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ECONOMICS

The Potency of Fiscal and Monetary Policy of the Asean Five from 2005 To 2015: A Modified St. Louis Model Approach

Mr. Jerico B. Tadeo, MaEcon
Cavite State University CCAT Campus

Abstract

This paper identified which between the policies, monetary or fiscal stimulus can further accelerate the growth of aggregate output among the member countries of the Association of South East Asian Nations (ASEAN). The researcher selected five countries in the ASEAN, namely: Philippines, Thailand, Malaysia, Singapore, and Indonesia, as the focus of the study. The main objective of this study was to weigh the impact of fiscal and monetary policy on the Gross Domestic Product of the ASEAN Five. More specifically, this study attempted to provide answers to the following related questions: 1) what is the behavior of Government Expenditures, Money Supply and Real Gross Domestic Product of the ASEAN Five from 2005 to 2015?; 2) is there a significant regional difference in the impact of Government Expenditures and Broad Money to the Real Gross Domestic Product between the ASEAN Five? ; and 3) which among the panel regression model is appropriate to be used in this study? The research paper utilized the descriptive and inferential approaches to determine which between monetary and fiscal policy, is more effective in influencing the aggregate output of the ASEAN Five. Finally, the researcher took into account the difference in the Real Gross Domestic Product across the ASEAN 5. The researcher used the panel data regression model from 2005 to 2015 adopting the St. Louis Model. Furthermore, the researcher chose to use the lag value by running various models and has chosen from various Akaike Information Criterion (AIC) value points. The researcher found out, after adopting the modified St. Louis Model and using the three panel data regressions namely, pooled least squares, fixed effect and random effect models, that both Government Expenditures and Broad Money has a significant influence on the Real Gross Domestic Product of the ASEAN Five. The appropriate model that was utilized in the discussion of the variables was random effect model. From the analysis of the results, the researcher also found out that fiscal policy better policy to be used at present but monetary policy is the more potent policy in the long run. The researcher concluded that the random effect model is the best and appropriate model to discuss and describe the variables. The researcher recommended that ASEAN Five countries continue to practice effective government expenditures in the region. More so, policy makers should provide an effective mechanism to spend government funds, hence this study implied that fiscal policy is a faster stabilization and influencing tool in the economy.

Keywords: ASEAN, monetary policy, fiscal

The Elasticity of Selected Macroeconomic Determinants and Economic Growth: A Panel Regression Model of the ASEAN-Five

Ms. Vernadette V. Ilagan
Polytechnic University of the Philippines

Abstract

The main objective of the study was to examine the elasticity of selected macroeconomic determinants such as Gross Capital Formation (GCF), Foreign Direct Investment (FDI), and Employed Labor Force (LFE) to economic growth in terms of the Real Gross Domestic Product (RGDP) for the period 2005 to 2015 using the Cobb-Douglas production function. This study focused on the general behavior of the variables of the five founding members of the ASEAN which are: Indonesia, Malaysia, Philippines, Singapore, and Thailand. The impact of the explanatory variables to RGDP was estimated through the use of three panel estimation models namely: Pooled Least Squares (PLS), Fixed Effect Model (FEM) and the Random Effect Model (REM). The researcher conducted different statistical tests to confirm or validate the results of these models. The following tests such as ImPesaran and Shin *W*-statistic, *t*-test, Durbin Watson Test, Hausman Test, Wald Coefficient Test, and the General F-test, test for Multiple Coefficient of Determination (Adjusted R²), the Jarque-Bera test to test the normality of residuals of the model, and the Breusch-Pagan Test for *v* Heteroskedasticity. The findings revealed that all of the variables employed in the model had passed the unit root test or test for stationarity. The model also indicated the absences of autocorrelation, multicollinearity, and specification error, and also that there was stability of the regression parameters among the variables. The selected macroeconomic variables such as Gross Capital Formation, Foreign Direct Investment, and Employed Labor Force had a significant impact on the Real Aggregate Output or the Real Gross Domestic Product of the ASEAN-Five. The results of the Pooled Least Squares Regression Model and Random Effect Model showed that, after being corrected for autocorrelation, lnGCF was found to be significant at the five percent level of significance which implies that only the GCF was significant to growth and that it contributed positively to the RGDP of the ASEAN-Five. The results of the Fixed Effect Model showed that, lnGCF, lnFDI, and lnLFE were found to be significant at five percent level of significance. The following were recommended: that the Governments of the ASEAN-Five member countries should further evaluate and enhance programs that promote economic growth; and to continuously promote a more conducive investment climate in as much Foreign Direct Investment was shown to significantly affect the region's aggregate output.

Keywords: macroeconomics, elasticity, ASEAN, GCF, FDI, LFE

EDUCATION

The Scientific Attitude of Science Teachers and Their Students

Mr. Rommel C. Cruz, MEM
Polytechnic University of the Philippines

Abstract

This study was undertaken to assess and determine the relationship between the scientific attitude of Grade 10 Science teachers and students in all public schools in the City Schools Division of Malolos. The descriptive method of research using two sets of questionnaires was employed in gathering the data. To find out the scientific attitudes exhibited by teachers and students, the researcher used an attitude scale covering the ten behavioral indicators that a person with a scientific attitude consistently manifested constructed by Lolita M. Salmorin (1983). The students and the teachers were asked to accomplish the attitude scale during the first semester of school year 2017-2018. The study revealed that the scientific attitudes exhibited by Grade 10 Science Teachers, in descending order were, open mindedness, respect for evidence, resourcefulness and creativity, curiosity, questioning attitude, believing in cause and effect relationship, honesty, humility, patience and determination, and intellectual responsibility. The students, on the other hand, ranked the above behavioral indicators in descending order were open mindedness, respect for evidence, curiosity, questioning attitude, believing in cause and effect relationship, resourcefulness and creativity, honesty, intellectual responsibility, patience and determination, and humility. The study found that there is no significant relationship between the scientific attitudes of teachers and students, specifically in the following behavioral indicators: open mindedness, respect for evidence, questioning attitude, curiosity, believing in cause and effect relationships, resourcefulness and creativity, honesty, and patience and determination. Likewise there was a significant relationship between the teachers and the students with the following attitudes; intellectual responsibility and humility.

Keywords: scientific attitude, science teacher, highly scientific, average scientific, less scientific

Using Graphic Organizers to Improve Reading Comprehension Skill of a Second Language Learner in English

Mr. Louie C. del Mundo
Philippine Normal University

Abstract

Reading comprehension is pertinent among learners of the English language. However, there are instances that reading comprehension is difficult to promote, because the learners are not familiar with the language being used in the text. Therefore, learners' prior knowledge cannot be activated, or sometimes learners encounter long passages that make them too afraid, or lazy, to read the text. In the present study, the researcher investigated the effectiveness of graphic organizers guided by text structures. The study aimed to find if the graphic organizers really help the ESL learners in terms of identifying the main idea to classify each item, stating the problem and the solution, and citing facts and supporting details to show persuasion and lastly, if the graphic organizers are effective in promoting reading comprehension skill. As a result, the mean of post-test was higher than mean of pre-test which signified that there was an increase of comprehension skill of the ESL learners after they read and constructed a suitable graphic organizer for each pattern: classification, problem-solution, and persuasion. The paired-sample t-test was also applied to find if the hypotheses were accepted or rejected. The result showed that null hypothesis was rejected therefore the alternative hypothesis was accepted. This signified that there is a significant difference in the performance of ESL learners who used graphic organizers to increase reading comprehension skill. As the researcher concluded the results of the study, various research studies supported and proved that upon using graphic organizers the learners increase their comprehension skill.

Keywords: graphic organizer, reading comprehension, learners of English as a second language, reading connection/web map, problem-solution-map, persuasion map, and text structures

Development of a Video Presentation as an Instructional Tool In Teaching Selected Self – Help Skills

Ms. Marissa Ejercito -Borines
University of the East - Caloocan

Abstract

The choice of a video material has an advantage over a live model in terms of modelling the skill by repeatedly showing it, thus the decision to develop of a video material. The participants involved in the development proper were eight children with autism enrolled in Kapalaran, Inc. their ages ranging from six to seventeen years old. Six of them are diagnosed with mild autism and two are diagnosed with high functioning autism. The typical eating behaviors of the participants as observed are the following: Uses fingers to pick food, Uses fork and spoon but alternately, Uses fork and spoon but simultaneously, Does not use fork and spoon at all, and Sometimes needs help in eating were observed before watching the video presentation. It also established that there are three eating skills of the CWA where they need more assistance: “Uses fork to push the food towards the spoon”, “Pokes food using the tines of the fork”, and “Uses fingers to twirl the handle of the fork”. The result of the video presentation suggests that CWA improved their eating skills from good to satisfactory.

Keywords: video presentation, instructional tool

Graduate Tracer for RMTU Graduate School: A Web-based Application

Mr. John April N. Marpa
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Abstract

This study aimed to assess the software quality of the Graduate Tracer for RMTU Graduate School: A Web-based Application of the respondents, level of acceptability of the respondents, and level of readiness of RMTU Graduate School for its implementation. The study made of used descriptive method of research. The specific descriptive research techniques used were survey and content analysis. This study involved RMTU Graduate School staff and alumni respondents with a total of 488 alumni and staff respectively. The number of respondents was determined by the use of purposive sampling technique at 5% margin of error. The software quality assessed based on the ISO/IEC 20501 metrics: functional sustainability, performance efficiency, compatibility, usability, reliability, and security. The level of acceptability of the RMTU graduate school determined through functionality and performance. The level of readiness of implementation was measured based on information system facility and user/technical personnel. The study revealed that Software Quality of Graduate tracer for RMTU Graduate School: A Web-based application using the ISO/IEE 20501 metrics was evaluated by respondents as “Good” in terms of functional sustainability, performance efficiency, compatibility, usability, reliability and security where the respondent obtained a higher mean score of 3.94 in portability, that the tracer can be transferred form one hardware, software or other operational or usage environment to another; the level of acceptability of the respondents described as “Acceptable” in terms of functionality while “Highly Acceptable” in terms of performance that the system improves job performance and increases productivity of the personnel because of the fast turn-around of service to the user; and for the level of readiness of the RMTU for the implementation of Graduate Tracer described as “Ready” in terms of information system facility and user/technical personnel.

Keywords: graduate tracer, web-based application

**Information and Communication Technology Competency Needs of Teachers in district 8,
City Of Malolos: Basis for ICT Intervention Program**

Mrs. Milita G. Puno
Department of Education - Malolos

Abstract

The main objective of the study is to assess the ICT competency of teachers in District 8 in the Division of City of Malolos and formulate an ICT intervention program that will cater their ICT competency needs. The respondents of the study were the 127 public school teachers from District 8 at the Division of City of Malolos. The survey instrument employed was from the National ICT Competency Standards for Teachers (NICS-Teachers) of the Commission of Information and Communication and Technology. In evaluating the ICT competency needs of teachers, weighted mean was employed. It showed that the level of ICT competency of the respondents based on the aforementioned ICT standard for teachers was "Average," with an overall weighted mean of 3.37. This means that teachers have the ability to explain and discuss the tasks related to ICT but have not experienced the actual process. Considering the indicators with the lowest weighted mean, the researcher was able to formulate a proposed intervention program that will cater the ICT competency needs of teachers in District 8. Grounded on the important conclusions and findings within the study, it is recommended that teachers should continuously develop their professional growth in terms of ICT competencies by means of attending trainings and seminars or learn through the use of different e-learning services. Furthermore, school heads must ensure the proper utilization and management of computers in their respective schools. Lastly, the researcher encourages other researchers to use the proposed ICT intervention program for teachers formulated in this study.

Keywords: ICT competency, NICT, information technology

Classroom Dynamics of a Secondary Physics Class Using Code- Switching

Ms. Sherly P. Ramirez
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Abstract

The study aimed to identify dominant classroom dynamics, practices, and the teachers'/students' perceptions toward code-switching in the secondary physics class. It used the qualitative research method through classroom observations and teacher/ student interviews for its data collection. Findings revealed that both English-Filipino and English-Chabacano secondary physics classes were teacher-dominated in terms of classroom dynamics showing the features of: whole-class activity structure, teacher-student interaction, and making judgments/decisions or valuing positions as cognitive level of behavior. The classroom practices in English-Filipino class were highest in *involvement* (I), average in *order and organization* (O&O), in *rule clarity* (RC) and in *teacher support* (TS) and least in *task orientation* (TO). In terms of dimension relationships, the English-Chabacano class was dominant in *system maintenance and changed dimension*. Moreover, interviews revealed that teachers perceived code-switching to have beneficial effects on the teaching and learning process. Its application to teaching needs not be planned but held as a last resort of building motivational activities that will result to meaningful learning experience. Likewise, students perceived code-switching as helpful in making lessons taught manageable and stress-free. Code-switching functions for equivalence, floor-holding, and conflict control. The study recommended that Physics secondary teachers be given training on application of code-switching as their last resort in improving classroom dynamics and thereby enhancing student learning.

Keywords: Physics teaching, code-switching, classroom dynamics, students' & teachers' perceptions, quasi-experimental study, Zamboanga City, Philippines

Impact of Work Immersion in Assuring the Chosen Career of the Grade 12 Students

Kathleen Joy M. Austria
Roan Cyrinne P. Barlet
Corazon C. Aquino High School

Abstract

The goal of this research is to test the impact of work immersion in assuring the chosen career of Grade 12 students. Specifically, the research would like to determine how assured are the Grade 12 students in their chosen career before and after the work immersion. Further, the research will also test the difference in the assurance of their decision before and after the conduct of work immersion and the factors affecting the Grade 12 students in assuring their career after Senior High School. The expected people who will be affected by the results of this study will be the different school stakeholders. The research is also expected to contribute as guide for students in choosing their tracks after high school.

Keywords: work immersions, senior high school, chosen career

Conceptual and Computational Difficulties of Science, Technology, Engineering, and Mathematics (STEM) Students in Pre-Calculus: Bases for a Proposed Work Text

Mr. John Patrick D. Serrano
Corazon C. Aquino High School

Abstract

The goal of this research is to determine the conceptual and computational difficulties of Science, Technology, Engineering, and Mathematics (STEM) students in Pre-Calculus which will be used as bases in the preparation of a work text. Specifically, the research would like to assess the students in Pre-Calculus, determine their conceptual and computational difficulties, and determine the causes of these difficulties. Further, the research will also determine how these difficulties will be improved and will propose a work text based from the identified difficulties. The expected users of the resulting work text include STEM students who are enrolled in Pre-Calculus. The research is also expected to contribute particularly the prepared work text which will be used as an added resource available for teachers to support increased distribution and access to learning, teaching and professional development resources to the schools.

Keywords: conceptual and computational difficulties, pre-Calculus, work text

Profiling of Philippine Merchant Marine Academy Academic Achievers and Their Origins

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Philippine Merchant Marine Academy

Abstract

Every academic institution aims to understand what contributes to the academic achievement and failures of their students to serve as basis for improvement in all aspects. This study identified the origins of the PMMA academic achievers and determined their relationship to their academic achievement. Data was gathered through a documentary analysis of existing school records. Interviews were also conducted among instructors who served at least 10 years. Findings revealed that majority of the PMMA academic achievers are from Luzon and mostly coming from the National Capital Region (NCR), usually graduated from public or state-owned High Schools, and already had college background before joining. When grouped according to their academic program, both BSMT and BSMarE achievers mostly came from NCR and already had college background. In terms of the type of school attended, most BSMT achievers were educated in private high schools while BSMarE achievers were educated in public or state-owned high schools. Moreover, no relationship was established between the academic achievement and their province, type of secondary school last attended or prior academic experience. The faculty-interviewees negated that those who came from Metro Manila have more intellectual advantage. They further claimed that those who came from remote provinces and who are less financially fortunate were perceived to be more dedicated and excelled better in class. It is recommended to conduct a follow-up study which will include other variables such as economic status to determine which factors have a substantial impact on the academic achievement of the PMMA cadets.

Keywords: achievers, correlation, origin, achievement

Academic Practices of Students in Pangasinan National High School (Region I) and Corazon C Aquino High School (Region III): Bases for a Proposed Student Policy

Erika Joy C. Saludez
Angel C. Saludez
Corazon C. Aquino High School

Abstract

The goal of this research is to determine the academic practices of students in Pangasinan National High School (Region I) and Corazon C Aquino High School (Region III) which will be used as bases for a proposed student policy. Specifically, the research would like to determine academic practices of students in terms of preparations in taking exams, joining in extra-curricular, practices in getting source of information, personal organization (readiness), and participation in school programs. Further, the research will also determine the factors affecting the student's practices and will test the difference in the intensity of student's common practices between the two schools. The expected people who will be affected by the results of this study will be the different school stakeholders. The research is also expected to contribute as guide to improve the academic practices of the students in schools.

Keywords: academic practices, senior high school, student policy

The Effectiveness of Play-Based Intervention on Pupils' Knowledge of Tagalog Alphabet in Grade One Section Cattleya at Itaas Elementary School

Ma. Cristina G. Bagas, LPT, MAEd
Itaas Elementary School

Abstract

One of the most important component of the K to 12 program, the Philippine government's comprehensive basic education reform policy, is the implementation of a universal kindergarten which seeks to equip formative learners with rudimentary skills such as reading, counting and communication skills among others before entering grade 1. The kindergarten program serves as a preparatory platform for the transition of learners from informal (home-based study) to formal education (grade 1-12). However, while reading literacy, especially alphabet recognition and phonemic awareness are at the core of kindergarten education, some children who completed this level still lack basic knowledge required of grade 1 pupils. Specifically, a number of grade 1 entrants were seen to have limited or zero alphabet knowledge. The results of the School Readiness Assessment (SReA) based on the kindergarten record, in the beginning of School Year 2017-2018 revealed that five (5) out of 46 grade one section cattleya pupils had failed to name and recognized letters. In response, the researcher organized a play-based intervention which involved the conduct of a 30-minute additional instruction thrice a week from July 2017 to August 2017. This action research, as an offshoot of this effort, sought to determine whether this intervention has been effective in fostering rudimentary knowledge of Tagalog alphabet among these five learners. The results of the weekly assessment and the post-test showed that pupils acquired familiarity with Tagalog alphabet after participating in the study, the responses of the pupils to questions in the post-intervention interview revealed that the play-based activities were successful in boosting pupils' interest and in reducing anxiety when learning the Tagalog alphabet. Following the results of the study, the researcher is now utilizing and framework of this intervention in addressing gaps in other development.

Keywords: reading literacy alphabet knowledge, play-based intervention, framework for intervention

Spanish Adobo Sardines with Curry: Its Acceptability and Competitiveness

Tom Domingo Cruz
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Abstract

The goal of this research is to develop Spanish Adobo Sardines with Curry and to have the product compete with the commercially available sardines. Specifically, the research would like to develop Spanish Adobo Sardines with Curry, describe it in terms of appearance, taste, aromaticity, uniqueness, size, nutritive value, customers' acceptability, affordability, packaging, and marketing. Further, the research will also test the difference between Spanish Adobo Sardines Ala Curry and the commercial product, and the overall acceptability of the product to the costumers. The expected consumers of the product of the study are the common public. The research is also expected to contribute as an innovation to the Cookery Industries.

Keywords: Spanish adobo sardines with curry, milk fish, cookery

A Follow-Up of Perpetual Help College of Manila Graduates: It's Implication for Professional and Occupational Productivity

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Abstract

The study attempted to follow-up the performance of Perpetual Help College of Manila graduates for the last school years, from SY 2011-2012, 2012-2013, 2013-2014, and its implications to professional and occupational productivity. The descriptive-normative survey method of research was utilized in this study. Since this involves a research study of graduates of Perpetual Help College of Manila for three school years: 2011-2012, 2012-2013, and 2013-2014, gathering the data about them would require first going via records of the school for purposes of getting in touch with them individually. The employability of the graduates can contribute to the school's promotion. The Perpetual Help College of Manila graduates contribute to the growth and development of the nation, the target goal of education and the acceptability and demand for the graduates. The courses offered at Perpetual Help College of Manila are relevant to the needs of the people in the community produced employable and productive graduates and the plight of the graduates depend upon their qualification and aspirations in life.

Keywords: nature of appointment and employment, status of graduates, professional and occupational productivity, board examinations

Grammatical Competencies of Teachers Teaching Subjects Using English as Medium of Instruction: Basis for Communication Training, SY 2015-2016

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Abstract

This study aimed to identify the *grammatical competencies* of teachers of Antipolo National High School who are teaching subjects using English as medium of instruction and to provide them with appropriate training for communication in order to help address their weaknesses. Using the Frequency Percentage Score and Weighted Mean of the Pre-test where 35 teachers were found to be *below mastery level*, the following are the *least mastered skills*: (1) Identifying Errors (2) Subject – Verb Agreement and (2) Correct Usage with 34.77 Mean and 57.96 Mean Percentage Score (MPS). Meanwhile, post test results after the In-service training showed 6 teachers found below mastery level with 73.14 MPS and a mean of 43.88. The data implies as corroborated by the T-test, that the intervention conducted during the In-service training is effective since it significantly improved the performance of teachers in the post-evaluation. It is recommended that (1) continuous In-service training addressing teachers' grammatical competencies be provided (2) the school should device a structure / mechanism that could check or evaluate teachers' grammatical competence during the teaching-learning process most especially those who are using English as medium of instruction and (3) future researchers should also look into the oral proficiency of teachers.

Keywords: grammatical competencies, English, communication training

Research Awareness and Capabilities of Faculty in Higher Education Institutions in Region 3

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Abstract

There is an urgent call for all higher education institutions to establish effective research capability building management systems and develop a nurturing research environment to facilitate the development and production of quality research. This study ascertained the level of research awareness and capability of faculty in private higher education institutions in Region III with an overall aim of strengthening the research capability of the faculty and the institution as a whole. The study made use of the descriptive method of research. Results showed that the respondents had very high level of awareness on the nature and importance of research and the role of the institution in promoting research undertaking. Moreover, the respondents were found capable in terms of the technical aspect in conducting research however; they need competence in processing and analyzing the data. Likewise, the research awareness and capability of the faculty are greatly influenced by the number of teaching load, academic rank, and researches conducted. It is, therefore, highly recommended that the higher education institutions should enhance the capabilities of the faculty in doing research and develop incentive programs to boost faculty motivation and participation in research endeavors.

Keywords – research capabilities, capability building, descriptive-correlational method, research program, Philippines

Ramon Magsaysay Technological University Graduate School Online Research Portal

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Abstract

This study primarily aimed to develop an online gateway for research outputs of faculty and student researchers so as to promote utilization of conducted researches by bringing them to the cloud accessible for use to future researchers. The system design and development was undertaken in order to establish an online research portal for the Ramon Magsaysay Technological University Graduate School. The developed system served as an online repository of research outputs accessible to student and faculty researchers over the web. The researcher made use of the descriptive type of research to evaluate the software quality, level of acceptability and level of readiness in the implementation RMTU Graduate School Online Research Portal. The Rapid Application Development (RAD) approach was employed in the system development. For the test of significant difference, the t-Test: Two-Sample Assuming Equal Variances was used with the aid of Microsoft Excel as statistical tool. The software quality of the Ramon Magsaysay Technological University Graduate School Online Research Portal was perceived by both faculty and student-researchers as “Good” in terms of functional suitability, performance efficiency, compatibility, usability, reliability, security, maintainability, and portability. The level of acceptability on the Ramon Magsaysay Technological University Graduate School Online Research Portal was perceived by both faculty-researchers as “Accepted” in terms of functionality and performance. The level of readiness for implementation of the Ramon Magsaysay Technological University Graduate School Online Research Portal was perceived by both faculty and student-researchers as “Ready” in terms of information system facility, and technical personnel. There is no significant difference in software quality as to the evaluation of faculty and student-researcher respondents. There is no significant difference in the level of acceptability as to the evaluation of faculty and student-researcher respondents. There is no significant difference in the level of readiness of RMTU for Implementation of the Ramon Magsaysay Technological University Graduate School Online Research Portal as to the evaluation of faculty and student-researcher respondents. The full implementation of the online research portal is recommended in order to conduct re-evaluation of the software after a certain period of actual implementation so as to validate the results of this study, particularly reliability, for this metric is best evaluated after a thorough usage and scrutiny of the system. The university should encourage faculty and student-researchers to utilize the system, not only as an online repository of research outputs but a platform for research publication and dissemination. It is only through using the system that researchers could maximize the benefits of the portal as well as contributes to the enhancement of the system. Based on the results on the level of readiness for implementation, it is apparent that the university lacks in state-of-the-art IT facilities and technical personnel. To sustain the implementation and further improve the system, it is certainly essential that the administration should look into the possibility of having of a long term plan for IT infrastructure development to prepare the University for Future Expansion of information systems.

Keywords: research, portal, online, research utilization, RMTU

EDUCATIONAL MANAGEMENT

Measuring Accreditation Experience: Impact on the Quality of Education of Selected ASAS Schools in Luzon and the NCR

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Abstract

The study gathered quantifiable insights on the impact accreditation experience have on the quality of education of ASAS-member schools in Luzon and the NCR. A descriptive research design was employed with the use of a standardized questionnaire modified to suit the locale. Respondents totaled 1,970 composed of administrators, teaching and non-teaching personnel and students from nine ASAS-member schools: LCC-Manila, LCC-Deparo, LCC Caloocan, LCS-Balagtas, LCC-Mercedes, LCC-Tanauan, LCC-Valenzuela, Assumpta Academy, and LCUP-Malolos. The correlational and regression analyses revealed that accreditation experience, in terms of the following variables (1) professional development, (2) teaching-learning environment, (3) organization management and leadership, (4) faculty and staff morale, (5) quality of instruction, and (6) short-term and long-term benefits, was found to have significant combined effects on the quality of education of ASAS schools. The best accreditation experience determinant of quality of education was found to be its Short/Long-term benefits. This was followed by Professional development and Teaching-learning environment.

Keywords: accreditation, quality education, compliance, accreditation experience, ASAS schools.

Faculty Course Assignment Optimization

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Abstract

Course assignment is the way subjects are loaded to faculty members in the university. This study is the first of the three stages of the University Course Timetable Problem. Faculty course assignment optimization optimizes the faculty-subject assignment by applying three models namely linear programming, binary integer programming, and genetic algorithms. Linear programming has the highest rating but it is not feasible because of divisibility rule. Binary integer programming is the best model because its output is higher than genetic algorithms. The binary integer programming model approaches the overall rating of linear programming model for normal scale applications because the binary integer programming model has more choices of possible combination of assignment under difficult than in simple problems. For as long as formulation of the needed function and constraints is possible and the solver can process them, then the binary integer programming model can provide the feasible and optimal solution. Genetic algorithms are capable of giving feasible solutions even in very complicated scheduling conditions. The linear programming model can be used as a basis of the correctness of the output because the optimum value that it gives is higher than those of the two models.

Keywords: course assignment; optimization; linear programming; genetic algorithms; binary integer programming.

Faculty Course Scheduling Optimization

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Abstract

Faculty course scheduling optimization is the second of the three stages of the University Course Timetable Problem optimization. The optimization process was modelled using genetic algorithms, binary integer programming, and linear programming. There are four simple problems and four difficult problems that were used in the study. Linear programming had the highest total rating but infeasible because it produced fractional timetable values. Since the output of both genetic algorithms and binary integer programming were feasible and the total rating of binary integer programming was higher, it was considered as the best model. The binary integer programming model gives the optimal solution for as long as formulation of the needed functions and constraints is possible and the solver can process them. An alternative model is the genetic algorithms that are capable of giving feasible solutions even in very complicated scheduling conditions. The linear programming model is the basis of the correctness of the output provided by the other two models because its optimum value is usually higher than the other models.

Keywords: course scheduling, optimization, linear programming, genetic algorithms, binary integer programming.

ELECTRONICS

Development of a Test Module for Battery Quality Monitoring using Voltage Recovery

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Abstract

Several portable machines depend on the batteries as a source of power that is why their quality should be given importance. Battery health monitoring is crucial to know equipment's maximum productivity. There are several studies that focused on this field with different approach and used expensive equipment. This paper presents a method for monitoring the quality of the battery using voltage recovery based on off the shelf components and Arduino-based microcontroller and sensor modules. Nine rechargeable Li-Ion 18650 batteries formed in 3 sets of parallel and 3 sets of series to form a battery pack were connected to a test module for simulation. The circuit design for the test module was constructed in LTSpice using a 555 timer and IRF530 MOSFETs to monitor the batteries' quality over time and later used in the experimental application in the health monitoring of the batteries.

Keywords: battery, test module, voltage recovery, quality

ENVIRONMENTAL SCIENCE

Reproductive Growth of Vetiver Grass (*Chrysopogon Zizanioides*) Response To Frequency of Water Hyacinth Extract Basal Application

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Abstract

Soil degradation is a major agricultural and environmental problem creating threat to food security in the Philippines (NAP 2004-2010). In response to environmental mitigation needs over the traditional engineering solutions is a versatile cost-efficient bio-engineering using Vetiver grass (*Chrysopogon zizanioides*). However, vetiver grass has difficulty in producing viable seeds and the general propagation is through division of roots replicated by vegetative propagation. (Truong, 2006). The study "Reproductive Growth of Vetiver (*Chrysopogon zizanioides*) Response to Frequency of Water Hyacinth Extract Basal Application" was conducted to provide instructive and reference material for the propagation of vetiver and promote the utilization of abandoned plant biomass like water hyacinth in propagating viable vetiver grass for soil protection and conservation. The study indicated soil pot experiment with three (3) treatments (frequency of basal application of water hyacinth extract) for Treatment 1 (every 15 days), Treatment 2 (every 30 days) and Treatment 3 (No Application) were tested for the reproductive growth of vetiver grass in terms of biomass fresh weight, roots and leaves length, number of shoots produced and clump diameter. The vetiver plant biomass produced were T1-4.76, T2-4.4g and T3-3.34g respectively. The number of shoots produced in T1 was 2 while both T2 and T3 only 1 shoots were propagated. The leaves and root length in T1 were longer (36.82cm and 29.2cm) compared to T2 and T3. The clump diameter in T1 (1.04 cm) was the biggest. The reproductive growth of vetiver in terms of roots, leaves, clump, and shoots were stimulated by basal application at 15 days. The Cohen's d test for the effect size shows a small (0.20) practical significant difference on the growth attributes in terms of plant biomass root and leaves length and clump diameter among treatments used while a very large (>0.80) effect size was observed for the number of shoot. The statistical analysis for the significant differences of the variations on the growth of vetiver between treatments revealed that there is no significant difference which implied that the frequency of basal application every 15 days and every 30 days both provided the same effect as indicated by the t-value of -0.76, 1.92 for plant biomass, 1.55 on the number of roots, 1.63 on the root length, 1.77 and -0.05 on the clump diameter. The ratio of the root and leaves length were 1:1.26, 1:1:24 and 1:1:18 for 3 treatments respectively. This showed that for every 1 cm, growth of root length there is 1.26cm growth in leaves for T1 as the highest ratio obtained. The ration of clump diameter and number of shoots were calculated 1:2 (T1), 1:1 (T2) and 1:1(T3). This revealed that for every 1cm growth of clump diameter there were 2 vetiver shoots produced for T1 which was the highest ratio obtained. The vetiver tillers preferred the basal application of water hyacinth extract for 15 or 30 days for continuous reproductive growth thus the null hypothesis was accepted. However, the Cohen's d test for practical significance of the difference in the growth revealed a greater (>0.80) effect size for the number of shoot s which implied that the basal application of water hyacinth for every 15 days has enhanced the vegetative propagation of vetiver for the number of shoots with equivalent clump diameter and shoots ratio of 1cm clump growth to produce 2 tillers or shoots. It is recommended that once a week frequency with higher dosage of basal application to promote biomass growth. It is also suggested to test and analyze on the performance of water hyacinth extract on the vetiver root system holding capacity. It is also suggested for further study on vetiver grass as aid for soil erosion and water pollutants reduction.

Keywords: vetiver grass, reproductive, vegetative, basal application, tillers

Effectiveness of Makahiya and Higad-Higaran Leaves Extracts against Gastrointestinal Nematodes

Mr. Ron Joseph N. Samonte
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General de Jesus College

Abstract

Gastrointestinal parasites thrive and grow inside the stomach and intestines of an infected individual. These worms are naturally predisposed to drain essential nutrients that the body needs. Furthermore, the World Health Organization (2017) proves that as the body tries to fight off the infection, this may lead to more severe and complicated diseases. They can even cause death due to a compromised nutritional status that induces tissue reactions and provokes intestinal obstruction or rectal prolapse (Davis et al., 2017). Nevertheless, the Food and Drug Administration (FDA) warns consumers that purgative agents or laxatives are dangerous even when dosing instructions are followed properly. That is why there is a need to produce healthier and alternative purgative agents that are plant-based. Specifically, this experimental undertaking aimed to identify the effectiveness of Makahiya and Higad-higaran leaves extracts against *A. suum* and determines the significant difference in their efficacy. The data were gathered through experimentation and analyzed through Frequency counts, Percentage, ANOVA, and T-test. Findings revealed that there is a significant difference between their effectiveness and proved that Makahiya had expended the earliest time of parasite death. The results of this study may become significant baseline data in producing efficient and safe anthelmintic drugs.

Keywords: makahiya, higad-higaran, gastrointestinal nematodes

Effectiveness of Compact Hydroponic System in Outdoor Gardening

Mr. John Carlo P. Landayan
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General de Jesus College

Abstract

This thesis was born out of the idea to produce green leafy vegetables using a compact hydroponic system. Hydroponics is essentially in growing of plants without the use of soil. Many innovations and designs all over the Philippines are made to increase the production rate and capabilities of the hydroponic system. The main concern of the study was to develop an innovative, fully capable compact hydroponic system that combines currently existing nutrient film technique and Kratky (non-circulating technique) to create a system that can provide a steady supply of nutrients needed for growth and healthy development of plants without the need for specialized greenhouse structures. Data were gathered through experimentation and survey to determine the most durable and available materials to ensure the maximum integrity of the system. Two different techniques and special system design were utilized to create a favorable environment for the fast growth of plants. The effectiveness of the system was tested by determining the average growth of the lettuce plants. The study revealed that the system was able to grow healthy 864 lettuce plants without the use of insecticides and fertilizers. It is recommended to try the system using other green leafy vegetables to prove its effectiveness further.

Keywords: compact hydroponic, outdoor gardening, vegetables

VETIVER on AQUAPONICS: Improving Water Quality for the Rearing of *Pangasius hypophthalmus* Fingerlings in Concrete Tank Using Vetiver Grass *Chrysopagon zizanioides*

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Ms. Roman V. Austria

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Abstract

Aquaponics is characterized by the symbiotic growing of plants and aquatic animals in one infrastructure and system to meet the water and nutrients needs simultaneously. The water used to culture the fish contains organic waste that can be used for plant growth and development. The plant can serve as bio-filter for the improvement of water for fish production. Vetiver is a grass that grows with long fibrous root system that can filter and absorb plant nutrients and hazardous chemical substances in the environment. Its cultivation can help prevent pollution and allow water source to be acceptable for culturing fishes and other minor fishery products. The study "Vetiver System on the Intensive Culture of *Pangasius hypophthalmus* in Circular Tank" was conducted to evaluate the physicochemical condition of the water during the growing period of pangasius under intensive culture in circular tanks with the application of vetiver grass system. The physicochemical parameters are indicative of the quality of water in the culture system for growth and survival of the organisms under culture. In this intensive culture system nine (9) units of circular concrete tanks (6.0 cu. m capacity) stocked with *Pangasius hypophthalmus* fingerlings (7 to 10 grams average body weight) at varying stocking rates of 100, 75, 50 fish per cubic meter of water, as study treatments using three tanks as replications designated as Treatment I (tanks 2,4,9) stocked with 300 fish, Treatment II (tanks 1,3,7) with 450 fish, Treatment III (tanks 4,6,8) with 600 fish. Commercial floating pellets were fed to the stocks twice a day. Water management includes daily water exchanges, aeration, and monitoring of water quality. Results of monitoring conducted before the application of vetiver pontoon shows that the temperature (26 to 30 degree), pH (7 to 8) and dissolve oxygen (>2 ppm) were within the desired level while the ammonia (>1 ppm) of the water in the tanks fluctuates towards undesirable levels. The fish increment growth was 6.53 grams and survival rate of about 88% (1977 out of 2240) of pangasius fingerlings initial stocks. The vetiver pontoon system gave a positive effect as it have help improved the water quality that enhanced the growth and survival of pangasius, reduced water requirements and discharges of polluted water in the environment within the thirty days application. The dissolved oxygen content of tank water 4.5 to 4.8 ppm was within the desirable level for the fish respiration and organic waste decomposition in the system. Likewise the temperature (26.9 to 27.1 °C) readings and the pH range (7.7 to 8.1) were within the desirable levels. The ammonia (NH₃) levels were maintained at 0.6 ppm which rendered good quality water for the growth of pangasius fingerlings and vetiver grass. *Pangasius* fingerlings weight increment was 7.3 grams and survival rate was high at 93% (1838 out of 1977). The value of daily water exchanges were reduced from 3 cu. m to about 1.5 to 1.74 cu. m after the application of vetiver system. Some problems were encountered such as death of fish that get trapped in the pontoon, clogging of pontoon nets with floating feeds and dirt, presence of insect larvae on the leaves of vetiver, and foul odor of the bamboo pontoons. A similar study is recommended to validate the results obtained in this trial and to be conducted with longer detention period of a modified vetiver pontoon design for tank culture system.

Keywords: vetiver, aquaponics, pangasius, culture, pontoon

Green Logistics: An Environmental Responsibility

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Abstract

One of the big dilemmas of the world is to address the threatening effects of pollution in the different part of the globe. Pollution and environmental hazards such as global warming, climate change, acid rain, greenhouse effect and the like may occur. To ease this environmental turmoil, the business entities like the logistics companies are adapting plans to lessen the cause of pollution, thus some of them include in their operational practices the so called Green Logistics and Reverse Logistics (Bearing Point 2008). The study determined the Green Logistics as Operational Practices in terms of Material Handling and Transportation, A total of 30 personnel of HG Premier International Trading, Inc., assigned in the Office and Operations Departments responded to the survey questionnaire and FGD, Study showed that Green Logistics Operational Practices was "Good". Material Handling got an average mean of 3.02 while transportation got a 3.24. The entire stated problem on Transportation was pegged at weighted mean of 3.0 except on the congestion of public road with 3.53. As such, Green Logistics Operational Practices on Material Handling and Transportation requires improvement. The use of energy saving material handling equipment and non-fossil fuel for the vehicles in transportation, should be initiated and/or implemented to reduce the cost of fuel consumption and eliminate smoke emission, For the government, there is a need for an additional equipment detection of air pollution/smoke emission. Furthermore, the need for a strict government policies and rules and regulation lessen the air pollution and smoke emission of the carriage particular during the peak hours. Finally, the use of an MIS and/or routing software to have a systematized process while on the operation.

Keywords: logistics, environmental hazards, global warming, climate change

FOOD TECHNOLOGY

Puso ng Saging and Smoked Fish Lumpiang Shanghai: Its Acceptability and Competitiveness

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Abstract

The goal of this research is to develop Puso ng Saging and Smoked Fish Lumpiang Shanghai and to enable the product to compete with the commercially available Shanghai. Specifically, the research would like to develop Puso ng Saging and Smoked Fish Lumpiang Shanghai, describe it in terms of appearance, taste, aromaticity, uniqueness, size, nutritive value, customers' acceptability, affordability, packaging, and marketing. Further, the research will also test the difference between Puso ng Saging and Smoked Fish Lumpiang Shanghai and the commercial product, and the overall acceptability of the product to the costumers. The expected consumers of the product of the study are the common public. The research is also expected to contribute as an innovation to the Cookery Industries.

Keywords: puso ng saging and smoked fish lumpiang shanghai, cookery

HEALTH AND WELLNESS

Affordability, Nutritional Value and Variety of Choices of Meal Packages in Food Kiosks Surrounding Olivarez College: Toward Proposed Reconceptualization of Oli's Den

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Abstract

This study was conducted to assess the food service program of the Olivarez College canteen. From the results of the survey questionnaire, descriptive statistics was used to assess the food variety, pricing, food portioning of the college canteen, at the same time profiled the respondents eating habits, patterns and preferences. The result of the study could serve as a preference among food supervisors or employees in planning, preparing, and selling food that are cheaper but substantially nutritious food that may contribute to the healthy well0being of customers specifically, the students, faculty members and parents.

Keywords: food kiosk, nutritional value, meal packages

INFORMATION TECHNOLOGY

**Electronic Document Management and Processing System of
Ramon Magsaysay Technological University**

Mr. Daniel Angeles Bachillar
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Abstract

The study was conducted to determine the evaluation of Electronic Document Management and Processing System of Ramon Magsaysay Technological University - an online repository and management solution to documents that ensure and provides smooth and firm exchange and flow of documents within the different offices of the university. Descriptive method of research was employed and a total of 188 respondents using purposive sampling had taken part in the study that includes head officials and staffs of RMTU, through them, the system was evaluated and pretested. To interpret the data effectively, the researcher had made use of Frequency and Percentage Distribution, Weighted Mean, and t-test. Findings had revealed that head officials perceived the software quality of the system using ISO/IEC 25010 as “Excellent” in terms of functional suitability, performance efficiency, compatibility, usability, security, maintainability and portability while “Good” in terms of reliability. However, staff respondents’ rate was “Excellent” in terms of functional suitability, usability, security and portability while “Good” in other characteristics of the system’s software quality. In the level of acceptability, a rate of “Highly Accepted” in terms of functionality and performance was perceived both by the Head officials and staffs. Likewise, the level of readiness of RMTU in the implementation of the Electronic Document Management and Processing System was described as “Ready” in terms of Information System Facility and User/Technical Personnel as perceived by both group. Furthermore, the results had indicated that there was no significant difference on the evaluation and perception of the head official and staff respondents on the systems’ software quality and the level of acceptability and readiness of the university.

Keywords: document, software quality, information system, ISO/IEC 25010, RMTU

LITERATURE

The Nation in Selected Short Stories from Suharto's New Order and Marcos' New Society

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Abstract

The conceptualization of a nation is a persisting theme among artists and writers. Some artists and writers either preserve the status quo or present an alternative version of the nation from their own perception or interaction with the masses and or community. Using the standards on art and literature by PAKSA and LEKRA, the study examines the alternative concept of nation in the works of selected Filipino and Indonesian writers who lived during Suharto's New Order and Marcos' New Society. Results show that the works challenge official histories by depicting and narrating the true plight of the people in both rural and urban areas, the role played by members of the Communist party in the struggle for socio-economic and political emancipation, the government's shortcomings if not failure to fulfill its promise, and the impact of the entry of foreign aid and intervention on the Philippines' and Indonesia's economies. On the literary and aesthetic side, writers have surpassed the limitations of the short story and successfully used it as a medium to discuss social and political relevant issues. While the Philippine works depict the activist and other progressive elements as heroes, in Indonesia, the role of the activist and other progressive forces in the lives of people is interrogated. The results and discussion affirm that the conceptualization of a nation is an ongoing process and is dependent on the prevailing political times and perspective of the creator of a work. The representation of the nation in the short stories is also important in that it allows room for critical examination on the real plight of the country; thus, challenging official histories.

Keywords: nation, New Order, New Society, short story, cerita pendek

MANAGEMENT

Supervisory Practices in the Dental Program: Basis for a Proposed Supervisory Model

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Abstract

Ineffective supervisory practices can be one of the possible causes of students' poor academic performance. The aim of supervision is basically to promote student learning, reflective practice, and improving patient safety and the quality of patient care. To date, there have been limited studies on the supervisory practices in dentistry programs. This prompted the researcher to assess their supervisory practices. The respondents' supervisory practices will practically serve as a basis for a proposed a supervisory model that can be helpful for the dental institutions in the future. Supervisory models aim to improve faculty member's performances and provide them with the assistance that they need for improvement of instruction and to provide quality education for the students. The study used descriptive research method. Qualitative and quantitative methods of data collection were employed. Interview, questionnaires, and discussions were used in gathering data for the study. Deans, Academic heads, department heads or section heads and faculty members from the selected private dental institutions in National Capital Region were selected as the respondents of the study. The method of data gathering was through the use of questionnaire. The researcher-made questionnaire was the product of the interview from the faculty members of the private dental institutions. Likewise, an interview guide was used to gather the existing supervisory practices in the dental program of the selected dental institution in National Capital Region. The main findings of the study indicated that for instructional supervision in terms of instructional improvement, offering continuing professional development trainings for the faculty members at school level got the highest mean of 4.00 while the lowest is on assisting the faculty members in the selection of appropriate resources like teaching aids with a mean of 3.40. On the other hand, for curriculum development, highest is on identifying the problems in the implementation of existing policies with a mean of 3.90 and the lowest is on convening stakeholders in a meeting for curriculum validation and evaluation with a mean of 2.73. Results for clinical dentistry supervision in terms of instructional improvement indicated that offering continuing professional development trainings for the clinical instructors at school level also got the highest mean of 3.43, lowest is on shadowing with a mean of 2.36. While for curriculum development, contributes in the professional competencies of clinical instructors by providing the latest information on materials got the highest mean of 3.64, lowest is on providing materials supportive to the existing curriculum with a mean of 2.96. With regard to community dentistry supervision in terms of instructional improvement, highest mean is on offering continuing professional development trainings for the fieldwork preceptors at school level got the highest mean of 4.00 and the lowest is on assisting in the planning the community fieldwork and providing feedback after the fieldwork with a mean of 2.83. Lastly for curriculum development, highest is on helps identify the problems in the implementation of the existing policies in the community outreach got the highest mean of 3.17, lowest is on providing necessary educational materials that are supportive to the existing curriculum in community dentistry with the mean of 2.85. The study further revealed that continuing professional development for faculty members is of utmost importance to the deans and academic heads. There is a felt need to help the faculty members in the selection of appropriate resources like teaching aids. The deans and academic heads of the different dental institutions address the problems in the delivery of instructions. There is a need to convene the stakeholders in a meeting for curriculum evaluation and validation. Providing feedback is needed particularly in the fieldwork preceptors on the service rendered. The recommendations are to strengthen the offering of professional development as a part of the instructional supervision of the administrators. Inclusion of the variables in the continuing professional development of the faculty and explore the possibilities of convening the stakeholders regularly for curriculum evaluation and validation. Further studies should be done in order to validate and evaluate the proposed supervisory model.

Keywords: supervisory practices, supervisory model, quality education, dental program

MARKETING

A Study on Multi-Level Marketing (MLM) as a Career Venture for Filipino Entrepreneurs

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Abstract

Multi-level marketing is a marketing strategy in which the sales force is compensated not only for sales they personally generate, but also for the sales of others they recruit, creating a downline of distributors and a hierarchy of multiple levels of compensation. Distributors of a multi-level marketing business foster a combination of friendship and instrumentality in developing networks. The study intended to investigate the motivational variables that contribute to venturing and engaging in a multi-level marketing business. It also aimed to determine the derived benefits from venturing in a MLM. There were fourteen (14) successful MLM venture capitalists as respondents of the study. Interview was conducted to the respondents using guide questions to collect and gather the data. The study shows that among the motivational variables that contribute to venturing or engaging in a MLM are as follows; success stories of people who successfully joined MLM was ranked 1 among the motivational variables, followed by generates employment for people who have no permanent source of livelihood, and lastly venturing in an MLM provides lucrative compensation, financial rewards or incentives. It was concluded that focus to one's job is a great attribute to success of most MLM venture capitalists, and people with ambition in life and commitment are likely to perform.

Keywords: multi-level marketing, networks, career venture, venture capitalist

Marketing Mix and Its Influence on Income, Per Day Customer, and Employee Turnover: An Analysis of Selected Food Establishments in Robinson's Place Malolos

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Abstract

The study assessed the influence of marketing mix on the income, per day customer and employee turnover of selected food establishments at Robinson's Place Malolos namely: Chowking, Mang Inasal, and Gerry's Grill. The respondents of the study were the employees and clients of the selected food establishments. Research has found that good marketing strategies may be continuously done to reach target markets. It may start with market research, in which needs and attitudes of consumers are assessed as well as competitors' products. Marketing mix strategies have been employed by respondents to a great extent and these have been found to have significantly influenced income per month, per day customer and employee turnover. Select establishments may consider delving deeper into the possibility of lowering prices, improving their employee turnover rate.

Keywords: marketing mix, food establishments, customer and employee turnover

MEDICINE

Programmable System on Chip Clog Detection using Slope Detection for Ventriculoperitoneal Shunt Application

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Abstract

Hydrocephalus is a life threatening neurological disorder that until now has no cure. It is characterized by a build-up of cerebrospinal fluid in the ventricles of the brain. Ventriculoperitoneal shunting is the most recommended treatment by doctors which helps release the CSF by implanting a shunt valve system from the brain to the abdomen, thus allowing the fluid to flow. However many complications arise from the treatment causing malfunctions to the system and unnecessary revision surgery, the biggest of which is shunt blockage. Shunt blockage can be done by tissue, cellular debris, and blood clot. This paper aims to discuss a clog detection method that uses slope detection to avoid false shunt triggering arising from body movements. This helps avoid over draining and allows the system to work as it should be.

Keywords: hydrocephalus, ventriculoperitoneal shunt, slope detection, false shunt triggering

A Comparative Study on the Accuracy of EEG-Based and sEMG Based Fatigue Level Measurement

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Abstract

Manual handling relates to transporting of an item from one place to another by means of either carrying, pushing, or pulling. Muscle fatigue results from a muscle constantly generating or applying force by doing manual labor or vigorous exercise. In line with this, measuring the fatigue level of a person is of great importance. This paper presents a comparative study between two systems. The first system uses electroencephalogram (EEG) while the second system uses surface electromyography (sEMG) in measuring muscle fatigue. A fatigue estimation methodology based on EEG signal processing is proposed for the first system in this paper to measure the muscle fatigue. Another fatigue estimation methodology based on sEMG signal processing is proposed for the second system to measure the muscle fatigue. In both cases, Artificial Neural Network (ANN) was used as the learning algorithm. The study volunteers were composed of 20 male devoid of gym workout for at least 2 years and had a complete rest before conducting the test. The volunteers were asked to perform elbow flexion using their dominant arm while lifting a 5 lb. dumbbell for 90 seconds. The accuracy of the two systems was compared and the results using sEMG in measuring muscle fatigue of a person is more accurate, having a testing accuracy of 94.6%, than using EEG having only 92.9% testing accuracy. It is believed that this paper will be beneficial for researchers in the field of bioengineering. This paper will help ease the difficulty in muscle fatigue detection through the use of Deep Learning algorithms.

Keywords: fatigue, EEG-based, sEMG-based

OPERATIONS MANAGEMENT

**Private and Public Warehouse Operations and Practices:
Basis for Strategic Planning and Decision Making**

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Abstract

Warehouses are the integral part of the supply chain in which they operate, therefore recent trends, such as uncertain and erratic market demand patterns, product range proliferation and shortening customer lead times, all have an impact on the roles that warehouse are required to perform. Warehouses should be designed and operated to match with the specific requirements of the supply chain as a whole. The study assessed whether or not there is a significant difference between the private and public warehouse operations and practices as to: (1) Receiving; (2) Put – away; (3) Storage-in Bulk or Pick; and (4) Order Picking. Assessment was made by the Ten (10) Warehouse Managers and/or Supervisors of Public and Private warehouse. The current practices of private and public warehouses revealed that the Private warehouse, receiving process ranked first of all the operations and practices with 3.72 (CM/HI); Storage 3.56 (CM/HI); Put-away 3.53 (CM/HI); and picking 3.44 (CM/I). As such this may have variances that hinder to avoid errors that may cause some delays in picking operations. Public warehouse, ranked 1 was the receiving 3.84 (CM/HI); storage 3.52 (CM/HI); order 3.52 (CM/HI); put-away 3.32 (CM/H). There is no significant difference in the operations and practices of private and public warehouses. Private and public warehouse strictly adhere to their operations and practices with some flexibility. Attention should be given to Put-away that requires a fair amount of labor because product may need to be moved considerable distance to its storage location. Strict implementation of the FIFO system in the storage of perishable consumables and non-consumables, and supplies/inventories. Reports (daily/weekly) updates on the movement or placement of goods and items to properly monitor the movement and inventory. Maintain and improve Picking strategies to maximize productivity, improve accuracy, and avoid disrupting the operation, is the recommendation with regards to this aspect. Double-check and aim for 100% correct picking system. The warehouse manager can have some programs in the department for 100% error free picking that will aim to perfect this part of the warehousing. This will boost the efficiency of the personnel involved in picking. Receiving, being the most labor-intensive activity, MIS and automation receiving cart that improve efficiency. Finally, the selected groups of respondents must continuously sustain the way they do business to create flexibility in their operations and to constantly increase competitive advantage in the face of increasing global competition.

Keywords: warehouse operation, strategic management, operation management

PSYCHOLOGY

The Social Networking Preferences and the Emotional Intelligence of College Students

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Abstract

Social networking via the internet has brought forth changes in the lives of the youth, including gaining an unlimited number of friends. Social networking websites are experiencing rapid growth which allows the Internet community, new and old friends, to get in touch. Social networking websites such as Facebook, Twitter, Skype, and multiply boast with millions of members using their networks on a regular basis to communicate, share, create, and collaborate with others in the virtual world. Alongside the virtual world is the school which educates students to succeed in life depending on intelligence and control of emotions. Aside from IQ alone, the measure of success includes emotional intelligence, social intelligence, and luck (Goleman, 2005). Other qualities such as trust, integrity, authenticity, creativity, honesty, presence, and resilience are as important. These different bits of intelligence are collectively described as Emotional Intelligence. This study was conducted to determine the social networking preferences and the emotional intelligence level of the college students and found out the relationship of social networking preferences and the emotional intelligence level of the college students, as well as, the connection of the profile between the relationship of the social networking preferences and emotional intelligence level of students.

Keywords: social networking, emotional intelligence

Behavioral Patterns of Students during Group Activities in their English, Science and Mathematics Classes

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Abstract

This study investigated behavioral patterns of students during their group activities in EnSciMa classes using qualitative – observational research design utilizing a total of 73 students. The findings revealed that: (1.) On the parents' educational attainment majority are high school and some are grade school level/graduates; most of the fathers are drivers, some are vendors, and the rest vary including those who are jobless. Mothers are housewives. Their parents' educational background jibes with their occupation and family income of 15,000 and below. The respondents' siblings ranged from 2-6. Inactive students in group activities are students with "Developing (75-79)" final grades in Grade 9. (2.) Students' behavioral patterns do not show bigger differences in 3 subject areas considering the selected variables. On the teacher (Pattern A), students show appreciation on the teaching process and experiences. Their behavior depends on the subject. They can do the activity dependent on the way the teacher instructs them and show that they are careful in committing mistakes because they may face different consequences. On instructional materials (Pattern B), students are appreciative of the IM's used by the teacher. They raise question whenever they don't understand the IM's. On classroom set up (Pattern C), they feel out of place when they are disregarded by their leaders and tend not to participate anymore. On the other hand, inactive students get offended with teacher's negative remarks but they see their teacher as a big help when they feel that they are loved. On group size (Pattern D), the behavior patterns are dependent on the number of members in the group and the number of group in the class. (3.) The behavioral patterns of students are the effects of the causes which are mostly based on their background and profile. The data reveals that 32% students have problems at home or in their family such as financial worries, family relationship, health problems, personally inclined problems, tasks at home and attitude towards the subjects and the like which is consistent on the first part of this study. On the basis of the findings, the researchers have arrived at conclusions and recommendations presented in the study.

Keywords: behavior, patterns, group activities, EnSciMa classes

RISK MANAGEMENT

Disaster Risk Reduction and Management Strategies of Selected State Universities in Region III, Philippines

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Abstract

This study assessed the level of implementation and problems met on the disaster risk reduction (DRR) and management strategies of selected State Universities (SUs) in Region III. The DRR and management strategies focused in four thematic areas such as prevention and mitigation, preparedness, response and rehabilitation and recovery. The descriptive- correlational method of research and the quota sampling were utilized. There were 425 faculty members and 375 student organization officers as respondents from the 5 SUs. The study is anchored on the Philippine DRR and Management Act of 2010 and Hyogo Framework for Action. The faculty and student organization officers perceived that the DRR and management strategies in terms of four thematic areas were Sometimes Implemented in their respective institution. Both groups of respondents perceived that the implementation of DRR and management strategies in terms of organization, planning, utilization of resources, and training needs were Sometimes a Problem. Findings revealed further that there was a highly significant difference between the responses of the two group of respondents on the level of implementation of DRR and management strategies and the problems met on its implementation. There was a very low positive but no significant correlation between the perceptions of the faculty on the level of implementation and the problems met in the implementation of DRR and management strategies. There was a strong positive highly significant correlation between the perceptions of the student organization officer on the level of implementation and the problems met in the implementation of DRR and management strategies.

Keywords: disaster, prevention, mitigation, preparedness, response, rehabilitation, recovery

Project BEAM (Batang Emergency Action Movers): Enhance Disaster Awareness and Preparedness Skills among Grade 4 Pupils of Itaas Elementary School, Muntinlupa City

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Abstract

Natural disasters and other emergencies can happen anytime. So, everyone in school should be prepared to handle them safely and effectively. Hence, Itaas Elementary School promotes and maintains school-wide safety and minimizes the effects of emergencies and other dangerous situations. This study sought determines whether a project BEAM would be effective in enhancing the disaster awareness and preparedness skills of the learners. It examines the use of Project BEAM by looking at the stances and opinions of selected Grade 4 pupils in Itaas Elementary School for school year 2017-2018. Using descriptive statistical analysis to compare the two groups of pupils, fifty (50) pupils were randomly assigned to the experimental group and other fifty (50) to the controlled group. The experimental group used Project BEAM including DRR Awareness Raising Activities while the control group did not experience/encounter the said activity. The data were collected using semi-structured interviews. T-test for independent variables was used to determine the significant difference between the mean scores of the experimental and control groups in the activities given. The experimental group which was given DRR Awareness Raising Activities performed better than the control group. These findings indicate that the students who participated in Project BEAM/DRR Raising Awareness Activities had a higher achievement scores than those students who were not involved at all. The research showed that there is a significant difference between the mean scores of the two groups. This is an accord with research indicating that student's knowledge levels increased using DRR Awareness Raising Activities. Through this, they can assist other pupils in finding ways for them to share their knowledge of disaster risk reduction with other members of the community. The study concludes that the Project BEAM is effective in enhancing pupils' disaster awareness and preparedness skills in elementary education. Hence, it is recommended that the use of Batang Emergency Action Movers (BEAM) project in elementary schools be strengthened.

Keywords: disaster awareness, preparedness, school disaster risk reduction and management council (SDRRMC), Batang emergency action movers (BEAM), awareness raising activities, mitigation, hazard

SCIENCE AND TECHNOLOGY

Hair Relaxing Gleam Cube: Its Acceptability and Competitiveness

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Abstract

The goal of this research is to develop Hair Relaxing Gleam Cube and to enable the product to compete with the commercially available hair relaxing treatment product. Specifically, the research would like to develop Hair Relaxing Gleam Cube, describe it in terms of hair freeze, smell, shine, scalp relaxation, and appearance. Further, the research will also test the difference between Hair Relaxing Gleam Cube and Hair Mask, and the overall acceptability of the product to the costumers. The expected consumers of the product of the study are the common public. The research is also expected to contribute as an innovation to the Hairdressing Industries.

Keywords: hair relaxing gleam cube, hairdressing, hair mask

URBAN PLANNING AND DEVELOPMENT

Factors Affecting Heavy Traffic along Rural Streets

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Abstract

The goal of this research is to determine the factors affecting heavy traffic along rural streets. Specifically, the research would like to factors affecting heavy traffic along rural streets, the causes of heavy traffic, and the possible routes that can be the made to avoid heavy flow of traffic. Further, the research will also propose an action plan to ease traffic obstruction along rural streets. The expected people who will be affected by the results of this study will be the common people. The research is also expected to contribute as inputs to project development among local government units.

Keywords: Traffic Management, Rural Streets, Local Government Units

Call for Papers

On behalf of the SIMP-AAG JOINT MULTIDISCIPLINARY RESEARCH CONFERENCES' (JMRCs) organizers - the Singapore Institute of Multidisciplinary Professions and the Ascendens Asia Group, the JMRC Research Review Committee is sponsoring a call for papers across multiple disciplines. JMRCs are open to all research conferences to celebrate researchers who continue to strive for excellence in pursuit of knowledge enhancement for world and human development.

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Authors of accepted papers may be invited to present their work either orally or by poster. The conference is open to the public and everyone is invited to submit proposals for papers.

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Timely submission of the papers is critical to the success of the program. The procedures and timetable enumerated below will apply.

Registration opens

Deadline for abstract submission

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**Full paper submissions that are completed after deadline for full paper submission may not be included in the Conference Proceedings.*

Important Dates

depends on scheduled JMRC

depends on scheduled JMRC

depends on scheduled JMRC

depends on scheduled JMRC

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The Research Review Committee looks forward to receiving full research papers from interested scholars and researchers in response to the call on or before <depends on scheduled JMRC>. The Conference Secretariat is happy to respond to inquiries from interested parties.

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While Ascendens Asia Singapore and its research conferences' collaborating partners do not strictly enforce specific full paper contents requirements, authors are advised to be guided by the IMRaD (Introduction, Methods, Results, and Discussion) scientific writing structure/format. Full papers must be in English and should be typed in Microsoft Word.doc format, using 11 size Times New Roman fonts, single-spaced on quarto or A4- size paper, 3,500-6,500 words in length. Margin: top: 4 cm; left: 4 cm; bottom: 3 cm; right: 3 cm. Paragraph alignment: justified.

Following is based on the IMRAD Cheat Sheet shared by Carnegie Mellon University's Global Communication Centre (Source: <https://www.cmu.edu/gcc/handouts/IMRD%20with%20Examples.pdf>):

Abstract

Abstracts can vary in length from one paragraph to several pages (acceptable for AAMJR and AAMJRA up to a maximum of one page including spaces for Title, Author's name, Affiliation, Contact details, Abstract, Keywords), but they follow the IMRaD format and typically spend:

- 25% of their space on importance of research (Introduction)
- 25% of their space on what you did (Methods)
- 35% of their space on what you found: this is the most important part of the abstract (Results)
- 15% of their space on the implications of the research (Discussion)

Introduction & Importance (Make a case for your new research)

Begin by explaining to your readers what problem you researched and why the research is necessary. Convince readers that it is important that they continue to read.

Discuss the current state of research in your field, expose a “gap” or problem in the field, and then explain why your present research is a timely and necessary solution to that gap. See Novelty Handout.

Methods (What did you do?)

Methods are usually written in past tense and passive voice with lots of headings and subheadings. This is the least-read section of an IMRaD report.

Results (What did you find?)

Results are where the findings and outcomes of the research go. When talking about this data, we can think of the results as having two parts: report and comment. The reporting function always appears in the results section while the comment function can go in the discussion section. Make sure all tables and figures are labelled and numbered separately. Captions go above tables and beneath figures.

Discussion (What does it mean?)

Discussion sections contain the following moves:

1. They summarize the main findings of the study. This allows readers to skip to the beginning of the discussion section and understand the main “news” in the report.
2. They connect these findings to other research
3. They discuss flaws in the current study.
4. They use these flaws as reasons to suggest additional, future research.
5. (If needed) They state the implications of their findings for future policy or practice.

References

Note:

Full paper shall be in APA Style. You may refer to Purdue Online Writing Lab (<https://owl.english.purdue.edu>) for more guidance and information about this format.



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