 with 70 ml of infused lemongrass oil. Based on one-way ANOVA (F-test), a ratio of 18.74 exceeded the critical value of 2.01 at 0.05 level of significance therefore, there is a significant difference in the acceptability of different concentrations of lemongrass ointment.

DISCUSSIONS

There was a significant difference in the acceptability of different concentration of lemongrass ointment based on varying the treatments. The study found out that the most acceptable was the T3 compared to the other treatments. Therefore, the researcher concluded that lemongrass (*Cymbopogon citratus*) is acceptable and proven effective against skin fungal infection.

KEYWORDS: lemongrass, ointment, skin fungal infection

SUBMISSION ID: R04A-CAVITP-0876

Miraculous Ashitaba Tea

Lorielyn Bool

Abstract

INTRODUCTION

Ashitaba is abundant in chlorophyll, which may reduce the risk of cancer. The antioxidant properties in the plant make it beneficial for fighting free radicals (damaging molecules that promote aging, destroy tissues, and promote disease in the body). Due to the plant's rich content of chlorophyll, B12, and antioxidants, it is recognized as a favorite herb for fighting disease and encouraging overall health. The youthful appearance of the Hachijo Islanders is attributed to the consumption of the herb, which appeals to an array of individuals who may not otherwise have an interest in herbs and alternative remedies.

METHODS

The experiment type of research was used to investigate the problem raised in this study. Data were gathered through a series of tests. The interview was conducted to throw light on the data gathered.

RESULTS

Based on the results of the study, ashitaba leaves are the most excellent raw material for making tea that can cure different ailments. Ashitaba leaves are miraculous leaves rich in B12 that has been recognized for its ability to promote the production of blood cells, increase attention span and concentration, increase the production growth hormone, and promote the immune system so that it can fight off serious disorder, such as cancers.

DISCUSSIONS

Tea is a hot drink made by infusing the dried crushed leaves of the herbal plant used in boiling water. It is widely used by many people who are very conscious about their health and who do not want to take commercial medicines. So, the homemade ashitaba tea is very practical, economical, and very effective as the best substitute for commercial tea. Based on the findings and conclusion from the study, ashitaba plants should be available in our immediate environment. The massive use of ashitaba tea as a replacement for commercial tea to gain more benefits for a healthier living.

KEYWORDS: Ashitaba, Tea, Medicine

SUBMISSION ID: R04A-BATANC-0351

Organic Aromatherapy for Classroom Motivation

Jaezelle Augustini D. Montalbo, Janah N. Yang-Student, Karol Mari A. Ebreo, &
Lara Isabel M. Panganiban
(Adviser: Mellany Joy Panganiban)

Abstract

INTRODUCTION

Senior high school students at present face several challenges in achieving their academic potentials. Although several internal and external factors may drive students toward achievement and excellence, these may also serve as reasons for lack of motivation. In this study, the researchers aim to investigate the effect of aromatherapy on classroom motivation of St. Bridget College senior high school students.

METHODS

Experimental research was used. A pre-test and post-test were administered to Grade 11 students using a standardized questionnaire. The tests were given prior to and after the introduction of aromatherapy for a specific period. Analysis of data was assisted by the psychometrician for a more valid interpretation.

RESULTS

Results show that aromatherapy, specifically lavender, increases motivation. Moreover, improved emotional perspective during class hours is achieved. It reduces stress and anxiety levels through its calming and relaxing effects so students can focus on improving their academic performance.

DISCUSSIONS

Results indicate that aromatherapy influences the motivation of students while in the classroom. Aromatherapy setups may be used for classroom motivation for students to focus on realizing academic potential.

KEYWORDS: aromatherapy, organic, motivation

SUBMISSION ID: R04A-BATANC-0449

Rabies Traditional Cure (Tandok) Vs. Anti-Rabies Vaccine: Perceived Preference as Remedy

Micah Pedragosa, Student – Senior High School
(Adviser: Julius Caesar Averilla)

Abstract

INTRODUCTION

Rabies is one of the major problems that our community faces today. In 51 Barangays of Donsol, Sorsogon, there are lots of dog owners. There are owners who are not responsible for their pets. Cases reported from the district hospital show that rabies is one of the cases that lead to death. This report led the researcher to conduct a study on the practices of people who were bitten by dogs and determine which treatment practice they preferred: the traditional tank or the anti-rabies vaccine. This study aimed to shed light on the practices of the aforementioned issues and concerns.

METHODS

This study analyzed the perceived preference in terms of remedy to rabies by the victims in Donsol, Sorsogon. The research used descriptive-analytic design to analyze the data and identify the patterns and its relationships about what is being studied. To support the findings, data gathering and an interview were completed to conclude the data that is being analyzed based on the information given by the victims of rabies as the respondents of the study.

RESULTS

Out of forty-four respondents, the majority were male. In terms of age, the majority of the respondents were in the age of five. In Forty- four respondents, the majority were from Barangay Dancalan, Donsol, Sorsogon. Out of forty-four respondents, the majority of them perceived the anti-rabies vaccine as a remedy for rabies. In forty-four respondents, the plurality of them perceived the anti-rabies vaccine, as they believe that it was much safer and recommended by the doctors as the treatment for rabies. Out of forty-four respondents, the majority suggested conducting a seminar to educate everyone in choosing the proper treatment for rabies.

DISCUSSIONS

Based on the findings, the victims of rabies should be aware in terms of choosing the right remedy for their condition. The community must provide proper and safe treatment for the victims of rabies. Prevention of rabies must be intensified in every barangay of Donsol, especially in Barangay Dancalan, Donsol, and Sorsogon. The Local Government Council of Donsol should conduct a seminar, wherein everyone can learn and gain knowledge about proper treatment that should be perceived as a remedy to rabies.

KEYWORDS: traditional medicine, tank, rabies

SUBMISSION ID: R005-SORSOP-0014

Study On the Anti-Angiogenic Property of *Euphorbia hirta* Linn. (Tawa-Tawa) and *Psidium guajava* Linn. (Guava) Crude Leaf Extracts Using Duck (*Anas domestica*) Chorioallantoic Membrane (Cam) Assay

Aronne Joy Madrangca, High School Student

Abstract

INTRODUCTION

Cancer is one of the leading causes of death worldwide and in the Philippines as well. One of the critical events behind cancer metastasis is angiogenesis, which is the formation of new blood vessels. Angiogenesis is the biological process of the creation of new blood vessels from pre-existing capillaries and post-capillary vessels. Prevention of the supply of oxygen and nutrients to tumor cells would be necessary for posing treatment to the disease. Anti-angiogenic chemicals help decrease the proliferation of cancer cells. Thus, the study aimed to determine the difference between the mean percentage inhibition of different treatments and active constituents present in the plants being studied which will pave the way to the discovery of new drugs against cancer.

METHODS

The study made use of Duck (*Anas domestica*) Chorioallantoic Membrane (CAM) Assay in vivo as a tool in the determination of the anti-angiogenic property of *Euphorbia hirta* Linn. (Tawa-tawa), and *Psidium guajava* Linn. (Guava), which purportedly exhibit several pharmacological effects. Five treatments replicated five times were prepared: T1: 100% tawa-tawa crude extract, T2: 100% guava crude extract, T3 50% tawa-tawa and 50% guava crude extract, T4: Celecoxib, and T5: distilled water. The CAM at the site of application for angiogenesis was examined. In response to proangiogenic stimuli, the newly formed blood vessels appeared converging toward the disc in a wheel-spoke pattern. Through the help of a qualified scientist, the blood vessel branch point at each area of the quadrant was counted manually. One-way Analysis of Variance (ANOVA) was used to determine if significant differences exist between the variables.

RESULTS

Comparative analysis of the mean percentage inhibition of the different treatments in the CAM treated duck eggs showed that T1, 100% tawa-tawa leaf and stem extract gained the highest percentage inhibition than the other treatments; and T2, 100% *Psidium guajava* Linn. crude leaf extract gained the lowest percentage of CAM inhibition in the blood vessels formed. Therefore, the individual *Euphorbia hirta* Linn. crude leaf extract exhibits the highest anti-angiogenic effect when compared to the combination of both *Euphorbia hirta* Linn. and *Psidium guajava* Linn. crude leaf extracts, and Celecoxib.

DISCUSSIONS

The inhibition of angiogenesis is done by suppressing the action of the vascular endothelial growth factor of VEGF since it is considered as one of the most important proangiogenic factors. The presence of flavonoids in tawa-tawa leaf extracts contribute to its suppressing property towards angiogenesis (Villagonzalo, 2013). Moreover, flavonoids decrease the thickness of blood vessels and vascular endothelial growth factor (VEGF) levels (Shao et. al, 1998). In conclusion, tawa-tawa crude leaf extract can be an antiangiogenic agent due to the presence of flavonoids, a secondary metabolite.

KEYWORDS: Angiogenesis, Cancer, Vascular Endothelial Growth Factor (VEGF)

SUBMISSION ID: R005-TABACO-0044

Susceptibility of the Methicillin-Resistant *Staphylococcus aureus* in the Biosynthesized Silver Nanoparticles by *Bacillus subtilis*

Johanne Aila Bacolo, Kristoffer Jon Angue, & Missy Ann Tecson, Cavite National Science High School

Abstract

INTRODUCTION

Due to the increase of multidrug-resistant bacteria, the discovery of new sources of antibiotics has seen an upsurge. In addition to this, the resurgence of Methicillin-resistant *Staphylococcus aureus* (MRSA) has created the necessity for studies directed towards the development of new antimicrobials.

METHODS

Nanoparticles have already made its way to be utilized in making a bacterium a potential alternative for antibiotics. From these precepts, this research study aimed to use Biosynthesized Silver Nanoparticles (AgNP) by *Bacillus subtilis* in inhibiting MRSA. Cultures of *B. subtilis* were obtained, broth and agar were prepared, *B. subtilis* were inoculated, centrifuged, and subjected to MRSA through agar well diffusion method; and the zone of inhibition was obtained.

RESULTS

Findings showed that the greatest zone of inhibition is the positive control with an average diameter of 24.33mm, followed by the negative control (14.67mm) and the biosynthesized AgNP by *B. subtilis* (14.17mm) subjected in MRSA.

DISCUSSIONS

Based on the results presented through the zone of inhibition, there is a significant difference in the positive, negative, and silver nanoparticles. The description was also supported by the statistical analysis using One-way ANOVA. The F was 74.83122, while the computed F crit was 3.68232. In relation to the hypothesis, since the F was greater than the F crit, the null hypothesis was rejected. With this, it can be delineated that biosynthesized AgNP by *B. subtilis* can be used as an alternative against MRSA.

KEYWORDS: multidrug-resistant bacteria, MRSA, *Bacillus subtilis*, silver nanoparticles

SUBMISSION ID: R04A-CAVITP-0181

**The Antibacterial Effect of the *Blumea Balsamifera* Linn. (Sambong)
Leaves Extract Against *Klebsiella pneumoniae***

Anne Jubette Castillo, Denise Jean Dela Cruz, & Mary Claire Eduarte

Abstract

INTRODUCTION

Antibiotics are used to treat or prevent different types of bacterial infections. But the continuous use of antibiotics also creates a different problem to public health. Antimicrobial Resistance (AMR) is progressively perceived as one of the serious threats to global public health with notable societal and economic impact proven by reports published by major organizations, including the WHO. A bacterium that is contributing to this is *Klebsiella pneumoniae*. It's a bacterial pathogen known for its high recurrence of antimicrobial resistance (AMR) qualities. Another major problem that these bacteria cause is the increasing rate of UTI cases. This study focuses on the antibacterial effect of *Blumea balsamifera* (Sambong) leaf extract against the bacteria *Klebsiella pneumoniae*.

METHODS

To test the inhibiting ability of the Sambong leaf extract against the desired bacteria, first, we had to gather the leaf extract. We used the Ethanol extraction method and Rotary Evaporation method to obtain the crude leaf extract. Different concentrations of the extract (100%, 75%, 50%, and 25%) were tested against the bacteria *K. pneumoniae* using the Agar-well Diffusion method. Three trials were conducted, and the bacteria were also tested against two positive controls which are Tetracycline and Ciprofloxacin. The data was collected by measuring the zone of inhibition by millimeters and the average diameter of the clearing zones was calculated using the antimicrobial index formula. For the statistical analysis, One-Way ANOVA was used. Phytochemical analyses for alkaloids, flavonoids, carbohydrates, tannins, cardiac glycosides, and terpenoids were conducted.

RESULTS

The concentration with 50% Sambong leaves extract had the highest average with 0.9 AI, and the sample with 25% leaves extract had the lowest average with only 0.3 AI. There were no patterns that can be found from the results since it increased or decreased randomly. There are two positive controls, ciprofloxacin and tetracycline. Both showed significantly higher result from the samples with the Sambong leaf extract.

DISCUSSIONS

The results show that the Sambong leaf extract has a positive result in inhibiting the bacteria *Klebsiella pneumoniae*. It can be used as a simple alternative for treating UTI or other infections caused by bacteria. Despite the effectiveness of the said plant, it is not enough to surpass the effectivity of the positive control which is already used commercially as a treatment for infections caused by the bacteria.

KEYWORDS: RACE, Research, Life Science

SUBMISSION ID: R04A-CAVITP-1029

The Lived Experiences of Nurses Handling Patients with Cardiovascular Disease Experiencing Bedsore in Selected Hospitals in Trece Martires City

Cecilia May Arceña, Trece Martires City Senior High School

Abstract

INTRODUCTION

Bedsore or decubitus ulcer is a skin wound as a result of pressure in combination with shear. Bedridden patients are mostly affected by this due to the fact that they are unable to change positions in bed. Because of this, the treatments are handled by the nurses in charge. The purpose of this study was to find out the experiences of nurses handling patients experiencing bedsores and their ways to cope.

METHODS

The phenomenological research study was performed by conducting an interview protocol with 10-questions. The interview with three nurses with a history of caring for patients experiencing bedsores was done through referral or snowball sampling. The researchers then transcribed the conducted interview, interpreted, and encoded the data using Thematic Analysis by Braun and Clarke (2006).

RESULTS

The results from the interview revealed that nursing the patients experiencing bedsore contributed to experiencing either the feeling of exhaustion or emotional distress. One of them stated that they felt self-pity. On the contrary, one expressed that it had no effect at all. The study also showed several ways the nurses do to cope up with these experiences: through developing work dedication and by enhancing one's spiritual aspect.

DISCUSSIONS

The study expressed the different experiences of nurses while handling patients with bedsores. It also exhibited how these nurses look towards their inner-self, like work dedication and spirituality when coping with these experiences.

KEYWORDS: bedsore, nursing, bedridden patients

SUBMISSION ID: R04A-CAVITP-0621

MENTAL HEALTH

**Adolescent Mental Health: An Empirical Inquiry among BNHS-SHS
Students on their Cognizance, Self-Assessment, and Insights**

Aida Lou F. Suganob

Abstract

INTRODUCTION

Adolescents today are exposed to a lot of stress-related circumstances. They air their sentiments on social media, but even the high-tech outlet could not ease their burdens, stress, and depression. Mental health is one of the most current issues being tackled by many health experts and school administrators (Lawrence, et. al., 2015). Recently, a male adolescent hanged himself at the traffic lights, and yet another girl teen hanged herself on a tree. Social media captured depressing posts and messages from teen victims of cyber-bullying and scandals. How mentally fit are our adolescents today?

METHODS

This research paper is a descriptive research paper that implores on survey questionnaires and empirical essays in obtaining data and information from the 83 respondents composing of 38 males and 45 females among Senior High School students of Bacongco National High School.

RESULTS

The result from the Cognizance part of the survey questionnaire showed that 50% among the male-respondents of grade 11 strongly agree that they are familiar with mental health while 33% of the female-respondents responded averagely. Moreover, 29% of the males among grade 12 students responded moderate and 33% among female grade 12 respondents responded strongly. A frequency of 65% responded strongly that mental health problems can also happen to adolescents and can affect one's outlook in life. In the Self-Assessment part, 39% of the male-respondents strongly responded that they are experiencing stress while 33% among girls moderately responded. Moreover, 26% of the male feels weak and vulnerable, while 60% of the females are feeling such. Alarmingly, 3 males out of 38 have a strong tendency for suicide, while 5 out of 45 have the same leaning. Around 55% thinks they are experiencing mental health problems. Insights of the student-respondents showed that 84% felt the need for a mental health program in the school. Moreover, 78% agreed that positive family support and ties can resolve mental health issues.

DISCUSSIONS

Mental health is a timely issue in the advent of the 21st century. It is not just an adult concern, but it affects adolescents too. In their empiric essays, respondents shared that mental health is a new concept to them though they are aware that it is often heard in the news. Furthermore, the majority think that they are experiencing mental health problems and that they are depressed. Thus, mental health problems are evident among adolescents, especially among Senior High School students.

KEYWORDS: mental health, adolescents

SUBMISSION ID: R012-KORONA-0001

Dr. Phobos: An Android Application that Helps in Lessening the Impact of Animal Phobias

Nicole A. Ayson & Naphthaniel Mejika Marie P. Nazareno

Abstract

INTRODUCTION

Phobias are mostly developed during childhood since it is the stage of curiosity and discovery, usually ranging from 8 to 12 years old. According to Fredric Neuman, the Director of the Anxiety and Phobia Treatment Center, affected individuals are not so much afraid of particular circumstances as they are afraid of their own feelings. Systematic desensitization is basically a form of cognitive behavior therapy. It is a technique that has been proven effective in treating certain cases of phobias, more in terms of dealing with panic attacks. This research study aimed to create an android application that could help lessen the impact of animal phobia to affected individuals. The application contains various pictures, animations, and videos.

METHODS

The application was programmed and made online using MIT App Inventor 2. The application contains the eleven most common animal phobias. To know the respondents of the study, a pre-survey was conducted. The application was created to test 64 respondents with a specific animal phobia. The survey was conducted to determine whether the application showed effectiveness or not. Results were analyzed using the z- test. It was used to determine the difference of intensity of fear in the pre and post-survey among the Grade 8 students with animal phobias.

RESULTS

The results of the statistics revealed that 97% of the Grade 8 junior high school students with specific animal phobia found the application useful or informative. It was also revealed that 3 respondents were able to watch and finish Level 1 (Pictures) of the video. There were 13 respondents who were able to watch and finish Level 2 (Animation) of the Video. 48 respondents were also revealed that they were able to watch and finish Level 3 (Realistic Video) of the Video. The z-computed value (19.79601) was greater than the Z-critical value (1.644854).

DISCUSSIONS

Results of z-test revealed that there was a significant difference between the intensity of fear in the pre and post-survey among the Grade 8 students with animal phobias. Based on the results, the z-computed value (19.79601) was greater than the Z-critical value (1.644854). Since there was a significant difference between the intensity of fear in the pre and post-survey among the Grade 8 students with animal phobias, it means that the android application really helps in lessening the impact of animal phobias.

KEYWORDS: animal phobia, MIT App Inventor, cognitive behavioral therapy, programming, application, systematic desensitization, psychotherapy, phobias, anxiety, zoophobia

SUBMISSION ID: R04A-CAVITP-0947

Evidence for Action: The Mental Health Status of Senior High School Students

Ladelle Kaye Gunio & Zynarik Tabelisma
(Adviser: Michelle Dulay)

Abstract

INTRODUCTION

The mental health of students is very important for efficient learning and proper development of personality. According to WHO (2014), numerous mental health disorders first develop in late youth and early puberty and may proceed into adulthood. The inability to perceive and address mental health issues in adolescents is a genuine public health issue with vital outcomes on the accomplishment of essential improvement objectives in private and public institutions. Thus, the study was conducted to determine the mental health status of senior high school students.

METHODS

The convergent parallel mixed design has been used in this study. For this purpose, an evaluation of the mental health status in terms of emotional, social, psychological health among adolescents was trailed using the Mental Health Continuum Survey (Keyes, 2002), and the factors that influence mental health was observed using a students' mental health assessment questionnaire. A total of 140 senior high school students were randomly selected to participate in this study. 80 senior high school students from a private school and 60 senior high school students from a public school in Cavite were utilized to address the objective of this study.

RESULTS

The mental health status of senior high school students emotionally is moderate for the students from the private institution and flourishing for those in the public institution; socially, students from both private and public institutions are moderate; and psychologically, is moderate for the students from the private institution and flourishing for those in the public institution. The prominent factors that influence the mental health of individuals are the following: studies, family, social relationships, and self-esteem. The most influential factor among these is studies. In private schools, females (mean = 3.37) have a slightly lower mental health status than males (mean = 2.90). The mental health status of senior high school students does not differ statistically by strand and GPA.

DISCUSSIONS

The results convey that senior high school students in private and public institutions are exposed to different factors that fuse the way in which people feel about themselves, the nature of their associations, their ability to administer feelings and oversee difficulties, and how much significance and bliss they get from life. With the given results, institutions may incorporate and developmental health policies and programs in schools.

KEYWORDS: mental health, emotional wellness, social wellness, psychological wellness

SUBMISSION ID: R04A-CAVITP-1695

KASAN-GAMO Project: Pushing Limits to Mental Health Awareness among Teachers, an Evaluation

Yvonne Nuestro, Teacher I

Abstract

INTRODUCTION

Suicide, depression, anxiety, stress, lack of motivation, and feeling of dissatisfaction are some of the issues teachers are facing these days. Thus, the need for mental health awareness among teachers arises and is necessary. This paper will give you a hint on how this awareness can be uplifted in schools to promote work-life balance both for teaching and non-teaching staffs through "Kalusugan Sandigan ng Galing Mo (KASAN-GAMO) Project." In this study, its activities, implementation, and effectiveness were evaluated and will provide the readers with an outlook on how to elucidate the current concerns of teachers.

METHODS

Descriptive survey method was used by means of the CIPP model approach. Questionnaires were distributed among employees of Kaytitinga NHS, Alfonso, Cavite. Thirty-five respondents among forty-five staffs were surveyed through purposive sampling and responded to five-set areas. Both descriptive and inferential statistical analyses were employed in analyzing the data collected.

RESULTS

The study found out that the preferences/opinion of teachers about KASAN-GAMO Project varies with their age bracket, gender, and length of their services. Thus, study shows that most of the respondents greatly agreed in the implementation of the program in terms of its objectives, program, activities, venue, time and schedule. However, further adjustments are suggested in terms of the attendance of the participants and the schedule as it has been the challenging part of the program.

Activities of the program were divided into four areas: 1) Physical Fitness: Zumba/ Dancercise and Playing Sports/Games 2) Mental Wellness: Yoga, Laughter, Funny Videos, and Film Viewing 3) Spiritual Mindfulness: Sharing and Praying 4) Social Cohesiveness: Eating Fellowship, Cooking/Baking, and Travel Galore. Respondents chose Spiritual Mindfulness as their most preferred while Mental Wellness as the least. Nevertheless, the project's effectiveness and impact are greatly seen in the respondents' physical and mental aspect of improving their work-life balance.

DISCUSSIONS

Results revealed that KASAN-GAMO Project is an effective tool in pushing limits to have mental awareness among employees. It caters their needs and secures their health through different activities. There are still limitations in the project in terms of schedules and attendance, however. For more meaningful and engaging activity, review and revisions are suggested for further studies. As seen as beneficial and purposeful, its objective is worth sharing to others.

KEYWORDS: mental health, work-life balance

SUBMISSION ID: R04A-CAVITP-0149

Prevalence and Associated Factors of Mental Health Conditions among Senior High School Students of Dasmarinas Integrated High School

Alorma Macatanga, Philippine Guidance Counselling Association

Abstract

INTRODUCTION

In the advent of the K-12 program in the Philippines, it would be timely to consider the mental health of senior high school students. The transition from being junior high school to being senior high school entails a range of stressors and other challenges. As cited in Aldiabat, Matani, and Le Navenec (2014), given the global prevalence and burden of mental illness, it is likely there would be a significant number of students with emotional problems (Storrie, Ahern, and Tukett, 2010). These young individuals are burdened with the fact that they have to handle adult-like responsibilities with inadequate skills and intellectual maturity as they develop from adolescence to adulthood.

METHODS

This study utilized a quantitative descriptive-correlational method. The 238 participants were picked through stratified random sampling from the approximately 1,690 total population of senior high school students in Dasmariñas Integrated High School-SHS (as of August 2018). The assessment tools utilized in this study include the survey questionnaire for a socio-demographic profile, the Interpersonal Support Evaluation List-12 (ISEL-12) for the perceived social support level, and the Self Report Questionnaire-20 (SRQ-20) for the prevalence of mental health conditions among senior high school students. The data were analyzed with the use of Chi-square.

RESULTS

The prevalence of mental health conditions among senior high school students of Dasmariñas Integrated High School was 50.84% (n=238). Among the socio-demographic characteristics, only the gender ($X^2=5.57$, $p<.05$) has a significant relationship with the prevalence of mental health conditions. Likewise, there is a significant relationship between the level of perceived social support and the prevalence of mental health conditions ($X^2=11.77$, $p<.05$). In terms of the sub-scales of the perceived social support, appraisal ($X^2=12.132$, $p<.01$) and tangible ($X^2=7.127$, $p<.05$) sub-scales had a significant relationship with the prevalence of mental health conditions.

DISCUSSIONS

Mental health conditions were prevalent among senior high school students of Dasmariñas Integrated High School. The associated factors that showed a significant relationship with the prevalence of mental health conditions are gender and perceived social support, particularly appraisal (advice or guidance), and tangible (help or assistance, such as material or financial aid) social support. The mental health of an individual can be improved by improving the interpersonal social support system.

KEYWORDS: mental health, perceived social support

SUBMISSION ID: R04A-DASMAR-0036

Spirituality, Job Satisfaction, and Job Performance among Teachers of Children with Special Needs

Shem Verlee Cabotaj, Principal

Abstract

INTRODUCTION

Education in the Philippines is challenged by the complexities of the teaching and learning process. Both General and Special Education face adversaries that make their everyday task as teachers for children with special needs (CSN) challenging. However, very little is said about how spirituality affects the challenging role and stressful task of GenEd and SpEd teachers who are handling CSN. Hence, this study aimed at finding out the influence, if any, of spirituality to job satisfaction and job performance of teachers of children with special needs (CSN). It explored the spirituality of Special Education and General Education teachers who handle CSN. It also examined its influence on their job satisfaction and job performance.

METHODS

The spiritual profile, job satisfaction level, and job performance level of 44 teachers for CSN were obtained. Job satisfaction level was obtained through the use of an adapted questionnaire while a researcher-made questionnaire was used to measure their levels job performance level which was answered by their School Head. The job performance of SpEd and GenEd teachers and how they are affected by spirituality were looked at. Their job satisfaction and spirituality were related in terms of job design/role clarity, administrative support, collegial support, student factor, work conditions, teacher training, and salary incentives. Focus group discussion was conducted to find out the influence of spirituality on their job satisfaction and job performance.

RESULTS

Based on the findings, it can be concluded that spirituality is the core and foundation of the participants' being the teachers for CSN. Their concerns and issues about the performance of their job arose during the FGD did not reflect in the questionnaires that they answered. This can be attributed to their belief to be nice and courteous because it may affect the integrity of the institution where they belong. Interestingly, it was revealed from this study that the participants' spirituality influences their job satisfaction and job performance. They work, stay, and look forward to performing their job every day amidst all challenges it brings because of their deep faith and trust to a higher being. They consider Him as the guiding force that supports and teach them the what, why and how of their job.

DISCUSSIONS

This study helps in filling in the gap in the literature of spirituality and its influence on job satisfaction and performance. Importantly, the result of this study may be of help for teachers of CSN, parents of CSN, administrators, curriculum writers, other professionals, and the CSN. Knowing that spirituality greatly impacts teachers for CSN's job satisfaction and performance, administrators and curriculum writers can proactively design training and activities that would somehow cultivate spirituality and all that it entails.

KEYWORDS: Spirituality, job satisfaction, job performance, children with special needs, special education teachers

SUBMISSION ID: R04A-RIZALP-0046

Stress Encountered by Senior High School Students of Paharang National High School of School Year 2018-2019

Anna Marie A. Umali, Jasmin A. Gonzales, Rancel Joyce A. Ramirez, Rigel Chelsea L. Tagon, & Rosalinda M. Cueto, Paharang Integrated School

(Adviser: Julerita Babao)

Abstract

INTRODUCTION

People are beset with problems and uncertainties. Students are less likely to perform because of these problems. It affects how the students think, feel, and live daily. The stress of students is a life stage on how they will react and handle their problems. This affects their study causing them to be distracted and having a lot of trouble organizing their time. With this, the researchers were urged to conduct this study to identify the different stressors and the ways of coping stress among senior high school students at Paharang National High School.

METHODS

Descriptive research design with a quantitative approach was used to determine the stress encountered by the students of Paharang National High School. The respondents of the study were grade eleven and twelve students who responded to the standardized survey questionnaire. The data were analyzed and interpreted using statistical tools, such as Frequency, Weighted Mean, Composite Mean, Independent t-test, and One-way Analysis of Variance.

RESULTS

The findings show that not all the students experience the same manifestations of stress in their body in terms of physical aspect. This shows that the manifestation of stress depends on how people deal with it. The findings show that the behavioral aspect of students doesn't have the same experiences. The findings show that in terms of the emotional aspect of the students, they have different but at the same time, they have common experiences.

DISCUSSIONS

Stress mostly affects students in negative ways. Based on the findings of the study, due to continuous experiences of stress in terms of the physical aspect, headache is the manifestation of stress mostly encountered by the students. In the behavioral aspect, students are not caring about their physical appearance or simply they become haggard because of stress. And lastly, in terms of the emotional aspect, being moody is the manifestation they mostly encountered. When grouped according to their profile, there are no significant differences between the sex of the students and all the variables while behavioral and emotional both do not have a significant difference between the ages of the students. However, there is no significant difference between the strand of the student and the behavioral variable only.

KEYWORDS: Stress, Senior High School students, stressors

SUBMISSION ID: R04A-BATANC-0060/R04A-BATANC-0525

MUSIC

Tunog Para Sa Kinabukasan: An Advocacy for 21st Century Musicians

Glory Perez, Department of Education - Tanauan City

Abstract

INTRODUCTION

Cale Elementary School envisioned to provide quality education and to develop holistically the potentials of the learners in all aspects. To realize its goal, the school organized the Drum and Lyre Miniband on July 2017. It ambitioned to showcase the talents of the learners, develop socialization among members, strengthen partnership with other stakeholders and grow 21st century musicians. However, not all talented learners afford to join the band due to financial constraint. This conflict opened doors for Tunog Para Sa Kinabukasan. It is an invitational seminar-workshop, and an advocacy-campaign to benefit indigent but musically talented pupils. The school scouted the two beneficiaries of the musical instruments, marimba and cymbals.

METHODS

The school tapped the help of Junior Chamber International (JCI) Tanauan Laubini, a civic organization, to support the campaign. The JCI Tanauan Laubini worked collaboratively with Cale Elementary School and gave financial assistance to acquire the materials needed for the activity. It was December 16, 2017 when Tunog Para Sa Kinabukasan conducted at Cale ES. Participating bands were from Suplang Elementary School, Suplang Tanauan City, Canossa School from Sta. Rosa City, St. Mary Magdalene College of Laguna and La Mesa Elementary School from Calamba City and of course Cale Elementary School. A total of six hundred eighty (680) attendees were registered.

RESULTS

The audience loved the exhibition of the bands. Loud hooray and clapping of hands were heard from the activity area. At the end of the day, the school raised twenty-two thousand three hundred thirty (Php 22,330.00) pesos from the registration of the attendees. The musical instruments, marimba and cymbals were purchased and awarded to the two pupil beneficiaries.

DISCUSSIONS

To sustain the advocacy of the school and the successful conduct of the Tunog Para Sa Kinabukasan motivated the organizers to have it once again next school year. It also inspired other learners to join the band. It developed the skills not only in academic but also skills needed in the adult life such as time management, decision making and socialization. It even helped the learners to divert the attention from playing e-games to musical instruments which is more healthy and helpful.

KEYWORDS: advocacy campaign, potential learners, 21st century musicians

SUBMISSION ID: R04A-TANAUA-0026

**A Qualitative Study on the Impact of Popular Music on the Everyday Lives
of the Grade Eight Learners of Integrated School of Lawa**

Glenn Asuncion, Integrated School of Lawa

Abstract

INTRODUCTION

My research explored the impact popular music has on the everyday lives of the grade eight learners of the Integrated School of Lawa with regards to consumption, identity, and behavioral formation. In an age of technological advances (such as YouTube and iPod devices), popular music consumption had become widely accessible on a variety of platforms. Consequently, my research questions focused on whether young people were shaped by the music they listened to considering the inappropriateness of the lyrics of popular music in their reference to drugs, sex, violence, alcohol, and death. In the evolving decentralized society in which we live, popular music is seen to be an influential socializing agent within young people's lives.

METHODS

The design used in this qualitative study is phenomenological and made use of correlational non-experimental to analyze the impact of popular music in the everyday lives of Grade Eight students of the Integrated School of Lawa. The study was comprised of eighty participants out of the 130 Grade Eight learners enrolled in the school year 2017-2018. All in all, twenty learners from four existing sections participated in the study. The learners were interviewed by the researcher to come up with validated results. Documents and records from the Guidance Office were also utilized.

RESULTS

The data gathered revealed that the participants favored songs reflecting their feelings. The learners might not understand the lyrics, but they recognize enough to get the gist of the song's message. Furthermore, it was also revealed that the participants who have risk-taking behaviors preferred songs or music referring to depression, death, violence, sex, and drugs. Participants with records at the Guidance Office revealed that they usually listen to the kinds of songs and music mentioned above.

DISCUSSIONS

The results demonstrated the need for intensive parental guidance; wherein, parents should be familiar with the kinds of music their children listen to. Doing so will give a hint to the parents on the emotional problems their children are going through.

KEYWORDS: popular music, lyrics, song, risk-taking behaviors

SUBMISSION ID: R04A-CALAMB-0065

**Analysis on the Effects of Classical Music on Productivity and Behavior of
the Grade Six Pupils in Hulo Elementary School**

Harold Paz, Hulo Elementary School

Abstract

INTRODUCTION

One of the specific strategies now commonly used to supplement and enhance student learning is the use of background music. Research indicates that music plays an important role in culture and is a strong influence on today's youth.

METHODS

The data was obtained from the pre-test and post-test results accomplished by the respondents. The respondents were requested to answer the pre-test containing different learning skills that they have tackled during the implementation of the project.

RESULTS

The use of classical music is useful in the productivity of the grade six pupils and that the proper use of classical music has a great effect on the pupils' productivity and behavior.

DISCUSSIONS

Establishment of another remediation program using music in other areas is recommended for implementation and for the benefit of the other pupils

KEYWORDS: Music, productivity, result, assessment, innovation

SUBMISSION ID: R04A-RIZALP-0073

Effectiveness of Project Musikalinga V.2.0 on the Academic Performance in MAPEH of Grade VI Learners

Maria Aisa Sebastian, Department of Education - Rizal

Abstract

INTRODUCTION

The study aimed to determine the effectiveness of Project MusiKalinga V.2.0 on the academic performance of grade 6 Aries pupils of Looc Elementary School. Grade 6 pupils served as respondents under section Aries. The study used the descriptive and experimental method using a single group design. The results of the test given after the experimental stage were compared to pretests given to measure and describe the level of academic performance in MAPEH. A teacher-made test was the primary instrument to test the effectiveness of project MusiKalinga V.2.0. The academic performance of the respondents was significantly higher after exposure to the intervention program, which resulted in high performance on their formative and summative assessments. Findings implied that the intervention program is effective in improving the academic performance in MAPEH.

METHODS

The researcher discussed with grade six teachers the purpose of this study and asked for their assistance and cooperation in helping make the study possible. Classical music played in the morning while the pupils were entering the classroom, while they work independently and in small groups. Formative assessment test results were recorded every day to determine the results and to avoid discrepancies on the results per se. In order to establish the profile of the respondents in terms of types of music, they listen to, frequency percentage and rank distribution were used. To determine the level of academic performance with respect to rhythmic patterns, reading notes and major and minor keys before and after exposure to the intervention program, mean and standard deviation was applied. To determine the significant difference in the level of performance of the respondents after the intervention program, dependent T-Test was utilized.

RESULTS

The performance level of the respondents differs significantly in the pretest and posttest. With the mean gains in the posttest, it further implies that exposure to Project MusiKalinga V.2.0 enhanced the performance level of the respondents.

DISCUSSIONS

This study made use of the descriptive survey method of research to attain its main purpose. It is directed to whether or not the particular program achieved its goal or not. It is added that this method has an element of values judgment in terms of effectiveness. Descriptive survey method is appropriate for the study since the aim is to determine the effect of background music in the motivation, behavior, and performance of pupils.

KEYWORDS: intervention, music performance, Music, pre-test/posttest, background music, Musikalinga

SUBMISSION ID: R04A-RIZALP-0434

Improving Parents' Involvement in Dacanlao G. Agoncillo Elementary School

Minerva Salva, Department of Education

Abstract

INTRODUCTION

Parental involvement refers to the amount of participation of parents in different programs and activities. In our school, most the parents of above average pupils come regularly. Oftentimes, those parents whose children considered as below average do not participate in different programs and activities in this school. For this reason, the researcher assessed the level of parental involvement in Dacanlao Gregorio Agoncillo Elementary School. The researcher also attempted to find out the problems encountered by the teachers in engaging the parents of their pupils in school activities. The findings of this study will be the basis in designing interventions to improve the level of participation of parents leading to the success of the various programs and activities of the school.

METHODS

The researcher used the quantitative and qualitative survey method of research. The rationale on the use of these methods laid on the fact that the study was focused on the improvement of parents' involvement and the interventions done by the researcher to address the problem. It was followed by the Input-Process-Output Model.

RESULTS

It was found out that after giving the interventions, innovations, and strategies, the respondents are now finding a higher level of participation of parents. When comparing before versus after having the intervention, data showed significant improvement on the common problems as the composite mean went down from 3.44 to 2.40 which showed that parents' participation in different programs and activities improved. The strategies cited in the embedded action plan for "Project SIPAG Pa" (Sustaining and Increasing Parents' Attendance in Gulayan sa Paaralan) and "Project GABAY" (Guardian Assisting Beneath Archetypal Youth) were implemented by the respondents.

DISCUSSIONS

Based on the above results, the factors affecting parents' involvement in school activities before and after doing the interventions were identified. The following conclusions were noted:

"The top 3 common problems encountered by the teachers in improving parents' involvement in DGAES before the interventions were the negative attitude of parents, economic statuses and educational attainment of parents.

"Communicating is the most beneficial intervention done by the researcher.

"Implementation of Project GABAY Project SIPAG PA also helped the teachers in resolving the problem, and at the same time, the struggling readers were benefited.

KEYWORDS: involvement, intervention, innovation, improvement, embedded

SUBMISSION ID: R04A-BATANP-2071

Performance of Grade Seven Students in Music Education

Isidro Bobier, Department of Education

Abstract

INTRODUCTION

This study determined the performance of grade seven students in Music Education at Dinapa National High School Castilla, Sorsogon, for the school year 2015-2016. This served as the basis in the development of strategic intervention materials to enhance teaching music in the said school. The subjects of the study were 5 MAPEH teachers in Dinapa National High School and 75 grade seven students of the same school as the respondents.

METHODS

The descriptive method of research was used in this study. The questionnaire-checklist was employed to gather the needed data on the perceptions of teachers and students for the factors affecting the teaching and learning of music. In addition, the data were tabulated, analyzed, and interpreted with the use of appropriate statistical measures. Findings revealed that the teaching of Music in the MAPEH subject for secondary schools in need of strategic intervention materials to be the basis of MAPEH teachers in their teaching of music. There were factors that affect the teaching of Music in MAPEH, such as the factors on the availability of musical instruments, knowledge of musical elements, and designing localized musical instruments.

RESULTS

It was found out that the performance level of grade seven students in Music along song analysis was 49.09 described as not mastered. On the other hand, their mean score in the improvisation of musical instrument was 2.50 described as approaching proficiency. It was reflected that 53 or 71% of the students perceived that the availability of musical instruments affected the teaching and learning Music, while 5 or 33% of the teachers perceived the same. On the other hand, the remaining percentage of both groups of respondents said that it did not affect the teaching and learning of Music.

DISCUSSIONS

On the knowledge of musical elements, 60 or 80% of the students and 10 or 67% of the teachers perceived that it affected the teaching and learning of Music. On the other hand, the remaining percentage of both groups of respondents said that it did not affect both the teaching and learning process. Moreover, 52 or 69% of the students and 10 or 67% of the teachers perceived that designing localized musical instruments affected their teaching and learning of Music. A strategic intervention material was developed based on the results of the study to enhance the teaching of Music in secondary schools.

KEYWORDS: music education, localized musical instruments, strategic intervention in music

SUBMISSION ID: R005-SORSOP-0025

**Role-Playing Techniques in Teaching Music of the 20th Century among
Grade 10 Students of Balayan National High School**

Alma Castillo, Department of Education - Balayan

Abstract

INTRODUCTION

Music education is a field of study associated with the teaching and learning of music. It touches all learning domains.

The goal of this paper was to explore the usefulness of role-playing teaching as a successful pedagogical approach for this stream of education. It also provides a reviewer of the brief literature related to common pedagogical strategies that have adopted in the construction program, and how role-playing can either be implemented in addition.

This study may have important implications for enhancing student's appreciation in studying the music of the 20th century and improving their literary competence through the use of role-playing.

METHODS

Descriptive research was used to describe systematically facts and characteristics of a given population as an area of interest, factually and accurately. A researcher-made questionnaire was also used as the main tool for data gathering. The questionnaire was used to student- respondents in order to determine and assess the status of Grade 10 students in perceiving the use of role-playing in teaching Music. After answering the needed data, the researcher retrieved it personally. It tallied, tabulated, analyzed, and interpreted the responses. Tables were used also for a clearer presentation of data. It was measured by means of the enumerated statistical tool.

RESULTS

The distinct features of role-play approach as used in teaching music of the 20th century was interactional, stimulate imagination, relevant to the real situation, challenging activity, interesting and fun. Role play approach could be applied in teaching music of the 20th century in lessons about electronic, chance, historical background, instrument use and composer of the 20th century. Majority of the students in grade 10 got average performance in role play approach in teaching music of the 20th century.

DISCUSSIONS

The study was to explore role-playing as a technique in teaching music of the 20th century among grade ten. The result will be beneficial to students, teachers, and guidance counselors. Teachers can use debate, games, videos, group exercise, and interviews in teaching music of the 20th century to enhance motivation and performance.

KEYWORDS: role-playing, 20th century, techniques

SUBMISSION ID: R04A-BATANP-2303

Techniques and Strategies in Teaching Music in the Public Junior High Schools in the Division of Tanauan City: Basis for the Enhancement Training Program

Fred Barrera, Public School Teacher

Abstract

INTRODUCTION

The Filipinos are gifted with a strong sense of musicality and they turn to music to express their innermost feelings. Hence, every song they sing, every instrument they play, every music they make is a direct, almost spontaneous reflection of their hopes and longings, frustrations and fulfillment, failures and triumphs. Music education is a field of study associated with teaching and learning music. But more than merely teaching notes and rhythms, music education seeks to develop the whole person in the affective domain through music appreciation and creativity.

METHODS

The researcher made use of the scientific descriptive method since it attempted to find out the techniques and strategies being employed in the study of a given population at the present time.

RESULTS

Music teachers mostly were young, new in the field, and graduated BSE (non-music major); administrators and music teachers teaching strategy influenced by computer, lesson planning, and student's records; respondents used computer overhead projector, cd player, textbooks and reference, books in teaching music; a significant difference between music teachers and school heads in terms of techniques and strategies in music instruction; needs for enhancement training programs such are training in choir singing and playing of instruments.

DISCUSSIONS

Non- music teachers require to enroll in short Music courses such are Solfeggio, Choir Singing and playing basic instruments; respondents need more of refresher courses in Music and should be exposed to relevant seminars, training, and workshops in all levels.

KEYWORDS: music appreciation, community enhancement, creative partnership

SUBMISSION ID: R04A-BATANP-1300

OPEN EDUCATION RESOURCES

"21st Century Tool On Students' Behavioral Management through Classdojo"

Ma. Cecilia Panaligan

Abstract

INTRODUCTION

According to some authors, "the purpose of implementing classroom management strategies is to enhance pro-social behavior and increase student academic engagement" (Emmer & Sabornie, 2015; Everston & Weinstein, 2006). Unfortunately, teachers continue to encounter many problems in making their students behave well during class hours regardless of their age and grade level. This leads to having learning challenges such as disorganized classes, poor quality of output, lack of cooperation among their peers or group, and the supposed instructional time becomes limited. The researcher also considers the ClassDojo as an open educational resource or app that can help the teachers to motivate the Grade 9 students to participate and improve their values, skills, and performance in school.

METHODS

The researcher used the Quantitative Method. This design provided the answers to the concerning situation regarding the improvement and effectiveness of ClassDojo. Lastly, the research defined the purpose of the study with the process of gathering, analyzing, classifying and tabulating data about prevailing conditions, practices, beliefs, and processes.

RESULTS

Based on the findings, the initial implication was for the teachers who would like to think of other tools in evaluating the students' behavior, which may lead to a new way of managing the class. In general, ClassDojo is similar to the traditional way of giving positive feedback to the students; however, it becomes more interesting because of its features and mode of communicating your message to the students, which is the technology. Hence, "as such, one might argue that it is not the technology itself that improves student achievement, but the craft of classroom teachers using all tools necessary to students' learning."

DISCUSSIONS

Another suggestion of this study has something to do with giving positive feedback instead of negative thoughts in managing the class or rather the misbehave class. Likewise, in the operant conditioning of B.F Skinner (1938) "a reinforcement (whether positive or negative) could influence how individuals act in the future." Same with the use of ClassDojo. It was designed as a classroom management tool designed to reinforce students' behaviors in order to get them to repeat behaviors that earn positive reinforcements and refrain from ones that earn negative reinforcements.

KEYWORDS: behavioral management, digital, positive reinforcement, open educational resource, operant conditioning, classroom management

SUBMISSION ID: R04A-CALAMB-0233

Competency-Based Modules in Physical Sciences for Hearing-Impaired (HI) Students

Gerald Martos, Cainta Senior High School

Abstract

INTRODUCTION

The UNESCO World Conference on Special Needs Education supports the mainstream education system for all learners. The said discussion espoused the Salamanca statement on practices, policies, and principles in special education, which proclaims that every learner has distinctive abilities, interests, characteristics, and learning needs. Many studies support the premise that the use of the learning module increases students' academic achievement. However, not all learning modules are designed to specifically suit the need of every student. There are groups with special needs like hearing impairment. Thus, it can be said that currently available modules may not be suited to the needs of special students. The effort that should be exerted to develop instructional materials carefully designed for them.

METHODS

The key purpose of this study was to design, validate, and evaluate competency-based modules in Physical Sciences for hearing-impaired (HI) students. Utilizing a descriptive-developmental design, this study employed the ADDIE (Analysis, Design, Develop, Implement, and Evaluate) model for module development to come up with the defined learning modules in Physical Sciences. A pretest-posttest design was also used to determine if there is an improvement in the performance of HI students after their exposure to the modules.

RESULTS

The competency-based modules were composed of several features including pre-assessment tools, objectives, subject matter, activities, post-assessment tools, rubrics, the definition of terms, and other characteristics specifically designed to suit the needs of HI students. The modules, as content-validated by a pool of experts, were suited to the science curriculum requirement of HI students based on the determined high content validity index. Results revealed that modules have great potential to improve students' conceptual understanding in Physical Sciences.

DISCUSSIONS

This study offers to resolve inadequacies in Science instructional materials for HI students at the SHS level. It can be recommended that the usability of the modules for another special group of students may be explored and studied. School heads and administrators may promote and fund the development of learning modules for use in their respective institutions. Considering millennials as gadget savvy, future researchers may also work on developing learning modules designed as a mobile application to increase the handiness of the modules.

KEYWORDS: modules, hearing impaired students, physical sciences, inclusive education, special education, open education resources

SUBMISSION ID: R04A-RIZALP-0433

Exposure of Reading Programs: A Tool in Enhancing Reading Ability of Grade 4 to 6 Pupils of Bucal II Elementary School

Annabelle C. Angue & Marita A. Caparas, Bucal II Elementary School
(Adviser: Marita M. Gonzales)

Abstract

INTRODUCTION

The ability to read is one of the most significant requirements for academic success. A limited reading ability hampers a person throughout life and thus contributes to great disadvantage in vocational, family, and other life goal pursuits. The goal of the basic education curriculum is to improve the reading ability of the pupils through different reading programs; hence, several public elementary schools have conducted different studies to determine the causes of low reading ability of pupils.

METHODS

This study utilizes a quantitative type of research because of its appropriateness to the study. Quantitative methods emphasize objective measurements and the statistical, mathematical, or numerical analysis of data collected through questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques. Part of this research is that the researchers will be gathering quantitative data from the selected respondents, which then shall be analyzed carefully to fully understand the problem of the research. Under the quantitative type of research, the researchers specifically used the descriptive research design since it aims to describe the exposure to reading programs a tool in enhancing intermediate pupils reading ability as perceived by the selected grade 4 to 6 pupils in Buccal II Elementary School.

RESULTS

In this study, it expresses the effects of reading programs in the reading ability of the students. It clearly stated that reading programs help students in different ways. The researchers gained factual information on how reading programs contribute to the reading ability of the students. The study shows that the reading program is effective in enhancing Grade 4-6 pupils reading ability.

DISCUSSIONS

Based on the result, the study identifies that Exposure to Reading programs is an effective tool for Grade 4-6 pupils on their reading ability. The study shows that Reading Programs can enhance the students' reading ability and it has a lot of advantage in their study like it helps the students to read more effectively. Additionally, more of the respondents showed that they can benefit from reading programs and it shows the relationship between exposure to the reading program and the reading ability of the pupils.

KEYWORDS: READING PROGRAM VERSUS READING ABILITY

SUBMISSION ID: R04A-CAVITP-1446

Level of Utilization of Learning Resource Center in Pililla Elementary School Central

Katleen Pendon, Cris A. Briones, & Shiela Mariz T. Ilocso

Abstract

INTRODUCTION

The importance of the library cannot be undermined. With the appropriation of funds, the development of libraries and its maintenance should be justified by its utilization. There are some factors that may affect the level of utilization of the library and this must be understood so that suitable resolutions may be applied so that it continuously serves its purpose. The researchers aimed to determine the level of utilization of the Learning Resource Center in Pililla Elementary School Central during the School Year 2018-2019, utilizing the 43 randomly selected grade 6 students as the main respondents. They were described according to their sex, age, internet availability at home, number of hours of internet usage, and availability of book at home. The respondents were requested to rate their level of utilization of the LRC as a place for research, as a place to find information, and as a place for school activities.

METHODS

The study employed researcher made questionnaire checklist as its main instrument. The study adopted the descriptive-quantitative research design with the use of a researcher-made questionnaire checklist.

RESULTS

The result revealed that most of the respondents were on their right age being grade 6, most of them are female, have internet connections at and books at home, and using the internet for 1-2 hours. The respondents "fully utilized" LRC as a place for research and a place for school activities while "utilized" as a place to find information. They are encouraged to use LRC since it has proper ventilation, they are allowed to use the computer for encoding, have internet access, the LRC is easily accessible in any point of the school, have different books for all subjects, and it is conducive for learning.

DISCUSSIONS

Most of the respondents use the Internet to getting the information they needed for academic work. Some are discouraged to use the LRC because of limited books to be borrowed and use at home, some books are old and not aligned to K to 12, and a minimal number of learners that can be accommodated. The result simply tells that the respondents fully utilized the LRC primarily because they found it as a quiet place to do research work and it has also easy directions in finding the books they needed for their research. Recommendations were provided and taken consideration for the improvement and utilization of the Learning Resource Center.

KEYWORDS: Learning Resource Center, Level of Utilization, academic work, a place for research, place to find information, a place for school activities

SUBMISSION ID: R04A-RIZALP-0074

Perceptions, Problems, and Practices (3Ps): Voices of Mayuro National High School in Conducting Action Research

Desiree Marasigan, Department of Education - Mayuro National High School

Abstract

INTRODUCTION

According to the policy documents and DepEd memorandums, teachers at all levels are required to engage in action research activities as a part of IPCRF. More specifically, as part of the teaching-learning processes, school teachers are expected to conduct action research practically to support and strengthen the teaching-learning process. The aim of this study was to investigate the perception, problems, and practices of conducting action research in Mayuro National High School.

METHODS

The research method employed in this study was mixed method approaches (QUAN + qual), which is embedded in a concurrent type of mixed method. The questionnaires were adapted with few modifications based on the reading of different literature. 100% of the questionnaires were properly filled and returned. In addition to this, the interview was made to collect the necessary information. Results obtained were analyzed by using descriptive statistics and narratives.

RESULTS

The results of the study revealed that a) the practices of Mayuro National High School teachers in conducting action research were very low, b) the knowledge and skills of teachers in the study area were sufficient but their involvement in undertaking action research was insufficient, c) the major factors that hinder teachers to conduct action research in the study area are lack of time and interest, shortages of training, seminars and workshops regarding research activities, insufficient budget, insufficient reference materials, and library services, and etc.

d) the major factors that enable some teachers to conduct action research were their professional commitment to support their teaching-learning process with research and a requirement in their IPCRF.

DISCUSSIONS

Thus, to alleviate these problems, it was recommended that the school management in cooperation with DepEd should arrange the means of improving the involvements of teachers in conducting action research by allocating adequate budget and providing in-service training's, workshops, seminars, and experience sharing programs with a knowledgeable and expert speaker regarding research. In addition, the researcher strongly suggests creating a website for public school teachers in which they can publish and search related study that can serve as a reference or guide for other similar research.

KEYWORDS: Problems, Practice, Perception and Action Research

SUBMISSION ID: R04A-BATANP-0160

ORGANIZATIONAL MANAGEMENT

The Link between Communication Skills and Personal Success among Professionals

Laquindanum, Perla D., Gov. Felicisimo T. Sanluis Integrated Senior High School

Abstract

INTRODUCTION

"Knowing English is like possessing the fabled Aladdin's lamp". Communication skills are essential for the successful future career of an individual. Vagos and Pereira (2010) continue to defend that individuals with a low sense of worth may have trouble in standing up for themselves because they view others' thoughts, feelings, and rights as more important than their own and therefore a man must know his worth but keep things under his feet.

METHODS

The study utilized descriptive research design and used the perception of the respondents about communication life skill and personal success among professionals. The main source of the data was the survey questionnaire, which is prepared by the researcher and statistically treated by the use of the simple descriptive statistics such as standard deviation, frequency, percentage and the average weighted mean.

RESULTS

The following important findings were summarized as follows: The level of perception of respondents regarding good communication as a life skill in terms of English as a language had an over-all mean value of 4.50 which was interpreted by the respondents as "strongly agree" or "very high. While in terms of fluent English speakers, it has over-all mean value of 3.90 with an interpretation as "agree" or "high". On the other hand, the respondents had frequently practiced their professional life, social life, and work place as well. In terms of professional life, it has a low mean value of 2.36 with a remark of "rarely practiced". Moreover, the level of perception of respondents regarding aspect of personal success in terms of building rapport, decision making, building confidence, assertiveness, facilitation skills, conflict resolution marked by the respondents as "frequently practiced". The profile of the respondents is not significantly related to personal success among professionals in terms of building rapport, decision-making, building confidence, assertiveness, facilitation skills, and conflict resolution. On the other hand, communication life skill is significantly related to personal success in terms of building rapport, decision-making, building confidence, assertiveness, facilitation skills, and conflict resolution.

DISCUSSIONS

In the light of the findings and conclusions of the study, the following recommendations were drawn: 1.) the professionals may develop more their rapport 2.) The school may conduct series of seminars and trainings featuring the development of confidence. 3.) The teachers should be able to practice professionalism in accordance with the Code of Ethics. 4.) The teachers and other professionals as a whole must have knowledge 5.) The teachers and other professionals should be professional enough.

KEYWORDS: Communication Skills, Personal Success, Professionals

SUBMISISON ID: R04A-LAGUNA-0440

Experiences, Challenges and Training Needs of Administrative Assistants: Basis for Professional Enhancement Program

Renetchie B. Martinez, Department of Education Sarangani

Abstract

INTRODUCTION

McGehee and Thayer (1961) believe that training needs come from underdeveloped skills, insufficient knowledge or inappropriate worker attitudes. Mager and Pipe (1979) define training needs as identified differences between the employees' current performance and the performance that the organization expects of them.

METHODS

The study was conducted to develop a professional enhancement program for administrative assistants (ADAS) of Sarangani division based on their experiences and training needs. The participants of the study were the regular permanent administrative assistants who are deployed in the division office. The method used in gathering data was a survey checklist questionnaire about their experiences encountered.

RESULTS

The study found that among the administrative skills, Office Management is the number one need of the participants. For communication skills, it came out that Grammar and Proofreading and Managing Difficult Customers ranked the top need. Managing Stress is also the number one need of the participants in terms of customer skills service. The study also found that ADAS personnel have experienced challenges in the workplace. Based on these findings, we point out that Training Needs Analysis (TNA) practice and research should: (a) be based exclusively on measurable human competences gaps, in multiple possible levels of analysis; (b) not focus only on individual professional roles, but also on internal and external contextual factors that can be important in the future.

DISCUSSIONS

This study suggests that employees should learn how to manage and reduce stress, both short-and-long term, is a big concern to work and to everyday life as well as learning basic first aid education and treatment procedures, as well as ensuring health, safety and welfare of people at work is also a skill aimed to be learned. With all of these in mind, a professional enhancement program was developed to address the training needs.

KEYWORDS: administrative assistants; training needs; professional enhancement

SUBMISSION ID: R012-SARANG-0177

Leadership Roles and Styles of Supreme Pupil Government Officers in Tabaco City Division

Maria Cecilia Borjal, Department of Education - Tabaco City

Abstract

INTRODUCTION

The study sought to assess the extent of the leadership roles of Supreme Pupil Government Officers, the different leadership styles of SPG officers, and the problems encountered by SPG officers in Tabaco. The researcher assumed that there is a certain extent in the performance on the roles of each SPG Officer. She also tested that there is no significant difference in the level of the performance in the roles of every SPG Officer and the different leadership styles. It is also disclosed in this study the problems that are met by the SPG Officers. The researcher proposed a training design to address the problems encountered by these SPG Officers in the Division. This study will provide benefits to the Department of Education, Education Program Specialists, school administrators, SPG Advisers and the officers, parents, community, the researcher itself, future researchers and future student leaders.

METHODS

This study focused on the extent of performance of each SPG Officers as well as their roles and leadership styles employed in the organization. A total of 16 randomly chosen schools were respondents of the study. Two schools from each district were chosen as the respondents. The descriptive method was designed and the data gathered were statistically treated using the F-test as well as the weighted mean and rank.

RESULTS

The extent of leadership roles among each of the SPG Officers of Tabaco is often performed. There is no significant difference in the level of performance of SPGOs in the 8 districts of Tabaco. There are varieties of leadership styles employed by the SPGOs of Tabaco, which helps them become better leaders of the organization. There are problems encountered by SPGOs of the division and the top one problem is the lack of budget which makes the organization suffer from not having applauded activities and projects due to lack of financial support. Training design is proposed by the researcher to address the needs and problems of SPGOs in Tabaco City Division.

DISCUSSIONS

Based on the findings, pupils who are equipped with the knowledge and skills as potential leaders of the country be allowed to run for the position in the SPG. Good leadership styles should be practiced by the leaders to help the organization minimize problems and issues. Leadership styles should be used by leaders for the betterment of the organization. Leaders should be more open to the undertakings of the organization to address problems and issues. Excellent training design should be used to address issues, concerns, and problems of the organization.

KEYWORDS: ces4ever

SUBMISSION ID: R005-TABACO-0083

Job Satisfaction and Organizational Commitment of Teaching Personnel of Gulod Senior High School

Euna Costa Pio, Department of Education

Abstract

INTRODUCTION

The study was conducted to determine the significant relationship between Job Satisfaction and Organizational Commitment. The respondents of the study were the Tech-Voc Teaching Personnel of Gulod Senior High School and were described in terms of demographic variables which includes, age, gender, status, highest educational attainment, position, and length of service.

METHODS

The respondents' job satisfaction was measured using Spector's Nine Facets Survey, while the Organizational Commitment was measured using Allen and Meyers Three-Component Model Survey. The respondents of the study were selected through stratified random sampling with proportional allocation using Slovin Formula and Pearson-Product Moment Correlation to test the significant relationship between job satisfaction and organizational commitment. In addition, all data were treated using statistical software, PASW version 18 to further analyze the result of the study.

RESULTS

The findings of the study showed that the respondents were satisfied in terms of pay, promotion, benefits, co-workers, nature of work and supervision but were dissatisfied in terms of operating procedure, communication, and contingent reward.

DISCUSSIONS

The evaluation shows that job satisfaction of the respondents is related to their organizational commitment and that respondents have a high level of normative aspect. The researcher also suggested activities that will improve and enhance the level of commitment and satisfaction of the respondents. Hence, the satisfaction may also affect and vary with the level of their commitment.

KEYWORDS: Job Satisfaction, Organizational Commitment, Technical-Voc

SUBMISSION ID: R04A-BATANC-0316

Love Languages in Leadership: Teacher, Student, Parent, Politician, and Church Leader

Eunice G. Suazo, Grace Ann A. Gadlan, Jericson B. Burbos, & Margarita C. Bugia,
Jr, Talangan Integrated National High School
(Adviser: Elymar Pascual)

Abstract

INTRODUCTION

This research aimed at determining the "Love Languages" of the leaders in school, at home, and in the community of Nagcarlan, Laguna, while encouraging them to keep the spirit of leadership and service to others. Coming from different aspects of leading, the researchers picked six from each of these to be their respondents-teachers, students, parents, politicians, and church leaders.

METHODS

The survey questions were given to the thirty chosen leaders. The researchers went to Brgy. Sta. Lucia, Talangan, Yukos, Alibungbungan, Malinao, Arela, Poblacion, and at Talangan Integrated National High School. Survey questions have two parts-researcher- made a question about the level of commitment in leadership and standardized test about love languages by Gary Chapman. Pre-survey was administered so as to know the level of commitment of the respondents. Based on the respondents' love language, the researchers made an experiment of expressing love to them. Then, a post-survey was done to know if the level of commitment increased after the experiment on love languages.

RESULTS

In all aspects of leading, the researchers found out that "Quality Time" is the most wanted Love Language followed by "Acts of Service", the third is "Physical Touch", fourth is "Receiving Gifts", and the least is "Word of Affirmation". The researchers also found out that during the pre-survey, respondents' level of commitment has a mean of 4.08 and a standard deviation of 1.09, indicating a varied level of commitment to leadership. For the post-survey, the mean level of commitment increased to 4.26, with a standard deviation of 0.89, showing more comparable answers from the respondents.

DISCUSSIONS

Through the social experiment of expressing love language to the leaders in school, at home and community, the level of commitment can be increased. Thus, at the end of this study, the researchers suggested that leaders should be more acquainted, give importance, and widen their understanding regarding their own love language and their subordinates as well. This would give them a proper venue to grow personally and in the aspect of leadership. Future researchers were also suggested to replicate this study but with a wider scope in terms of an aspect of leadership and increased sample size.

KEYWORDS: leadership, love language, teacher, student, parent, politician, church leader

SUBMISSION ID: R04A-LAGUNA-0008

**Philippine Professional Standards for Teachers: Self-Assessment Test
Result and Profiles of Selected Elementary School Teachers in Talisay
District**

Rechilda Torrero - M. Cacho

Abstract

INTRODUCTION

PPST aims to set out clear expectations of teachers along well-defined career stages of professional development; engage teachers to actively embrace a continuing effort in attaining proficiency; and apply a uniformed measure to assess teacher performance, identify needs, and provide support for professional development. This research aimed to analyze the results of the self-assessment of selected elementary school teachers in Talisay District along with the 12 priority indicators in the five strands of the PPST and their relationship to the teachers' profiles such as age, teaching position, educational attainment, years of teaching experience and training attended. Strategies to enhance the level of capability of Teachers in each domain of the PPST were also proposed.

METHODS

This study used the quantitative research method, specifically the descriptive survey design to describe the profiles and level of capabilities of the respondents. It also utilized descriptive-correlational research design because it involved existing situations of correlating two or more variables. Sampling methods used were purposive and convenience sampling to select the 30 respondents from the two participating schools in Talisay District.

RESULTS

The results of the study show that profiles such as age, teaching position, educational attainment, years of teaching experience, and trainings attended have no strong correlation with the teachers' performance along the 5 domains of PPST namely content knowledge and pedagogy, learning environment, diversity of learners, curriculum and planning, and assessment and reporting. Although the results showed that profiles of the teachers have no bearing with their level of capabilities in performing the 12 indicators enlisted among the 5 domains in the PPST, there is still a need to find ways on improving them.

DISCUSSIONS

Therefore, it is highly recommended to look into the real factors that significantly relate or affect the capability levels of teachers in performing the tasks. Finally, this study is highly subjective because the results were based on the personal assessment of teachers of their capabilities. Therefore, future researchers should make sure to elicit their responses as objective as possible through the use of triangulation method in order to validate the answers of the respondents.

KEYWORDS: PPST, Teacher Performance, Profiles

SUBMISSION ID: R005-CAMNOR-0043

The Personnel Management Practices in the Division of City Schools, Iriga City

Sharon Saldo, Department of Education

Abstract

INTRODUCTION

To formulate pointers to improve the personnel management practices in the Division of City Schools, Iriga City is the ultimate goal of this study. The bases of the proposition were the identified personnel management practices, problems encountered, and suggestions. Further, it drew out the profile of the respondents in terms of their personal and professional backgrounds, practices, problems encountered, suggestions to improve personnel management, tests of significance of agreement of the respondents' practices, problems, and suggestions.

METHODS

Descriptive-correlational type of research was employed using frequency count, rank, percentage, weighted mean, Kendall Coefficient of Concordance W with the corresponding chi-square. Respondents were randomly selected.

RESULTS

The extremely serious problems along recruitment were: applicants are sponsored by politicians and other persons in authority and there is no updated database of employees. On selection, absence of feedback mechanism and set of specific guidelines on the movement of employees were considered extremely serious. Personal relationship plays a role in the promotion of employees, while on transfer, the proximity to one's residence to the new assignment/station is not considered. The pointers to improve the personnel management in the Division were derived from the indicators which had the lowest weighted mean, which was found out to be of great help for effective implementation of the process. Personnel management is not an easy task and must be taken as a challenge, implement the suggestions, and school heads, teachers, and non-teaching staff need to be one to achieve career development for the employees.

DISCUSSIONS

The results demonstrate the need to improve the professional background of the respondents by enrolling in post-graduate studies. There is also a need to improve personnel management practices by updating a database of applicants and employees, formulating a feedback mechanism for the selection committee, informing very well the employees of vacant positions, and considering the proximity of the employees' residence to the new station/assignment. School heads must be ready to cope with the challenges that they may face. School heads, teachers, and the non-teaching group must work closely to help one another in their career advancement. They will serve as a guide toward the realization of certain goals. Pointers must be adopted to achieve effective implementation of personnel management in the Division.

KEYWORDS: personnel management, practices, schools, school heads, teachers, non-teaching personnel

SUBMISSION ID: R005-IRIGAC-0020

PHILOSOPHY

Historical Survey of the Notion of Common Good

Arjay Badong

Abstract

INTRODUCTION

What happens to a society that does not promote common good? Most probably, it will fall and be chaotic - a very disordered society. This situation could be a reality if people do not support what is good for all. Various appeals to uphold the common good have surfaced in various discussions in our society today. Issues such as business social responsibilities, educational reforms, environmental stability, eradication of graft and corruption, poverty alleviation, and the like have been raised in various symposia. It aims to present philosophical notion of common good according to philosophers and how it was developed from ancient until contemporary period.

METHODS

The method used in this research is purely historical survey, the method which the researcher considers useful in his attempt to delve more deeply into the topic. This is a qualitative data giving emphasis on the different views on the notion of common good of different philosophers from ancient period, medieval period, modern period and contemporary period such as Plato, Aristotle, Augustine, Thomas Aquinas, Thomas Hobbes, John Locke, Jean Jacques Rousseau and Antonio Rosmini.

RESULTS

The notion of common good is a combination of ethical and political philosophy. It is a political because it deals with the organization of society, and it is ethical because it deals with the attainment of good. The notion of common good gives an understanding about what is good for the society and its members. Even though these philosophers have their own views about the common good, they still agreed on the fact that the notion of common good is for the good of the society (good for all).

DISCUSSIONS

The common good depends on the image and structure of society and the kind of period. The notion of common good in ancient period includes their society specifically in the city-state and their views about common good and how to attain it. The second part is the Medieval Period. It gives emphasis on the philosophical preoccupation with God. They used the highest good (Supreme Being) as common good. The third part is the Modern Period. These philosophers focuses on the social contract as means of common good. The Contemporary Period, namely, Jean Jacques Rousseau, Antonio Rosmini, and Jacques Maritain focused on the current notion that is relevant in our society today and its connection to contemporary world and it was posited as existing above all to provide for the rights, general will, and democracy of the people.

KEYWORDS: common good, ancient, medieval, modern, contemporary, historical survey, philosophy, society,

SUBMISSION ID: R04A-IMUSC1-0079

Perception of Grade Seven Learners of Integrated School of Lawa AY 2017-2018 on Teachers' Patience

Nena Cristina Quija, Integrated School of Lawa

Abstract

INTRODUCTION

In this generation where everything is instant, instant gratification is what everybody wants. It seems that patience is no longer a virtue but an abstract concept. As patience becomes difficult to practice, frustration comes along. For a teacher with more than forty or more learners, being patient is such a daunting task. This study aimed to identify the levels of teachers' patience based on the perception of the youngest grade level in an integrated school: the grade seven learners.

METHODS

This research study determined the perception of grade seven learners of Integrated School of Lawa AY 2017 - 2018 on teachers' patience. Qualitative research design, particularly the Grounded Theory Design, was used in this research study, which explored the common experiences of grade seven learners of Integrated School of Lawa on the levels of their teachers' patience.

RESULTS

Based on the findings, the participants identified the levels of their teachers' patience depending on how their teacher handled the learners' inquisitive nature during class discussions. Teachers who injected humor when answering a learner's question indicated high tolerance, thus, being very patient. Teachers who carefully repeat a particular part of the lesson to answer a query showed tolerance and patience, while teachers who refused to smile and answer their learner's question after a series of questions proved to have low tolerance, thus, no patience at all.

DISCUSSIONS

Patience is a virtue that every teacher should possess. Every teacher is different from others and have different levels of tolerance. In this light, there was a need for the administration to assign teachers on a grade level that he/she can handle. Teachers with high tolerance or very patient can be assigned to the youngsters who were still playful and inquisitive. Teachers who have low to no tolerance at all to such attitude can be assigned to higher grade levels.

KEYWORDS: patience, tolerance, virtue, inquisitive nature, instant gratification

SUBMISSION ID: R04A-CALAMB-0096

School Dress Code in the Light of Judith Butler's Gender Trouble

Chezska Zyra Orfanel, Alfonso National High School

Abstract

INTRODUCTION

This research discusses that dress code in the Philippines has been part of the norm of schools and universities that are implemented to uphold formality, decency, discipline, and protection of students. Dress codes among institutions have is very evident in Catholic schools for it promotes modesty, aligned with the values and beliefs that are being instilled on students. However, it is really alarming to witness that among these institutions, victim-blaming, harassment, and humiliation are very prominent and is being tolerated by officials which is rooted from the clothing and physical expression of students.

METHODS

The philosophical method used in addressing the issues on dress codes and sexism was dialectical, consisting of a thesis, antithesis, and synthesis. Issues on dress codes and sexism that emerged from universities and colleges from recent months was discussed followed by a contradiction from Judith Butler's gender trouble which highlights her aims to break the supposed links between sex and gender and she wanted to establish the notion that gender is performative and not biological.

RESULTS

Issues on dress codes and sexism are affected by different factors such as culture, religion, beliefs, and practices most especially in Catholic schools. Due to these factors, self-expression has been a problem based on Judith Butler's gender trouble, wherein it creates certain anxiety and fear among people especially if it does not conform to gender norms in the society which happens dominantly to women. Cross-dressing and heterosexual issues have also been a problem, not just in public places but also in schools and universities, which greatly discriminates other genders and leads to oppression, disrespect, and deprivation of their rights.

DISCUSSIONS

The results demonstrate the conflict between the factors and feminist views but it also became a platform to arrive at the ideas that a person's act and gender performance determine his identity and should not be deprived from his right to express or choosing and doing what is aligned with his/her gender. We, as part of the educational institutions, should take a stand in starting a feminist culture most especially in schools and universities so that the younger generation will be enlightened on this issue. Sexual harassment, oppression, victim-blaming, and discrimination should not be tolerated since people should be treated fair and equal, regardless of his sex/gender.

KEYWORDS: Educational institutions, Judith Butler's Gender Trouble, Gender, Sexism, School Dress Code

SUBMISSION ID: R04A-CAVITP-0327

Striking the Equilibrium: A Dialogue between Religious and Secular Education

Arvin Alcoriza, Josie B. Gaynilo, & Melissa C. Acosta

Abstract

INTRODUCTION

Religious education is often seen as contradiction to secular education because of their respective point of views. Their longstanding opposition and separation extend their influence to the current educational system. If the aim of education is to produce holistic individuals, then it must ensure the development of all the aspects of the person by providing balanced educational pedagogy. This is where religious education provides a balancing force to secular education.

METHODS

Since the paper is an ongoing study, it provided the backbone of the whole research enterprise. The nature of the paper is expository and argumentative. It exposed the ideas of different experts and results of studies conducted in foreign educational institutions regarding religious education. The paper argued in favor of integrating religious education in the secular curricula in assuring a holistic education. It provided a basis in applying the current research on the current Philippine educational system.

RESULTS

It is argued that while secular education provides a practical point of view to the students, religious education complements it with proper attitude giving them a chance to reflect on the values promoted making them responsible in their choices and pursuit of values. While both approaches orient in terms of responsibility, secular education touches it in a personal level while religious education discusses it in a wider perspective on the social level. Secular education enhances the person's knowledge and promotes modern technologies as means for personal betterment and progress while religious education provides students an opportunity to balance their needs with social responsibility, educating them to become productive individuals for social action and transformation. Religious education finds a meaningful life built in a hope in God/ Transcendence which is unbounded and last when the hope on technology fails to provide a lasting foundation for a meaningful life.

DISCUSSIONS

In the case of educational thrust, the paper presented how religious education serves as a balancing force in terms of (a) cultivation of values (b) responsibility, and (c) meaning of life. Holistic education can only be achieved if the cultivation of skill is balanced with the cultivation of the human spirit. The former is left in the realm of the secular while the latter is served in the religious sphere.

KEYWORDS: religious education, secular education, equilibrium, dialogue

SUBMISSION ID: R04A-BATANP-1411

PHYSICS

An Alternative Approach for the Coffee Husk Dye-Sensitized Solar Cell

Genesis Adam Mendoza, Amadeo National High School

Abstract

INTRODUCTION

Sustainable energy forms became the focus of attention now as issues for non-renewable energy sources increases. To address these problems, sustainable sources such as solar power are established. In order to harness the solar energy, a type of solar cell called dye-sensitized solar cell (DSSC) that utilizes organic dyes such as coffee husk dye was developed. It is easy to make, but the problem lies with the availability of materials. This study attempts to increase the electrical output of the DSSC by using alternative materials.

METHODS

Experimental method of research was used in this study. Coffee husks was immersed in water and ethanol to extract the anthocyanin pigment. The conductive glass was made using SnCl_2 (stannous chloride) and $(\text{NH}_4)\text{HF}_2$ (ammonium bifluoride) solution. The anode was made by applying a TiO_2 (titanium dioxide) paste made from TiO_2 and vinegar in three conductive glasses. It was dried and immersed in the extracted dye. The cathode was made by rubbing a pencil lead in another conductive glass. A lugol's iodine electrolyte solution was sandwiched between the anode and cathode. The fabricated solar cell was tested using a digital multimeter.

RESULTS

The fabricated conductive glass demonstrated a resistance with a value of $4.48\text{k}\Omega$. In direct sunlight, the average voltage produced is 423.6 mV. The power output is $3.27\text{E}-03\text{ mW/cm}^2$. In diffused sunlight, the average voltage produced is 406.7 mV. The power output is $3.02\text{E}-03\text{ mW/cm}^2$. In artificial light, the average voltage produced is 396.2 mV. The power output is $2.86\text{E}-03\text{ mW/cm}^2$. Using the obtained and calculated data, the solar energy to electrical energy conversion efficiency is 0.02023%.

DISCUSSIONS

The study showed that the harvested solar energy can be converted into electricity using a dye-sensitized solar cell that utilized alternative materials. It was shown that the power output is comparable to the DSSCs fabricated in the laboratories. Since the voltage does not depend on the resistance, it can be inferred that the improvement of the voltage output came from the lugol's iodine electrolyte and the graphite catalyst. In order to improve the power output and efficiency, it is recommended to use a readily fabricated conductive glass that has a low resistance.

KEYWORDS: dye-sensitized solar cell, alternative, vinegar, lugol's iodine, pencil lead

SUBMISSION ID: R04A-CAVITP-1254

Boosting Test Scores of Grade 10 Students in Electromagnetism through Collaborative Testing

Mary Jerica Rellorta, Department of Education - Cavite

Abstract

INTRODUCTION

Most high school students have a strong untoward perception about physics as a subject due to its highly cognitive, abstract, and mathematical nature. Because of these aspects, the achievement, in the form of test scores, of students in physics is generally low as reflected by multiple researches done nationally and abroad. This study entitled "Boosting Test Scores of Grade 10 Students in Electromagnetism through Collaborative Testing (CT)" aims to investigate the effect of Collaborative Testing (CT) to the scores of Grade 10 students in electromagnetism topic.

METHODS

This study utilized non-equivalent pretest-posttest experimental research since its main purpose was to determine the effectiveness of collaborative testing in enhancing the test scores of the Grade 10 students in electromagnetism. The study used pretest and posttest as instruments to collect the performance of the students on electromagnetic induction. The tests were composed 12 multiple choice items and 3 problem solving items. Additionally, the test used for intervention were composed of open-ended questions and problem solving to allow collaboration among the students. All teacher-made tests were validated by 3 physics teachers in terms of content and construction. The participants of this study were the 45 Grade 10 students. The participants were grouped into two using a toss coin method; the two groups were assigned as experimental and control.

RESULTS

Results revealed that the pre-test scores of the control and the experimental group do not differ significantly. The post-test scores of the groups significantly differ resulting to higher scores for the experimental group. Significant differences exist in the pre-test and post-test scores of the control group and experimental group. There is an improvement in the groupings of pupils both in the control and experimental group, but significant improvement was shown for the students exposed under Collaborative Testing. Therefore, the use of Collaborative Testing is effective considering the higher scores of the experimental group compared to the control group.

DISCUSSIONS

Based on the outcome of the research, the researcher recommended that Collaborative Testing is an effective method in boosting the test scores of students in electromagnetism. It can be concluded that collaborative learning fosters the development of academic confidence, creativity, and emotional intelligent through exchange of views, elucidation of thoughts, and analysis of views of others.

KEYWORDS: Physics, Electromagnetism, Collaborative Testing

SUBMISSION ID: R04A-CAVITP-0278

Characterization of Gulaman as an Exhibiting Medium of Total Internal Reflection: A Novel and Contextualized Method

Roberto G. Capinig, Department of Education, Gamut National High School
(Adviser: Shekaina Faith Lozada)

Abstract

INTRODUCTION

The continuous improvement on the varied materials fed in by Science and Technology supports the nonstop spreading of productive and useful advancement of technologies. However, the development is entwined on the consequences of complication in utilizing it. Thus, it's been a great challenge to convey the topics simply yet remarkable. One of the most applicable concepts in physics is optics. Now, most of the medium used to exhibit Total Internal Reflection (TIR) is a prism. Unfortunately, not all schools has the capacity to describe TIR with the use of the said medium. Thus, this study was introduced to look for an alternative exhibiting medium of TIR that was contextualized.

METHODS

This study used gulaman as an exhibiting medium for TIR. The study was conducted in the dark room and limited only using gulaman powder. First, we weighed 6 grams of gulaman powder of three different colors. Mixed each weighted gulaman to the boiling water of 300 ml. We repeated this procedure using 400 ml and 500 ml. After mixing, we stirred and waited for 5-10 minutes until the powder was dissolved. Poured the solution on a 10 ml graduated cylinder and wait for 30 minutes to cool. Prepared 3 trials for better comparison. When solidified, set the gulaman on a plain surface. Pointed the laser on the bottom part of the medium creating an angle of 30, 45, and 60. Applied this procedure in all colors and observe the image. Lastly, we repeated the whole procedure using another brand of gulaman.

RESULTS

2 different brands of gulaman powder were used in this study. Three colors of each gulaman were considered during the experiment. The researcher also considered different trials with varying concentration to be tested in order to display the result. Gulaman was used according to its capability to conduct and propagate light using laser as light source. The light from laser was pointed to the bottom of gulaman tube. During the experiment, colors green, red, and white were used to examine which of those were capable of demonstrating TIR.

DISCUSSIONS

Among the three colors of 2 brands, only the white color of crystal gulaman propagated light with 60 angles of incidence with 6 grams/400 ml. Total internal reflection can be observed by making a medium like prism with the use of gulaman. Gulaman was more optically dense than air, so the gulaman was the core and the air surrounds it served as cladding. By pointing a laser into the end side of gulaman tube using the white color, the researcher found out that light shows total internal reflection.

KEYWORDS: TIR, gulaman

SUBMISSION ID: R013-SURSUR-0258

Comparative Study on Sand Loam and Silt Loam in Electricity Generation of an Earth Battery-Powered Lamp

Ephraim Mahonri S. Gabriel, Kristine Joy B. Arellano, & Mary Jeane R. Velasquez,
San Pablo City National High School
(Adviser: Renelyn Banasihan)

Abstract

INTRODUCTION

Electricity is one of mankind's greatest necessities. The lack of electricity access in the Philippines and the continuous increase in electricity demand has been a major problem of the government. Overexploitation of fossil fuel usage and great amount of carbon dioxide emission from power plants has also been a challenge for environmentalist groups. Earth Batteries are alternative energy source capable of powering simple devices such as bulbs.

METHODS

This study focused on the comparison of the voltage and current outcomes of Earth Battery-powered lamps. The researchers used readily available soil in Laguna, specifically the San Pablo area. Sand Loam (53% sand, 37% silt, 10% clay) and Silt Loam (40% sand, 50% silt, 10% clay) were collected from Barangay Concepcion and were used as the electrolytes of the earth battery cells. Both setups consisted of eighty-four battery cells and were connected in a series-parallel connection. Paired T-test was used to statistically analyze the data gathered from the experimentation.

RESULTS

Setup 1 with Sand Loam produced 13.23V and 0.48mA, while Setup 2 with Silt Loam produced 14.63V and 0.82mA. Thus, there was a significant difference in both the voltage and current of the set-ups at a confidence level of 95%. The results showed that Silt Loam contains higher electrolytes than Sand Loam.

DISCUSSIONS

The results demonstrate that it is possible to power a 12V and 5W DC bulb using the concept of Earth Batteries. Though both Sand Loam and Silt Loam succeeded in powering the bulb, the comparison of the data shows that Set-up 2 with Silt Loam produces higher outcomes of voltage and current thus having brighter light emission than that of Sand Loam.

KEYWORDS: earth battery, electricity, renewable energy

SUBMISSION ID: R04A-SANPAB-0043

Conversion of Rotational Kinetic Energy of a Fan to Electrical Energy for Portable Power Bank

Jean Luc Izach S. Malijan, CLDDMNHS
(Adviser: Liza Brion)

Abstract

INTRODUCTION

Energy conservation is the decision and practice of using less energy. The two main reasons people conserve energy are to gain more control over their energy bill and reduce the demand on the earth's natural resources. In this study, the researchers decided to convert the rotational kinetic energy from electric fan to electrical energy and stored this in a 5 volt portable power bank. Instead of consuming electricity for charging power banks, the converted electrical energy was used.

METHODS

In this study, the researchers attached the DC motor on the fan that converted the rotational kinetic energy of the fan to electrical energy, which was used to charge the portable power bank. The researchers first disassembled the housing of the fan and attached the gears on the rear shaft of the electric fan. Then, the DC motor was mounted on the fan with a 40 mm belt connected on the gears to the DC motors. After that, a 35V Capacitor was attached on the DC motor. Then, wires were connected on the DC motor to the circuit as the input. The micro USB was connected to the regulator in the circuit as the output of the prototype. Lastly, the power bank was connected to the micro USB.

RESULTS

The device generated an average output voltage of 4.97, which was enough to charge a 5 volts portable power bank. The average time of charging was 2 hours and 31 minutes. The effect on the electric fan's performance was tested by determining the number of revolutions (RPM) of the fan with power bank and without power bank. T-test was used and showed that there was no significant difference ($P > 0.05$) in the number of revolutions per minute of electric fan.

DISCUSSIONS

Based on the results, the converted electrical energy formed from the rotating energy of the electric fan can charge a 5-volt portable power bank. Moreover, the performance of the rotating electric fan was not affected while it was charging the power bank.

KEYWORDS: Conversion, Rotational, Kinetic, Energy

SUBMISSION ID: R04A-SANPAB-0058

Design Thinking Approach in Teaching Physics

Joy Landicho, SHS Assistant Principal, Padre Vicente Garcia Memorial Academy,
Inc.

Abstract

INTRODUCTION

Innovation in teaching strategy is necessary at the present time to develop 21st century skills such as creativity, critical thinking, collaboration, and communication among learners. Empowering learners with 21st century skills is essential as they thrive in this modern world, which demands critical thinkers, problem solvers, digitally literate, effective communicators and innovators. To address this need, there should be innovation in education especially in the teaching strategies utilized by teachers in delivering the lessons to the students. This study aimed to determine the effectiveness of design thinking approach in teaching physics concepts. Also, the study assessed the development of students' skills along the phases of design thinking and the level of students' understanding and appreciation of the approach in learning physics concepts.

METHODS

The experimental and descriptive methods of research were used by the researcher in conducting the study with the aid of achievement test and questionnaire as research instruments in data gathering. Two groups of respondents were involved in this study: the control group where traditional method of teaching was utilized and the experimental group where design thinking approach was implemented. The study was conducted at Padre Vicente Garcia Memorial Academy during the school year 2018-2019. Weighted mean, average weighted mean, and t-test were the statistical tools used in order to answer the research questions.

RESULTS

The findings revealed that the students in the experimental group where design thinking approach was utilized performed better. The students strongly agreed that the phases of design thinking approach such as empathizing, ideating, prototyping, and testing develop their verbal communication skills, creativity, and emotional stability. The students had very high level of understanding and appreciation on the items used to describe design thinking as an approach in learning physics concepts.

DISCUSSIONS

The proposed instructional guide utilizing design thinking approach will serve as a tool in conducting an interactive class in physics that will engage students in design challenges. The guide is designed following the four phase of design thinking: empathizing, ideating, prototyping, and testing. Educators may shift from traditional methods of teaching through innovative strategies that will cater the needs of 21st century learners.

KEYWORDS: design thinking, experimental, empathizing, ideating, prototyping, testing

SUBMISSION ID: R04A-BATANP-2250

DETS (Device for Earthquake and Tremor Sensing) Innovation

Chelsey Ann Garcia, Jhonalyn Vinoya, Ken Daniel Gipit, & Mico Andrei Tienzo,
Biñan Integrated National High School

Abstract

INTRODUCTION

The Philippine K to 12 Curriculum includes the subject DRR (Disaster Readiness and Risk Reduction) in senior high school to bring awareness about the different natural and man-made disasters. Together with the NDRRMC, government agencies are able to create plans that help mitigate the effects of disasters. One of these plans is the use of an Improvised Earthquake Detector. The Improvised Earthquake Detector consists of a transparent bottle attached to the flat ceiling with a colored water inside that will form ripples, informing everyone when an earthquake occurs. However, this improvised earthquake detector seems to be ineffective. So, the researchers have decided to innovate the device. The project plans to include an alarm with a LED so that even in a normal classroom setup, they can easily detect the device's signal and prepare everyone to find safety. The project will be called Device for Earthquake and Tremor Sensing Innovation or DETS.

METHODS

The device consists of a 9-Volt battery (main source of electrical energy), a buzzer (12-Volt), a battery cap, a small container (will be filled with brine solution), LED, and an empty bottle container (which will provide protection for the mechanism). As for the mechanism, first you need to connect the first line join 1 wire from the battery cap, buzzer and LED). Next, do the same for the second line the remaining wires of the battery cap, buzzer and LED). After this, the 2 connected wires will be taped inside the bottle, allowing their tips to touch the bottom of the bottle. Lastly, the small container filled with brine solution will be placed inside the bottle, and then you can now attach it to the ceiling.

RESULTS

The study found out that the container inside the bottle was able to spill some of its content into the bottom of the bottle where the tips of wires were located, even with the slightest tremor. Therefore, the alarm was triggered as soon as the brine solution touches the tips of the wire. Brine solution was used instead of normal water because it has better conductivity. The battery generated enough electricity for the buzzer to perform its mechanism. It is user friendly and caters even the blind and hearing-impaired individuals.

DISCUSSIONS

The Project DETS Innovation is clearly one of the most important devices a school or community should have. It provides precise signals anytime, unlike human observation, which is obviously flawed at most times. The proposed project only triggers when a tremor occurs, making it a reliable earthquake alarm system.

KEYWORDS: Earthquake, Tremor, DETS, Disaster, Risk, Reduction, NDRRMC

SUBMISSION ID: R04A-BINANC-0005

Heat-Responsive Sunshade in Producing Electricity for Charging Mobile Phones

Charlyn Joergette A. Triñanes, Elgene Mari C. Jose, & Ralf Mikael T. Rivera, Santa Rosa Science And Technology High School
(Adviser: Angelou Vanessa Tarroza)

Abstract

INTRODUCTION

Renewable energy is not an entirely new concept, but it continues to emerge rapidly as an alternative to fossil fuels and other harmful energy sources. Products are being created on an unprecedented scale, and various systems are available for use. Solar technologies are extremely promising with ever-increasing energy output efficiency and the capability to be used in a variety of locations.

METHODS

The study used single group design to measure the time of the sunshade exposure and the current and voltage produced. The data were gathered using a multimeter, directly connected to the circuit in the sunshade. Pearson R Correlation Coefficient was used for statistical treatment since it deals with measuring the degree of linear relationship between two variables whether positive or negative, showing the effects of different lengths of time exposure of the sunshade to the produced voltage and current of the sunshade.

RESULTS

The data obtained showed the voltage and current will reach a specific range of value during the time under the sun. Though after a while, the voltage and the current will decrease due to the melting ice, resulting to a thermal equilibrium where the Seebeck effect does not apply. Using Pearson R Correlation Coefficient, data showed that there is a very small positive correlation between the time of sun exposure and the output voltage -- result that is the same with the current during their 12.5-minute experimental period. This correlation proves that the length of time of sun exposure has a negligible impact on the voltage and current produced. Nevertheless, the values are enough to make a boost converter work and charge a mobile phone.

DISCUSSIONS

The results of the study suggest that the sunshade is an effective source of electricity for charging small-scale devices, producing energy sufficient for charging a mobile phone. At some standards though, the voltage and current are low and that the input is higher than the output energy, errors which make way for future improvements.

KEYWORDS: Seebeck Effect, Current, Voltage

SUBMISSION ID: R04A-STAROS-0004

**Inquiry-Based Learning through Virtual Laboratory and Performance in
Physics among Senior High School Students at Col. Lauro D. Dizon
Memorial National High School**

Richelle Q. Omaña, Department of Education - San Pablo

Abstract

INTRODUCTION

Improvements in science education has been a subject of most researches. Many researchers have come up with the use of different instructional methods like inquiry-based learning. Efforts to use inquiry as an approach in teaching physics face a number of challenges. These include the need to balance content versus open-ended inquiry while dealing with overloaded curriculum. Nowadays, computer technology has been widely used as a tool in education and helped students to gain abstract concept and increase achievements. Based on the researcher's experiences in teaching physics, it is of great advantage to use computer technology as instructional. Thus, the researcher is certain that the use of virtual laboratory will provide inquiry-based learning environment for the students.

METHODS

The study used the experimental method and utilized two (2) groups of fourth year high school students. The control group was exposed to traditional learning while the experimental group to Inquiry-based learning through virtual laboratory using the PhET simulation. The research instrument used is the achievement test in Physics that served as the pre-test and posttest.

RESULTS

Based on the results from the comparison of data of the mean pre-test score for the control group was 16.30, and 16.63 for the experimental group, it indicates that both groups were at nearly the same ability level in terms of the knowledge on topics covered in the study. The t-test of difference on the mean posttest scores of the control and the experimental groups presented the mean difference of 5.13 which had a comparative effect on the two teaching approaches used. Thus, this imply that the use of inquiry-based learning through virtual laboratory approach in teaching improved the performance of the students. Results of the t-test difference between the mean gain scores of the two groups showed that the experimental group had a higher mean gain score of 13.03 compared with the control group which had 5.70 mean gain score, which implies that the students exposed to inquiry-based learning through virtual laboratory approach showed better achievement.

DISCUSSIONS

The findings of the study indicate that the use of inquiry-based learning through virtual laboratory approach in teaching improved the performance of the students. The findings from this study is heuristic in nature and may contribute to knowledge about teaching and learning strategies that utilize information communication technology and processing skill

KEYWORDS: Inquiry-Based Learning Through Virtual Laboratory

SUBMISSION ID: R04A-SANPAB-0064

Interactive Engagement in Rotational Motion via Flipped Classroom and 5E Instructional Model

Jhoanne Rafon, Tanay West National High School

Abstract

INTRODUCTION

The educational system is continuously developing strategic learning methods and curriculum designs that can effectively bring out the skills and provide the sufficient needs of the learners to be equipped in the real-life challenges. In the field of physics, the students are not so interested or they find it hard to understand some topics because the teaching method used may not be interesting, thereby resulting in low academic performance in physics. The researcher conducted her study to determine the effectiveness of this teaching method in the academic performance of students in physics.

METHODS

A mixed method approach was used and involved ten (10) Grade 12 students enrolled in the STEM strand. In the research, the students used the flipped classroom approach and 5E Instructional Model for four (4) weeks. The qualitative data were collected from the survey-questionnaire, video-recorded class, reflections and interview.

RESULTS

Data showed that the implementation of the study was successful and interactive. The students developed a sense of responsibility, concern on taking part in the discussion, and a desire to follow instructions. Using indicators of engagement, the teachers and students both appear to be more active in the learning process manifested in terms of active participation, positive learning environment and high formative assessment results.

DISCUSSIONS

Further study was highly recommended to be conducted on the appropriateness and suitability of the model in different subject areas and with different levels of students. The needed technology have also be studied to determine the most effective means to record and store the vodcasted lectures. As an additional study, mastery learning may also be evaluated and assessed as a separate program or as a supplement to the model. Moreover, the division will need to look at the effect of the Interactive Engagement, Flipped Classroom and 5E Instructional Model on the structure of the common exam such as pre-test and post-test since this study is qualitative descriptive, a large number of students will help to determine the effect of these approaches.

KEYWORDS: Interactive Engagement, Flipped Classroom, 5E Instructional Model, Rotational Motion

SUBMISSION ID: R04A-RIZALP-0262

Mako Shark Denticles: Maximizing the Aerodynamic Performance of Wind Turbines

Ina Louise Magno, Valenzuela City School of Mathematics And Science
(Adviser: Loretta Salvador)

Abstract

INTRODUCTION

Wind is a renewable source of energy and by means of wind turbines, the wind can be converted to electricity. However, it is rarely used because of high initial cost but low efficiency. The intent of the study is to construct a design based from the scales of mako shark to maximize the wind energy acquired and improve its efficiency. Wind turbines, the conventional and the mako shark scale designed, were assessed in terms of wind turbine efficiency, power, and voltage.

METHODS

The study used quasi-experimental research since no randomization was utilized. Two setups were made, the conventional and mako shark-designed wind turbine, with three replications to establish accuracy. An industrial stand fan served as the wind source for the turbine. The experiment was conducted in a closed space. T-Test at 5% level of significance was used to analyze the significant differences between the two designs and Two-way Analysis of Variance for determining the comprising of significant results from test.

RESULTS

The voltage and power increments as the wind speed increases. The voltage increased by 15%, and the power also increased by 20%. It is distinct that as the wind speed increases, both the efficiency of wind turbines decreases. The highest recorded efficiency is 46% coming from the mako shark-designed wind turbine and the lowest is 4% from conventional wind turbine. The decrease in value showed that the increase in wind speed overwhelms the wind turbine until such time it reaches its maximum velocity and results to lower efficiency. The data gathered showed that there is a significant difference in the voltage and power produced by the two wind turbines as the mako shark scale-designed wind turbine produced greater values in every trial. As for the efficiency of the wind turbines, greater percentage was accumulated in the experimental wind turbine than the normal wind turbine. Statistically, it can be concluded that the mako shark scale-designed propeller yielded greater value of voltage, power, and efficiency.

DISCUSSIONS

The study proved that the mako shark scale-designed wind turbine yields greater voltage, power, and efficiency. It presents the gap in speed and efficiency between the conventional and the modified blades. However, precision and accuracy is not guaranteed as the researcher used the standard air density value. The study should be done in a more controlled environment. The idea of applying auto-rotation mechanism and modifying the whole blades is also suggested.

KEYWORDS: mako shark, wind turbine efficiency, aerodynamics, biomimicry

SUBMISSION ID: NCR1-VALENZ-0006

Microwave Security Alarm with GSM Capability: A Security Device

Clarence Losa, Bula National High School
(Adviser: Jhomar Jaravata)

Abstract

INTRODUCTION

Bula National High School has experienced theft cases due to lack of security measures implemented in its perimeters. One of the precautionary measures on preventing the problem is the installation of security devices. Its demand increased over the past years considering that not all the time security guards can provide full-time security. In this case, the researchers decided to develop a security alarm with GSM capability. A robot that will activate an alarm and send a notification message to the owner of the establishment when an intruder is detected.

METHODS

Developmental method was utilized to conduct this study. The developed device was validated by the experts and underwent proper dry run. The researchers used the arduino, sensor with GSM Capability, and survey questionnaires on the effectiveness and acceptability of the device as instruments in the study.

RESULTS

The newly developed security device can detect intruders and can even distinguish between a dog, a cat, and a human. It was also found that it was effective and was highly acceptable to the respondents. Moreover, the newly developed device is helpful on providing full-time security in the establishments of Bula National High School.

DISCUSSIONS

Microwave Security Alarm with GSM Capability helps the establishment to improve its safety and also to prevent untoward incident because it can detect intruders.

KEYWORDS: Microwave Security Alarm, GSM Capability, Security Device

SUBMISSION ID: R005-CAMSUR-0082

Onos X: Water Filtering Device with Turbines to Harness Hydroelectric Energy from Floodwater

Alyssa Grace Briones, Clark James Rayos, Mark Anthony Acorda, & Ronin Lao,
Biñan Integrated National High School
(Adviser: Freedom Carbonell)

Abstract

INTRODUCTION

The Philippine archipelago's geographical position is characterized by being surrounded by bodies of water and is visited by an average of 20 typhoons per year. Due to that, flooding has become a perennial problem in low-lying areas. The distance between islands and treacherous landscapes makes rescue and relief operation hard. This research aims to provide ease during relief operations by providing emergency power source and water provisions at calamity-affected areas.

METHODS

To successfully achieve the purpose of this research, field experimental design was applied. Variables used were controlled. Materials comprising the prototype were adjusted accordingly based on the results which are periodically collected and evaluated.

RESULTS

Testing of the prototype power output capacity was able to mirror 9V, which was enough for emergency charging of mobile devices. In the same manner, the prototype was able to produce a liter of clean water from floodwater within 15-minute time. That being reliant entirely to gravity that accelerates the water into the turbines at 9.8 m/s² with short delays on the filtering process for the phasing through the filter agents take time. The filtered water's Total Coliforms was less than 1.1 as well as its Fecal Coliforms, thus, the filtered water passed the Bacteriological Examination. Portability of the prototype also proved efficient with the installation of wheels at the bottom of the prototype's carcass, giving it more flexibility in relief operations. Furthermore, additional features such as a redirecting tube for higher water pressure has been designed throughout the research process that would add to the power output of Onos X.

DISCUSSIONS

The results of the research proved efficiency of the filter as emergency water provision, filtered from flood water, for household use. The turbine designed to harness the energy from the flow operator was able to provide charging for basic mobile phones, which enable users to access communication (outside factors disregarded such as lack of signal, signal jams, etc.).

KEYWORDS: Water Filter, Turbines, Floodwater, Emergency Power Supply, Clean Water

SUBMISSION ID: R04A-BINANC-0007

Performance of Senior High School Students using PhET Simulation in Teaching Physics

Shekaina Faith Lozada, Department of Education, Gamut National High School

Abstract

INTRODUCTION

The Philippine educational system believes that every Filipino deserves an advanced quality education through computerized program. Department of Education enhanced the teaching-learning processes that meet the standards of the 21st century as it emphasizes the use of ICT-supported instructional materials. The University of Colorado developed PhET Simulation as aid to increased visualizations of students to a deeper understanding of Physics. Thus, this study wants to address the challenges in teaching physics and determine the performance of STEM students using Phet Simulation as computer-based instruction in teaching physics.

METHODS

A quasi-experimental research design and a standardized questionnaire from the study of Kotoka and Kier (2013) were used. Grade 12- STEM students were grouped according to their General Physics 1 grades and assigned as experimental (n=16) and control group (n=16). Both groups took the pretest and were taught in the same way. However, Phet Simulation was used in the experimental group. After discussion, post-test was given to determine student's performance before and after using PhET Simulation. Results were interpreted and analyzed using Frequency Count, Percentage, Weighted Mean and t-test for independent samples.

RESULTS

A thirty (30) item test was administered to the experimental group of students. Table 1: Performance in the Pre-test

Performance: 30 items Frequency Percentage Description
26-30 0 0% Excellent 21-25 0 0% Very Good 16-20 1 6.25% Good 11-15 0 0% Fair 6-10 15 93.75% Poor 0-5 0 0% Very Poor Over-all Mean Score: 8.94-Poor

Table 2 Performance in the Posttest

Performance: 30 items Frequency Percentage Description
26-30 1 6.25% Excellent 21-25 7 43.75% Very Good 16-20 6 37.50% Good 11-15 2 12.5% Fair 6-10 0 0% Poor 0-5 0 0% Very Poor Over-all Mean Score: 21.13-Very Good

Table 3 Difference in the Posttest of the Experimental Group and Control Group Group Mean Score t-value \bar{I} -value Remarks

Experimental Group (PhET Simulation Method) 21.13 2.04 .000025 There is a significant difference
Control Group 13.56

DISCUSSIONS

The experimental group performed poor in General Physics at the start of the study, which resulted to 8.94. However, the student's performance increased to 21.13 or Very Good when utilizing PhET Simulation. The study found out that there is a significant difference in the student's performance during the posttest of both groups. The t-value and \bar{I} -value resulted to 2.04 and .000025, respectively. This shows that PhET Simulation is effective in learning physics.

KEYWORDS: PhET, Physics

SUBMISSION ID: R013-SURSUR-0252

Physics Dash: A Game to Enhance Physics Knowledge

Clint Villorente, Franz Gloriani, & Luke Pugne, Cavite National Science High School

Abstract

INTRODUCTION

Games help develop skills such as the non-cognitive skills that panelists agreed are still as important or as fundamental as cognitive skills. The problem is that the grade 10 students of Cavite National Science High School are having a hard time on physics based on the survey conducted. The main objective of this research was to help the students in learning physics by playing.

METHODS

The game was programmed using GameMaker Studio 2 with its own proprietary GML programming language. GameMaker Studio 2 also had its debugging system, which was used to debug the game. Pre-test and post-test were conducted to identify the impact of the game to the students. The data was analyzed by Z-test. The game was rated based on its Gameplay, Audio, Visual and Learnings.

RESULTS

The results of this study were positive. The game had an impactful effect to the knowledge of the students. There was a great difference between the scores of the students who took and played the game. The scores of the students in pre-test were low indicating that they don't have enough knowledge about physics. The students took another exam after playing the game. The scores of the students in post-test were higher, indicating that they learned and improved their knowledge in physics. The students also rated the game. The ratings were telling that the game needs some improvement in its content.

DISCUSSIONS

This study could conclude that games could really help students and players to enhance their knowledge. Games could be an alternative learning system for the students. We recommend for the other researchers who will continue this to add more information or try different topics and enhance the design of the game.

KEYWORDS: Non-cognitive skills, Cognitive-skills, GameMaker Studio 2, Pre-test, Post-test, Games, Alternative learning system, Physics, Knowledge

SUBMISSION ID: R04A-CAVITP-0957

Producing Power from Human Steps Using a Piezoelectric-Integrated Prototype

Anjanette Capule, Bernadette Capule, Francis Neil Jarical, Jennifer Love Calajate,
& Zarina Elenita Reyes, Marcelo H. del Pilar National High School

Abstract

INTRODUCTION

There are numerous sources at hand in terms of acquiring energy. However, conventional resources usually leave a huge environmental impact. It is in the hopes to find a cheap and nonconventional energy source that the researchers in this study aimed to create and test a piezoelectric-integrated prototype which harvests readily available energy from the environment.

METHODS

Certain methods were employed in this study. Necessary materials were acquired from respective sources. The prototype, after being assembled and characterized, was tested stationarily under different frequencies of simulated human steps: the highest frequency being 2 steps per second and the lowest frequency being 1 step per 2 seconds. Using Randomized Complete Block Design, the resulting power was then processed and analyzed using F-test via Statistical Package for Social Sciences.

RESULTS

Three tables with different frequencies of steps were used as the experimental setup. The results showed the highest mean of 13.37 mW and the lowest mean of 9.67 mW from the highest and lowest frequency of steps, respectively, which may be due to less energy exerted by the subject onto the prototype during the slow pacing in the first experimental table or human error. In addition, the statistical analysis showed that the study is very significant: the significance level of 0.00 being less than 0.05 and the calculated F value, 51.69, being greater than the critical F value, 3.89. Thus, the different frequency of steps has a significant effect on the power that the piezoelectric-integrated insole prototype can produce.

DISCUSSIONS

The results showed that the frequency of steps has a significant effect on the power output of the prototype and, consequently, the functional model can evidently produce power. Due to its fragile nature, it is suggested to change the piezoelectric material. Furthermore, it is suggested to explore the application of the mechanism of the prototype and investigate the charging rate of the battery since it was not dealt with this study.

KEYWORDS: nonconventional, piezoelectricity, energy harvesting, ambient energy scavenging, electricity

SUBMISSION ID: R003-MALOLO-0000

Project GEN-LP Generating Electricity from Noise Detector and Land Piezo

John Kennedy Buena, Lance Gabriel Root Revilla, Maura Franchesca Mortega Pasion, Ruzel Acheron, & Val Erick Bambalan, Biñan Integrated National High School

Abstract

INTRODUCTION

Non-renewable resources such as oil, coal, and natural gas are extremely harmful. The usage of non-renewable resources in Philippines such as coal power plants (which generating 46.8 million mwh in 2017), make up half of the country's power generation mix. The production of electricity is still dominant, and the demand of electricity is continuously increasing in Philippines. The concept was used in the research in converting the sound energy into mechanical energy and into electrical energy.

METHODS

The research made use alternative energy coming from sound energy through piezo electric material - Cunningman (2012). When pressure is applied to it, it generates an electric charge. Thus, with the sound as a vibration form in the piezo will absorb and produce electricity. This piece will use the noise as an alternative way of producing energy for the community. Wiring or the soldering of iron and tin-lead is used to connect wires into the negative and positive part of the piezo. Testing is used to connect the piezo element to the breadboard by inserting the negative lead into socket 5E and the positive lead into socket 6E. To test if the circuit is working using the LED, connect the wire of the load. Lastly, the use of the amplifier to increase the voltage, current, or power of a signal.

RESULTS

The piezo makes the LED illuminate because of its mechanical energy. The sound and vibration coming from the speaker's voice and amplitude was absorbed by the piezo material and turned it into electricity that produced light. The electricity that was made by the piezo is not constant because the vibration that was made in the speaker does not directly determine the capacity whether it is high or low pitch. Since, the voice of a human was used to produced sound, it is unstable because not all the time the human is speaking. However, if the sound coming from the voice of many people is nonstop, the electricity produced will probably be consistent.

DISCUSSIONS

Based on the results we've collected from the different sources, Project GEN-LP has been proven effective as it generated electricity from noise detector and land piezo. This project can be a useful tool to help lessen the maximum capacity of noise and convert sound via electrical energy. This project is useful in places with high amount of vibration and sound produced like roads, trains, bus lines, or airports. Moreover, it'll be able to transport in the rural areas with no specific lining of electrical sources by transmitting through storage devices.

KEYWORDS: Land Piezo, LED, Non-renewable, Noise, Noise Detector, Soldering, Breadboard, Amplifier, Vibration, Sound

SUBMISSION ID: R04A-BINANC-0006

Strategic Intervention Materials for Enhancing Physical Science Instruction in Grade 12 at San Nicolas National High School

Kristine Annie D. De Roxas, San Nicolas National High School

Abstract

INTRODUCTION

Instructional and intervention materials in learning Physical Science reinforce the development of problem solving and critical thinking skills. However, teaching Physical Science lessons in Senior High Schools is a great challenge and needs lots of effort from the teachers. The access of student's Learning Module and Learning Guide was limited, and there was no module available for the students to help them in the teaching-learning process as prescribed by the curriculum. The formulation of Strategic Intervention Material would help students to think critically and develop their higher order thinking skills.

METHODS

The descriptive method of research was used with the questionnaire as the main data gathering instrument. In addition, the researcher used documentary analysis of the students' grades from Department of Education Promotional Report to determine the level of performance of senior high school students in Physical Science. Respondents were 50 Grade 12 students under TVL and HUMSS Track. Frequency, percentage, means, and weighted mean were the statistical tools applied to treat the gathered data.

RESULTS

Results of the study revealed that out of 50 Grade 12 students, 18 students had fairly satisfactory of performance in Physical Science. There were 13 students with satisfactory grades and 12 students had very satisfactory performance. Only 7 students were classified to have an outstanding level of performance in Physical Science. Most of the students had fairly satisfactory performance in Physical Science. Results also indicated that the levels of difficulty of Grade 12 students on the different learning competencies in Physical science were difficult. The students agreed to the different attitudes toward Physical Science that could affect their performance in the subject. Attitudes of the students toward the subject greatly affected students' performance in the different lessons.

DISCUSSIONS

The innovative and latest Strategic Intervention Materials (SIM) could enhance students' performance in Physical science. Determining the attitude of students toward the subject should also take into consideration as a factor of students' performance. Strategic Intervention Materials in learning Physical Science reinforced the development of problem solving and highlight the importance of science careers to society.

KEYWORDS: strategic intervention materials, level of performance of students, learning competencies, attitude

SUBMISSION ID: R04A-BATANP-0826

Test Submission

Albert Einstein

(Adviser: Janice Pauline Del Castillo)

Abstract

INTRODUCTION

Medical education researchers regularly develop excellent, evidence-based innovations. Often, these innovations are implemented, yet fail. In our program, we witnessed varying levels of success with an assessment innovation. In this study we explored the reasons for varying levels of success with an innovation that was solidly grounded in evidence and theory.

METHODS

A multiple methods design was used. Using a grounded theory approach, we conducted focus groups with Family Medicine residents. Thirty-two 1st and 2nd year residents across 5 different teaching sites responded to a set of semi-structured questions. An "implementation fidelity" (the degree to which the innovation in action resembles the innovation in theory) inventory was also conducted, with data collected through quantitative analysis of use of the innovation at individual teaching sites.

RESULTS

Many residents who participated in our focus groups perceived substantial problems with the assessment innovation, which stem predominantly from 1) technical issues with the web-based portfolio, and 2) varying levels of preceptor involvement. In some instances, where preceptors sounded highly involved, residents voiced satisfaction with the innovation. Value was seen for learning and for guided self-assessment in sites where implementation fidelity was highest. Sites where champions of the innovation could be identified showed highest implementation fidelity and highest degree of resident perception of learning benefits from the innovation. Frustration with technical clumsiness of the web-based interface was seen for all sites.

DISCUSSIONS

The results demonstrate the need for active preceptor involvement in any medical education innovation in order for the innovation to be effective. Learner-driven innovations will falter when preceptors do not take an active role in effective practice of innovations. Implementation fidelity was a constant factor in the success of the innovation.

KEYWORDS: Medical, education, researchers, regularly, develop, excellent, evidence-based, innovations

SUBMISSION ID: R012-KORONA-0000

The Effectiveness of Using Strategic Intervention Material (SIM) Entitled "VIBRA-ThING, HIGH! he-LOW!" in the Performance Level of Students in General Physics I

Myra Bayer, Department of Education

Abstract

INTRODUCTION

The aim of the study is to increase the level of performance of the students in teaching general physics I particularly on understanding factors that affect the change of sound using Strategic Intervention Material (SIM) entitled The Effectiveness of Using Strategic Intervention Material (SIM) Entitled "VIBRA-ThING String HIGH he-LOW!" in the Performance Level of Students in General Physics II. The findings of the study can help the teacher provide the pupils the needed support to make progress in studies, enrich their understanding of varied subject matters that sharpen their competencies which are not so much clear to the learners, and to help them gain mastery of the skills. Strategic Intervention Materials otherwise known as SIM is one of those tools that was introduced to serve the purpose. It is included on the list of those strategies that is being utilized to address the identified least learned competency.

METHODS

This action research used single group with pre-test and a post-test design in which the experimental group is exposed to the intervention material while control group is exposed to the traditional method. Both groups were given twenty (20) items teacher-made test. The scores on the pretest and posttest served as the basis in determining the effectiveness of intervention in increasing student's performance level.

RESULTS

The computed value in the use of intervention material (SIM) has higher MPS than the control group using the traditional method. The traditional method got 68.33 MPS while the experimental method got 87.00 MPS. The study revealed that there is a significant difference in the mean percentage score of the two classes as the experimental group got the higher performance compared to the control group. Thus, the use of SIM is proven to be more effective.

DISCUSSIONS

The research proved that the use of Strategic Intervention Material yields a better performance on students to master the competency-based skill and teachers should adopt it as a strategy or instructional material in teaching science lessons and can help them to re-teach the concept and enhance student's understanding.

KEYWORDS: Strategic Intervention Material, Intervention, Control Group, Experimental Group

SUBMISSION ID: R04A-LAGUNA-0252

Utilization of Gas Leak Detector Device in Increasing Awareness of Students on Gas Leak

Rico Llabres, Bula National High School
(Adviser: Jean J. Pesimo)

Abstract

INTRODUCTION

This study focused on the use of the Gas Leak Detector Device (GLDD) to lessen possible accidents that come from LPG and to bring awareness on gas leaks.

METHODS

The research made use of descriptive method. Gathered data were treated through weighted mean and percentage. Purposive sampling was used in selecting the respondents of the study which identified eighty (80) Senior High School Bread and Pastry Production students of Bula National High School enrolled in the school year 2018-2019. The researcher-made survey questionnaires and the Advanced Gas Leak Detector were used as the instruments of the study.

RESULTS

It was found that the GLDD was effective and highly accepted by the students. Thus, GLDD is a helpful device in promoting safety in the cooking laboratory room in Bula National High School

DISCUSSIONS

Teachers should conduct orientation to the students about safety precautions when using LPG with the use of GLDD. School administrators should encourage stakeholders in creating devices that will implement safety in the school. Other students and teachers should develop similar devices that would lessen risks of accidents caused by gas leaks.

KEYWORDS: Gas Leak Detector Device, Awareness, Students, Gas Leak

SUBMISSION ID: R005-CAMSUR-0083

POLITICAL SCIENCE

Correlation of Leadership Skills and Observance of Department of Education Core Values Indicators

Christine Joy Somera, SDO@DNHS
(Adviser: Jaybert Cabanero)

Abstract

INTRODUCTION

The school campus is a big home composed of many different families with different functions. Some are engaged in learning, some in teaching and research, and yet all are in support to leadership-unified through the Department of Education core values. This paper primarily sought to find the relationship between leadership skills and performance of student leaders.

METHODS

This study is a correlational study since it looked into the relationship of leadership skills to the performance of student leaders along the prescribed of the Department of Education core values indicators. The primary instrument used in the study is a structured questionnaire. The instrument was subjected to a pilot testing where a cronbach alpha of .851 was found. This indicates a very good description on its level of internal consistency. The researchers were utilized SSG Officers and classroom presidents from the Junior and Senior High School Department to represent student leaders in the school for the needed data.

RESULTS

Student leaders considered themselves as beginner in the field of leadership. This is evident on the leadership skills assessment where partially attained was reflected. However, under performance, there were three out of the four core values of the Department of Education indicated that student leaders fully observed all the indicators of Maka-diyos, Maka-tao, and Maka-kalikasan and partially observed the indicators of Maka- bansa. The correlation coefficient between leadership skills and performance of student leaders was statistically significant with $r = .718$ at .001 level of significance. Thus, strong positive relationship existed between leadership skills and performance of leaders. As the leadership skills of student goes higher, they observe good attributes, and as the leadership skills of student goes lower, they do not observe good attributes as indicated in the core values. This finding indicates that a student with good leadership skills is a good indicator that a student performs well in his duties and functions as leader. On the other hand, if students were trained and given with utmost attention unto their leadership development, their performance as a leader is a good indicator of how much they observe good attributes.

DISCUSSIONS

The results of the study show that there is still a need to be developed in the student development plan of student government body. It recommends increasing the exposure of students to leadership trainings as these directly affect the exercise of good attributes by a good student leader.

KEYWORDS: leadership skills, core values

SUBMISSION ID: R002-QUIRIN-0072

Level of Implementation of the Supreme Student Government Programs in the Public Secondary Schools in the Division of Imus, Department of Education Cavite: Input for the Improvement of the SSG Programs

Randy Pantaleon, INHS

Abstract

INTRODUCTION

Academics are not the “be all and end all” of education. Students need to be exposed to various engaging activities for them to become empowered and be able to manage and face realities of life. Getting involved with extra-curricular activities is another component of a well-rounded education outside the regular academic program. Correspondingly, to fully address the need of the students to develop under diverse learning environments, various programs and projects are introduced by the Department of Education and one of which Supreme Student Government organization that will serve as a vehicle for developing leadership skills. This study aimed to determine the Level of Implementation of the Supreme Student Government Programs in the Public Secondary Schools in the Division of Imus City, Department of Education Cavite: Input for the Improvement of SSG Programs.

METHODS

The study utilized the descriptive type research using the survey method. Frequency and percentage distribution, mean, and standard deviation were utilized for the descriptive presentation of the data and were gathered through the use of the questionnaire as the main data- gathering instrument.

RESULTS

There were 135 respondents. Of these, 70 were advisers or teachers in Social Studies, 65 of them are SSG Officers from Imus National High School, General Emilio Aguinaldo High School, General Lecirio Topacio National High School, and two Annexes Green Gate and Alapan. On the SSG Programs level of Implementation, the research resulted in the average mean of ($X=3.881$, $SD=0.768$), ($X=4.107$, $SD=0.807$), for both advisers and student leaders respectively. Objectives weighted average mean ($X=3.891$, $SD=.7205$), ($X=4.266$, $SD=.616$); quality of activities ($X=3.991$, $SD=.7243$); ($X=4.492$, $SD=.560$); leadership training ($X=3.877$, $SD=.7145$); ($X=4.329$, $SD=.6749$); values education program ($X=3.837$, $SD=.7337$); ($X=3.914$, $SD=.9267$); anti-drug abuse education program ($X=3.932$, $SD=.8164$); and brigade eskuwela ($X=3.854$, $SD=.8277$), ($X=3.99$, $SD=.948$).

DISCUSSIONS

On the correlation between the independent variables, only academic rank was found with significant correlation of .243 ($p \leq .05$) with the respect of objectives, ($r=.321$, $p \leq .05$) with the SSG Implementation of the anti-drug abuse education program, ($r=.321$, $p \leq .05$) with the level of SSG Implementation of the Brigada Eskuwela program, student leaders have a statistically significant relationship ($r=.276$, $p \leq .05$) with the level of SSG Implementation of the Brigada Eskuwela program.

KEYWORDS: Supreme Students Government, level of Implementation

SUBMISSION ID: R04A-IMUSC1-0106

The Local Government's Role in Local Economic Development through an Export-Oriented Industrialization Strategy

Michele Rocela, Amadeo National High School

Abstract

INTRODUCTION

The municipality of General Trias, Cavite, used to be an agricultural area, but now it is one of the most progressive municipalities in the province of Cavite. This economic growth was due to the Local Government Unit's (LGU) decision to adopt the Export-Oriented Industrialization (EOI) strategy by encouraging foreign investors to invest in the area through the establishment of the Special Economic Zones (SEZ) within the municipality. It is evident that the local government plays an important role in achieving the goal of this export-led strategy.

METHODS

The researcher used the descriptive method to determine the role of the local government in the local economic development through this EOI strategy. This is a case study of Barangay Javalera in the Municipality of General Trias, Cavite, adopting the EOI strategy with the Gateway Business Park's establishment year 1990 until year 2015.

RESULTS

There are PEZA-registered and Non-PEZA registered companies inside the Gateway Business Park. These companies are called Locators. When the GBP was introduced to the locality, a number of developments were experienced by the people in the barangay like road construction and several other services were improved.

DISCUSSIONS

Through the revenues granted from economic zones operations specifically those collected from the locators inside the GBP, numerous projects and programs were implemented by the LGU. Aside from these developments, the big role of the local government is to foster good relationship between the GBP locators and the local entrepreneurs as well as the people of the municipality. Likewise, the local government has its role in the local economic development. There were a number of programs that were established using the revenues granted from the economic zone operations.

KEYWORDS: export-oriented industrialization strategy, export processing zones, locators,

SUBMISSION ID: R04A-CAVITP-0011

PRIMARY AND SECONDARY SOURCES

Cabay NHS Industry Partner, Panaderia Bakery Asset Bridge to the Development of Cabay SHS Program

Francheska Marie G. Balanday, CBER
(Adviser: Anna Marie A. Ranillo)

Abstract

INTRODUCTION

This study sought to assess the process and development of the senior high school program for the succeeding year of the program from 2016 - 2018. The respondents were composed of 30 grade 11 and 12 TVL students from Cabay NHS. The program was utilized to create innovation and best practices among SHS Students.

METHODS

The descriptive method was utilized through the checklist questionnaire as the main instrument for gathering data. Meanwhile, the weighted mean was used as the statistical tools for analysis. Meanwhile, this research led to the presentation of the development of the program with the set categories; a. Home Economics Skills and Competencies, b. Cabay SHS Program c. Cabay SHS Laboratory Tools and Equipment d. Cabay SHS Industry Partner.

RESULTS

The Home Economics Skills and Competencies shows that they agree on bearing the improvement with 3.85 average weighted means, Cabay SHS Program development that showcases student's skills with 3.68 and aided by the SHS Industry Partner tightening the improvement of the program with 3.98 average weighted means. The summary of results with the average weighted mean 3.88 and based on the descriptive rating it is Highly Acceptable (HA). It indicates that the Cabay SHS Industry Partner is more convenient for the Senior High students than the SHS Laboratory Completion.

DISCUSSIONS

The result was an evaluation of the development of the program in Cabay National High School, Senior High School, Home Economics Strand. It was recognized that the survey pertained to only a limited sampling of Senior High students, and the interpretations could not be applied indiscriminately to the entire population. The innovation presented to increase the enrolment from 40 students (S.Y. 2016-2017) to 103 students (S. Y. 2018-2019) and really prepared for their curriculum exit.

KEYWORDS: TVL- Technical Vocational Livelihood Education

SUBMISSION ID: R04A-QUEZON-0048

PRIMARY CARE

NONI (*Morinda citrifolia*) as Organic Ointment Cream

Venice G. Jolipas & Denisse Andrea G. Jolipas, Department of Education -
Calamba City
(Adviser: Mirachel Batolena)

Abstract

INTRODUCTION

Wounds can be described as a loss of tissue integrity which is a result of pathological change or physical trauma. Deficiency of immunity and bacterial invasion, as well as poor treatment, is a significant problem of wound healing and it may be a cause of chronic wounds. Leaf is a part of the plant, Noni (*Morinda citrifolia* L.) is used to heal wounds or cuts. Many amazing health benefits of noni fruit juice are due to its therapeutic properties. For example, noni juice is an effective home remedy for gout. Noni juice has the ability to inhibit the xanthine oxidase enzymes. Noni fruit juice has healing power. It can be used to treat many inflammation conditions like arthritis.

METHODS

The noni raw materials are done through the simple process like drying, boiling and squeezing. The samples produced were then subjected to a different survey by respondent's assessments based on the level of acceptability on its appearance, odor, and effectiveness.

RESULTS

The data gathered were then analyzed using 5 Point Likert Scale. Results showed that noni organic ointment cream had a grand mean of 4.80 and with a qualitative description of "strongly liked" while commercially available ointment cream had a grand mean of 4.26 and with a qualitative description of "Liked". As the results indicated, it shows that noni organic ointment cream is highly accepted by the respondents in terms of appearance, effectiveness and aroma or odor. Respondents agreed and accepted the noni organic ointment cream as an alternative ointment cream. Thus, they will be using natural or organic cream.

DISCUSSIONS

The study focuses on the effectiveness of the noni leaves and fruit extract as a substitute medicine curing open wounds. In this manner, it is cheaper compared to the commercial one. Noni leaves and fruits extracts can be made into an ointment cream as a treatment for the wound. Noni fruit can be used as an organic and antiseptic ointment and it can help to heal wounds faster.

KEYWORDS: noni fruit, ointment cream, wounds, healing, alternative

SUBMISSION ID: R04A-CALAMB-0013

PROJECT MANAGEMENT

Alternative Power Generator System

Mendoza, John Michael, Montecer, Joker R., & Manongsong, Kimberly Ann A.,
Department of Education
(Adviser: Apolonio Villanueva)

Abstract

INTRODUCTION

Students in Senior High School in Malvar encountered different problems with regards to having an expensive amount of electric bill due to the different activities. Although the institution obtains a certain amount from Maintenance and Other Operating Expenses (MOOE) its budget can't suffice the different expenses in school. The preceding discussion prompted the researchers to design and construct an Alternative Power Generator System that will be a good help in conserving electricity, environmentally friendly and low-cost. The main objective of this study is to construct an Alternative Power Generator System for Senior High School in Malvar which is capable of producing electricity with the use of renewable energy. This aims to make a generator without the use of oils and gases, to test and evaluate the functionality of the generator. The project development was built into an environmental-friendly structure which allows in generating electricity without damaging its environment. Although it uses a motor cycle battery, it is not harmful to affect the environment.

METHODS

In order to make Alternative Power Generator System undertake the following stages: (1) designing, (2) estimating, (3) constructing or assembling and (4) testing and evaluating the product.

RESULTS

In the light of the significant findings revealed in the study that the design of the Alternative Power Generator System is effective and efficient, the total cost of the project was two thousand five hundred seventy pesos (â,±2570.00), the project was completed with easy to follow steps and with the use of simple tools and equipment and the project Alternative Power Generator System is functional and cost-effective.

DISCUSSIONS

The researchers formulated the following recommendations for the improvement and promotion of the product. First, use the Alternative Power Generator System as a source of electricity and model during a power interruption. Second, the system can be used as a teaching tool for the students concerning with the study of electricity and how the sunlight turns into electricity. Third, using an enlarged size of the different components is highly recommended to enhance the electrical capacity provided from the sun. The fourth number of the user should be limited depending on the capacity of the electricity produced from the sun. Lastly, charge the battery before using the generator to make sure it works efficiently.

KEYWORDS: power generator, solar panel, rechargeable energy

SUBMISSION ID: R04A-BATANP-2284

Automatic Solar Powered Lights

Jayson G. Aranilla, Jayvee M. Linga, & Erica O. Vanguardia, Department of
Education
(Adviser: Apolonio Villanueva)

Abstract

INTRODUCTION

The main objective of this study is to design and construct an Automatic Solar Powered Lights that can be used for households or building purposes and security as well on the same purpose. The purpose of it is to provide light every night with the same function that the solar-powered street light has. Specifically, the project development study aimed to design an Automatic Solar Powered Lights, estimate the cost of supplies and materials needed in the construction of the project, construct the project, and to test and evaluate the functionality of the completed project.

METHODS

The researchers made in-depth research until they finally came up with the idea about the project. The project was carefully designed, suggestions from experts were solicited, materials were bought, checked and tested, the project was constructed, evaluated and quality control measures were observed. The researchers used different materials and supplies to come up with the completed project. Different tools and equipment were also utilized. The process employed in the development of the project includes designing, estimating the cost of supplies and materials, constructing, and testing and evaluating procedures.

RESULTS

Based on the completed project the researchers found out that the design of the completed project was feasible. The needed supplies and materials were available in the local market. The process of construction and assembly is simple and practical, and the project passed the testing and evaluation measures. The researchers found out that the design of the project is well-designed and constructed in such a way that it can be used every night, the cost of the project has amounted to one thousand six hundred seventy-seven (Php 1677); the project is constructed and assembled properly with the use of locally available supplies and materials; and that the project passed the testing and evaluation measures.

DISCUSSIONS

From the mentioned conclusions, the researchers recommended that the project may be used for instructional, recreational, and other purposes; the project proper maintenance and operation should be observed, enhance the capacity of the battery to have a long life power, the project can more durable holder, this can be considered in making similar projects, and for the future researchers; it may be modified and be improved the functionality when making similar projects.

KEYWORDS: solar-powered lights, electricity, solar energy

SUBMISSION ID: R04A-BATANP-2286

Awareness, Acceptance and Congruence on the Vision, Mission, Goals, and Objectives of College of Arts and Sciences Programs in the Cavite State University

Josephine P. Manapsal, RPsy, Ph.D., Francisco Osorio National High School,
Renato T. Agdalpen, & Antonio V. Cinto, Cavite State University

Abstract

INTRODUCTION

This study determined the level of perceived awareness, acceptance, and congruence on the vision and mission of the Cavite State University to the Goals and Objectives of the College and Arts and Sciences (CAS) to its four Departments' objectives to maintain excellence in providing quality education.

METHODS

This study was conducted to the six (6) programs of the College of Arts and Sciences: 1. BA Mass Communication; 2. AB Political Science; 3. AB English; 4. BS Applied Mathematics; 5. BS Biology; and 6. BS Psychology. The respondents were grouped by the registration advisers. To objectively assess the group of respondents according to the six programs, stratified cluster sampling was used for students. However, complete enumeration was employed among the faculty members. For parents/ alumna and other stakeholders, snowball sampling was utilized. Self-made Survey Questionnaire and VMGO Awareness, Acceptance and Congruence Scale was used to gather information. Content validation of the instrument was consulted to the three experts.

RESULTS

The result revealed that there is a high level of awareness and understanding of the faculty, students, parents/alumna and other stakeholders on the University's vision as well as its perceived congruency, appreciation, agreement, participation and responsibility of College of Arts and Sciences goals and Departments' objective. The perceived most effective and appropriate medium of disseminating the VMGO were the teachers. The number one medium used to learn the VMGO by the student and faculty members are the bulletin boards while the least mediums are handbooks, catalogs, board resolutions, and the least in rank is the website.

DISCUSSIONS

The general strength of the VMGO is its stated platform for the university, the college, and the Department which the students are 67.9 percent while the faculty members are 60.5 percent. Meanwhile, 58.4 percent of the students and 51.9 percent among the faculty members gave the highest percentage in terms of the general weakness of the VMGO that it is not well advertised or lack of advertisement, while 1.9 percent students and 2.5 percent of faculty members do not appreciate the VMGO. It is highly evident that parents/ alumna and other stakeholders have attained a high level of awareness, acceptance, and understanding of the VMGO of the university.

KEYWORDS: AACUP, accreditation

SUBMISSION ID: R04A-CAVITP-0016

Eco Air Condition

Remetre, Rohan Mil M., Simangcas, Mavrick Floyd V., & Olan, Catherine P.,
Department of Education
(Adviser: Apolonio Villanueva)

Abstract

INTRODUCTION

The objective of this study is to design an Eco Air Conditioner for Senior High School in Malvar. This undertaking is focused on creating cheap and energy efficient air conditioner. Specifically, this aims to provide affordable ventilation product for low and middle wage earners. This also aims to estimate the cost of supplies and material needed in the construction of the project. It aims to test and evaluate the functionality of the completed project.

METHODS

In order to make Eco Air Conditioner the following stages were undertaken (1) designing, (2) estimating, (3) constructing or assembling and (4) testing and evaluating the product.

RESULTS

From the results of the test on the finished project and from the analysis of the gathered data for the Eco Air Conditioner it was found out that the project is well-designed and constructed in such a way that it can be used in an easy way and can be used inside or outside areas because the project can be used without direct plugging to the socket as long as the battery has charge. The supplies and materials purchased by the researchers for the completed project are nine hundred thirteen pesos (Php. 913.00). The Eco Air Conditioner was constructed and assembled with the use of locally available supplies and materials. The project passed testing and evaluation measures.

DISCUSSIONS

The researchers formulated the following recommendations for the improvement and promotion of the finished project. The researcher recommends the Eco Air Conditioner for indoor and outdoor use. It does not need to be directly plugged to a socket for as long as the battery has a charge. The Eco Air Conditioner could be used especially when the temperature is too high during summer. It should be covered with wallpaper for protection. A metal contraption should be built for the back part to hold the ice container for durability. Proper maintenance and operation should be observed to ensure the project functions and lasts. For future researchers, additional modification can be undertaken when conducting a similar project.

KEYWORDS: eco air conditioner, energy saving techniques

SUBMISSION ID: R04A-BATANP-2285

Solaris Umbra

John Mark L. Holgado, Emilou Fyne A. Antiporda, Catherine Mariz J. Haplit,
Department of Education
(Adviser: Apolonio Villanueva)

Abstract

INTRODUCTION

The main objective of this study is to design and construct a "Solaris Umbra" is an umbrella is capable of recharging mobile phones. The project is handy and suitable for outdoor activities providing an efficient tool for sun and rain cover as well as a source of electricity for your mobile phones. The project is beneficial to, but not limited for the traveler or outgoing individuals, it is also suited for students, teachers and other professionals, and is useful to almost everyone in the society.

METHODS

In order to make Solaris Umbra undertake the following stages: (1) designing, (2) estimating, (3) constructing or assembling and (4) testing and evaluating the product.

RESULTS

After the completion of the study, the following findings were drawn: (1) Solaris Umbra is an umbrella that can recharge mobile phones (2) the supplies and materials purchased cost one thousand and ninety pesos and twenty-five centavos (Php.1090.25), and (3) the project passed testing and evaluation measures.

DISCUSSIONS

The findings are as follows: (1) the Solaris Umbra and the design of the project is simple and operational, (2) the total cost of the project is one thousand and ninety pesos and twenty-five centavos (Php.1090.25), (3) the project was constructed and assembled by applying the step by step procedure with the help of the necessary tools and equipment, and (4) the Solaris Umbra is functional.

The research generated the following recommendations: (1) the Solaris Umbra is best used during sunny days, however, it can still be utilized during rainy season, (2) the project may also be equipped with an on and off switch for easier usage and storage, (3) the umbrella to be used can vary in size, shape and color without direct effect to the functionality of the project, (4) the furniture may also be equipped with battery for storing energy when not used for recharging, and (5) future researchers can put additional modification can be undertaken when conducting similar project.

KEYWORDS: Solari's umbra, solar panel

SUBMISSION ID: R04A-BATANP-2288

PSYCHOLOGY

A Phenomenological Study of the Lived Experiences of Psychology Graduates in their First Interview with a Patient with Mental Illness

Kirsten Kyle Pones, Trece Martires City Senior High School

Abstract

INTRODUCTION

In this study, the researchers explored the lived experiences of Psychology graduates in their first interview with a patient with mental illness. This study also aimed to know the challenges of Psychology graduates in their first interview to a patient with mental illness, to determine how they face the challenges they have experienced, and to determine how the challenges help them to stay in their current job.

METHODS

The researchers used a phenomenological method of research. Three (3) respondents of the study who were classified as Psychology graduates were selected by the used of snowball sampling. The phenomenological research study was performed by giving a set of open-ended questions about their experiences and yielded qualitative data that was analyzed from an interpretative viewpoint. The data was transcribed, interpreted, and encoded using Thematic Analysis by Braun and Clarke (2006).

RESULTS

This study aimed to determine the lived experiences of Psychology graduates in their first interview with a patient with mental illness. Based on the response of the three (3) respondents, the researchers found out that attitudinal problem of the patient and trust issues of the interviewer are the challenges that Psychology graduates experienced during their first interview to a patient with mental illness. Furthermore, they faced those challenges by developing their self-encouragement, holistic perspective, and sympathy towards the patient's feelings. Also, the challenges they have experienced helped them stay in their current job as it helped them improve their interpersonal skills.

DISCUSSIONS

The results demonstrated the different experiences of Psychology graduates in their first interview with a patient with mental illness. It also showed that they developed self-encouragement, holistic perspective, and sympathy towards the patient's feelings as they experienced challenges in interviewing a patient with mental illness.

KEYWORDS: Psychology graduates, interview, patient, mental illness

SUBMISSION ID: R04A-CAVITP-0620

A Phenomenological Study on the Experiences of High School Students in Dealing with Stage Fright

Patricia Mae Tandas

Abstract

INTRODUCTION

Many people have severe anxiety when it comes to performing and standing in front of the crowd, especially among high school students. In this case, it leads people to become physically, emotionally and mentally affected. Most studies emphasize on the stage fright among musicians. However, this study focuses on stage fright among students. This study aims to describe the experiences of high school students in dealing with stage fright.

METHODS

This study used phenomenology under the qualitative design. A semi-structured interview was conducted among three (3) male and (5) female who were chosen through purposive sampling technique. They were selected according to the following criteria: a) dealing with stage fright, b) aged 12-17 years old, c) studying at Trece Martires City National High School; d) willing to participate in the study. A request letter was submitted to the Principal in order to conduct the interview among the students. Also, the participants were given a copy of informed consent and were informed that the interview will be recorded. After the interview, the researchers asked the participants to read and checked the correctness of their answers. Upon validation, coding was done and the highlighted answers were thematically analyzed.

RESULTS

The findings of the study revealed that the participants deal with stage fright by taking a deep breath, counting, studying for a couple of time, and smiling. It was also found out that stage fright caused them to obtain lower grades, lessen their self-confidence, fear of talking again in front of an audience, and feeling of nervousness whenever they are about to speak in front.

DISCUSSIONS

The results showed that dealing with stage fright brings negative and untoward experiences to the participants. They lost focus and unable to deliver well in front of an audience. Their academic performance is also negatively affected by this phenomenon which in turn, also impact their view of themselves. Lastly, the participants try to handle their stage fright in varied positive ways.

KEYWORDS: fright, anxiety, self-confidence

SUBMISSION ID: R04A-CAVITP-1024

A Teachers' Journey: Phenomenological Study on the Punitive Behavioral Standard of Students with Broken Family

Nova Ariston & Edith Delos Santos, Pililla National High School

Abstract

INTRODUCTION

Family plays a crucial role in molding students' personality. There as much as devastating matters regarding family relationships like parent's separation, family problems, and misunderstanding within the family members leading to broken families which resulted in students' misbehavior. Thompson (2009), stated that students' misbehavior not only escalated the time but also lowered academic achievement. Christensen et. al (2008), cited, dramatic occurrences of school violence in the past have greatly enhanced the public's awareness of school safety and discipline. Through this, the researchers prompted to identify the positive behavioral standard of students with a broken family and determine the positive behavior support that Pililla National High School could give by promoting a positive school environment.

METHODS

Purposive sampling technique was used that comprised 34 students with a broken family at Pililla National High School. Mix method of research was utilized by using researchers' made questionnaire which includes the profile of the respondents as Part I, the quantitative data, which frequency, percentage and rank distribution was used and behavioral standards and belonging of the respondents in Part II, the qualitative data, which solicits the authentic descriptive responses of the students.

RESULTS

Majority of the respondents are female, aged 15-19, and belong to the lower-class household. There are two positive behavioral standards and belonging; first was students' behavioral breakdown; the students experienced behavioral bumps like bad temper, moody, rebellious, feelings of sadness, irritable or snappy, worrying about little things, feeling lazy, bored, tired, sleep disturbances, nightmares, sleeping at all times or no sleep at all. The second was a positive behavioral breakthrough; the respondents displayed strong social interaction and influenced by positive values that possess a positive outlook in life.

DISCUSSIONS

The positive behavioral breakthrough of the respondents can help the students at risk of dropping out (SARDO) caused by a broken family. Through these findings, the researchers draw the Students Attitudinal Grade Intervention Program (project SAGIP) intended for the students at risk of dropping out which includes comprehensive intervention that elaborates individual students' positive behavior. This program might develop a safe zone environment among schools and the community as well.

KEYWORDS: Punitive Behavioral Standards, Behavioral Standards and Belonging, Phenomenological Approach, Broken Family

SUBMISSION ID: R04A-RIZALP-0103

Altruistic Behavior among Senior High School Students of St. Bridget College

Daphie Mae R. Kaping, Ma. Cindy P. Gozalvo, & Angela S. Leynes
(Adviser: Lander Joseph Ilagan)

Abstract

INTRODUCTION

The focus of teaching in Catholic schools reflects the teachings of Jesus Christ. Students acquire selfless act in the community through the value of acts of service. In this study, the researchers intend to determine the relationship between altruism and acts of service to people and society.

METHODS

Descriptive research was used. An adapted questionnaire on altruistic behavior was administered to senior high school students of St. Bridget College. All data gathered were analyzed using descriptive statistics.

RESULTS

Results show that students very often contributed money for a worthy cause, and strongly agree with demonstrating empathy, attitude towards helping others, and altruism. Students of Catholic education know the value of altruism and acts of service.

DISCUSSIONS

Results indicate that students possess pro-social behavior characterized by the initiative to benefit others without expecting anything. Students choose to help driven by the desire to assist others. Catholic education may continue to cultivate a culture of sharing and caring to foster the values of being Christians.

KEYWORDS: altruism, behavior, Catholic education

SUBMISSION ID: R04A-BATANC-0455

Awareness on the Behavioral Effects of Psychoactive Drugs and the Emotional Attitude of Grade 11 Students Towards Drug Addiction

Rachel Aiza C. Calamro, Francisco Osorio National High School

Abstract

INTRODUCTION

This study aimed to determine the relationship of awareness on the behavioral effects of psychoactive drugs and the emotional attitude of Grade 11 students towards drug addiction.

METHODS

This research is a quantitative research design using two sets of questionnaires to measure the level of awareness on the behavioral effects of psychoactive drugs and their attitude towards the use of drugs in a five-point Likert scale. The emotional attitude scale was pilot tested to 150 students with a Cronbach alpha of 0.95 which means that the items are excellent and reliable.

RESULTS

The 72 Grade 11 students are strongly aware of the behavioral effects of psychoactive drugs with a weighted mean of 3.53. They are also highly emotionally affected by people using drugs with a mean of 3.63. Their awareness of psychoactive drugs and their emotional attitude towards drug addiction has a significant weak correlation of 0.461 at p-level of .001. Thus, the null hypothesis was rejected.

DISCUSSIONS

It can be noted that the higher the awareness of students in the behavioral effects of psychoactive drugs, their emotional attitude towards the people using drugs tend to be negative. Meanwhile, as stated by Sao (2009), the meta-analysis results show that awareness has had little effect on attitude. Results from the assessment of different programs, which include curricular classes, have shown significant immediate improvement, not only in knowledge but also in drug use patterns.

KEYWORDS: negative attitude, psychoactive drug

SUBMISSION ID: R04A-CAVITP-0406

Barbie in the Box: A Phenomenological Study on Identity Closeting of Male Homosexuals

Christianne M. Guinday & Mariah B. Navarro

Abstract

INTRODUCTION

According to Butler (1991), the process of coming out does not free gay people from oppression. Rejected LGBT youths generally do not learn how to build a relationship with peers or families (Cole 2007). In addition, LGBT youths are both verbally and physically abused by parents ("Today's Gay Youth", n.d.). Previous research in this field has focused on "coming out" of closeted gays and their coping mechanisms. A significant number of studies confirmed family plays a big part in the identity development of LGBT youths (Cass, 1979 as cited in Morrow, 2004). In relation to this, the researcher investigated the lived experiences of homosexual men while hiding their identities from their families to add to the growing number of literatures to this prevalent phenomenon.

METHODS

In this qualitative phenomenological approach, in-depth interview was used to gather data. Seven homosexual men were chosen as the participants using purposive sampling technique. A letter of consent was given to the participants and their permission was also sought for the recording of the interview. Then, each participant was interviewed personally; the interview was purely a conversational style which allowed the researcher to gather precise details in depth from the participants. Interviews were then transcribed, and the transcripts were given back to the participants for validity. Lastly, coding was done and data were thematically analyzed.

RESULTS

Findings revealed that male homosexuals hide their true gender orientation from their family because of the fear of being neglected. It was also found out that the participants have similar strategies in hiding their true identity from their family. The themes that emerged are 1) having two or more social media accounts, 2) dress codes, 3) having male friends, and 4) using a normal male-like voice at home. Also revealed from the study, the participants feel pain whenever they are neglected, criticized and unsupported by their own families.

DISCUSSIONS

Male homosexuals use varied and similar strategies to keep their true identities from their families. They try to stay in the closet because of fear of not being accepted by their loved ones. A broader point of view from the participants demonstrate the need for acceptance and understanding from their own family members so they would not hide their being homosexuals. Generally, closeting brings negative experiences to male homosexuals.

KEYWORDS: Lived experiences, male homosexuals, closeting, family

SUBMISSION ID: R04A-CAVITP-0871

Common Smart Shaming Phrases: An Analysis of Origin and Causes

Cheza Cantonjos, Student
(Adviser: Zaldy Jazareno)

Abstract

INTRODUCTION

Thoughtful, intelligent, and insightful ideas or statements are a contribution to the body of knowledge, they are considered as vital factors for a conversation and intellectual exchange of ideas to thrive. Educating as they are, these intelligent agreements are sometimes bluffed by limiting blow to the intellect which is technically referred to as smart shaming. In this study, the researchers came up with an exclusive based comprehensive analysis of the grassroots of smart shaming and its effect on society.

METHODS

The method used is intended for gathering, analyzing and interpreting data from 25 out of 890 students across areas of concentration. From a total population of 890 students, 25 were randomly selected to answer the survey questionnaire.

RESULTS

Students who responded to the questionnaire believed that social media and other information platforms are the primary sources responsible for their acquisition of the common smart shaming phrases used in their daily conversation. These smart shaming phrases were used either as a joke or a form of sarcasm. 92% of the respondents confirmed that they are victims of smart shaming. Although smart shaming has not affected their academic performance, it has negatively affected their self-esteem.

DISCUSSIONS

Blows to the intellect, may it be for humorous purposes or a form of sarcasm impedes the flow of intellectual arguments the study revealed negative effects to the self-esteem of students and a halt to the flow of information vital to achieving understanding. It is of great influence that institution conduct an in-depth orientation on smart shaming issues and concerns focusing on the causes, effects, and interventions to support intellectual arguments and eventually eradicate smart shaming.

KEYWORDS: smart shaming, intellectual argument

SUBMISSION ID: R005-SORSOP-0031

Coping Strategies and Adjustments of Teenage Mothers Before and After Giving Birth: A Phenomenological Study

Monico Sam M. Banico & Kenneth Andrew M. Manaig

Abstract

INTRODUCTION

Teenage Pregnancy is a major cause of concern in the 21st century that involves teen mothers who did not undergo maturity in terms of their physical and psychological aspect. These mothers are the ones who experienced changes from adolescent period towards motherhood. This transition is a significant event for them (Salvador, 2016). The sense of responsibility of these teen mothers is tested during and after their pregnancy. Most studies emphasized on the causes and effects of pregnancy of teen mothers specifically their prevention. However, this study focuses on the coping strategies and adjustments of teen mothers.

METHODS

This study used phenomenology under the qualitative design. A semi-structured interview was conducted among six teenage mothers who were chosen through a snowball sampling technique. They were selected according to the following criteria: a) female, b) aged 10-19 years old, c) has a child/ child, d) she has the custody of the child; e) willing to participate in the study (Manalang et. al, 2015). The thematic analysis was used in the study that involves the collection of data, coding of data, code validation, and identification of themes and finalizing the consolidated information (Boyatzis, 1998).

RESULTS

Results show that teenage mothers' coping strategies before giving birth are: (1) resiliency against societal forces, (2) optimism, and 3) being excited about seeing her child. After giving birth, the themes that formed are: 1) time management, (2) increased financial support of family, (3) balanced livelihood of both families, (4) optimism towards raising their child, and (6) focusing on their new-born. Teen mothers overcome their challenges through various efforts by numerous institutions such as family, school, and friends.

DISCUSSIONS

Teen mothers cope and adjust positively in spite of being in a situation they are not yet ready to face. Overall, teen mothers prioritize the welfare of their child more rather than themselves. The significant difference between their pregnancy and giving birth is that the effect of the phenomena translates these teen mothers to proper motherhood.

KEYWORDS: coping, management, teen mothers, motherhood

SUBMISSION ID: R04A-CAVITP-0877

Correlation between Stress Level and Patience Level of Students

Donna Mae Delfin, Marian Esteva, Angelica Macinas, & Jobell Mangune, Munting
ILog NHS
(Adviser: Noel Anciado)

Abstract

INTRODUCTION

Stress is something that almost every person experience especially the students in dealing with their everyday responsibilities such as subject-related, teacher-related, classmate-related, schedule-related, classroom-related, and financial-related tasks. According to some studies, patience which includes self-control, anger management, and situation acceptance has something to do with stress in the sense that it helps them (people) handle the stress they encounter.

METHODS

This study utilized descriptive research design using adapted questionnaires to describe the characteristics of the students at one point in time in terms of their vulnerability and vigor in facing various tasks and expectations of the people around them.

RESULTS

The study found out that the stress level of students is 3.16 which is described as moderate. This means that the students sometimes feel anxious because of different reasons. Among the kinds of stressors, they encounter, a subject-related, teacher-related, classmate-related are the top sources of their stress. In terms of the level of patience, they obtained the mean score of 3.44 which is described as moderate. This means that the students can sometimes moderately control themselves, manage their anger, and accept the situation. The computed Pearson r of the correlation between student stress and patience level is 0.171886 shows a positive low correlation between the two variables. The correlation of stress and patience level is negligible correlation which means that there is no significant relationship between the stress and patience level of the students.

DISCUSSIONS

The results show the need to assist, orient, and equip the students through various symposia or orientations to help them dealing with various forms of stressors whether internal or external factors. Although, the results show that they just moderately experience this problem but the high percentage of the subject and teacher related stressors are noteworthy to explore.

KEYWORDS: Students' Stress, Students Patience

SUBMISSION ID: R04A-CAVITP-0473

Depression, Anxiety, and Stress (DAS), Coping Styles and Teaching Engagement of Tagaytay City Secondary Public School Teachers

April Rose Segumalian, Department of Education

Abstract

INTRODUCTION

Due to insufficiency of empirical studies on the level of depression, anxiety, and stress (DAS) experienced in the public schools, this study wants to have empirical evidence on the emotional states level of public-school teachers, their coping styles and level of teaching engagement. Determination of these variables may prevent the overexposure of the teaching force from DAS and from other disorders that may affect their efficiency as teachers and persons as well.

METHODS

A descriptive- correlational design was used in the study. The participants of the study were the selected 142 public secondary teachers of Tagaytay City during the school year 2015- 2016. They were chosen using stratified random sampling. The instruments used in the study were Depression, Anxiety, and Stress Scale (DASS- 21); Modified Coping Inventory for Stressful Situations; and the Engaged Teacher Scale.

RESULTS

It was found out that there was a significant relationship with depression and with the four factors of teaching engagement. In terms of anxiety, there's also a significant relationship specifically with cognitive engagement and colleague's social engagement. Lastly, the stress level of the participants has a significant relationship with the four factors of teaching engagement. It was also noted that there is a significant relationship between coping styles and teaching engagement. The coping style, in general, was found to be significant with cognitive, emotional, and colleagues' social engagement.

DISCUSSIONS

DAS has a significant relationship with teaching engagement. The higher the DAS level, the less likely they'll become engaged in their teaching. Coping styles and teaching engagement have a significant relationship with one another. The coping styles affect their teaching engagement in terms of cognitive, emotional, and colleagues' social engagement. It is therefore recommended that teachers may explore the best coping style that suits their personality that they can use in lessening their DAS level. School principals may also provide their teachers with activities that can lessen their DAS level. Research focusing on finding the causes of DAS of Tagaytay City public secondary school teachers may be conducted. It is also recommended that the same research with participants from low land areas in Cavite may be conducted. And lastly, a study focusing on the relationship between DAS coping styles and teaching engagement in the elementary level is highly encouraged.

KEYWORDS: Depression, Anxiety, Stress, Coping Style, Teaching Engagement

SUBMISSION ID: R04A-CAVITP-0187

Effects of Psychosocial Development on the Decision Making of the 21st Century Learners

Christian Tejerasas, Tanauan City Integrated High School

Abstract

INTRODUCTION

Decision making is complex and subject to multiple influences and especially true with major life decisions. In this study, I explored the life decisions of the 21st-century learners when it comes to their career choice, their moral, and in choosing a partner, also include the factors that affect these decisions.

METHODS

Random sampling was used to select the 200 respondents from grades 7 to 10 and employed the correlation type of descriptive research. A self-constructed questionnaire for the factors in psychosocial development which went through content validation and the Big Five Personality Test to explain their personality was used. Regression analysis was used to examine the relationship between these variables.

RESULTS

The study found out that the effects of psychosocial development on the decision making of the respondents in moral values revealed that media (.000), conscientiousness type of personality (.027) and grade point average (.029), the learners are aware (means), goal-driven and focus on studies; The decision making of the respondents in career choice revealed that media (.000), grade point average (.000), and openness to experience type of personality (.001) and the learners are aware (means), focus on studies and high in intellect. The decision making of the respondents in choosing a partner revealed that media (.000), and agreeableness type of personality (.039) and the 21st-century learners are aware (means), and value getting along with others. Regression analyses revealed that the respondents' decision making in moral values, career choice and choosing a partner are affected by the media. Agreeableness, openness to experience and conscientiousness are the personality type that greatly affects the respondents' decision making.

DISCUSSIONS

The effects of psychosocial development on the decision making of the 21st-century learners revealed the significant relationship. Based on the findings of the study, it is concluded that there is no significant relationship between the respondents' decision-making variables as to respondents' profile. There is a significant relationship between the respondents' moral values decision making and media factors, conscientiousness, and grade point average. There is a significant relationship between the respondents' career choice decision making and media factors, grade point average, and openness to experience. There is a significant relationship between the respondents' choosing a partner decision making and media factors, and agreeableness.

KEYWORDS: psychosocial development, decision making, career choice, moral, choosing a partner

SUBMISSION ID: R04A-TANAUA-0013

The Efficiency of Establishing Enrolment to Employment System for Senior High School Students of Palahanan National High School

Camelle Magpantay
(Adviser: Eric Hernandez)

Abstract

INTRODUCTION

Enrolment to Employment System (E2E) is an approach developed and established by STI Colleges to help students get applicable education, job preparedness, and job placement assistance. As the K-12 curriculum promises a job to students after Senior High, this study aims to know how efficient the E2E system is and how it will benefit them if adopted by public schools.

METHODS

A multiple methods design was used. Using a Descriptive Design, the researchers conducted an online survey. Forty-four STI alumni responded to a set of structured questions. Collected data were then used in getting the quantitative analysis.

RESULTS

Many respondents who participated in the study perceived E2E system as beneficial in getting a job of students aligned to their courses, and when innovated, is good to be established in public schools. It will also be very helpful to them especially those who will not be able to go to college. The K to 12 programs will be acknowledged by parents and other stakeholders who may boost trust among schools. Hence, having Job Assistance Services in public high schools will prevent students in becoming bystanders and will not be added to the unemployment rate that could be great in stabilizing society.

DISCUSSIONS

The results demonstrate the need for E2E system in public schools to prepare and help students land a job faster. Being a societal concern, the government and other organization should support and encourage schools in establishing E2E system and investing in it.

KEYWORDS: E2E, job assistance services, innovation

SUBMISSION ID: R04A-BATANP-0303

Embracing Change: Adapting to the Senior High School Working Environment

Marjualita Theresa Malapo, Camp Vicente Lim Integrated School

Abstract

INTRODUCTION

With the implementation of the Senior High School Program, additional teachers were hired. These teachers come from different work environments, hence, as they transfer to the public Senior High Schools, they have been experiencing inevitable career changes which required their adjustment so that they would be able to perform what is expected of them. Given such a situation, this study determined the relationship of change readiness to the work adjustment of the public Senior High School Teachers in Calamba City. Specifically, it determined the previous work experience of the respondents, as well as their change readiness and work adjustment. It also sought a significant difference in their change readiness and work adjustment when they were grouped according to their previous work environment.

METHODS

This study utilized quantitative research using the descriptive correlational method. Data were gathered through a standardized test, the Change Readiness Scale, and the modified National Competency-Based Teacher Standards Tool. These were administered to 74 teachers in the 12 public Senior High Schools in Calamba City. The data collected were tallied, analyzed, and interpreted. Moreover, the researcher consulted a statistics expert for the treatment of the gathered information.

RESULTS

Most of the Senior High School teachers are former junior high school teachers. There was no significant difference in the change readiness indicators such as resourcefulness, optimism, adventurousness, drive, adaptability, confidence, and tolerance for ambiguity, as well as the work adjustment of the respondents when they were grouped according to their previous work experience. As regards the significant relationship between change readiness and work adjustment, the change readiness indicators such as optimism, adventurousness, drive, adaptability, and tolerance for ambiguity have no significant relationship with the work adjustment of the respondents, while their resourcefulness and confidence relate significantly with their work adjustment.

DISCUSSIONS

The results revealed the need for an intervention program to facilitate the Senior High School Teachers' readiness particularly on areas of resourcefulness and confidence to ensure their work adjustment. The same program may also be used to ensure their readiness to possible changes that they may experience as the Senior High School program progresses in the future.

KEYWORDS: change, work adjustment, senior high school teachers

SUBMISSION ID: R04A-CALAMB-0230

Emotional Intelligence and Personality Traits of the Grade 12-Senior High Students of Canossa College, San Pablo City

Allysa Nicole Dipasupil & Hannah Patricia Pible, Psychology Club-Canossa San Pablo

(Adviser: Norayda Dimaculangan)

Abstract

INTRODUCTION

The implications of growing up in a technological environment have shown dramatic shifts in youth behaviors, attitudes, and lifestyles of the post-Millennials. Hence, it is noteworthy to assess the correlation between emotional intelligence and personality traits among Grade 12 Senior High School Students at Canossa College, San Pablo City.

METHODS

The correlational research design was employed to explore the relationship between emotional intelligence and personality traits of 124 Senior High School students from Canossa San Pablo. A standardized two self-report questionnaires: The Trait Emotional Intelligence Questionnaire (TEIQue) - Short Form and The Big Five Personality Traits Inventory was used while Pearson Correlation Coefficient (Pearson R) was administered to measure the strength between variables and its relationships.

RESULTS

Majority of the respondents are female (52.42%), belonging to age bracket eighteen years old and above (41.13%), with Average Emotional Intelligence Level (98.83%), inferring that they can validly reason and enhance their thoughts. Findings are: a) Majority of the respondents are female belonging to ages 18 and above with an average level of emotional intelligence; b) There is a weak positive correlation between emotional intelligence and Conscientiousness and Agreeableness; c) There is weak negative correlation between Emotional Intelligence and Extraversion; d) There is a strong negative correlation between Emotional Intelligence and Openness to Experience; e) There is no correlation between Emotional Intelligence and Neuroticism.

DISCUSSIONS

Ninety-eight percent of the respondents belonged to the Average Level of Emotional Intelligence, implying that they are emotionally stable. Results indicate a weak positive correlation ($r=0.20$ and 0.05 respectively) between Emotional Intelligence and Conscientiousness and Agreeableness, which means that feeling of empathy is present. On the other hand, there is a weak negative correlation ($r=-0.07$) between emotional intelligence and extraversion and a strong negative correlation ($r=-0.12$) with Openness to Experience. This suggests that the level of emotional intelligence is not a factor in being sociable nor being open-minded of a person. Lastly, there is no correlation between emotional intelligence and Neuroticism. It denotes that negative feelings do not depend on the level of emotional intelligence of an individual.

KEYWORDS: Emotional Intelligence; Personality Traits; Trait Emotional Intelligence Questionnaire-Short Form (Teique-Sf); The Big Five Personality Traits

SUBMISSION ID: R04A-SANPAB-0014

Factors Contributing to the Sleeping Patterns of Senior High School Students in St. Bridget College

John Gabriel G. Martinez, Krizia Marie A. Mendoza, & Bianca Denisse M. Hernandez

(Adviser: Lander Joseph Ilagan)

Abstract

INTRODUCTION

Sleeping is a vital function of the human body since it allows the body to rest, heal and regenerate the body's damaged cells. Senior high school students need an appropriate amount of sleep for their body to function properly. In this study, the researchers intend to identify the sleeping patterns of students and evaluate the influencing biopsychosocial factors.

METHODS

A descriptive study was used. An adapted questionnaire was administered to senior high school students of St. Bridget College. All data were analyzed using descriptive statistics.

RESULTS

Results show that students very often experience biphasic sleep characterized by 5-6-hour sleep at night and a nap during the day. Psychological and Social factors influence the sleeping patterns of students.

DISCUSSIONS

Results indicate that stress, sadness, anxiety and lack of time management affect the sleep of students. Students tend to sleep below the required number of the hour for sleeping. Use of social media applications plays part in the pattern of sleeping among students.

KEYWORDS: sleeping patterns, sleep, biopsychosocial factors

SUBMISSION ID: R04A-BATANC-0465

Game Changer: A Phenomenological Study on Experiences of Female Obese Teenagers Who Underwent Extensive Diet and Exercise

Gabrielle Ann Fabito & Andrea L. Brillantes, Trece Martires City Senior High School

Abstract

INTRODUCTION

Cases of obesity and overweight are truly alarming as it indicates many consequences, especially to teenagers nowadays. In the inevitable inclination of the prevalence of obesity, there is a limitation of current efforts to control and reduce obesity rate, not only globally but here in the Philippines specifically. A study suggested by Jasul & Sy (2011), there is still a need to conduct a study on the experiences of female obese teenagers. Conducting this kind of study in the Philippines would be additional literature on this field I describing the experiences of female obese teenagers who underwent extensive workout and diet.

METHODS

Qualitative phenomenology was used in the study. Six female obese teenagers with a Body Mass Index of 30 to 40 who underwent extensive diet and exercise age thirteen to nineteen (13-19) years old were purposively selected as participants of the study. A semi-structured interview was individually conducted. The study was guided by the Interpretative Phenomenological Analysis (IPA). It includes reading, re-reading of transcribed interviews, coding, developing of themes, and finding comparisons and or connections between emerged themes.

RESULTS

After the analysis of data, the participants' experiences were: (1) struggles on exercise/ workout, (2) struggles on dieting, (3) disappointment for not getting the desired outcome in a short period of time, (4) disincentives while undergoing extensive diet and exercise, (5) self-motivation, (6) burn out due to extensive exercise, and (7) weight loss and healthy body.

DISCUSSIONS

Undergoing an extensive diet and exercise is difficult. Moreover, doing exercise and diet, in the beginning, is easy, but after several months the participants already feel worn out and disincentive. But through self-motivation and self-discipline, they were able to endure hardships and struggles. In general, through extensive diet and exercise female obese teenager succeed in achieving their goal which is to lose weight and normalize their Body Mass Index (BMI)

KEYWORDS: Female Obese Teenager, Diet, Exercise, Work-out

SUBMISSION ID: R04A-CAVITP-1048

Impact of Interpersonal Activities in Developing Skills of Magdalena Integrated National High School Grade 11 Students

Melissa Tuazon

Abstract

INTRODUCTION

Every student has the fear of speaking up to join the discussion especially when English is being used. To speak up, especially when the required language is English. Most of the students are afraid of standing in front of the class. Some feared to have a stand and fight for it because they are afraid of expressing themselves. There are students feared in explaining because they don't have the courage feel so uneasy, uncomfortable, and conscious using the language that they are not used with. This also affects their self-esteem.

METHODS

This action research is a descriptive method of research to investigate the influence of interpersonal activities to low self-esteem students. Students' examination results and communication skills were used to gain insight, into the impact of interpersonal activities. Interpersonal activities can help unconfident students to overcome their fears. Mostly, students keep their mouth shut during interaction with their teachers. They are afraid to share and speak out their answers and thoughts.

RESULTS

Students show improvements based on how they act during class discussion. Students are now more confident compared before the interpersonal activity conducted. Sometimes there are still students who are shy that needs the continuous conducting of the interpersonal activity. Discussions become more active because of the improved students. In support of that, Grade II students who joined different activities are now increasing. A positive result doesn't mean that we have to stop the activities that help them to improve, instead, we have to improve the research for it to adapt to its objective.

DISCUSSIONS

According to Dr. Kenneth Shore - psychologist and chair of child team for the Hamilton New Jersey Public Schools, the challenge in working with children with low self-esteem is to restore their belief in themselves, so they can persevere in the face of academic challenges.

Praise the student in a specific and genuine way Show the student tangible evidence of progress Showcase for accomplishments

Help the student feel important in class

Engage the student in conversation about her interests Help the student deal with adversity.

Encourage a sense of belonging

Inform parents of their child's successes

KEYWORDS: Interpersonal, Developing Skills, Descriptive Method

SUBMISSION ID: R04A-LAGUNA-0267

Implementation of Developmental Programs in Barangay

Richard Marbella
(Adviser: Zaldy Jazareno)

Abstract

INTRODUCTION

The Philippines is an archipelago that comprises 42,044 barangays known as the smallest political unit and the most basic one. Barangay plays an important role in the various socio-economic development of the country. Hence, it is vital that the programs of the government laid down in the barangay level be monitored and evaluated on the extent of program implementation because there are only a handful number of barangays conducting the evaluation. In this study, the researchers attempted to investigate the implementation of developmental programs of the government in the barangay level.

METHODS

This study was an attempt to investigate the implementation of the developmental programs of the identified barangay under study. Descriptive evaluative was the method employed. The barangay under study was composed of 2559 residents. However, the respondents 34 youths and 62 adults were randomly selected from the seven zones of the barangay and were given with the evaluation form to evaluate the different developmental programs implemented. The basis for evaluating the programs was based on the objectives and key results area.

RESULTS

The findings showed that the barangay under study focused on implementing programs like feeding of children which were conducted in the elementary school, clean up drive - a drive that motivates the residents to adopt a clean environment, renovation of Day Care Center, construction of multipurpose hall - wherein important meetings or assembly in the community can be held, and construction of pathways. The most frequently implemented program or activity was the clean-up drive. However, the least implemented project is the construction of the pathways because of the geographical location.

DISCUSSIONS

The results demonstrate the demand for proper monitoring of the priority and other significant programs and projects in the barangay. The results showed also that other important aspects are neglected such as a program to address the need of senior citizens, of women, for medical and dental health.

KEYWORDS: developmental program

SUBMISSION ID: R005-SORSOP-0030

Implementation of Guidance Program and Services and Teacher-Counselor Competencies: Impact to Grade 10 Students' Personality Development

Mary Anne Alipao, LSPU Alumni Association

Abstract

INTRODUCTION

The study was undertaken to find out the relationship of Guidance Program and Services and Teacher-Counselor Competencies to Grade 10 students' Personality Development at Makiling National High School, Division of Calamba City. A total of 58 teacher- counselors and 280 (124 male, 156 female) Grade 10 students served as the respondents of the study.

METHODS

Descriptive type of research was used and applied an adapted and modified questionnaires as the main tool in gathering needed data information. The researcher used statistics such as frequency, percent, mean, and Pearson-r, T-test, and regression analysis. The significance was tested at the 0.05 probability level.

RESULTS

The researcher has come up with the following findings: The level of extent of the guidance program and services was perceived by the respondents to a "high extent" in all variables. As to the level of teacher-counselor competency, it was perceived by respondents to "meet performance expectation". The level of Grade 10 students' personality development, in terms of behavior, was perceived to be "moderately satisfactory" emotional skills and social skills as "very satisfactory" and cognitive skills "below average".

DISCUSSIONS

The results demonstrate there is a significant difference between the perceptions of the Grade 10 students and the teacher- counselor competencies on guidance program and services in terms of individual inventory, and on program/service management. It has also a significant relationship with the Personality Development of Grade 10 students. The result of the regression analysis reveals they significantly affect Grade 10-students' personality development in terms of behavior, emotion, social and cognitive development. The hypothesis there is no significant difference between the level of guidance program and services and teacher-counselor competencies as perceived by the respondents is partially supported. There is no significant relationship between the teacher-counselor competencies and the Grade 10 student's personality development is partially supported. The researcher recommended the following: Teacher-counselors may maintain in fulfilling their responsibilities in the implementation of Guidance program and services in Makiling National High School in Calamba City, Teacher- Counselor may attend training/seminars in line with Guidance Program and services. They may also consider evaluating yearly guidance program and services in line with the student's needs.

KEYWORDS: Guidance Program and Services, Personality Development, Behavior, Cognitive, Emotion, Social

SUBMISSION ID: R04A-CALAMB-0281

Lived Experiences of Kindergarten Teachers Handling Students with Behavioral Problems in Aguado Elementary School

Cheska Ruby Dianopra, Trece Martires City Senior High School

Abstract

INTRODUCTION

Kindergartens help children to adjust quickly in elementary school as it teaches a child to sit, listen, obey teachers and to cooperate with fellow students (Sinclair, 2017). Kindergarten teachers have a challenging role in handling young pupils especially those with a behavioral problem. Many studies have looked at the experiences of teachers on teaching. However, attention has not been given to kindergarten teachers' experiences in handling the behavior of the pupils. The study looked into the experiences of kindergarten teachers in handling the behavior problem/s of the students in an elementary school in Cavite.

METHODS

This phenomenological study describes the lived experiences of kindergarten teachers in handling students with a behavioral problem. A request letter was submitted to the School Head to conduct a semi-structured interview among the six purposively selected kindergarten teachers. Participants were selected using the following criteria: have students with behavioral problems and with at least two years of experience being a kindergarten teacher. Interviews were recorded and transcribed. Interview transcripts were read and checked by the participants for validation. Manual coding and thematic analysis were used to answer the research questions.

RESULTS

Thematic analysis resulted in the following: (1) gentleness of teachers in avoidance to traumatization, (2) proper counseling, (3) influence of different children to themselves through integration. These various themes showed a different kind of experiences of students with behavioral problems such as being shouted at and have been hurt physically. Moreover, kindergarten teachers confessed that their job is hard but it is enjoyable as their students were sweet.

DISCUSSIONS

Kindergarten teachers use a gentle way of teaching and handling students with a behavioral problem, it is needed than being strict as the children are sensitive. The participants experienced to be mothers and counselors to these students. Physically hurt among the participants is also inevitable in this situation.

KEYWORDS: Kindergarten Teachers, Behavioral Problem, handling students

SUBMISSION ID: R04A-CAVITP-1038

Music as an Anxiety Reliever among Students

Regina Francisco, Teacher

Abstract

INTRODUCTION

Music has fascinated people for many centuries with its ability to evoke strong emotions and move people in profound ways.

METHODS

The study used a pre-test and post-test design. Subjects are randomly selected and assigned to three groups. Two groups will receive the treatment and labeled as experimental group and the third group will not receive the treatment and labeled as the control group. The independent variables of this study are music; rock and jazz music, the dependent variable is anxiety while the extraneous variables are noise, hunger, and the space of the counseling room. The participants were thirty-fourth-year students of Tala High School. They were randomly selected using the State-Trait Anxiety Inventory (STAI). Ten students listened to rock music and ten students listened to jazz music as the experimental group, while the last ten students belonged to the control group who sit in silence during the experiment. There were thirty participants in the experiment taken from public high school (Tala High School); informed consent was given to the school to be able to perform the experiment.

RESULTS

The effect of music (Rock and Jazz) on relieving anxiety was tested. Data were analyzed by SPSS (Statistical Package for the Social Sciences). One-way analysis of variance (ANOVA) was used. The mean score between subjects is 20.84 and for within-subject is 77.47. It was found out that there is no significant effect of using music as an anxiety reliever. The computed value for F is 0.22 $P=0.05$ the tabular value for F is 3.35 ($F_t > F_c$). When it comes to the reference of music, the students tend to relax when jazz music was played. This result equals to the control group, students tend to reduce their anxiety when silence was used.

DISCUSSIONS

The current study was designed to know if music can relieve anxiety among students. The results of the current study indicated that music has no significant effect on relieving anxiety. There were many extraneous variables present during the experiment, the counseling room is too small to accommodate by ten participants per treatment. Therefore, the noise was also present. Hunger was also a part of the extraneous variable. This study examines the effect of music on relieving anxiety among students in the hope for a better understanding of the effect of music on relieving anxiety.

KEYWORDS: STAI, SSPS, ANOVA, variance, mean, dependent variable

SUBMISSION ID: R04A-CAVITP-1043

Needs Assessment Inventory Survey among Grade 11 San Pascual Senior High School Students A. Y. 2018-2019: Basis for a Proposed Guidance Program

Merycrist D. Comia, San Pascual Senior High School 1

Abstract

INTRODUCTION

The Needs Assessment Inventory Survey for SPSHS 1 Students is constructed to be administered to Grade 11 Senior High School students and know their needs and its importance. Guidance is an integral part of education catered to offer assistance to individuals so that they would make intelligent decisions and adjustments in life. The Guidance Intervention Program is of great help for the improvement on the three domains; Career Development, Personal/Social, and Academic/Self Development Domain that should be implemented and executed by the Guidance Office.

METHODS

The research method used in the study was a quantitative descriptive survey method with interview and observation. Random sampling among grade 11 students; STEM, HUMSS, ABM, EIM, and FBS was used in the study, 255 respondents or 43.66% of the total population of 584 students (male 316 and 268 female students.) The instrument used was adopted from the works of Villar's instrument. Frequency count and the weighted mean were used in the computation.

RESULTS

The result implies that the San Pascual Senior High school 1 Grade 11 students have the least focus on the student's Academic/Self-Development.

DISCUSSIONS

The study revealed that the Needs Assessment Inventory Survey among San Pascual Senior High School Students scored high in Career Development Domain which means that the focus of their needs and importance was on that domain. The school needed to improve and enhance the immersion program for the students which could be one focus on the development of a student's career. Meanwhile, the needs of the students in terms Academic/Self Development Domain implies that the San Pascual Senior High school 1 Grade 11 students have the least focus which could mean that the learners of SPSHS 1 were already built. Guidance Intervention Program is of great help for the improvement on the three domains; Career Development, Personal/Social, and Academic/ Self Development Domain.

KEYWORDS: guidance intervention program, needs assessment inventory survey

SUBMISSION ID: R04A-BATANP-2197

Needs Profile and Academic Performance of Bs Psychology Students At Cavite State University

Josephine P. Manapsal., RPsy, Ph.D., Francisco Osorio National High School & Imelda R. Filart, Cavite State University

Abstract

INTRODUCTION

This study examined the relationship between students' needs profile and their academic performance and determined the internal consistency of the instrument used.

METHODS

A total of 218 BS Psychology students across level were the respondent of the study. The adapted form of Student Needs Inventory by Torres et. al., (1989) was used.

RESULTS

The results showed that a significant correlation exists between academic need and academic performance ($r = .14$) and between psychological-emotional need and academic performance ($r = .14$). The inter-item correlation of the ten variables in the instrument, The Student Needs Inventory is consistent with the result conducted to BS Psychology students. The highest correlation also found to be .70 between career and spiritual-moral. Generally, it suggests that the instrument used is a valid and reliable show that these correlations with all variables range of reliability .31 to .70. The correlation shows may also mean that spiritual - moral background of BS Psychology students will further intensify as soon as they practice their field of profession or expertise where ethical standards in the profession as a psychologist is valued much. The BS Psychology students have psychological-emotional needs that are not met. Students are either aware or unaware of their psychological- emotional needs. It is also interesting to note that being Psychology students, they are sensitive to their psychological well-being. They have all the tendency to satisfy these needs when they feel they are deprived of.

DISCUSSIONS

On the basis of these findings, it was recommended that additional guidance counselors should be employed at Cavite State University and that they should provide necessary assistance to students to enable them to overcome both their academic and psychological- emotional concerns. Along the students' journey of getting a degree in Psychology, both their academic and psychological needs found to correlate with academic performance. However, correlations do not show causation. It cannot be inferred that academic and psychological needs affect their academic performance. It may or may not affect academic performance but there is no direct conclusion.

KEYWORDS: academic, career, social, spiritual-moral

SUBMISSION ID: R04A-CAVITP-0014

Parenting Styles as Correlates to Physical, Socio-Emotional and Cognitive Competencies of Kindergarten Pupils; Basis for a Wellness Program

Josie Velunta, Department of Education

Abstract

INTRODUCTION

Republic Act 10157, or "The Kindergarten Education Law" made Kindergarten the compulsory and mandatory entry stage to Basic Education. Section 2 of this Act provides that all five (5)-year old children shall be given equal opportunities for Kindergarten Education to effectively promote their physical, social, emotional and intellectual development, including values formation so that they will be ready for school.

METHODS

The study employed the descriptive correlational research design with an interview and use of documents. Descriptive method (Sevilla, 1992) is designed for the investigator to gather information about present existing condition/ Descriptive Research use systematic observation to describe a specific behavior. Descriptive researchers create very detailed records and observe many subjects. Descriptive research cannot make predictions or determine causality. It simply identifies behaviors and describes the behavior and the participant. This study determined the parenting styles, pupils physical, social-emotional and cognitive competence of selected kindergarten pupils who were described in the present study, based on the existing conditions.

RESULTS

The data and findings presented in this study are presented, analyzed and all the pupils have experienced different parenting styles at the varied extent of having authoritative, authoritarian, permissive and uninvolved parents. However, except for an insignificant number of four, all the kindergarten pupils have constantly to exceedingly experienced having authoritarian parenting style with a weighted average means of 4.42 (constant extent). As to authoritative, the extent is 2.90 or moderately permissive, 2.02 or fairly and uninvolved, 1.78 or fairly involved.

DISCUSSIONS

In addition to differing on responsiveness and demandingness, the parenting styles also differ in the extent to which they are characterized by a third dimension: psychological control. Psychological control "refers to control attempts that intrude into the psychological and emotional development of the child" (Barber, 1996, p. 3296) through use of parenting practices such as guilt induction, withdrawal of love, or shaming. One key difference between authoritarian and authoritative parenting is in the dimension of psychological control. Both authoritarian and authoritative parents place high demands on their children and expect their children to behave appropriately and obey parental rules.

KEYWORDS: THESIS 2016

SUBMISSION ID: R04A-CAVITP-1300

Parenting Styles, Pupils' Social Adjustment, and Academic Achievement: A Correlation Study Towards a Program to Enhance Family Relationship

Lea Lunazo, Department of Education

Abstract

INTRODUCTION

The word parent comes from the Latin word "parents" meaning "to give birth". However, the word parent and the process called parenting means more. Parenting started when God created Adam and Eve. They did not follow the instruction of God not to eat the forbidden fruit. As their punishment, they should have children of their own and have them experience first-hand the rigors of parenting. Thus, the pattern was set and it has never changed. According to Pajaron (2009), parenting can be one of the most rewarding, challenging, and life-transforming responsibilities of life.

METHODS

A descriptive thesis examines phenomena, group of people, idea or theory with a particular focus on facts and conditions of the subject. A descriptive thesis should be unbiased. Your goal is to collect factual evidence and information that give your reader a comprehensive perception of your subject. Writing a descriptive thesis can be one of the most challenging types of thesis papers because of its reliance on unbiased perception. A descriptive thesis is commonly used in analyzing people, though they may be used in other sciences as well.

RESULTS

It shows that as prescribed by the pupils they have experienced all types of parenting styles; however, the highest orientation is authoritative parenting style with a weighted mean of 3.92 (high orientation), second is authoritarian with a weighted mean of 2.44 or fair orientation. Next is mixed with 2.22 weighted mean and least is permissive, with a computed mean of 2.22 (fair orientation). This implies that most parents practice authoritative parenting style which is characterized by reasonable demands and high responsiveness and with parents who might have high expectations for their children, these parents also give their kids the resources and support they need to succeed.

DISCUSSIONS

1. Pupils have experienced all types of parenting styles to a varying extent. However, the highest orientation is an authoritative parenting style with a weighted mean of 3.92 or high orientation, second is authoritarian with weighted mean 2.44 or fair orientation. Next is mixed with 2.22 weighted mean and least is permissive, 2.22 weighted mean or fair orientation. Pupils experience a fair extent of parenting along with authoritarian (2.44 weighted mean), permissive (1.51 weighted mean), and mixed (weighted mean 2.22). The highest extent of experience is on an authoritative parenting style with a weighted mean of 3.92 or high level.

KEYWORDS: THESIS 2016

SUBMISSION ID: R04A-CAVITP-1334

**Perceived Impact of Bisexual Identity: An Analysis on Crisis, Obstacles,
and Trials among selected Senior High School Students**

Kenrick Cayabat & Rosalinda Delos Santos, Lopez National Comprehensive High
School

(Adviser: Sharon Villaverde)

Abstract

INTRODUCTION

Bisexuality has been documented since ancient times (400 B.C). Bisexuality is a recurring theme in Greek mythology and historical records show that it is common for young to have sexual relationships. Bisexual people may be stigmatized by mainstream society, but they may also experience discrimination from within the community they identify with or belong to. Bisexuality equals infidelity, bisexual people cannot make up their minds. A bisexual person discriminates, barriers to treatment and other concerns which may often contribute to mental health issues such as anxiety and depression. Fear of these or of other negative experiences may also cause individuals to feel unsafe and refrain from coming out to friends, family, and society in general.

METHODS

This study used a quantitative descriptive method using focus group discussion. The researchers utilized a questionnaire type of descriptive research method and purposive sampling which enables the researchers to gather information from the respondents on what are the crisis, obstacles, and trials that a bisexual encounter.

RESULTS

Based on the data gathered from the respondents, they are frightened to express their feelings that is why some of the bisexuals mostly experienced depression, anxiety and being uncomfortable with others. From the survey the highest rate of the commonly encountered problems of a bisexual student with a total weighted mean of 3.92 is being self-doubt, followed by the struggle to be accepted by their family with 3.74, discrimination for their preferred sexuality in third with 3.58, in fourth which is the impact of social media with 3.34, and lastly with a total weighted mean of 3.4 which is the reflection though being a bisexual does not conclude that it has only a negative impact but also a positive one as well. With a total weighted mean of 4.22 is revealing their real sexuality in first, the second one is bisexuality is not a hindrance to success in life with 3.96, the third one is bisexual person can contribute a lot in our society with 3.94.

DISCUSSIONS

From the data gathered in the findings, self-doubt and rejection from family are the most common problems a bisexual encounter that eventually leads to stress, depression, and anxiety. The researcher concluded that respect, awareness, and understanding are all we can do to lessen their struggles. They need to be protected by passing a bill (Sogie Bill) and giving proper punishment for the offenders of the members of LGBTQ for not giving their rights to be themselves as a member of society. The research leads to the development of conducting a Gender Awareness Program. But above all, it's not just giving what they want but also giving what they need. To love and accept them for who they are.

KEYWORDS: bisexual, analysis, crisis, trials, obstacles, qualitative

SUBMISSION ID: R04A-QUEZON-0102

Psychosocial Factors among the Male Inmates in Naga City District Jail

Carlo Donato Olivan, Department of Education

Abstract

INTRODUCTION

Confinement has been a punishment since ancient times to persons who have committed crimes. Due to the situation of the inmates, their personality could be affected. This study investigated and explored the psychosocial factors among the male inmates in Naga City District Jail.

METHODS

By random sampling, 30 inmates were chosen for the quantitative method, 7 participated in FGD and 1 joined In-Depth Interview. In the quantitative method, Demographic Profile Checklist and 3 standardized tests, Pasao Self-Concept Rating Scale, Basic Psychological Need Satisfaction Scale, and Ways of Coping Questionnaire were used to know the levels of self-concept, levels of basic psychological needs satisfaction, and coping strategies, respectively. A researcher-made test, Olivan Stages of Faith Questionnaire, was used to know the stages of faith. For the qualitative method, 3 FGD sessions and 5 In-Depth Interview sessions were done to explore other psychosocial factors among the inmates. Finally, triangulation was employed to analyze the data.

RESULTS

The study found an average level of self-concept of the inmates and an average level of basic psychological needs satisfaction. For stages of faith, the inmates belong to Synthetic-Conventional Faith. The coping strategies include Seeking Social Support, Distance Coping, Planful Problem-Solving, and Escape-Avoidance. There was no significant relationship found between self-concept and basic psychological needs satisfaction. Lastly, Support Systems, Social Adjustment, and the Realizations that the inmates had with their imprisonment were the other psychosocial factors which surfaced as present among them.

DISCUSSIONS

The average self-concept could be because the reformation that inmates are receiving helps them to still feel good about themselves, and their needs are fairly satisfied. Their description of their faith is focused on observing the devotions and traditions of the religion they belong to. To adjust to their situations, respondents seek support from others or detach themselves from problems. No relationship was found between self-concept and basic psychological needs satisfaction. The self-concept of the inmates is not affected regardless of whether their psychological needs are satisfied or not. The theory of the development of self-concept states that at the onset of early adulthood in the lives of individuals, self-concept is already established and stable due to their self-awareness.

KEYWORDS: self-concept, psychological needs satisfaction, stages of faith, coping strategies

SUBMISSION ID: R005-CAMSUR-0118

Stress Vulnerability of Teachers: Input to Stress Management Project for Buhaynasapa National High School

Jhimson V. Cabral, MAED & Marlyne R. Luistro, MAT, Buhaynasapa National High School

Abstract

INTRODUCTION

Stress is a feeling of emotional or physical tension from any event or thought that makes someone feel frustrated, angry, or anxious. As a result, it may affect his/her attitude, physical well-being, or performance. Although teaching is a fulfilling profession, many teachers are facing problems like large class sizes, increasing workloads, and insufficient instructional materials. Such hostilities trigger stress among teachers. Likewise, stress is relative to the capacity of individuals to handle unfavorable situations; perhaps, the extent an individual is more likely to experience it is due to their own vulnerabilities. As such, this study aimed to assess the stress vulnerability of teachers with the end goal of providing recommendations in planning for a stress management project.

METHODS

The study used the descriptive method with Stress Vulnerability Scale developed by Miller and Smith (1988) as a research instrument. The respondents were the 67 teachers of Buhaynasapa National High School, School Year 2018-2019, obtained through purposive sampling. The researchers sought the approval of the authorities before personally administering the research instrument used.

RESULTS

As revealed in the study, 56.7% of the teachers' population is in age ranging from 22 to 34, 79.1% are female, and 53.7% are married. In addition, 47.8% are Teacher I, 49.3% are in the service for not more than 5 years, and 43.3% are with units leading to a Master's Degree. In terms of work-related attributes, 35.8% have one to three loads with one teaching preparations and 34.3% have more than four teaching loads, while 61.2% has one ancillary duty. On the other hand, 58.2% of their population are seriously vulnerable to stress and 40.3% are vulnerable. However, 1.5% is extremely vulnerable to stress. Using paired sample t-Test, the study found out that there are significant differences on the level of stress vulnerability of teachers in terms of sex, civil status, designation, teaching experience, educational attainment, and ancillary duties as evident on the obtained p-values lower than 0.05 level of significance.

DISCUSSIONS

The findings clearly indicate that the majority of the teachers at Buhaynasapa National High School are seriously vulnerable to stress. As such, it is highly recommended to conduct a stress management project with consideration the teachers' sex, civil status, designation, teaching experience, educational attainment, and ancillary duties.

KEYWORDS: stress, stress vulnerability, teachers, stress management

SUBMISSION ID: R04A-BATANP-1349

Survivors of Sexual Abuse: Their Experiences, Challenges, and Coping Mechanisms

Cheryl Cañezal, Department of Education/ETTMNHS

Abstract

INTRODUCTION

Sexual abuse is one of the most prevalent abuses in the world today. As a critical phenomenon, the action of the authorities to address the issue is deemed to be quite significant. The study focused on the respondents' experiences, challenges, and coping mechanisms at the time that they were still in the government facility and when they were reintegrated with their family or guardian in the community.

METHODS

This study used the phenomenological approach that is particularly effective at bringing to the fore the experiences and perceptions of individuals from their own perspectives, and therefore at challenging structural or normative assumptions (Lester, 1999). There were 10 respondents in this study and the use of semi-structured in-depth interview served as the main material for this research. With this, a deeper and qualitative understanding of the phenomenon of survivors of sexual abuse was attained.

RESULTS

The respondents identified significant experiences inside the government shelter: grateful for the support provided, became trustee, developed positive affect, and acquired self-help and livelihood skills. The challenges they shared while inside the shelter are apprehensions, faced negative affect, hypocrisy and unfairness, adjustment and limitation, and the challenge to retract the case. The coping mechanisms exhibited are avoidance, having a positive relationship, faith in God, and involvement in a same-sex relationship.

When reintegrated with their family or guardian, the respondents experienced a mixed effect, lack of contentment, freedom, uncertainty, and poor self-concept. The challenges they faced are an adjustment, financial constraints, inability to pursue education, lacked a positive relationship, hypervigilance towards men, experienced apprehension with their perpetrator, and engagement in prostitution. The coping mechanisms that the respondents identified are faith in God, leaning on a support system, dreaming and striving to succeed, reframing one's perspective, exhibiting assertiveness and self-control, decisiveness to move on, and using employable skills to survive.

DISCUSSIONS

The respondents validated the benefits of being sheltered in the government facility for abuse victims. It is then assessed the importance of sustaining and strengthening their program. On the other hand, the role of respective family or guardian seems to be more important as they received back the respondents in the community for good, and the lives of the survivors are again in their hands.

KEYWORDS: Survivors, Sexual Abuse, Experiences, Challenges, Coping Mechanisms

SUBMISSION ID: R04A-CAVITP-1169

The Effects of Acute and Episodic Stress on the Academic Performance of the Students in Gen. Pantaleon Garcia Senior High School S.Y 2018 - 2019

Richelle B. Dela Cruz, Gen. Pantaleon Garcia Senior High School
(Adviser: Maria Theresa Landoy)

Abstract

INTRODUCTION

Stress is actually one of the reasons why we consider a task more difficult. We experience stress when there is an imbalance between the demands and our capabilities to manage it. Stress triggers a surge of a hormone called 'adrenaline' that affects our nervous system and affects the appearance and actions of an individual. There are two types of stress that most of the students are experiencing, the Acute stress that doesn't last for an extended period or occurs too frequently and the Episodic stress that frequently pops up in a pattern and happening over and over. Many students or young people are really determined to study but stress hinders it and the main reason why students gradually losing their interest in it. Finding ways to manage a difficult situation can prevent long term stressful situation, and ease the stress that's been lasting.

METHODS

To fulfill the study, the researchers used a quantitative research design. The researcher used quota sampling that gathered a representative sample from a group based on the certain characteristic of the respondents. 150 students from grade 11 and 12 under academic track participated to accomplish this study and answered a survey questionnaire. The researchers chose this type of instrument because it is quick and provides precise and definite responses.

RESULTS

This study concludes that stress can have a great impact on academic performance especially to those who are in the academic track. First, a lot of stress can pressure the students resulting in mental distress, difficult circumstances, etc. It arises due to the demands of the students like academic requirements, family, school, and friends. Students who are suffering from a high level of stress could become uncertain to their goals and priorities that could lead to irritability to effectively budget and manage their time. The key to reducing stress is to provide students with control over education.

DISCUSSIONS

The result of this study is there are numerous factors which could motive stress that may affect students' academic performance. Senior high student, especially in the academic track, may additionally find themselves in a tough balancing situation. But like Dr. Gnawali said, it is not the load that breaks students down, but the way they carry or manage it. Students just need a strategic approach to at least to manage it.

KEYWORDS: ACUTE EPISODIC STRESS ACADEMIC PERFORMANCE STUDENTS

SUBMISSION ID: R04A-IMUSC1-0007

The Gender Difference of the OCEAN Five Personality Traits of Selected Grade Nine Students. the basis for Intervention.

Bea Zharina Pascual, Malvar National High School

Abstract

INTRODUCTION

The researcher has high regard on the many ways that the gender difference of these teenage learners is being discussed and being explained coming from thousands of personality types, thus the Big Five Personality Domains have become the building blocks and universally used in dealing with these personality traits. Based from the personal teaching experiences of the researchers, there is actually a need for an adjustment program hence a learning intervention is of great help when it comes to a deeper understanding of these teenage- learners' character and personality domains.

METHODS

This study focused on the 154 respondents from Malvar National High School who were selected through a purely random sampling technique. The instrument used was the 50-item trait test by Dr. Gerard Saucier. In order to prove the hypothesis, t-Test was used.

RESULTS

Findings revealed that most of the respondents ranked on the 30th-60th percentile with the interpretation of having AVERAGE personality traits. There is a significant gender difference in Agreeableness for a personality trait. Recommendations are for these teenage respondents to believe, accept and deal with everyone's uniqueness, strengths, weaknesses, and individuality. They may have high or low traits, high or low neuroticism, what is more, important is that these teenagers know how to appreciate and embrace God's gift to them.

DISCUSSIONS

As the scoring, norms, and interpretations for the personality traits test explain, the higher the score obtained by the respondents but not more than the value of 40, the higher the tendency and the possibility for the personality traits will be. This also explains that each of these five personality traits describes neutral and average yet relative to the respondents. Hence the frequency and intensity of these teenagers' feelings, thoughts or behaviors that attribute the significant variation possess all of these five big traits to a much greater or lesser degree. There are respondents who could be described as more agreeable than others.

KEYWORDS: personality traits, gender difference, feelings and behaviors

SUBMISSION ID: R04A-BATANP-0124

**The Influence of Music Preference on the Aggression of G12 GAS Students
in Emiliano Tria Tirona Memorial National High School Integrated Senior
High School S.Y. 2018-2019**

Charles A. Olaes, Julius F. Abella, & Rhogel Ivan C. Diaz, Department of
Education/ETTMNHS

Abstract

INTRODUCTION

Aggression is over, often harmful, social interaction, with the intention of inflicting damage or other unpleasantness upon another individual. It may occur either in retaliation or without provocation. In humans, frustration can cause aggression. People are attracted to music that is congruent with their needs, desires, and values. Over time and with repeated exposure, listeners' attitudes and values gradually come to conform to those represented in the music. Their music preference is connected to their current mood. Most of the student can get easily affected because of too much commitment to music without noticing it by themselves. However, available literature on this subject is still limited specifically for adolescent local music lovers.

METHODS

The researchers used a descriptive research design. The participants of the study were the Senior High School students of the Emiliano Tria Tirona Memorial National High School-Integrated Senior High School, School Year 2018-2019. To obtain a good representation of the student the researchers decided to randomly picked 114 respondents who are under Senior High School and considered as the sample population of the study. The researchers used a validated aggression scale and demographic survey questionnaire as instruments to gather the data.

RESULTS

Among the varied music genre existing, four genres were found out to be the common preference among the senior high school students namely: pop, OPM, rock, and classical. Based on the data gathered, the majority of the respondents preferred pop music the most, and rock music the least. Scores gathered from the aggression scale were grouped according to their music preferences and was analyzed using Pearson R. The calculated Pearson R was - 0.0284 which indicates little or no correlation.

DISCUSSIONS

Basing from the value of Pearson R obtained, it can be noted that there is a negligible correlation between one's music preference and his/her aggression. In other words, to conclude that one has aggressive behavior simply because he/she prefers to listen to a lot of rock music or one is gentle because he/she listens to classical music has no statistical basis. Implications of this research pave the way to further investigation on one's aggressive behavior and the possible factors that may affect/cause this behavior such as childhood experience, nature of the neighborhood, parenting styles, etc.

KEYWORDS: music preference, behavior, aggression

SUBMISSION ID: R04A-CAVITP-1575

The Level of Depression of Public Secondary School Teachers in Valenzuela City

Kate Sanchez, Department of Education

Abstract

INTRODUCTION

Teachers have been a central force in the facilitation of learning, playing a vital role in education and care of students, who are to become the leaders in the future. While teaching has been found to be one of the most important jobs of a country, it is also one of the most stressful jobs compared to other occupations (Adams 2001). It is therefore important to attend to teachers' welfare. A local survey by Perlas, Tronco et. al (2015) noted that 5.3 percent of those surveyed were suffering from depression. The aim of this research is to examine the level of depression of the public secondary school teachers in District II of Valenzuela City in terms of the following variables: sex, age, marital status, years in service, and employment status.

METHODS

This study was conducted from September to October 2018. The descriptive research design specifically surveys method was used in this study. A total of two hundred and thirty-seven public secondary school teachers in District II of Valenzuela City were randomly selected as the respondents of the study.

RESULTS

Results showed that majority of the respondents are female; most of the ages from 21 to 30. Majority of teacher-respondents are married. A considerable number of teachers are experiencing normal mood changes. Though it was found out that there are 20 teachers who are suffering from depression at various levels ranging from moderate to severe level of depression. Somatic factors tend to be the greatest contributing factor towards the depression level of public secondary school teachers. There are no significant differences in depression levels of the teacher - respondents when they are grouped according to any of the following: sex, age, marital status, length of teaching experience, and employment status.

DISCUSSIONS

The teachers are suggested to find means to make them aware of their depression level. The school administrators are recommended to initiate conduct of lectures or seminars that focus on topics such as stress and anger management, maintaining optimistic mindset, positive human relations and others that may help the teachers develop a better and brighter outlook in life. Parallel studies may include other variables which were not covered in this research. Future researchers may also explore possible interrelationships of the chosen variables. They may also conduct their study with a different group of teachers, say, public elementary school teachers, to see whether similar results will be obtained.

KEYWORDS: Depression, Secondary School Teachers, Public Secondary School

SUBMISSION ID: NCR1-VALENZ-0004

The Lived Experiences of Mothers with Autistic Children

Aries Magnaye, Department of Education - Calamba City Senior High School

Abstract

INTRODUCTION

This study aimed to understand how mothers cope and provide different mechanisms with their children diagnosed with an autism spectrum disorder (ASD). The emotional feelings of mothers were relevant regarding their lived experiences, to release more aspects and answers, to show the importance of the influences of mothers to their children, specifically with autism, and vice versa.

METHODS

The study employed a descriptive qualitative method of research to expand the body of knowledge and gave definitions to further investigate the experiences of mothers who have children with ASD. The participants were three (3) mothers who have children diagnosed with ASD, determined through snowball sampling. The data was collected through the use of questionnaires and structured interview to gather the data needed.

RESULTS

The findings revealed that being a mother to a child with an ASD seemed to be disappointing at first but later on, mothers found out that they are a blessing, and there's more to their condition, like hidden talents. Mothers reported struggles regarding their financial problems, emotional issues, and providing comfort to their children. In addition, they spoke of the numerous roles they played and shared stories of hardships and inspiration as a result of being a mother to an autistic child. Furthermore, they were able to bridge gaps and remained a sense of optimism in accepting their role as a mother. Suggestions were made for further research on the lived experiences of ASDs on their families and how they come to be understood and accepted in our society.

DISCUSSIONS

This study is limited to mothers who have children diagnosed with autism spectrum disorder (ASD) in Calamba City. Lived experiences of mothers with children diagnosed with autism can be a legitimate stepping-stone in fully accepting and understanding them especially in our society today. This study gives a chance to all the mothers with autistic children to be understood by the community, on what they undergo in their daily instances. This also took into consideration the holistic development of the relationship between the mother and the children.

KEYWORDS: Autism Spectrum Disorder (ASD), lived experiences, mothers

SUBMISSION ID: R04A-CALAMB-0352

The Motivational Strategies on the Work Performance of the Employees of Baguio Central University

Ritchel Mendoza, Teacher

Abstract

INTRODUCTION

This study determines the status of motivational strategies on work performance. It is very important to keep their employees driven constantly to reach a mutually desired result. Encourage employees to be able to sustain the drive within them that leads to excellent performance. In, truth employees lose their motivation at work, satisfaction on their performance, involvement in various tasks and competence in performing their duties that mostly results in frequent absenteeism or total career change.

METHODS

This investigation is a descriptive survey. The data were collected from 72 employees. The questionnaire-checklist was used to determine the status of the motivational strategies on the work performance of employees. This study used frequency count, Average Mean and One-way Analysis of Variance on the level of effectiveness of motivational strategies, the importance of motivational strategies, impact on the lack of motivational strategies and favorable actions of employees to raise work performance. The Tukey's Posy Hoc HSD (Honestly Significant Difference) test was employed to determine which groups differ significantly if there was a significant difference as revealed by the ANOVA.

RESULTS

Results showed varied motivational strategies among employees are very effective. Likewise, motivational strategies also are seen as very important among employees. However, their actions to the lack of motivational strategies are relatively average. Moreover, the employees' favorable actions to raise their work performance were seen to be greatly advantageous. To conclude, the respondents have an unimportant difference in how effective they look at the motivational strategies. Similarly, the respondents have substantial unlikeness on how they observed the importance of motivational strategies. Moreover, the employees have relatively average reactions on the lack of motivational strategies. On the other hand, the favorability of the actions to raise the work performance of employees is seen to be greatly advantageous.

DISCUSSIONS

The results reveal the need for varied and effective motivational strategies to raise work performance. Employees feel dissatisfaction with their jobs and expressed willingness to seek better opportunities when employer disengaged with his employees. Design and implement a developmental program that will enhance/ improve employees work satisfaction, level of productivity, work relationships, commitment and the like.

KEYWORDS: Incentives, promotion, behavior, workplace, environment

SUBMISSION ID: R04A-CAVITP-0097

The Psychological Experiences of Grade-10 Students Under the Science Curriculum in Studying Robotics at Trece Martires City National High School, the School Year 2018-2019

Vinci Baluyot, Trece Martires City Senior High School

Abstract

INTRODUCTION

Robotics plays a major role in terms of technological advances in our current society, especially as we constantly experience modernization. According to Bermudez (2010) technology was created to ease the lives of people, especially students. The researchers focused on the experiences of grade-10 students who studied under the Science Curriculum at Trece Martires City National High School, specifically their experiences on its psychological aspect.

METHODS

The researchers used a qualitative research design specifically, descriptive research design. Whereas the psychological experiences of grade-10 students under the Science Curriculum in studying robotics at Trece Martires City National High School year 2018-2019 were evaluated. There were 10 students under the Science Curriculum that studied robotics at Trece Martires City National High School that served as respondents to evaluate their experiences in studying robotics specifically on its psychological aspect.

RESULTS

Based on the results of the study, most of the psychological effects of studying robotics turned out to be positive. On the emotional aspect, the respondents said that they felt pleased, excited, glad, enjoyed, and stressed but in a positive manner. On the mental aspect, the respondents stated that they've enhanced their programming skills and creativity, boosted their critical-thinking and problem-solving skills, and honed their patience and resilience. On the attitudinal aspect, the respondents stated that they learned how not to be impatient, to explore more and have a thirst for knowledge, think critically regarding problems, to be industrious, cooperative, to listen to others' opinions, and develop teamwork.

DISCUSSIONS

The results show that similar experiences were experienced by each of the respondents. Therefore, the results would be a great help to future students who would like to study robotics. It could also help the teachers because of the prior knowledge they might get from this study. This study gives a new understanding of the psychological aspect of studying robotics.

KEYWORDS: psychological experiences, students, robotics

SUBMISSION ID: R04A-CAVITP-0605

The Relationship between Psychological Stress and the Utilization of Social Media as a Coping Mechanism of Gr.12 Students of Gen. Pantaleon Garcia Senior High School Sy. 2018- 2019

Justine G. Soquila & Kerwin E. Sison, Gen. Pantaleon Garcia Senior High School
(Adviser: Maria Theresa Landoy)

Abstract

INTRODUCTION

Faced with new responsibilities, challenges and pressure with their studies, an increasing number of young people are developing psychological stress. Because of that, numerous students find various ways to cope with their stress, one of which is social media. Although social media, is generally marketed as a mode of communication and a platform to create and share content online, it is known to have negative consequences to the students, which is why it is dubbed as a "double-edged sword". In this study, the researchers generally aim to identify the significant relationship between psychological stress and social media use of students.

METHODS

This study used a quantitative correlational research design. Systematic random sampling was utilized. 150 respondents were accumulated from Gr. 12 students of GPGSHS, which then answered a Likert-scale form of a questionnaire. The researchers chose this type of instrument because it is quick and provides precise and definite responses.

RESULTS

The possible reasons why students experience being psychologically stressed were classified into personal, academic and environmental factors. Among the given factors, 112 out of 150 or 74.67% of the respondents classified academic workload as the cause of their stress, making it the prevailing factor for students to be psychologically stressed. Positive and negative effects of social media to the academic and personal relationships of the students were also assessed. With an average mean of 2.9%, the results revealed that the ability of social media to connect students to their long-distance family and friends is a positive effect for the students. Meanwhile, a large number of students agreed that relationships formed online are difficult to maintain. Garnering an average mean of 2.7%, it became the leading negative effect of social media. In conclusion, contrary to all the negative connotations associated with it, obtaining an average mean of 2.9% showed that students perceive using social media as a pleasant rest - it makes them feel less tense, allows them to unwind, and relaxes them.

DISCUSSIONS

The result of this research conducted entails that the utilization of social media as a coping mechanism by the students are used to parry from the stress they felt. The lack of a number of accessible respondents affected the accuracy of the claimed findings. To obtain valid facts, the researchers suggest furthering the scope of the research

KEYWORDS: PSYCHOLOGICAL STRESS UTILIZATION SOCIAL MEDIA COPING MECHANISM

SUBMISSION ID: R04A-IMUSC1-0005

Time Management Strategies of Parent Teachers in a Selected Public High School: A Phenomenological Study

Judel Shane Gellido & Uriah S. Epalan

Abstract

INTRODUCTION

Faculty life is full of various duties and responsibilities that are very time-consuming. In the same manner, parenting is multidimensional for it must respond to various needs of children (National Academy of Sciences, 2016, p. 2-4). These two terminologies often connected to each other because of their similarities in terms of responsibilities. Parent-teachers are abundant but there are only a few studies conducted that tackle parent-teachers. Most of the studies are about the relationship of parents to teachers or teachers to students. This study covered the experiences of parent-teachers in time management in work and at home.

METHODS

This study is qualitative phenomenology, which aimed to understand how parent teachers manage their time in school and at home. A semi-structured interview was used in gathering the data necessary for the study. The ten (10) participants in the selected public high school were chosen through purposive sampling guided by the following criteria: (a) a teacher that is currently married; (b) thirty (30) to fifty (50) years old; and (c) at least 1 year in service. The gathered data were analyzed using thematic analysis. This type of analysis includes a collection of data, coding of data and validation of codes, identification of themes and consolidation of data to analyze a set of data.

RESULTS

Parent-teachers describe their experiences in time management as a teacher difficult but manageable and enjoyable for they treat their students as their own children. In terms of time management at home, they consider it less difficult. On the other hand, parent teachers manage their time as both a parent and a teacher by organizing their schedule through a timeline. They have a particular routine that should be followed. Also, they only focus on what will be taken cared of on a particular time span; either work or family. If emergencies come up, parent teachers easily reschedule and prioritize things up. With all these errands, parent teachers have no time for themselves and considering their family bonding as their own leisure time.

DISCUSSIONS

Time of parent-teachers is divided into two; work and family. They prioritize things depending on their urgency and connection to them. Focus, scheduling and following the timeline carefully are the strategies they do to effectively manage their time. Having time for themselves is the least thing parent teachers think of. Despite all of these, parent teachers still manage and enjoy their time as both a parent and a teacher.

KEYWORDS: time management, parent, teachers, experiences, parenting, teaching

SUBMISSION ID: R04A-CAVITP-1498

Wellness Program for the Residents of Cuenca

Jovine Krisell Cuevas, Teacher II, Cuenca Senior High School

Abstract

INTRODUCTION

Health is a very essential component of life. It serves as a person's ticket towards attaining his/her dreams and fulfilling his/her existence. Nowadays, a lot of campaigns are being introduced to promote health and wellness, yet, a lot of people are still observed to be disturbed by the happenings in their community. In this study, the researcher determines the wellness status of the residents of Cuenca to be able to propose a health and wellness program specifically tailored to the residents' age group.

METHODS

A researcher-constructed questionnaire was used to determine the wellness status of respondents coming from different age groups. This focused on the respondents' physical/environmental, emotional, social, occupational and spiritual status. This is then correlated with their perceived health and wellness program.

RESULTS

Majority of the respondents have a good to excellent health and wellness status. Only a few of them had challenged physical/ environmental, social, emotional, and occupational health and wellness status. Moreover, the respondents' age, sex, civil status, and educational attainment showed a significant relationship with their health and wellness status. It was also reflected that the respondents showed a high interest in enhancing their spirituality and physical health.

DISCUSSIONS

The results showed that despite a lot of challenges faced in the community, the respondents were still able to maintain a high wellness status. More so, even though the respondents have a high physical spiritual status, they still wish to enhance their spiritual and physical health.

KEYWORDS: Health and Wellness Program, Wellness Status, Cuenca

SUBMISSION ID: NCR1-MAKATI-0000/ R04A-BATANP-1255

Work-Related Self-Efficacy and Work Immersion Satisfaction among Grade 12 General Academic Strand Students of Trece Martires City Senior High School SY 2017-2018

Gemmar Anthony F. Guimba, Trece Martires City Senior High School

Abstract

INTRODUCTION

According to Department of Education Order No. 30 S. 2017, Learners are immersed in actual work environments such as workshops, offices, and laboratories in which their prior training is relevant. Qualitative Work Immersion Programs are considered a useful instrument that bridge between school and professional life which can be used by the school in order to develop appropriate skills among students aimed at increasing their employability chances on the very competitive labor market. Wood & Bandura (1989) as cited in Machmud (2018) states that perception in completing a job is self-efficacy. The aim of this study is to determine the significant relationship between self-efficacy and work immersion satisfaction among Grade 12 General Academic Strand students who underwent their Work Immersion Program to different establishments.

METHODS

The total population of this strand is 249, however, only 164 students voluntarily participated in the study. The total enumeration was used in the sampling procedure. The Self-Efficacy Questionnaire and Work Immersion Satisfaction Scale were developed and used in gathering data, content validated by the experts and implemented pilot testing to establish its reliability and validity.

RESULTS

The result reveals that Work-Related Self Efficacy ($\bar{x}=4.16$) has an $\bar{f}=.4571$; while the Work Immersion satisfaction ($\bar{x}=4.11$) has an $\bar{f}=.496$ which indicates that the score of the latter is spread out. The table also shows a positive linear stronger correlation of .532 between work-related self-efficacy and work immersion satisfaction with a p-value of .001 which is lower than .05 which rejects the null hypothesis. It can be concluded that there is a significant correlation between work-related self-efficacy and work immersion satisfaction. As the work-related self-efficacy increases, the work immersion satisfaction also increases and vice versa.

DISCUSSIONS

Based on the result of the study, the following conclusions were made:

1. When the respondents have a high level of self-efficacy, they are confident, they are aware of the duties and responsibilities as expected of them, they have high regard to self and positive outlook towards own efficacy and capacity.
2. A high level of work immersion satisfaction would mean that the respondents enjoy the learning experience in the workplace that made them worthwhile, they got the chance to see their career path in the near future.
3. A strong positive correlation between work-related self-efficacy and work immersion satisfaction means that there is a direct association between the two variables, as the work-related self-efficacy goes high, the work immersion satisfaction also gets high. The level of work immersion satisfaction relies/depends on the level of work-related self-efficacy of the respondents.

KEYWORDS: work-related self-efficacy, work immersion satisfaction, deployment

SUBMISSION ID: R04A-CAVITP-0010

PUBLIC HEALTH & COMMUNITY MEDICINE

Efficacy of *Annona squamosa* Seed Extract as Treatment for Pediculosis

Eraida Mae M. Saure, Dipintin High School
(Adviser: Marie Eugenie Soriano)

Abstract

INTRODUCTION

Pediculosis Capitis, known as head lice, is a common parasitic infestation among school-age children. In the Philippines, children often have head lice infestation during the summer months. There are available commercial pediculicides but these products are expensive which ordinary family cannot afford. Custard apple or atis in the local dialect is a known pesticide and was used as an alternative in eliminating head lice by old people. In this study, the researchers tested the efficacy of crushed atis seed infused in coconut oil in treating head lice among high school students.

METHODS

The experimental method was used to test the efficacy of atis seed extract. The outer shell of the dried seeds was removed. Using mortar and pestle, the seeds were pulverized. A ratio of 1g atis extract: 1 ml oil to make a paste. The in vitro test of the extract through the film residue method where live lice collected from female subjects were placed on a thin film of the paste. Checking for signs of life after 5 minutes and every minute thereafter was done. For the in vivo test, the subjects were classified according to the severity of infestation. The length of application as shampoo was based on the degree of severity. The application was akin to that of using a shampoo and was covered with a shower cap to avoid contact of the mixture with the eyes. The application was done every other day for seven days. Physical inspection for the presence of adult lice or nits and ova was done every after application.

RESULTS

A total of twenty-six female students were included in this study after the parents' consent was given. All students were comparable in terms of baseline severity of head lice infestation. In vitro testing showed that the average time to kill the lice is 20.33 minutes. As to the in vivo testing, the paste was allowed to stay in the head for 25 minutes covered with a shower cap. The results showed a gradual decrease in severity every after use and became negative until day 7. The subjects also reported that there were no adverse reactions noted and the infestation was not evident.

DISCUSSIONS

The results demonstrated that crushed atis seed with coconut oil is effective in the eradication of head lice. The mixture was allowed to stay in the hair for 25 minutes. After which, the hair was combed to ensure that dead head lice were removed before washing the hair. The application of the paste is a natural remedy in the eradication of head lice and easily prepared in ordinary homes.

KEYWORDS: crushed atis seed, pediculosis humans capitis, *Annona squamosa*, pediculicide

SUBMISSION ID: R002-QUIRIN-0009

Enhancement of Cognitive Abilities and Skills of Selected Public Secondary Professional Teachers in Handling Common Health Concerns through a School-Based Health and Safety Training Program

Ronalyn Salazar, Department of Education - Cavite Province

Abstract

INTRODUCTION

The existing public-school nurse: learner ratio, various studies, statistics and related articles as well as the enthusiasm and interest of the researcher, both as a teacher and a school nurse, support the need for the conduct of this study. This study sought to determine the effects of a School-based Health and Safety Training Program on the cognitive abilities and skills in handling common health concerns of selected public secondary professional teachers.

METHODS

This study utilized the quasi-experimental design using the non-equivalent control group pre-test and post-test design. Purposive sampling was used to ensure inclusion criteria were observed. The research was conducted in five (5) public secondary schools located in Trece Martires City, Cavite. To ensure that the study is ethically sound, approval was obtained from the Center for Academic Health Sciences Research and De La Salle Health Sciences Institute-Independent Ethics Committee. In the analysis of data, percentage, mean and t-test for the independent and dependent means were used as statistical treatments to answer to the specific problem statements.

RESULTS

There were significant differences between the cognitive abilities and skills in handling common health concerns of the respondents in the treatment group before and after the implementation of the School-based Health and Safety Training Program. Overall, it is clearly recognized that when the treatment group alone was measured, it resulted in a highly significant difference in the cognitive abilities and skills of the respondents after the intervention. Therefore, the School-based Health and Safety Training Program indeed had an effect on the respondents' cognitive abilities and skills in handling common health concerns.

DISCUSSIONS

With the reality of having a ratio of 1:10, 000 plus the ratio of nurse to learner's population in the public education nowadays, it is highly recommended that other professionals, especially teachers be involved in catering to the health and safety needs of the learners by helping capacitate and empower them through the provision of training. Moreover, curriculum developers should include units of basic first aid and disaster preparedness in the undergraduate education courses to ensure that future educators will have sufficient entry level on technical know-how in handling learners with health and safety concerns. Also, teachers may utilize the health and safety training module as reference material. Lastly, the continuation of this study is highly recommended.

KEYWORDS: teachers, school nurse, health and safety training program, common health concerns, cognitive abilities, skills

SUBMISSION ID: R04A-CAVITP-0838

Innocent in Prison: A Phenomenological Study of the Lived Experiences of Correctional Nurses

Kevin Joshua B. Gorgonio, Student

Abstract

INTRODUCTION

This phenomenological qualitative research determined the lived experiences of correctional nurses in the province of Cavite, Philippines. Latif (2010) stated that correctional nurses were challenged because of poor communication and less staff between nurses and officers, feelings of frustration and less valued. Further study to review the role and scope of nursing in order to better facilitate the delivery of healthcare within corrections is recommended. Moreover, this study determined the problems that the correctional nurses encounter in their workplace on a daily basis and their coping-strategies in adjusting with their environment.

METHODS

The study involved correctional nurses that are working here in Cavite. Out of the population, five correctional nurses were chosen using purposive sampling. The sample of 5 was chosen based on Creswell (2007) which suggests 5-25 participants with the same experience should be chosen and interviewed. The researchers conducted an in-depth semi-structured interview in their workplaces. Each interview is recorded in a recorder and lasted for thirty minutes to one-hour interview. The interviews were transcribed by the researchers and were analyzed.

RESULTS

The results showed that lack of medicine which pertains to the shortage in the supply of medicine in jail facilities, shortage of manpower which concerns the shortage of staffs where jail nurses become utility workers because of the lack of officers., inadequate facilities which relate to the insufficient facilities that jail nurses should have and risk which pertains to the negative effect that jail nurses experiences in the job are the problems that these nurses encounter in their daily basis. For their coping strategies, results showed that time management which pertains to the way how the jail nurses manage to do their task with an allotted time, availability of resources which concerns the usage of present or available resources in the jail facilities and for the importance of inmates, are the coping strategies of Correctional nurses.

DISCUSSIONS

Based on the obtained results, the common themes about the difficulties faced by the correctional nurses on a daily basis are lack of medicines, shortage of manpower, inadequate facilities and risks on their workplace. At the same time, correctional nurses have different strategies in coping up with the challenges namely time management, availability of resources, and importance of inmate's health care.

KEYWORDS: Correctional Nurses, Correctional nurses' experience, challenges, coping strategies.

SUBMISSION ID: R04A-CAVITP-0720

RESEARCH IMPACT GUIDE

Adoption of Department of Education Basic Education Research Agenda in Calabarzon

Jumar Sadsad, Department of Education - CALABARZON Regional Office

Abstract

INTRODUCTION

This study determined the level of adoption of Department of Education basic education research agenda among public secondary school heads and teachers in CALABARZON relative to curriculum, instruction, learners, assessment and learning outcomes. Moreover, it also assessed the extent of the conduct of research when grouped according to profile variables. The status of the strategic directions of the Regional Education Development Plan of CALABARZON and the issues and problems relative to the adoption of the research agenda was also included. As an output, a research development management program was proposed.

METHODS

The descriptive method of research was applied in the study with the questionnaire as the main data-gathering instrument. Interview and focus group discussion was part of the research to further enhance the responses given by the respondents in the questionnaire. Respondents were 393 teachers and 180 school heads from selected public secondary schools in Region IV-A CALABARZON. Frequency, percentage, weighted mean, and one-way analysis of variance or F test were the statistical tools used to treat data.

RESULTS

Findings revealed that school heads and teachers conducted researches along with the basic education research agenda. Further, both groups performed well in conducting researches about curriculum, instruction, learners, and assessment and learning outcomes. However, they differed in the assessments when grouped according to profile variables. Data also revealed that respondent groups affirmed that the implementation of K to 12 and teachers' capability through pieces of training, meetings, and LAC sessions were fully implemented. There were also issues and problems relative to the adoption of a research agenda specifically limited budget and time in conducting a research study.

DISCUSSIONS

The proposed research development management program posits that determining research engagement and issues and problems that deter conduct of research will facilitate the implementation of the mandates in research capability and productivity programs. It was recommended that the Department of Education CALABARZON personnel for suggestions and enhancement measures after which it might be tried for implementation review the proposed research development management program. Furthermore, it was also recommended that capability- building workshops on research to help school heads and teachers develop research skills and encourage them to participate in different research activities to make them proficient may be done.

KEYWORDS: Research, Research Culture, Department of Education Basic Education Research Agenda, Research Development Management Program

SUBMISSION ID: 04A-REGOFF-0009

Difficulties Encountered by Grade 12 Students in Conducting Research

Rachel Ann K. Maguling, Buhaynasapa National High School
(Adviser: Jhimson Cabral)

Abstract

INTRODUCTION

Research is defined as a systematic, investigative process employed to increase or revise the current knowledge by discovering new facts. Being one of the skills needed to develop 21st century learners, it is imperative to nurture research skills among students in order for them to become competitive in the new milieu. As such, this study aimed to assess the perceptions of the student-respondents towards research and the difficulties they have in conducting it. By identifying these problems, academic leaders will be able to devise enrichment activities and supplemental materials to augment the research-related skills of the learners.

METHODS

A quantitative-descriptive method was used in this study with a validated questionnaire as a research instrument. The study made use of 197 respondents out of 389 Grade 12 students of Buhaynasapa National High School, School Year 2017-2018, across tracks and strands. It was obtained through random sampling with the use of Slovin's Formula at a 5% margin of error. Before conducting the study, the researcher secured permits to authorities, then, administered the research instrument used. The researcher also consulted a statistician in treating the gathered data.

RESULTS

The overall assessment of the respondents towards their perception about research obtained the composite mean of 3.64 interpreted as strongly agree. Despite this awareness and relatively high perception, the findings revealed that they are still frequently encountering difficulties in conducting it. It is evident on the generated average composite mean of 3.40 interpreted as frequently encountered. The study also showed that stating the research problem got the highest composite mean of 3.46 interpreted as frequently encountered. Competencies related to presenting, analyzing and interpreting data, and summarizing the findings and formulating conclusions and recommendations were least rated difficulties with a composite mean of 3.35 interpreted as frequently encountered.

DISCUSSIONS

The study revealed that students are greatly aware of the nature, characteristics, and importance of research but are still lacking skills and competencies essential in writing it. Specifically, competencies related to stating the research problem are the major difficulties encountered by the respondents. Once accomplished properly, proceeding competencies will be easier as revealed on the analyzed data. Therefore, enrichment activities and supplemental materials should focus on these least mastered competencies.

KEYWORDS: research, difficulties, Grade 12 students

SUBMISSION ID: R04A-BATANP-1064

Effects of Synergy Seminar Workshop in Writing Proposal in Qualitative Research

Gerald Martos, Marinel Andres, & Roy Discutido, CSHS

Abstract

INTRODUCTION

Research enhances the various skills of the students. However, senior high students were not introduced in research before. Both students and teachers are faced in the dilemma of writing research papers. In the implementation of Senior High School, applied subjects were introduced that require students to do researches. In a Learning Action Cell session conducted by Cainta Senior High School Research Team, the research teachers said that students have poor knowledge and skills in conducting research as well as writing. The researchers conducted a seminar-workshop in Practical Research I entitled, "Synergy" to provide a solution to the identified problem. The topics discussed in the seminar-workshop are based on the competencies perceived by the practical research teachers as significant in writing a research proposal.

METHODS

A descriptive quantitative approach was used in this study. To gather the necessary data, researchers-made instruments were validated and utilized. Participants of this study are Grade 12 students who already took Practical Research I, Research teachers, and Grade 11 students who participated in the seminar workshop. One hundred Grade 12 students were chosen purposively to assess the difficulty of research competencies. Five teachers who are currently teaching Research were selected to evaluate the current skills and knowledge needed to write a proposal. One hundred Grade 11 students were also deliberately chosen to evaluate the impact of the seminar-workshop in their knowledge of qualitative research.

RESULTS

Based on the findings, 100% of the teacher - respondents believe that the writing skills of the students must be prioritized. Furthermore, they believe that writing research questions, constructing instrument, writing citations, and identifying related literature and studies are very important competencies to be discussed. Generally, the student - participants rated SYNERGY 4.24 interpreted as "effective." This perception is reinforced by 100% rate of successful research proposals.

DISCUSSIONS

The result demonstrates that seminar-based learning promotes positive interdependence between and among learners as they encourage each other during the course of the seminar. This is synonymous to the works of Johnson & Johnson (2012) as well as Zshar & Smith (2010) who claimed that a seminar workshop is an effective tool in establishing effective dynamics between students by motivating each other to learn concepts.

KEYWORDS: research, writing a research proposal, senior high school

SUBMISSION ID: R04A-RIZALP-0266

Embracing the Culture of Research: A Glance to the Research Engagement of Teachers in Conducting School-Based Research

Laarni Doliente, Carmona Senior High School

Abstract

INTRODUCTION

Researching is a part of the professional development of teachers. Embracing the culture of research is a trend teacher must follow. The research engagement of teachers in conducting school-based researches. Apparently, there are barriers that hinder teachers to embrace research, as a professional practice must. As one of the researches engaged professions, teachers must overcome barriers that hinder their research engagement. Awareness and readiness of teachers about research are essential, teacher's direct involvement through research and be part of the development of the school.

METHODS

Descriptive-Purposive research was used. The study was participated by 35 English teachers. Survey questionnaires and open-ended questions were used to obtain information while frequency distribution, simple percentages, weighted mean and ranking were utilized to analyze data.

RESULTS

Results showed that the respondents regarded school-based research as a way to identify and resolve existing problems of the school. The respondents' willingness and preparedness to conduct school-based researches showed a very acceptable range. However, there are barriers that hinder the teachers to totally engage themselves to conduct school-based researches such as teachers' schedule, workloads, lack of resources, financial constraints, stress from work and lack of knowledge on the procedures of conducting research. Motivating teachers to do school-based research, capacitating and training them to improve skills in the conduct of research, pairing them with experienced researchers with knowledge about statistics and having a specific time frame or a year-round schedule will help teachers to embrace the culture of research.

DISCUSSIONS

The results and recommendations from this study will be the basis of capacity development programs to orient and train teachers so they can embrace the culture of research resulting to their professional development as well as fostering positive changes in education. Doing research is a process and must follow a time frame. A specific schedule for the parts or the time frame of the parts of research is suggested.

KEYWORDS: research engagement, the culture of research

SUBMISSION ID: R04A-CAVITP-1399

Extent of the Impact of Research Development in Looc National High School, Nasugbu, Batangas

Ron Ronald Cloma, Department of Education - Batangas

Abstract

INTRODUCTION

The availability of the resources in conducting research is a big challenge in provincial schools especially those from far-flung areas where updated books and good internet connections are so infrequent.

METHODS

The survey questionnaire was made. Descriptive survey methodology was employed and simple random sampling and purposive sampling were used.

RESULTS

The time frame of RONS (Research on School) Improvement Plan is being used by the Grade 10 English teachers in Looc National High School and this developed improvement plan can serve as a guide to the teachers in other schools to help their students develop good action research.

DISCUSSIONS

In terms of social issues awareness, research development helped the respondents determine the effects and causes of social problems but need to focus on formulating solutions. It helped the respondents in comprehending well appropriate literature and articles for the study but need improvement on how to summarize articles. Finally, research development enhanced respondents' skill in defining research topics effortlessly but need to be strict in following set research work plans.

KEYWORDS: Research development, research, research skills

SUBMISSION ID: R04A-BATANP-0002

Family Orientation and Motivation as Correlates of Science Academic Performance among Grade 5 Pupils

Elisa Sarmiento, Department of Education

Abstract

INTRODUCTION

Pupils are the key assets of the school. The pupils' performance plays an important role in producing the best quality graduates who will become great leaders. Academic performance is one of the major factors to continue their study to the next grade level. Moreover, academic performance as a concept is greatly affected by numerous factors and that includes not only the school but also other physical agents outside its realm. The paper posits that the careful examination of the factor - family orientation and motivation could better foster a clear understanding of Grade 5 pupils' academic performance in their Science subject. The selection of variables is made since few explorations are made on such areas and that calls for further and deeper excavation.

METHODS

The inquiry on hand is the bedrock on the mix-method research design specifically the descriptive-correlational type of research. The gathering of data will be done via a survey questionnaire with ten (10) questions and to be rated using a 5-point rating scale format. The tool is validated with the help of experts on such field and piloted as well to check reliability. The material was administered to the total population of Grade 5 pupils present in the locale of the study to ensure results that are more reliable. Therefore, non-random sampling is employed following the total enumeration procedure.

RESULTS

The outcome is complimented with most families of the respondents where placing education on high value is very much observed to the extent that they are determined to have at any cost. The results revealed the high focus of a family to a pupils' academic performance, at the same time, family members seem to carefully allot time in case the pupils experience shortcomings and lapses on their studies. Overall, the findings of the inquiry suggest that pupils – “family as an agent to learn” could be somehow be considered to be magnified by schools and classroom since this aspect holds the greater promise of effective and efficient academic learning among pupils.

DISCUSSIONS

The data gathered from the study suggests that knowing the pupils' family orientation and motivation as an approach to determine pupils' strengths and weaknesses on their academics especially in subjects that require high technical knowledge like Science could be better understood. Likewise, overcoming the fear of pupils in participating in Science discussions and other activities could be increased if families will also be somehow involved.

KEYWORDS: rolisa47

SUBMISSION ID: R04A-CAVITP-0492

Improving the Reading Comprehension of Grade 7 Students Thru Vocabulary Development

Eleonor Garcia, Department of Education

Abstract

INTRODUCTION

The study aimed to find the relationship between Vocabulary and Reading Comprehension. Results of Philippine Individual Reading Inventory (Phil-IRI) to Grade 7 students showed a dismal result of 16 students who fell under frustration to non-readers category. This is alarming because they have reached the secondary schooling with insufficient knowledge on the basics of reading comprehension and vocabulary knowledge. With the ongoing problem, the study was conducted to determine the level of performance of Grade 7 students, describe their performance in each remediation activities and how can they apply them towards the enrichment of their comprehension and vocabulary.

METHODS

The researchers used a simple random technique in selecting the respondents. Sixteen (16) out of 90 Grade 7 students were selected based on the results of the Philippine Individual Reading Inventory (Phil-IRI). Using supplementary materials for reading comprehension and vocabulary, students underwent a series of pre-tests and post-tests. Three months of remedial classes were held every afternoon. The researcher used a qualitative approach to the actual research and quantitative methods to analyze the data. A one-way ANOVA was employed to test the difference between the scores of students among the pre-tests and post-tests.

RESULTS

Two hypotheses were proposed: the null hypothesis being the zero value and the alternative hypothesis holding the significant difference. A one-way ANOVA was used to test the difference between the scores of students among the pre-tests and post-tests. The decision rejected the null hypothesis. The results found that vocabulary supplements have a significant effect on the scores of Grade 7 students. The findings of TOEFEL (2000), Quian (2002) and Weiser (2013), highlighting the strong psychometric relationship between vocabulary and comprehension skills were proven.

DISCUSSIONS

At an early stage, students must learn the basics of reading coupled with comprehension. This is important to attain functional literacy. Possible solutions are immersing them with vocabulary exercises and reading exercises, reinforcement of reading at home by parents and a positive attitude towards reading. Improved comprehension skill can also be attained by promoting the culture of reading among schools and in the community. In that way, students are ensured for successful reading and learning experiences.

KEYWORDS: Vocabulary Development, Reading Comprehension

SUBMISSION ID: R04A-LAGUNA-0051

Initial Contribution of Community Extension Program through PROJECT PUNLA (Pagsasanay Tungo sa Pag-unlad ng Kasanayan) ng / sa Filipino)

Sharon Villaverde, Department of Education, Lopez National Comprehensive HS/ University of Nueva Caceres

Abstract

INTRODUCTION

This study aims to examine the Initial Contribution of the Community Extension program of the Graduate School Students of the University of Nueva Caceres Using Project PUNLA (Pagsasanay Tungo sa Pag-unload ng Kasanayan) ng / sa Filipino. This is in terms of capacitating teachers and students in terms of classroom-based research and innovative strategies; and conduct training-workshop for teachers and students in research and content in Filipino with the partner institution.

METHODS

The study used descriptive design using focus group discussion. Analysis of data will generally base on the results of the experiences, challenges, and opportunities of the students on the programs initiated.

RESULTS

Many respondents who participated in our focus groups perceived that Project PUNLA had an initial contribution to their research writing and help boost their confidence in writing research in both media. The challenges of the implementation were the venue, the participants and the interest, availability of the resources and materials, The opportunities benefit both the students and the facilitators by enhancing their skills in research writing using mentoring, self-kit learning, great help in research writing and research competition as a training ground for future researchers. The study provides insights into how universities in the country can develop a capacity building program in research through higher education thus a capacity building thru project PUNLA is proposed.

DISCUSSIONS

The results demonstrate the need to sustain this project is having a continuous tour and venture of the Project PUNLA nationwide. The challenges of the implementation were the venue, the participants and the interest, availability of the resources and materials. The opportunities benefit both the students and the facilitators by enhancing their skills in research writing using mentoring, self-kit learning, great help in research writing and research competition as a training ground for future researchers. Project PUNLA should be extended to a wider, especially to the SHS researchers. Project PUNLA with an innovative approach like mentoring and face-to-face guided instruction. In the end, this project makes students and teachers grow and develop a tree from a pot of knowledge.

KEYWORDS: initial contribution, Community Extension Program, PROJECT PUNLA

SUBMISSION ID: R04A-QUEZON-0030

Level of Competence of SDO Quirino Personnel in Basic Education Research Writing

Noveline C. Tacata, Saguday National High School

Abstract

INTRODUCTION

Research writing is one of the skills that must be developed among teachers, supervisors, and employees of Department of Education in the Schools Division of Quirino. After having the Quirino Basic Education Research Summit (QBERS) conducted in October 2015, 50 participants presented their researches based on their levels of governance. The Quirino Basic Education Research Summit (first QB) was a project to help teachers, employees, principals and supervisors in improving their skills in research writing and presenting their researches through oral and poster research presentations.

METHODS

The researcher used a quantitative descriptive method. One hundred fifty-nine (159) out of the 433 participants of the First Quirino Basic Education Research Summit served as respondents of this study. There were two questionnaires given to the respondents: Questionnaire 1: Self-Rating Before the first QBERS; Questionnaire 2: Self-Rating after the first QBERS. Frequency counts and percent were used to describe the profile of the respondents. Mean was used to analyze the level of competence of the respondents in writing the different parts of a research proposal.

RESULTS

Majority of the respondents were school heads comprising 48.43% followed by teachers comprising 38.36%. Majority of them were within 35-44 of age comprising 31.45% followed by those aged 45-54 comprising 30.82%. Majority of the respondents were Bachelor's Degree holders comprising 47.8% followed by Master's Degree holders comprising 42.77%. Only 9.3% are Doctorate Degree holders. The School Heads rated themselves fairly and moderately competent in constructing the research proposal before and after they participated in the QBERS with means of 2.78 and 3.74 respectively. The teachers rated themselves fairly and moderately competent in constructing research proposal before and after they participated in the QBERS with means of 2.74 and 3.79 respectively.

DISCUSSIONS

Majority of the respondents conveyed that conducting action research might help them improve their school performances. They signified their intention to prepare their own research proposals to be presented in higher research conferences. Technical assistance from the SDO Planning and Research section should be extended to them. This research supports the study of Dunn, which states that attending, and presenting at conferences offers a myriad of opportunities such as contributing to and learning about the most recent advances in the field.

KEYWORDS: competence, basic research writing

SUBMISSION ID: R002-QUIRIN-0032

Mathematical Understanding in Localized Teaching: Input to the Performance of Learners Efficiency

Elsa Sumague, Department of Education - Tanauan City

Abstract

INTRODUCTION

Project MULTIPLE (Mathematical Understanding in Localized Teaching: Input to the Performance of Learners Efficiency) was a program of School-to-School Partnership between Talaga Central School as a leader and Cale Elementary School as the partner school. This program came up based on ESIP (Enhanced School Improvement Plan) whereas the basis was the low performance of grade two pupils in multiplication. The researcher aimed to find out the implication of using localized materials in the improvement of pupils' abilities in multiplication.

METHODS

The study was intended to find the implication of using localized materials in the improvement of pupils' abilities in the multiplication of Grade II pupils. Fifty-seven (57) grade two pupils were the respondents of the study. No sampling was required since 100% of the population was considered in this study. The input phase contained the result of pre-test, the process phase contained the implementation of the program, gathering of data, analysis, interpretation, and validation while the output phase contained the difference in the pre-test and post-test.

RESULTS

The performance in Mathematics particularly in solving routine and non-routine problems and creating a problem involving multiplication and division had low MPS of 54.70 and 64.17 for the second and third quarter based on the conduct of the test. These competencies were identified as the most difficult and least learned among learners. To elucidate these problems, localized teaching and activities were given for the identified difficult learning competencies. The study found a significant difference in the pre-test and post-test in each quarter wherein from 54.70% in the pre-test it increased to 74.82% in the Post Test in the second quarter 64.17% increased to 78.81% in the third quarter. The study revealed that localization helped the learners in understanding the problem because there was a familiarity in the given data; pupils were able to solve problems using the data that is present in their environment.

DISCUSSIONS

The results demonstrated the need to emphasize the importance of establishing study habit with the supervision of parents at home, readiness of the school and teachers to practice localized teaching and maximize the use of materials that is available in the community and school environment. It is also recommended to utilize project MULTIPLE because it is an effective intervention material in upgrading the performance of the pupils in Mathematics.

KEYWORDS: competencies, contextualization, localization

SUBMISSION ID: R04A-TANAUA-0029

**Project T2P: A Basis for Establishing the Culture of Research in Bulihan
National High School, Silang, Cavite**

Joseph Butawan, Bulihan National High School Silang, Cavite

Abstract

INTRODUCTION

Initiating and maintaining a culture of research may take years to develop and once established it requires regular maintenance. Plans for the research culture may include the teachers, school administrators, guidance counselor, and the stakeholders will join hand in hand to improve educational outcomes. Through this, it will design a research program that will help teachers to conduct research on their own.

METHODS

This study used descriptive research design and there are 126 teachers' respondents in Bulihan National High School. The researcher utilized stratified sampling using survey-questionnaire.

RESULTS

The teacher-participants were agreed to all the indicators on the assessment of the culture of research in terms of "I will engage in research" with an overall weighted mean of 4.08 with a verbal interpretation of agreeing for the past three years of 2015-2018. Moreover, the teacher-participants were neutral to all the indicators on the assessment of the culture of research in terms of "I will not engage in research" with an overall weighted mean of 3.09 with a verbal interpretation of neutral.

DISCUSSIONS

This study is limited for teachers and school administrators in the Department of Education (Department of Education) that will help them to enhance and develop their research capabilities through different programs created by the researcher. The future direction of the research is to continue upgrading of skills among teachers and school administrators through training's, seminars and workshops that should regularly be conducted so that they will acquire the most up to date skills in research writing.

KEYWORDS: Theory, Practice, Research Culture, Assessment, Teachers.

SUBMISSION ID: R04A-CAVITP-0547

Quanti-Quali Research Outputs of Diffun National High School: An Evaluation and Review

Lovely Ventura, SDO@DNHS
(Adviser: Jaybert Cabanero)

Abstract

INTRODUCTION

Research is a careful study that is done to find and report new knowledge about something, and action is done to clarify and solve such issues. If research is not properly undertaken, then its credibility might be greatly affected. Thus, this research has the intention to evaluate and review research outputs at Diffun National High School.

METHODS

In the pursuit of the study, survey design was employed. A structured questionnaire was used to gather the needed data for the study. This instrument is designed to assess the respondents' knowledge in constructing a research manuscript. The questionnaire was subjected to pilot testing. The result of the Cronbach alpha was .827 which indicates a very good description of its level of internal consistency. One viable and appropriate action is undertaken to validate and strengthen the data gathered was through the conduct of reviewing data on the rating of research outputs and results of selected researches related to the subject of the study. Simple random sampling was used in the selection of the 173 respondents from the total population of Grade 12 students.

RESULTS

Students were not skillful on knowledge on discussing legal bases in the re-investigation of the problem, explaining the situation through data and statistics, and identifying theories. Furthermore, presenting major findings, synthesizing literature, constructing suitable instrument, identifying statistical tools, supporting statistical data using literature or studies, providing a brief conclusion, giving recommendations based on the drawn conclusion, and presenting references used in the review were identified by the students where they find themselves as not proficient. There are significant results from the responses of the students to describe the level of their knowledge in preparing research manuscript when grouped by their strand. Reviewed data showed that preparing research design, data collection and data analysis needs improvement. This data was supported by a research output of student discussing that the common errors in research papers of the senior students include inappropriate research design, constructing the questionnaire, and filtering out the gathered data.

DISCUSSIONS

The result of the study shows in general that most of the difficulties of the students are along with a selection of theories, synthesizing reviewed literature, selection of design, data collection, data analysis, drawing conclusion, and giving recommendations. Komba (2015) summarized these as academic or technical writing skills in his study.

KEYWORDS: Research, Manuscript,

SUBMISSION ID: R002-QUIRIN-0062

Reducing Student Absenteeism through Strategic Reward and Penalty System among Senior High Students of Dagatan National High School

Glenda Lumanta, Canda NHS, Mike Beralde, & Carlo Erba Pacinos, Department
of Education – Quezon
Dagatan NHS

Abstract

INTRODUCTION

Absenteeism of the students is one of the very crucial problems of the school, which could give many bad effects to the students. It can also affect to parents as well as in school. There are many reasons why students become absenteeism, which needs appropriate intervention in order to pursue to go to school like lack of financial, family problems, long distance of the school from the home, etc. Strategic reward and penalty system are some ways done by the researchers and this reduce student absenteeism in Dagatan NHS.

METHODS

The researchers used quasi-experimental and triangulation method. It also used purposive sampling which there were twenty-five (25) Students' absenteers qualified for the intervention. Furthermore, the percentage and weighted arithmetic mean were the statistical tools to identify the result of the study. Later, twelve (12) weeks or three (3) months (January - March 2018) intervention was planned for the identified students and rewards were attached for them for the perfect attendance. After the weeks of intervention, the post-observation through school form 2 and school form 4 was carried out to determine the frequency of absenteeism among senior high school students.

RESULTS

Results revealed that the level of performance in the class of the students' absenteers is almost poor according to the computed grades by the teachers. It means that there was a great effect of being absenteeism in the class to the performance of the students because there are some lessons, activities, written, etc. that were not undertaken by the respondents due to their absences in the class.

DISCUSSIONS

Findings of the study are the following: the level of performance of the students' absenteers during pre-test observation was low level based on the documents came from the teachers and advisers. After the intervention, there was a greater chance of reducing students' absenteeism. It means that the intervention made by the researchers was efficient and effective. Furthermore, in the level of awareness of the consequences of students' absenteers, the result was the present lesson could not understand very well because they need to understand first the previous lessons taught by the subject teachers; that the most problems of the students' absenteers were lack of financial, family problems, and far distance of the school from their house.

KEYWORDS: student absenteeism, strategic reward, penalty sytem

SUBMISSION ID: R04A-QUEZON-0021

Research Competencies of Teachers in Buhaynasapa National High School

Jhimson V. Cabral, MAED, Buhaynasapa National High School

Abstract

INTRODUCTION

The recent adoption of Department of Education to Basic Education Research Agenda underscores the need for teachers to conduct school-based action researches. Given the fact that research greatly influences education in terms of improving its current state and practices, quality outputs are expected to teacher-researchers. However, teachers find it hard to conduct researches due to constraints in time and lack of interest. Although it is beneficial since it will provide relevant intervention and remedies based on empirical evidence, growing numbers of teachers are still hesitant in doing it. As such, this study was conducted to assess the research competencies of teachers that will serve as bases for drafting a contextualized research manual for them.

METHODS

The study used the descriptive method with a validated questionnaire as a research instrument. The respondents were the 67 teachers of BNHS, School Year 2018-2019, obtained through purposive sampling. The researcher sought the approval of the authorities before personally administering the research instrument used.

RESULTS

As revealed in the study, 56.7% of the teachers' population is in age ranging from 22 to 34, 79.1% are female, and 53.7% are married. In addition, 47.8% are Teacher I, 49.3% are in the service for not more than 5 years, and 43.3% are with units leading to a Master's Degree. On the other hand, teachers are slightly competent in conducting research as evident in the obtained average composite mean of 1.83. However, teachers are not competent in skills pertinent to organizing the methodology and presenting, analyzing and interpreting the data. It is evident in the obtained composite means of 1.41 and 1.36, respectively. Using paired sample t-Test, the study proved that there are significant differences in the competencies of teachers in conducting research when group according to profile variables. It is evident on the obtained p- values lower than 0.05 level of significance.

DISCUSSIONS

The study revealed that majority of the teachers are in age ranging from 22 to 34, female, married, Teacher I, in the service for not more than 5 years, and are with units leading to a Master's Degree. Teachers are slightly competent in conducting research; however, they are not competent in skills pertinent to organizing the methodology and presenting, analyzing and interpreting the data. These skills must be emphasized in drafting a contextualized research manual for teachers while considering their diverse profile variables.

KEYWORDS: research, research competencies, teachers, Buhaynasapa National High School

SUBMISSION ID: R04A-BATANP-1357

Teachers' Research Engagement, Attitude, and Capability: Basis for Enhancing Skills in Research

Hilda Jumarang, Tagaytay City Science National High School

Abstract

INTRODUCTION

This research study focused on teachers' research engagement, attitude, and capability to undertake research in the secondary schools of Tagaytay City for the school year 2017 -2018. Data gathered were hypothesized as significant variables tested and proven that gave light to the problems. The respondents of the study were 311 junior and senior high school teachers from the District of Tagaytay.

METHODS

This study aimed to determine the teachers' research engagement, attitude, and capability. This study adopted a quantitative/descriptive correlation research method to arrive at an intensive understanding of the research problem. The methodology used was in the form of a survey using questionnaires. The data was based on existing conditions. Data gathered from the responses of the respondents were subjected to statistical treatment such as mean and weighted mean, standard deviation, and Pearson r for the test of a relationship.

RESULTS

In terms of research engagement, majority of the teachers are Moderately Engaged in doing research activities with a weighted mean of 2.89. For research attitude, the majority of the teachers are Highly Positive in conducting the research activities with a weighted mean of 3.77. For research capability, the majority of the teachers are Very Good with their capability of conducting research activities with a weighted mean of 3.82. There is a significant relationship that exists between all the variables as indicated in the respective Pearson r result.

DISCUSSIONS

The following proposed programs are presented to enhance skills on teachers' research engagement, attitude, and capability. Training of Trainers is suggested for the teachers to have an opportunity of practicing and strengthening their research skills to become speakers and presenters in the different research seminars and conferences. Inclusion of Research subject in the curriculum so that every teacher has the opportunity to teach research to strengthen and develop their knowledge, skills, and understanding of the subject. In addition, establishing a strong partnership with other professionals who are knowledgeable of research is very helpful thru benchmarking and sharing of research best practices. Acquiring resources like e-books (e-library) and resource sharing will also provide teachers with information about the latest updates on research. Capability building activities are also suggested to provide technical assistance and collaborations for teachers through formal training or research projects.

KEYWORDS: Research, Research Engagement, Research Attitude, Research Capability

SUBMISSION ID: R04A-CAVITP-0790

The Implication of Reading Intervention in the Development of Reading and Comprehension Performance of Grade Six Pupils

Adelfa Villapando, Department of Education - Tanauan City

Abstract

INTRODUCTION

The government is targeting to have a quality education. There are factors to consider in attaining its goal. Hence, the Department of Education was set to be responsible for monitoring the reading and comprehension level of the pupils. In relation to this, Cale Elementary School implemented a reading intervention to help the learner improve their reading skill. The focus of the study was to determine the effect of the Project Spark (Spell, Articulate, Read and Know) in developing the reading and comprehension performance of Grade VI pupils. As reflected in the Phil-IRI Pre Test out of twenty-seven (27) pupils, twenty-four (24) were frustration readers in silent reading and 25 in oral reading. These findings called the attention of the researcher to conduct this study.

METHODS

The study is intended to find the implication of reading intervention in the development of reading and comprehension performance of the Grade 6 learners using the PHIL-IRI. Twenty-five (25) Grade 6 pupils were the respondents of the study. The input phase contains the profile of the learners and the result of a pre-test. The process phase contains the implementation of the intervention program gathering of data, analysis, interpretation, and validation while the output phase contains the difference in the reading and comprehension performance of the learners after using the intervention material.

RESULTS

The study found a significant difference in the reading performance of the learners. For silent reading, the twenty-four (24) frustration readers improved to twelve (12) instructional and twelve (12) independent readers while for oral reading, the twenty-five (25) frustration readers enriched to thirteen (13) instructional and twelve (12) independent readers.

DISCUSSIONS

This study recommended developing study habits among learners and following up of parents at home. The school can maximize the use of reading materials available in school and sustain the implementation of the Project SpARK because it is an effective reading intervention in upgrading the reading performance of the pupils.

KEYWORDS: Frustration readers, instructional readers, independent readers, study habit, reading and comprehension

SUBMISSION ID: R04A-TANAUA-0028

The Use of Coconut (*Cocos nucifera*) Oil as Alternative Ingredient for Commercial Toothpaste

Marilou Vidallon, Department of Education

Abstract

INTRODUCTION

Toothpaste is used to promote oral hygiene. It serves as an abrasive and aids in removing dental plaque and food from teeth, assists in suppressing halitosis and delivers active ingredients mostly common fluoride to help prevent tooth and gum disease. This study would help them know the acceptability of coconut oil as an ingredient for homemade toothpaste by using natural ingredient than those leading brands that use chemicals that might harm people. The researcher believes that the substance is not just an alternative but helps consumers to use natural ingredient than that of chemicals like fluoride and glycerin. Most people commonly urban dwellers consider this research as a homemade toothpaste due to its processes like coconut oil extraction, which is not simple to do but the researchers proved the acceptability of the product.

METHODS

An experimental method was used to determine the acceptability of coconut oil as alternative ingredients in making toothpaste. The researchers conducted four treatments: T0 was the commercial toothpaste; T1- 1tbsp of coconut oil and $\frac{1}{2}$ cup of baking soda; T2- 1 $\frac{1}{2}$ tbsp of coconut oil and $\frac{1}{2}$ cup of baking soda; T3- 2 tbsp of coconut oil and $\frac{1}{2}$ cup of baking soda. One hundred pupil-respondents answered survey form using a questionnaire from Guyam Elementary School to determine the acceptability of the natural ingredient.

RESULTS

The study showed that among four treatments T3 has 3.88 WM and T0 has 4.25 WM was found to be acceptable by pupil-respondents, with a difference only of .16 WM. This is compared to T1 with 2.94 WM, and T2 with 3.59 considered as moderately acceptable.

DISCUSSIONS

Most of the respondents said that the product was almost the same as that of commercial toothpaste specifically fluoride toothpaste but not merely its taste and texture. The effect of this study could be of great help in raising the issue of using fluoride in toothpaste because of the seen effects of the product to the users. It was suggested that further study is needed in order to improve the facts it contains to improve the product of using the natural ingredient.

KEYWORDS: COCONUT OIL AS ALTERNATIVE INGREDIENT FOR COMMERCIAL TOOTHPASTE

SUBMISSION ID: R04A-CAVITP-1058

RISK & SAFETY SCIENCE

Physicochemical Features of River in Santa Cruz, Laguna: Basis for Strategic Plan

Dela Cruz, Maria Teresa S., Gov. Felicisimo T. Sanluis Integrated Senior High School

Abstract

INTRODUCTION

Water is essential not only to individual humans, but also to human societies. Along with the water that flows in the Santa Cruz River are the wastes that include trash or garbage from the households, schools, offices, market places, restaurants and other public places. The researcher has observed that the river condition is currently very different and perceived the water to be of poor quality. The practices of the surrounding community, as assumed, contribute to the present features of Santa Cruz River.

METHODS

This study has its importance in upholding the status of Santa Cruz River wherein different issues may be solved by the set of assessment that the researcher entitled to do like giving questionnaire to know the perception of the residents living near the river as well as the laboratory analyses that were done on water samples.

RESULTS

River in Santa Cruz, Laguna as analyzed according to the results obtained for 3 months from stations 1,2 and 3 "passed" the water quality criteria for basic parameters. It falls on classification class C, defined as Fishery water for propagation and growth of fish and other aquatic resources, Recreational Water Class II for boating, fishing and similar activities and for Agriculture, irrigation and livestock watering. All the river water samples from the three stations "passed" the water quality criteria for the physical analysis. However, Biological analysis reveals that average values for BOD for the three stations are higher than the minimum standard of 7 mg/L for class C, which made the water "failed" to meet the criteria the results, was obtained from the checklist of perceived practices being done by the residents.

DISCUSSIONS

However, the findings of the study revealed that the perceived human practices that involved agriculture and fishing, quarrying and water supply, sewerage and waste management significantly affect the status of the River in Santa Cruz, Laguna. This implies that the water from the river is not suitable for human consumption, which is for drinking, bathing, washing of clothes, and other similar human activities for it contains bacteria that can cause human diseases.

KEYWORDS: Physiochemical Features, Strategic Plan

SUBMISISON ID: R04A-LAGUNA-0435

Hindering Factors in Implementing the Disaster Risk Reduction and Management Plan of Daliao Elementary School: Basis for Strengthening DRRM Program

Alhadi K. Ibrahim & Francis Irene R. Pezario

Abstract

INTRODUCTION

Educational institutions worldwide had embraced the importance of disaster preparedness, response and education which is seen in the Disaster Risk Reduction and Management (DRRM) plan of the school. In the Philippines, the approach on the subject already shifted from being reactive to proactive. However, despite all the shifts, the problem of proper implementation hinders the goal for a Filipino culture of disaster management (Pantino, 2015). For this reason, the researchers aim to find out the hindering factors that affect the implementation of the DRRM plan. This initiative will help the DRRM implementers identify and solve the roots of the problem.

METHODS

The researchers used Quantitative-Qualitative research design involving fourteen (14) teachers of Daliao Elementary School purposively chosen from the total enumeration of teaching staffs during the school year 2018-2019. The level of preparedness was measured using the Localized DRRM Monitoring and Evaluation Tool from the Division of Sarangani while the hindering factors were identified using the survey questionnaire adapted and modified from Johnson (2014).

RESULTS

The study revealed that the school has a moderate preparedness capacity (29.55), two steps lower from the highest level. It was also found that there are three major hindrances in the implementation of DRRM plan and these are; Weak connection with disaster agencies and LGU's (92.8%), Lack of Budget and personnel (85.7%) and Lack of training in developing a program (71.4%).

DISCUSSIONS

Based on the results, the school did not reach the highest disaster preparedness capacity because it was hindered by three major factors including; Weak connection with disaster agencies and LGU's (92.8%), Lack of Budget and personnel (85.7%) and Lack of training in developing a program (71.4%). This means that the school is not solely responsible for the success of implementing DRRM programs. It should be a collaborative effort of the school, community, NGO's and the government. Reaching the highest level of disaster preparedness requires a long term action plan which gives importance to activities revolving around the community awareness, contingency planning and conduct of local drills (Jurilla, 2016). Further study is recommended using a larger sample size and a wider scope to identify other hindering factors in the DRRM plan of the schools in the division.

KEYWORDS: Disaster Risk Reduction and Management (DRRM), Daliao Elementary School, preparedness capacity

SUBMISSION ID: R012-SARANG-0064

A System that Affects the Decrease of Accidents and Crimes through a Citizens Emergency Support System

Arlan A. Mato, Amelia Amelie O. Ugal, & Mary Jane Amar

Abstract

INTRODUCTION

In this era, the World Wide Web conveyed a big change in human history, from one place to another, the communication and link to everyone have been quite improving. It helps the societies to extend information through technology and also, they have been helping each other in many ways. As of today, the mobile-based system could be more useful as an application to prevent incidents just by sending SMS and MMS because the societies had been using smartphones and tablets. The objectives of this research are to develop a Citizen Emergency Support System and to enhance the current system. Citizen Emergency Support System is a mobile-based system that serves as an application to prevent any incidents in the surroundings. This application can be used by the concerned citizen just by sending an SMS and MMS to the administrator of the system, then the administrator will send the SMS and MMS reported to the Land Transportation Office, Philippine National Police, and Bureau of Fire Protection General Santos City. The specific Government Agencies immediately response if the incident report is suited to their work. The study was limited in the boundary of General Santos City and the respondent is limited into Land Transportation Office, Philippine National Police, and Bureau of Fire Protection.

METHODS

The researcher used the waterfall model (Dennis, Wixom, Roth, 2010) as their software methodology; this methodology helped the researcher to review and reconstruct documentation. The researchers gather information and observation from the Land Transportation Office, Philippine National Police, and the Bureau of Fire Protection. The Police officers, Firemen, Traffic Enforcers, the employee, and the public are the respondents of the study. The researchers used to gather tools as an effective way to acquire the information that is needed for the development of the system. They also determine the problem, needs, and opportunities during the study. The User Acceptance Testing or the UTC was performed, developed, and focused after the system program design, content usability, and acceptability. The system concludes that if the users use this system it helps the people of General Santos City to lessen the crimes and accidents. As well the quick response of the Local Government in the specific crime or accidents. The researchers use a questionnaire to conduct survey & interviews. Based on the statement of the problem, questions were formulated. The questionnaire's content would help the study for further understanding. The system Emergency Support System is a mobile-based design and supported by a web-based for an emergency situation such as a fire accident, road accident, and minor crimes. Citizen Emergency Support System records all reported incidents.

DISCUSSIONS

Cambodia Road Crash and Victim Information System Annual Report 2010 Tragedy that is caused by traffic accidents is the tragedy that the royal government considers as the main problem until now. The numbers of fatalities, injuries, people with disabilities, orphans, widows and the hardship of people are still serious. Within the last 5 years, the numbers of fatalities are almost double, and the numbers of traffic accidents increase by more than 200%. Nearly 90% of road traffic victims are motorcyclists, pedestrians and cyclists.

KEYWORDS: emergency support system, accidents decrease, crimes

SUBMISSION ID: R012-SARANG-0077

Disaster Risk Reduction Management: Its Impact on Elementary Pupils' Level of Preparedness During Hazards

Jackie Lou P. Montebon & Sarah A. Regidor

Abstract

INTRODUCTION

A comprehensive disaster risk management strategy will actively involve stakeholders at all levels of government as well as the private sector, local communities, and civil society. The school that is located near the seashore is prone to hazards like tsunami and earthquake. It is very important that all children will be aware of the Disaster Risk Reduction Management (DRRM). Adapted from GFDRR (2014a) Disasters are emergencies that cannot be handled by those affected without outside assistance. Responsibility for disaster risk management does not lie with disaster managers alone. It is rather a concern for everyone—from citizens who must be empowered to make decisions which reduce risk, to political leaders, government institutions, the private sector, civil society organizations, professional bodies, and scientific and technical institutions.

METHODS

This study used the descriptive-correlational method of research. It described the impact of the Disaster Risk Reduction Management (DRRM) to the level preparedness of elementary pupils during hazards or disasters. The Disaster Risk Reduction Management (DRRM) interventions such as early warning system evacuation plan and others such as tsunami drill, earthquake drill and fire drill used by the DRRM team to the elementary pupils in Rudes Elementary School.

RESULTS

Based on the data gathered, there is a significant impact on the elementary pupils, level of preparedness. It was found that elementary pupils have a high level of awareness about the mitigation of Disaster Risk Reduction Management. Based on data, they are prepared for hazards. They are well informed of the early warning system and evacuation plan. They know how to give first aid if somebody is injured during hazards. The researcher came up with an action plan to ensure that the elementary pupils are well-informed with the implementation of the DRRM.

DISCUSSIONS

Disaster Risk Reduction Management (DRRM) is a quarterly or annual activity that should not be neglected in the school. Rudes Elementary School was evaluated and identified as a probable hazard zone or area and the necessity for preparedness is emphasized. In order for the pupils to become fully aware of the accompanying risks when calamities like earthquake and tsunami. The researcher as the in-charge of Disaster Risk Reduction Management (DRRM) comes up with an action plan that will capacitate the school children during hazards with the partnership of the local government unit (LGU) (Department of Education) to strengthen the activities and measures that will be taken in advance to ensure that there will be a noticeable impact on the awareness and preparedness of the school children.

KEYWORDS: Disaster Risk Reduction Management (DRRM), Elementary pupils, Rudes Elementary School

SUBMISSION ID: R012-SARANG-0189

The Level of Preparedness of the Residents of Barangay Benguet During Typhoon

Daniella F. Espayos & Jona Estocado, Rizal National High School
(Adviser: April Manallo)

Abstract

INTRODUCTION

We are situated in a Pacific Ring of Fire. An average of 21 typhoons enter the Philippine Area of Responsibility (PAR) in a year.

A typhoon is a violent tropical cyclone, in meteorological terms, which is low pressure system occurring in tropical ocean. Typhoons are major storms that affect everything they come in contact with, from boats to agricultural products to human beings.

There are several times that the residents of Barangay Benguet suffered because of lack of awareness and training on the precautionary measures when typhoon occurs. People in the community rely on their past experiences, instead of adapting the proper things to do before, during, and after typhoons.

METHODS

The study aimed to determine the level of preparedness of the residents of Barangay Benguet during typhoon. This study utilized a descriptive method of research. A survey questionnaire was used to gather the needed data. The respondents were the 60 residents of Barangay Benguet aged 20 to 60 years old.

RESULTS

The level of preparedness of the respondents during typhoon has a rating of 4.31, which has a descriptive rating of very prepared. Most of the respondents agreed to the benefits of being prepared during typhoon as follows; a) To avoid loss of life, b) To prevent destruction of property, c) To know the things to do before, during, and after typhoon, d) To overcome the difficult situation during typhoon and e) To gain knowledge on the precautionary measures during typhoon. The things to do before, during, and after typhoon are the following; a) stay alert and be prepared, b) keep and emergency kit, c) stay updated on news, d) follow the instructions given by the disaster risk reduction committee personnel and e) know the important emergency hotlines in the community like the BDRRMC or PDRRMC. From the responses of the residents, the average rating is 3 which has a descriptive rating of aware.

DISCUSSIONS

The results show that there is a need to increase the level of preparedness and enhance the awareness of the residents on the things to do before, during, and after typhoon. The awareness of the residents would be enhanced through the cooperation of the school and the community. Thus, the Barangay Council with the assistance of the school may conduct a training program on disaster resilience. On the other hand, the school may use the proposed module in the teaching learning process to increase the awareness of the students.

KEYWORDS: Level of Preparedness, Residents, Benefits, Typhoon, Community

SUBMISSION ID: R005-SORSOP-0018

The Level of Security that the CCTV System Provides in San Juan Senior High School

Philip Joshua Cape, San Juan Senior High School

Abstract

INTRODUCTION

Closed Circuit Television also known as CCTV is a television system that has a great potential to lessen the possible security threats within the school area. It is commonly used as a video surveillance for security purposes. CCTV system is designed to monitor a specific area and to record videos or footage that will help to solve problems and incidents. Schools must consider the installation of surveillance cameras and its quality to address the people and students within the school premises. It will be a big part for the improvement of school's security systems to ensure a safe environment. With the use of this technology there will be a safe school community where the students can study comfortably. This study will help promote the importance of having CCTV system in schools, thus, lessens the case of incidents that might happen.

METHODS

This study used a case study qualitative approach. The researchers used this design to know the particular rate of security level in a school with the presence of CCTV System. This research used convenience and purposive sampling.

RESULTS

This study aimed to analyze and identify the quality of the CCTV System in San Juan Senior High School and how it significantly affects the level of security of the school. These factors served as the basis of the data gathered by the researchers. Findings indicated that the number of CCTV Cameras and the clarity of CCTV footage have great impact on the level security of the school. CCTV Cameras were really effective in places like the canteen because of its equipment. It can prevent cutting classes because most CCTV Cameras were installed in the area where the possibility of doing cutting classes was high. The participants also felt safe and secured because they are protected from bullying and safe from any harm in school. The CCTV System can help in monitoring important things even left unattended. The security level of the school is high because there is no new case of robbery since the installation of the CCTV System.

DISCUSSIONS

CCTV can help the school to solve crimes and incidents because the perpetrator will be scared to do unnecessary things. In terms of a high security level, the school must provide a good quality of CCTV System and assign a monitoring personnel to check the CCTV footage from time to time. An active monitoring of the school area with the aid of CCTV System is needed. The school should install more CCTV cameras in the place where cutting classes and brawls takes place.

KEYWORDS: CCTV System, Security level, Surveillance, Safety, Threats

SUBMISSION ID: R04A-BATANP-0765

Level of Awareness in School's Disaster Risk Reduction and Management Programs in Looc National High School, Nasugbu, Batangas

Alexandra Cloma, Demetrio D. Angga, & Venancio V. Himaya, Jr, Department of Education - Batangas

Abstract

INTRODUCTION

As a preparation of disasters that might happen in the country, the Department of Education created the School Disaster Risk Reduction and Management Office which deals in the preparedness and fulfills the lack of awareness of every student to be prepared every time in any possible disaster that might happen in the school. The study identified the level of awareness in School's Disaster Risk Reduction and Management Programs in Looc National High School and the suggested measures on how to improve it.

METHODS

To achieve these purposes, survey questionnaires were prepared. Descriptive survey methodology was employed and simple random sampling was used. Then, the information obtained through questionnaires was analyzed using percentage and mean value.

RESULTS

An annual plan focused on increasing the level of awareness in the school's disaster risk reduction and management programs in Looc National High School was prepared.

DISCUSSIONS

The level of awareness of the respondents, based on the school's disaster risk reduction and management programs, concluded that the respondents are mostly aware in one of its implemented program which is the earthquake drill but least aware in the Fire Prevention Drill.

KEYWORDS: School's Disaster Risk Reduction and Management Programs

SUBMISSION ID: R04A-BATANP-0001

Level of Awareness of Grade Six Pupils on the Importance of Waste Segregation in Bolbok Elementary School, Tuy, Batangas

Norilyn Abogado, Department of Education, Tuy Batangas

Abstract

INTRODUCTION

A lot of programs have been implemented in the school to lessen the problem on waste but still the problem was not resolved. There are pupils that keep throwing their waste materials on the ground despite the solid waste management practices in the school. This study aimed to determine the solid waste management awareness of grade six pupils on the importance of waste segregation.

METHODS

A descriptive research method was used. Sixty grade six pupils responded to the researchers-made questionnaire checklist. The data gathered was analysed and interpreted using percentage, rank, weighted mean, Pearson product moment correlation coefficient, and the T- test.

RESULTS

Most of the respondents belong to 10-11 years of age and majority of them are male. They agree on the importance of waste segregation in terms of discipline and attitude. There is no significant relationship between the respondents' awareness on waste segregation when grouped according to their profile variables and are all accepted in terms of discipline and attitude. No significant difference exist between the discipline and attitude of the respondents on their awareness on waste segregation. The proposed action plan is designed to improve the level of awareness of grade six pupils on waste segregation.

DISCUSSIONS

The results show that the school should exhibit programs and activities that will enhance the pupils' positive perspective towards waste segregation based on their age and gender. Conduct a symposium with the pupils and parents with the help of Local Government Unit and Municipal Environment and Natural Resources Office. Wider information dissemination of programs and activity and strict implementation of rules and regulations on proper waste management must be reinforced in the school, home, and community. The proposed action plan must strengthen the level of awareness of pupils on the importance of waste segregation.

KEYWORDS: Awareness, discipline, attitude, waste segregation

SUBMISSION ID: R04A-BATANP-1420

Impact of Non-Compliance to the Disaster Risk Reduction and Management Guidelines in Earthquake Drill on Calamba Bayside Integrated School

Aaron Paul L. Habacon, Calamba Bayside Integrated School
(Adviser: Aaron Paul Habacon)

Abstract

INTRODUCTION

Disaster Risk Reduction and Management is an interesting field of study. The safety of schools is important and Disaster Risk Reduction and Management aims to reduce the vulnerability to and impact of disasters on schools. Earthquake drills and exercises are an extremely important part of your preparedness plan because they teach students, staff, and parents how to respond to the complications of an actual earthquake, help you evaluate how well all parts of your emergency plan work together, and how well your staff and students. To attain high morale of each individuals and to be aware and be prepared of what will happen is the intention to the Drill Guidelines.

METHODS

Mixed method research was employed in this study. Quasi-experimental design was used to determining the significant event of the non-compliance to the earthquake drill guidelines purposively Selected Teachers and Students from Calamba Bayside Integrated School. Survey questionnaire served as research instrument and the data collected were analyze using chi-square test. Qualitative design was employed in determining students and teacher's perception on DRRM guidelines module through interview. The data collected were analyzed through thematic coding. While, survey questionnaire was utilized to identify the acceptability and validity of the Student/Teacher-based DRRM Module among the respondents and experts in the field.

RESULTS

The study revealed a significant difference between the respondents' pre-test and post test scores during the NSED SY 2018-2019, which indicated an improvement in their emergency preparedness. Based on the thematic analysis, all respondents (100%) strongly agreed that if they complied on this event may be they will learn anything. The activities are interactive and meaningful for the student and also for the teachers. The latest NSED that 100% of the students are actively engaging the said drill.

DISCUSSIONS

The results reveal that if we followed the Disaster Risk Reduction Guidelines in Earthquake DRILL there is a significant change in learners' academic performance and perception in DRRM Guidelines. This module likewise serves as avenue for a more challenging and enjoyable way of learning, wherein scientific literacy and inquiry and analytical skills are altogether improved.

KEYWORDS: DRRM, Compliance

SUBMISSION ID: R04A-CALAMB-0045

Driving Students' Level of Awareness of Road Signs

Christian James Acuzar, Joyce Bronzi, Mary Joy Bayona, & Rica Louise Bawalas,
Munting Ilog NHS
(Adviser: Christian James Acuzar)

Abstract

INTRODUCTION

Nowadays, people are often using or riding in any form of vehicle. They are driving even though they are not fully registered as professional drivers that is why they are engaged in accidents. In response to this concern, the study explored the level of awareness of driving students of different road signs and its significant relationship to their demographic profile.

METHODS

The study was conducted in Munting Ilog National High School, Munting Ilog, Silang, Cavite. The study employed descriptive-comparative design. Data was gathered through administration of a test to gauge their level of knowledge with regard to road signs. T-test was used to determine the significant connection between demographic profile and level of awareness in road signs. Awareness across gender and age was compared to know if these (age and gender) have something to do with how they comprehend these cautionary marks.

RESULTS

The study revealed that there is no significant difference between the demographic profile and the level of awareness of road signs of the students in Munting Ilog National High School. Regulatory and informative categories obtained almost the same mean, 5.6 for male drivers and 5.8 for female drivers and 6.23 for male drivers in regulatory signs and 6.13 for female drivers in informative signs with the descriptive rating of very good. While warning road sign falls under satisfactory with a mean score of 5.15 for male drivers and 5.10 for female drivers.

DISCUSSIONS

The results show that most of the students who are driving have moderate level of understanding in road signs especially in informative signs. Their gender and age have no direct impact with their awareness as shown by the T-test. This means that male and female drivers have equal knowledge on these signs. However, in terms of age gap, the small interval may not guarantee that there is no significant relationship between the two variables.

KEYWORDS: level of awareness, road signs

SUBMISSION ID: R04A-CAVITP-0421

Earthquake Preparedness Skills among Pupils of Talaga Elementary School

Avelyn Cajayon, Maria Manalo, & Rowena Baculo

Abstract

INTRODUCTION

Last April 2017, the town of Mabini where Talaga Elementary School (TES) is located, was shaken by an earthquake averaging to magnitude 6. The occurrence of earthquakes and their aftershocks, which worried the school community and the public as well, awakened the minds of every individual especially the pupils to be more alert and be prepared. At TES, three classrooms of Grade Four classes are located at the second floor of a two –story building. It was built and completed in 1961. Today, the building itself needs repair. Some said that it should be demolished.

Thus, the researchers aimed to assess the preparedness skills on the occurrence of an earthquake among Grade-Four pupils of Talaga Elementary School.

METHODS

This paper utilized the descriptive method approach of research which used questionnaires as a main tool for gathering data that identified the best practices of the pupils before, during and after the occurrence of an earthquake. The frequency of pupils' response and percentage rating were utilized to determine their level of preparedness. The data was then presented, analyzed, and interpreted in order to find out the result.

RESULTS

Grade-Four pupils who were respondents of this study has low level of awareness during earthquake occurrence, thus result suggests that a proposed localized earthquake readiness guidelines be crafted for information and dissemination.

DISCUSSIONS

The output of this research will inform pupils as well as their teachers on the important things and practices that they should remember and apply before, during, and after an earthquake occurrence while in school. This was based on the researcher-made questionnaire utilized to the pupil-respondents. Different difficulties that may be encountered during an earthquake based on the school location were also considered. With this, Talaga Elementary School imposes and implements activities or safety tips on how to deal with the disasters especially during the occurrence of earthquake that will come up unexpectedly. Stakeholders of the school work hand in hand to orient pupils and to build and develop disaster awareness and preparedness among themselves.

KEYWORDS: earthquake, preparedness, skills

SUBMISSION ID: R04A-BATANP-1209

**Climate Change Awareness and Preparedness of Brgy. Banadero, Calamba
City: Basis for DRRM Partnership Program**

Jonash Legaspina & Joshua Gadin
(Adviser: Sheila Villareal)

Abstract

INTRODUCTION

One of the major global issues is climate change. The effect of climate change is now experienced. Due to the fact that our country is located in the Pacific Ring of Fire, mitigation is necessary; that's why our government is investing in trainings and projects are implemented from the barangays, schools, and other local government units. The objectives of this study are to identify percentage of awareness of the community of Banadero toward climate change and mitigation and how frequent do the people in community of Banadero practice ways of climate change mitigation; determine programs and projects promoted by the Brgy. Official and School in climate change mitigation and propose DRRM Partnership Program that can be implemented for climate change mitigation and adaptation.

METHODS

This research used descriptive method. Random sampling was used in determining the 50 (25 students and 25 adults ages 20-50) respondents living in Brgy. Banadero. The instrument used was a survey questionnaire.

RESULTS

Based on the findings, 22.72% of the respondents were very aware, 54.55% were aware and 22.72% were slightly aware of climate change. On the other hand, the respondents perceived that they slightly practice ways on climate change mitigation. The top five programs of the barangay were Early Warning/Weather and Flooding Monitoring Team, Waste Segregation, Tree Planting Activity, Brgy. Clean Up Drive, and Earthquake Drill while the school practices Zero Waste, Earthquake Drill, Integration of CCA in Curriculum, and Climate Change Mitigation Campaign. Project BASIC (Barangay and School Intensive Campaign) toward Climate Change Mitigation was proposed.

DISCUSSIONS

Residents of Banadero are aware of climate change but some of them were not practicing ways of preventing it, therefore, the school and the Barangay Officials should increase and strengthen the awareness and projects in order to mitigate the climate change.

KEYWORDS: climate change, mitigation

SUBMISSION ID: R04A-CALAMB-0022

Analysis on the Effectiveness of Barangay Ordinances on the Safety of Teenagers in Talahiban 2.0

James Mondelo, San Juan Senior High School

Abstract

INTRODUCTION

Every barangay implements different ordinances for different purposes. The ability of the barangay to implement any law comes from the authorization of higher institution. Barangays that are granted "home rule" charters by the assembly have the foremost authority to act. The researchers conducted this research to further disseminate information about ordinances to the constituents of the barangay because many people lack knowledge on the ordinances of the barangay. The teenagers will also learn new things from this research that will contribute to the success of the barangay. It will identify the associated behavior of teenagers who are violating laws.

METHODS

This study is essentially Case Study Research Design where it involves deep understanding through multiple types of data sources. The researcher used the purposive or subjective sampling to select participants.

RESULTS

The study analysis of the effectiveness of Barangay Ordinances to the safety of Teenagers in Talahiban 2.0 had the following data gathered. It is not safe to walk during night that has been agreed by the five respondents. Some of the participants are very aware on what ordinances are being implemented in their barangay, because out of 10 participants, 8 of them know the ordinances. It is implemented by the Barangay Police and supported by posters in different areas on streets of Talahiban 2nd. Based on the data gathered, it is very safe to walk during daytime and 50% safe during night time due to lack of street lights. Another problem was the lack of street lights as well as the using of video karaoke during night time. According to the respondents, the ordinances really affect their living because they give assurance to them that they are safe even outside their houses.

DISCUSSIONS

The views of Barangay Officials, Parents and Teenagers is related to the safety of the teenagers. They feel comfortable and safe on the streets of Talahiban 2.0 due to the implementation of different ordinances that aim to protect the youth. It will guide the teenagers on what is the right thing to do when they are in the areas of the said place. In terms of the level of safety, teenagers in barangay Talahiban 2.0 feel safer walking alone during the day, ten respondents agreed that they feel safe to walk alone during day time. Five out of 10 respondents stated that it is not safe to walk alone during night time due to the lack of streetlights and most of those respondents were women.

KEYWORDS: Curfew, Ordinance, Teenagers, Safety, Barangay

SUBMISSION ID: R04A-BATANP-0758

Assessment of the School's Disaster Risk Reduction Practices

Carl Darel D. Abada, Julie Ann M. Brillantes, & Roy Cyrus T. Frias, Southville 1
Integrated National High School
(Adviser: Grace Lamano)

Abstract

INTRODUCTION

Republic Act 10121 or the Philippine Disaster Risk Reduction and Management Act provides a comprehensive, all-hazard, multi-sectoral, inter-agency, and community-based approach to Disaster Risk Management framework. The act shifted the policy environment and the country's preparations for disasters. This study aimed to assess the level of involvement of Grade 12 Students of Southville 1 Integrated National High School in disaster risk reduction and the factors attributed to the effectiveness of these practices. Furthermore, this study aimed to develop capacities in disaster management of the school through student initiatives.

METHODS

The study used a descriptive survey research design and used stratified random sampling to select 130 Grade 12 students to answer the researcher-made survey questionnaire. It contains the level of involvement of the students in terms of Disaster Preparedness, Safety Precautions, and Drills Implementation. In addition, it contains the factors affecting Disaster Risk Reduction Practices. The researchers used the weighted mean as a statistical treatment.

RESULTS

The Grade 12 students are moderately involved in the school's disaster risk reduction practices in terms of Disaster Preparedness, Safety Precautions, and Drills Implementation. This is supported by the study of UNISOR (2015) which stated that some schools conduct disaster practices for the awareness of the students in a disaster which regulate the proper ways of action, response, and responsibility of each student. Furthermore, the factors including the environment, student's behavior, local community involvement, student's responsiveness and coordination among stakeholders attributed to the effectiveness of the school's disaster risk reduction practices. It signifies that R.A. No. 10121 is adopted not only in a multi-level system but also becomes multi-relational involving the social system of the community.

DISCUSSIONS

Results reveal that the level of involvement of Grade 12 students on the school's disaster risk reduction practices is only moderate. This implies that their involvement could still be improved through efforts by the school administration and the community. The factors attributed to the effectiveness of these practices include the environment, student's behavior, local community involvement, student's responsiveness, and coordination among stakeholders. To address the issue, the researchers propose a Facebook page that provides information on disaster risk and readiness.

KEYWORDS: assessment, disaster risk reduction practices, Disaster Preparedness, Safety Precautions, and Drills Implementation

SUBMISSION ID: R04A-CABUYA-0019

Automated Urban Flood Detector Warning Device

Francisco, Renelle John, Madlangbayan, Jomari, & Ylagan, Karen
(Adviser: Jellina Rosga)

Abstract

INTRODUCTION

Flood is a common hazard caused by an intense rainfall that generates quickly with little warning, sweeping everything in its path downstream. In line with this, an early flood warning device made from scrap with the application of Arduino UNO board was created to give early warning of the incoming flood and aware the people around

METHODS

The flood warning device was composed of four components: the sensors, alarm/buzzer system, water level indicator, and the casing. The pipe was labeled and drilled and the water level indicator was placed onto the hole and then wires were soldered to be lengthened. The buzzer was placed into a bracket and the wires were soldered for connection purposes. Arduino UNO was programmed using Arduino 1.0.7. After the case was drilled from its corresponding labels to make pathways for the connection then, the Arduino UNO and the buzzer were attached to the case and the wires were connected according to its position. The device was tested to twenty students from Cavite National High School - Senior High in order to assess the buzzing sound of the device and its acceptability level. Statistical treatment Pearson r was used to determine the correlation between two variables.

RESULTS

Many of the Students who participated in testing the device agreed and give satisfaction with its functionality, acceptability level, and cost-effectiveness. Through the use of a statistical tool: Pearson r. there was a perfect negative correlation due to the computed value of -1 between in the quality of sound produced by the device and varying distance. The distance from the device and the sound produced of the device was inversely proportional to each other.

DISCUSSIONS

Overall, the functionality and cost-effectiveness of the device were highly acceptable. The researcher recommends the following for the better outcome of the device: (1) assess the functionality of the developed flood warning device on actual floods; (2) use the application of GPRS or SMS for the real-time update of the level of flood through the use of mobile phones; (3) and use additional components for the clear distinction of alarm in different flood water levels.

KEYWORDS: DRRM, flood warning device, automation, sensors

SUBMISSION ID: R04A-CAVITC-0028

Bacteriological Analysis of Osorio's Spring Water with Utilization of Filtration and Boiling Process

Mischelle Papa, Trece Martires City Senior High School

Abstract

INTRODUCTION

Water is an essential part of life. It is used in daily activities; drinking, cooking, etc. However, as human use this, they are not aware of unseen bacteria such as *Escherichia Coli*, Fecal Coliform, Coliform, and Heterotrophs. Thus, examining and identifying the bacteria present in water is very important for human's safety. In this experimental research, the bacteria count in the spring water of Barangay Osorio, Trece Martires City was determined and indicated if it is safe to drink. Moreover, with the use of filtration and boiling process, this study showed the difference of bacteria count between the filtered and unfiltered spring water.

METHODS

This research study used quantitative method experimental research design as it aims to analyze the bacteria count and to determine the effectiveness in lessening of these bacteria through filtration and boiling process. The samples were gathered at Barangay Osorio, Trece Martires City. Researchers prepared several materials, followed some methods in conducting the research, and used the standard values adopted from Philippine National Standards for Drinking-Water (PNSDW) to score and interpret the data. Finally, Independent Paired t-test was utilized for statistical treatment.

RESULTS

Using multiple tube fermentation technique for both *E.coli* and Potability Test (Fecal Coliform and Coliform); pour plate HPC, the results showed that, before utilizing filtration and boiling process in Osorio's spring water, the samples had a count of greater than 8.0 MPN/100ml for both *E. coli* and Potability Test in bottle 1 and 6,067 CFU/100ml for the HPC Test; greater than 8.0 MPN/100ml for both *E. coli* and Potability Test and 5,967 CFU/100ml for the HPC Test in bottle 2. Meanwhile, after it was filtered and boiled, the samples had a count of less than 1.1 MPN/100ml for both *E. coli* and Potability Test in bottle 1.1 and 510 CFU/100ml for the HPC Test; less than 1.1 MPN/100ml for both *E. coli* and Potability Test and 478 CFU/100ml for the HPC Test in bottle 2.1.

DISCUSSIONS

There is a significant difference in the count of *E. Coli*, Fecal Coliform, and Heterotrophs present in the water sample before and after filtration and boiling. The study found out that water samples that were filtered and boiled shows a huge decrease in bacteria count. Thus, the researchers concluded that the elimination of bacteria in the water could be possible through the utilization of boiling and filtration process.

KEYWORDS: *Escherichia Coli*, Fecal Coliform, Heterotrophs

SUBMISSION ID: R04A-CAVITP-0967

Dealing with Disasters: Awareness and Preparedness of Tanza National Trade School

Mark Garry A. Garcia & Marnelli P. Marges, Tanza National Trade School

Abstract

INTRODUCTION

The Philippines is one of the most vulnerable countries in the world. Being located within the Pacific Ring of Fire, it is a disaster-prone country. In relation to the effort of managing the disaster in the Philippines, the school has a tangible role in building community resilience. The school as an educational institution has the responsibility to deliver education. It is for the reason that the school is an effective platform in transferring information, knowledge, and skills to the surrounding communities. Therefore, the activities of disaster education in school are an effective, dynamic and sustainable strategy in spreading out disaster education. The systemic, measurable and feasible efforts to increase the capacity of the school community will effectively reduce disaster risks in schools.

METHODS

An adopted survey questionnaire of Celis & Heres (2016) consisting of close-ended questions was administered to students and teachers both in Junior and Senior High School departments of Tanza National Trade School. Descriptive method of research was used to determine the level of awareness and preparedness on disaster education of the respondents

RESULTS

The findings of the study revealed that there is no significant difference in the level of awareness and preparedness among students from Junior and Senior High School. The respondents strongly agree on the schools' campaign on disaster education thus having a high level of awareness. Moreover, student respondents are very concerned in terms of disaster preparedness. Similarly, the teacher participants in general strongly agree on the school's disaster education awareness campaign and are very concerned with disaster preparedness.

DISCUSSIONS

The study on awareness of disaster among students and teachers of Tanza National Trade School revealed that the participants are highly aware and prepared for Disaster Education. Crafted from Clark's (2013) point of view, teachers should better impart practical skills in disaster prevention and reduction through Disaster Education.

KEYWORDS: disaster, disaster education, awareness, preparedness

SUBMISSION ID: R04A-CAVITP-0310

Development of Padre Garcia District Disaster Risk Reduction and Management Scheme

Romeo Ramos, Bawi Elementary School

Abstract

INTRODUCTION

It was based on Municipal Disaster Risk Reduction and Management Plan, which aims at strengthening the capacity of Padre Garcia District School with its partner stakeholders to build disaster resilient communities and institutionalizes arrangements and measures to reduce risks, including climate risks, and enhancing disaster preparedness and response capabilities at all levels. The researcher was motivated to conduct this study to strengthen the capacity of Padre Garcia District School with its partner stakeholders to build disaster, resilient communities and institutions arrangements and measures to reduce risks, including climate risks, and enhancing disaster preparedness and response capabilities at all levels.

METHODS

This is descriptive qualitative research, which aims to identify the common practices that should be done in case of typhoon, earthquake, and fire. The respondents of the study are all Elementary public-school Disaster Risk Reduction Management Coordinators in Padre Garcia. They manifest the interest in the research and willing to take part of in the study, which is a big help in solving the difficulties in practicing DRRM like willingness and political commitment of various agencies including government and another major donor, and inconsistency in DRRM interventions. The researcher used data gathering procedure namely: deep and focus group discussion, survey method through questionnaires and interview.

RESULTS

Based on the result the difficulties encountered by the School DRRM Coordinator out of 17 teachers 3 or 17% of the respondents stated that they are not well informed about the different drills to be conducted in the school. 15 or 88% of the teachers said that they have fewer seminars/training about risk reduction. 17 or 100% of the respondents stated their pupils have a lack of self - esteem in doing the different drills. Lack of support from the Barangay and Municipal DRRM are the difficulties encountered by 10 or 59% of the respondents and 9 or 53% of the respondents stated that there is lack of coordination between various DRM coordinators.

DISCUSSIONS

The school must always conduct drills, symposium, lectures, orientation or campaign about the importance of Disaster Preparedness to boost the confidence of the pupils and make them aware of the necessary actions to be done in case of occurrence of different catastrophe. Good coordination among all the DRRM coordinators to strengthens disaster response in all schools in Padre Garcia.

KEYWORDS: Disaster, DRRM,

SUBMISSION ID: R04A-BATANP-0245

**Disaster Awareness and Preparedness of the Elementary School Teachers in
Calatagan District, Division of Batangas: Basis for a Communication
Campaign Strategies in Disaster Management**

Wilma Verzosa

Abstract

INTRODUCTION

The Province of Batangas in the South is one that is often visited by natural calamities, from storms and typhoons, earthquakes, shortages of water, and sometimes the leveling of the ocean waters. At the forefront, the schools in the province have also been actively involved in disaster management awareness and preparedness. This is in partnership with the local government units (LGUs), the National Government, private agencies, and even the non-government organizations for disaster assistance, preparedness, disaster training, and education, etc., for the people to be more informed and educated towards a culture of disaster prevention, and flexibility.

METHODS

The study is descriptive and exploratory in nature since it seeks to identify the level of awareness, preparedness, and knowledge of teachers in the time of disasters in the schools. It made use of 63 elementary school teachers purposively and conveniently chosen in three (3) public elementary schools in Calatagan District, Division of Batangas.

Sets of self-constructed validated instruments were used to gather data and summarized data were treated arithmetically and statistically to arrive at the answers to specific questions raised.

RESULTS

The 63 elementary school teacher respondents were moderately aware of the school-management disaster practices in their respective schools. Much that they agreed they were aware and participated in the disaster planning strategies ($X=3.99$), however, they only agreed moderately their awareness before the school disaster management strategies.

DISCUSSIONS

Based on the findings of the study, the researcher identified the weaknesses and gaps in the implementation of the Department of Education schools' disaster management events practices. The researcher wishes to advance a Communication Campaign Strategies to Raise Awareness and Preparedness of Teachers in the Management of School Disaster Events which was highly endorsed by teachers where the before, during and after disaster plan stages should be developed to bring more conscious school culture for preventing disasters in school.

KEYWORDS: Awareness, Disaster Mitigation, Disaster Planning, Disaster Recovery, Disaster Rehabilitation, Disaster Response, Disaster Risk Management, Disaster Risk, Disaster, Preparedness, Risk Management, School Disaster Management

SUBMISSION ID: R04A-BATANP-2259

Natural and Human-induced Disasters in San Juan, Batangas: Basis for Risk Reduction Management Project

Jhimson V. Cabral, MAED, Buhaynasapa National High School

Abstract

INTRODUCTION

The geophysical condition of San Juan, Batangas made it exposed to different disasters brought by natural and human-induced hazards. Since disasters can cause indisputable damage to life and property, the Municipality is expected to be at the lead of every emergency and risk reduction measure. Educational institutions, on the other hand, should also be partners of the Local Government Units (LGUs) in the implementation of programs for risk reduction management. As such, this study focused on assessing the natural and human-induced disasters in the in San Juan, Batangas. It also paid attention to determining the extent of the practice of disaster resiliency measures in the municipality.

METHODS

A qualitative-descriptive method was used in this study with a questionnaire, document analyses and interviews as research instruments. The respondents of the study are 198 academic leaders obtained through random sampling and 41 civic leaders identified through purposive sampling. Before the conduct of the study, the researcher sought firsts the approval of the authorities, then, personally administered the research instruments used.

RESULTS

The study revealed that the academic and civic leaders have the knowledge on natural and human-induced disasters such as fire, flood, typhoon, landslide, and earthquake as evident on the obtained composite means that are of the same ranges. However, academic leaders are more aware than civic leaders in terms of disasters. On the other hand, the school announces the suspension of offices and/or classes based on advisories given by the warning agencies and/or the Local and National government obtained the highest weighted mean of 3.35 interpreted as moderately practiced. Least rated among the measures is that school provides and installs functional alarm and warning system as evident on the obtained weighted mean of 3.12 interpreted as moderately practiced. The findings indicate that they exerting efforts to become prepared and ready to respond in times of emergency and disaster crises, however, there is a need to improve the current practices given the fact that DRRM is everyone's responsibility.

DISCUSSIONS

The academic and civic leaders have knowledge of natural and human-induced disasters such as fire, flood, typhoon, landslide, an earthquake. However, disaster resiliency measures are moderately practiced in San Juan, Batangas. Therefore, schools and government agencies must strengthen its implementation in order to build a disaster resilient community.

KEYWORDS: natural and human-induced disasters, risk reduction management

SUBMISSION ID: R04A-BATANP-1347

Solar Powered Water Level Indicator Prototype with LCD and SMS Receiver

Nicole Duarte

Abstract

INTRODUCTION

One of the greatest difficulties that a commuter can experience is having his or her transportation time being delayed due to bad weather. With this, the researcher has sought to make a prototype that will make people aware about the level of difficulty passing certain roads, especially when it is heavily raining or flood-prone, make a system that will be able to inform the people about the road status via mobile phones, and to determine the status of accessibility of roads and bridges that are in a certain area.

METHODS

Using the quasi-experimental research design, the study was done on barangays located at Maragondon, Cavite, where the people often have difficulties in traveling during bad weather. The construction of the prototype and programming of the system took five months, and another month for the surveying of the respondents. The said respondents were barangay captains, students, barangay residents, and motorists. Their perceptions were analyzed through the usage of a survey questionnaire and utilized the Likert scale based upon the prototype's operability, cost, novelty, ease of use, and general acceptability.

RESULTS

Based on the respondents' perceptions, the prototype was mainly more effective than its predecessor, which only had a remote receiver in most aspects, aside from the general acceptability, which stayed the same. In addition, the respondents have also perceived that this prototype, if ever mass-produced, would be a great help to them in keeping themselves safe and lessen the risks encountered when foul weather strikes.

DISCUSSIONS

With these results, it can be determined that the device will be able to serve its purpose as an automatic indicator of the status of accessibility and intensity of the weather, which will keep the possible respondents safe, per the assessment of the respondents. This will help them to be aware of the road situation in bad weather, and provide invaluable operation for the local government to be able to avoid casualties and untoward incidents in the area.

KEYWORDS: awareness, information, indicator, receiver, perception, prototype, safety

SUBMISSION ID: R04A-CAVITP-1616

Status of Readiness and Awareness of San Luis Senior High School in Disaster Risk Reduction and Management

Jenny Lou Guansing, Marites C. Bonifacio, Sheiryn B. Mirano, &
Vivian A. Novales, Department of Education - Batangas
San Luis Senior High School

Abstract

INTRODUCTION

In lessening the impact of hazards brought by disasters Republic Act No. 9155 or the Governance of Basic Education Act of 2001 formulates, implements and coordinates policies, plans, programs and projects in the areas of formal and non-formal basic education. In line with this, each school was required to organize committees of Disaster Risk Reduction and Management to easily cope with and overcome the worsening effects of the disasters that one may experience inside the school premises. San Luis Senior High School is a newly established public senior high school in the municipality of San Luis, Batangas. It is but necessary to gauge the school's level of readiness and awareness on Disaster Risk Reduction and Management to enhance its status.

METHODS

The researchers, in determining the readiness and awareness of DRRM, utilized the descriptive method of research. A researcher-made questionnaire was administered to 50 learners chosen by incidental sampling and 13 teaching and non-teaching personnel. The researchers also assessed the difference between the assessments of the two groups of respondents on the level of readiness as well as the level of awareness of San Luis Senior High School in DRRM. The t-test, weighted mean was used in the statistical treatment of data.

RESULTS

The level of readiness of the school in DRRM as assessed by the learners and teachers is large as evinced by the composite means of 4.20 and 4.49, respectively. There is a significant difference between their assessments as shown by the computed t- the value of 5.2751. Hence, the null hypothesis was rejected. The level of awareness of the school in DRRM was large as assessed by the learners (4.23 mean) and teachers (4.49mean). The computed t - the value of 3.6531 revealed that there was no significant difference in the assessments of the said two groups of respondents as to the level of awareness in DRRM. This led to the acceptance of the null hypothesis.

DISCUSSIONS

The researchers recommended the amplification of the DRRM of the school. The information campaign will be revitalized through programs such as educational video presentation, the conduct of earthquake and fire drills, and improved visibility of the DRRM announcements, hazard maps, and emergency hotlines. Strengthening communication and collaboration with local authorities, agencies and the community is also encouraged.

KEYWORDS: DRRM, Awareness, Readiness, teachers, learners

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Teachers' Readiness on Disaster Risk Reduction and Management in Paharang National High School: Basis for Capacity Building Program

Julerita A. Babao, Rosalie Ronquillo, & Zenaida Z. Garbin, Paharang Integrated School

Abstract

INTRODUCTION

Disasters are inevitable emergencies that will be difficult to handle by those affected especially without outside assistance. These are usually caused by natural or manmade events wherein communities experience severe danger and result in loss of lives and properties. In particular, this study sought to investigate the level of readiness of teachers of disaster risk reduction and management in Paharang National High School Batangas City in order to address the concerns and determine the direction of the preparedness. It also aims to classify the evaluation of the school's disaster preparedness efficiency in terms of Community Risk Assessment, Communication System and Capacity-Building. The researcher believed that the output generated from this study will result in achieving the general objectives of disaster risk reduction and management.

METHODS

Descriptive method of research was employed to determine the readiness of high school teachers of Paharang National High School in Disaster Risk Reduction and Management. The respondents of the study included thirty Secondary teachers of Paharang National High School during the School Year 2017 - 2018. The data in this study are all sourced from researcher research-based survey to assess the teachers' readiness in disaster risk reduction and management. Focus group discussion was also incorporated to furnish bases and additional information for the study.

RESULTS

Descriptive method of research was employed to determine the readiness of high school teachers of Paharang National High School in Disaster Risk Reduction and Management. The respondents of the study included thirty Secondary teachers of Paharang National High School during the School Year 2017 - 2018. The data in this study are all sourced from researcher research-based survey to assess the teachers' readiness in disaster risk reduction and management. Focus group discussion was also incorporated to furnish bases and additional information for the study.

DISCUSSIONS

The study demonstrates that all teachers in Paharang National High were all ready when the catastrophe happens. However, there is still a need to reinforce readiness on disaster risk reduction and management. Reinforcement can be done through seminars and symposium.

KEYWORDS: DISASTER, RISK REDUCTION, READINESS

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Waste Al locator Load Lifter Aquatic Intelligence Robot (WALL - AIR)

Aaron Gabriel Suarez, Paharang Integrated School
(Adviser: Angelina Tegon)

Abstract

INTRODUCTION

Educational robotics is introduced as a powerful, flexible teaching/learning tool stimulating learners to control the behavior of tangible models using specific programming languages (graphical or textual) and involving them actively in authentic problem-solving activities. It can also be used to enhance student learning. With the passage of time, the Department of Education introduces the importance of robots in the field of education. Because of this, Paharang National High School Team designed a robot that can do actions such as to detect and sensor the light, spin travel in difficult space with box of a medical kit to rescue and give first aid to the victim and mostly can travel in water to lift all unnecessary trashes that can pollute the marine organism. Therefore, it was called as Waste Al locator Load Lifter Aquatic Robot (WALL-AR).

METHODS

The components of Waste Al locator Load Lifter Aquatic Robot (WALL- AR) are; Atx2 Board which is the brain of the robot, ADX- BT stick/blue stick interface board-the chip that control the robot using Bluetooth in mobile phone, 2 DC Encoder Motor (ratio 1:46) which is the dynamo that is attached in its wheels, 2 dynamos of sumobot for its propeller, 1 go-pro cam, a Battery Holder, Styrofoam for support, 4 light sensor for light detector, and a box medical kit and cellphone as controller.

RESULTS

The study showed the presence of Waste Al locator Load Lifter Aquatic Robot at home with the use of controller cellphone kept the family safe and sound since it can monitor cases such as light, rescue, and safety. The practical application of Waste Al locator Load Lifter Aquatic Robot is of great help to humans, and survivor in terms of safety and defense. It can save lives in case of disaster, safety in their home, and safety of the environment and marine organism. It can also help some Disaster risk Reduction Personnel in entering into congested areas restricted to humans.

DISCUSSIONS

To produce Functional Waste Al locator Load Lifter Aquatic Robot special materials like Atx2 board, ADX-BT stick/blue stick interface board, 2 DC encoder motor (ratio 1:46), battery holder, 1 light sensor, and 1 cellphone with a camera and a go pro cam were used. The waste Al locator Load Lifter Aquatic Robot can be used for safety and security at home, marine habitat, teachers and community. Further, the presence of Functional Waste Al locator Load Lifter Aquatic Robot in the community will keep everybody safe and sound.

KEYWORDS: Robotics, Waste Allocator, Intelligence Robot

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