

**ISSN: 2529-7902**  
**Vol. 1, No. 1, Jul. 2017**



**Ascendens Asia Journal of  
Multidisciplinary Research  
Conference Proceedings**

*Funded by*  
SIMP-AAG Joint Multidisciplinary Research Conferences  
ISSN: 2529-7902

*Available at*  
[www.ascendensasia.com/ojs](http://www.ascendensasia.com/ojs)

*Published by*  
Ascendens Asia Pte. Ltd.

# Ascendens Asia Journal of Multidisciplinary Research Conference Proceedings

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Volume 1

Number 1

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July 2017

## 1st SIMP-AAG-RI Joint International Multidisciplinary Research Conference Proceedings Abstracts



ISSN: 2529-7902

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### Recommended Citation

(July 2017) "1st SIMP-AAG-RI Joint International Multidisciplinary Research Conference Proceedings Abstracts," Ascendens Asia Journal of Multidisciplinary Research Conference Proceedings, Vol.1, No.1. Available at: "<http://ascendensasia.com/ojs>".

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# ENTREPRENEURSHIP

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## **Prefabrication Construction System of Selected Residential Building Projects in Metro Manila**

Melito L. Minuluan Jr., MSIEM  
*Fortbuilders Corp.*  
*Polytechnic University of the Philippines*

### **Abstract**

The main objective of the study was to assess the Prefabrication construction system of selected building projects in Metro, Manila. The study sought to address the following concerns: (1) Extent of impact of prefabrication construction system in terms of time, cost quality, safety and sustainability; (2) Degree of benefits in adopting the prefabrication construction system and (3) ranking of identified hindrances in adopting prefabrication construction system. The Descriptive method of research was used in the study. A total of 107 respondents chosen using simple random sampling, consisting of the architect, Civil Engineers, Estimator, Prefabricated product supplier of MDC, VSI and DatemCorp. Results showed the respondents' assessment of the extent of prefabrication impacts; degree of benefits and identified hindrances in adopting prefab construction system. The following are recommended: provide informative seminar on prefabrication construction system; use prefabrication construction system on other building structure.

**Keywords:** *prefabrication construction system, residential building projects, building construction*

## **Real Estate Housing in Ilocos Sur: Its Economic Impact**

Scott Jason P. Llanes, DBA, FRIBA  
*University of Northern Philippines*

### **Abstract**

The study assessed the housing development in Ilocos Sur and determined the level of assessment of housing development; the economic impact along multiplier effects on businessmen, broker's commission/income, and consumer expenditures; and the economic impact affecting level of satisfaction of homeowners, economic, and government policies. Data gathered were treated statistically using frequency and percentages, mean, and linear regression analysis. From the findings, conclusions are: (1) Local developers have comparative advantage; (2) The industry contributes to economic development; (3) Homeowners are satisfied with the quality of goods and services; (4) Few number of owners/developers gives higher revenue; (5) Housing development affects income opportunities; and (6) The broker's commission/income is adequate that it sustains employability. Based on findings and conclusions, the following recommendations are forwarded: (1) Developers should continue to improve delivery of goods and services; (2) Other investors should come in to add other players to the industry; (3) The provincial government must encourage more housing developers; (4) Owners should give incentives to homeowners; (5) Owners should provide more affordable housing; and (6) Real estate owners should provide lower price for low-income earners and beginning families.

Keywords: *housing development, economic impact, competitive strategies, economic policies, government policies*

# INNOVATION

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**Blended Learning in Home Economics and Livelihood Education (BEEd course)  
for Pre-service Elementary Teachers in St. Mary's College, QC, Philippines**

Ruth A. Arsenue-Salazar  
*UPOU/St. Mary's College QC*

**Abstract**

Distance education for teacher training was cited in numerous studies with positive results, but not a cheap substitute due to the use of multimedia or ICT. Thus, blended learning is more common in traditional colleges today. This research study tried to answer the questions, How can blended learning be done in a traditional General Education HELE class? How can GE HELE class be designed and developed to make it blended learning? What course model or framework for GE HELE can be used? What could be the difficulties or challenges that the teacher or the students encounter in the implementation of a blended learning course? Michael Power's BOLD was adapted for the course design. The ADDIE, horizontal course syllabus, lesson plan template, course calendar, survey questionnaires and interview were also used. Positive results were obtained about blended learning provided that the user has adequate computer skills and there should be Internet access.

**Keywords:** *blended learning, course model, framework*



## Geometrical Study of Eight Lanes Intersection: Deterministic Queuing Analysis of Traffic Flow

Nicolas A. Cayetano, Ed.D-EM, DT(c), FRIIT

### Abstract

The study determined the urban intersection traffic through understanding the eight geometrical lanes by mathematical equation and analyzed the cause and effect of traffic congestion. The deterministic analysis of causes and effect of traffic flow; real-time rendered in the traffic volume: the arrival, queuing, departure and delay time dynamically determined the numbers of vehicles in eight lanes: simulation of traffic control, data statistics and reporting which contributed the probability of traffic intervention in different part of Metro Manila where almost all business structures were built.

The geometrical intersection of eight lanes consisted of Point A to H mostly the time interval each intersection is Red: 80sec.; Green: 60sec.; and Yellow: 5sec. A mathematical research involved in computational arithmetic and event-scheduling methodology associated with First-In First-Out (FIFO) algorithm with predictive variables: arrival, queuing, departure and delay is necessary to record the time that brought in and out. The average time needed to execute the finite set of inputs on all size of  $n$ , define the fundamental algorithm that dominate steps in obtaining the measuring time. The system will be implemented in Web App development environment

Determine real-time traffic conditions before setting a new traffic scheme into effect and changing the road rerouting. System can also be used to analyze and evaluate the new scheme. Higher efficiency can be gained, then wasted time can be avoided.

**Keywords:** *deterministic queuing analysis, fifo algorithm, traffic intersection, geometrical intersection, mathematical research*

## **Electronic Continuing Professional Development (e-CPD) for Registered and Licensed Professionals: A Web Portal Model**

Dr. Danilo S. Sosa

*Arellano University-Pasay City, Philippines*

### **Abstract**

The study explored the factors that influenced the development of web portal for continuing professional development (CPD) programs for registered and licensed professionals. The research used both the qualitative and quantitative approaches of research trying to complement each other. The findings of the study showed that some professionals comply with the requirements of CPD by pursuing higher education, write books, manuals/modules and doing researches while the majority are attending seminars. Some factors that contributed for the professionals to pursue and not to pursue CPD are motivations, finance, time and accessibility of CPD activities. There is negative feedbacks from professionals on the CPD seminars/workshops implementation as to its learning outcomes, design, delivery and cost.

The researcher concluded that CPD program is not a priority for some professionals. It is a personal enhancement and growth of a professional not only in his career but also promoting the general welfare of his client, the people and the society. Government regulations affect the compliance of registered and licensed professional to their continuing professional development. Nowadays, technology plays a major role in almost all aspects of education including continuing professional education.

An immediate action is sought to help solve the perceived problems through the immediate deployment of the website model. There should be an immediate approval of a bill that will mandate the PRC to require all professionals to have the required CPD units before renewal of their PRC ID to compel all professionals to undergo CPD activities. The Continuing Professional Development Council (CPDC) should strengthen the monitoring of CPD performance of accredited service providers. On the personal level, a professional must consider CPD as a moral obligation to enhance their professional skills and competence to become globally competitive. On the other hand, employers should consider CPD as part of their employee development program or else encourage their employees by providing them flexible time and educational support to continue further learning.

**Keywords:** *continuing professional development, online and distance learning, distance education, registered and licensed professionals, lifelong learning*

## **Learning Station Technique for Mainstreamed Children with Reading Difficulty (MCRD) in Biology**

Magielyn S. Lugo, Ph.D  
*New Era University*

### **Abstract**

This study aimed to explore the learning station technique for Mainstreamed Children with Reading Difficulty (MCRD) in Biology in public high schools in three divisions in the National Capital Region.

Qualitative descriptive research design with the questionnaire, interview and the case study were used in this research. Teacher made tests were used in the pre-test and post-test. T-test was used to get the significant difference in the pre-test and post-test of MCRD.

The subjects in the study were 15 Mainstreamed Children with Reading Disability enrolled in public high schools in three divisions Caloocan, Manila and Quezon City. A total of 14 teacher-respondents participated as informants in the study. They are all Science teachers teaching mainstreamed class in Biology.

All subjects were in Grade 9 with different age from three different schools in NCR. Majority of them were male with different disability and low reading ability.

Learning station technique for mainstreamed children with reading difficulty helped the MCRD increase their understanding in Biology lessons. Lesson illustration and texts encourage MCRD to read and understand the concepts it emphasize by completing all the stations.

Reading ability varied from kindergarten, preparatory to Grade 5, which did not match the expected competency in reading. The post-test scores showed that LST effectively assisted learning process of the MCRD.

**Keywords:** *mainstreamed children with reading difficulty, learning station technique*

## **Development of an Informatics Nurse Specialist Program and Certification Process for the Republic of the Philippines**

John Francis L. Faustorilla Jr, DNS  
*University of the Philippines Manila*

### **Abstract**

There is a pressing challenge of setting mechanisms to address the issues and concerns of certification and standardization. Its significance is founded on the consideration of nursing as a discipline of knowledge and a practice profession. This study aimed to address and develop the informatics nurse specialist (INS) certification program using existing cases as a foundation for the development of a sound certification program. Specifically, it resolved questions on the development, elements, patterns and proposal of an INS program and certification process. This study utilized a multiple case study approach with a single unit of analysis. Case reports have been prepared for both cases, the American Nurses Association and the International Medical Informatics Association – Nursing Informatics Special Interest Group, on their similarities and differences as they align with the development of the informatics nursing specialist program and certification process. Two main conclusions can be derived from this study: (1) Significant patterns identified to be common among the different INS program revolved around 5 key elements. There are also 14 core patterns that emerged in the analysis of these cases; (2) There are 15 significant patterns, specifically among competencies, identified to be common among the different nursing informatics certification processes.

**Keywords:** *informatics, nursing informatics, health informatics, informatics nurse specialist, nursing, advance nursing practice*

# ENGINEERING AND INFORMATION TECHNOLOGY

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## **An Evaluative Study on Project Management Tools for Managing Engineering Projects**

Daniel D. Dasig, Jr., Ph.D  
Engr. Guillermo Mojica  
*University of Makati*

### **Abstract**

The nature and complexity of engineering projects have challenged project managers skills set with the high changing demands of technological integration into the project workspaces. There have been offline and online projects management tools which readily support the success of project scope management, project time management, project cost and project quality management. This paper presents the evolution of project management tools in construction and information technology project management, its complexities and key features which significantly contributed to the success of the project. The researchers employed Quantitative-Descriptive Design using Secondary Data Analysis. Based on the results, Primavera and AutoCAD were the most commonly used tools. Basecamp, Trello and MS Project were also considered as online tools and productivity support. The researchers recommended that project executives, project managers should make use of these tools to support project management undertakings.

**Keywords:** *project management, project management tools, basecamp, primavera, ms project*

## **Enterprise Risk Management Maturity in the Philippine Banking Industry**

Joselito A. Quinto, DBA, CRA  
*PNB Savings Bank, National University  
and Polytechnic University of the Philippines*

### **Abstract**

The study focused on determining the Enterprise Risk Management (ERM) maturity level in the Philippine banking industry to establish an industry-wide assessment of where the Philippines is in terms of ERM implementation and initiatives, and what are the further initiatives that the regulators and the banks can work on to uplift the level of ERM initiatives in the country. Specifically, the study aimed to determine maturity level in terms of (1) oversight; (2) systems; and (3) processes. A total of 295 Risk Officers were surveyed – 251 from universal banks and 44 from commercial banks, which were further stratified per bank. The questionnaire used in the study was structured based on Deloitte's ERM Model. Results showed that in terms of oversight, the banking industry is Mature as there is tight regulation on the Board of Directors' oversight function. In terms of systems, the banking industry is Somehow Mature as banks are using multiple IT systems across all data and reports in the preparation of risk reports to the Board of Directors. In terms of processes, the banking industry is Mature due to the presence of various risk management standards and best practices that banks can use as basis. The following are recommended: banks must continuously develop programs to build a risk aware culture, banks must allocate enough resources for the acquisition of IT systems for risk, and regulators must continuously adopt ERM best practices that are custom-fitted to Philippine banking industry.

**Keywords:** *enterprise risk management, bank risk management, risk maturity level*

**Measuring the Performance and Productivity of select Business Process Outsourcing Organizations: An Implementation of Data Envelopment Analysis (DEA) and Clustering Analysis**

Dr. Daniel Dasig Jr.  
Dr. Danilo C. Sabado  
Prof. Roel C. Traballo  
*University of Makati*

**Abstract**

The use of complex tools and statistical models supports managers in measuring the efficiency of organizations based on its productivity. This paper presents combined Data Envelopment Analysis based on data mining performed and applied in a BPO database and used for clustering analysis to evaluate the efficiency of the DEA tools being integrated. This paper reports the investigation results on the performance efficiency of productivity-driven Business Process Outsourcing companies in the Philippines. The results of the study will be used to inform decision maker who specialize in efficiency analysis to design decisions support and executive support system to contain a quality indicator of efficiency in a productivity-driven company.

**Keywords:** *business process outsourcing, data envelopment analysis, productivity, performance, clustering analysis*



## **Microcontroller-based Data Center Monitoring System**

Deney A. Miranda, MSE  
*Polytechnic University of the Philippines*

### **Abstract**

The main objective of the study was to enhance the data center server and network monitoring system by using the proposed prototype model called Microcontroller-based data center monitoring system. The study specifically aimed to address the following concerns (1) develop a prototype system that monitors a certain data center network rack using motion-controlled camera with the aid of robotics (2) evaluate effectiveness of data center operation task and support using remote hands system or existing system and Microcontroller-Based Data Center Monitoring system. Descriptive method of research was the methodology used. In addition, prototype development of proposed alternative system. Using purposive sampling, a total of fifty-eight (58) Information Technology and Data Center support personnel respondents were obtained for the evaluation of this study. Results interpretation showed somewhat effective in the existing and remote hands system, showing that there is room for improvement in supporting data center operations; whereas the development of Microcontroller-Based Data Center Monitoring System has the potential to enhance the current system which was interpreted in the evaluation as moderately effective in terms of troubleshooting effectiveness and overall functionalities. Moreover, it is highly effective in terms of cheaper cost and support responsiveness. The results of the study recommend exploring other alternative systems like prototype model created by researcher to improve operational support tasks with lower expenses.

**Keywords:** *data center, microcontroller-based, remote hands system*

# OPERATIONS

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**Environmental Responsiveness of Community Service Program of CWTS  
of the University of Makati in Selected Partner Institutions**

Virgilio Bulan Tabbu  
*University of Makati*

**Abstract**

This study was conducted to assess the environmental responsiveness of the community service program of Civic Welfare Training Service (CWTS) of University of Makati as evaluated by the students, NSTP facilitators and selected partner institutions in Makati consistent with Republic Act 9163, otherwise known as the NSTP Act of 2001.

The study made use of the descriptive method of research. It utilized a researcher-made survey questionnaire, documentary analysis and interview to assess the program. Respondents of the study were University of Makati Students who have completed NSTP 1 and 2, Academic Year 2014-2015, NSTP Facilitators who were directly involved in the implementation of the program; and Community Partners of the CWTS-NSTP.

The objective of this study is to determine the extent of implementation of the delivery system of Community Service Program of CWTS of the National Service Training Program (NSTP) in the University of Makati in terms of its environmental responsiveness. The findings of the study will serve as the basis in the formulation of an enhanced community service program.

The study revealed that the three groups of respondents rated the environmental responsiveness of the Community Service Program of the CWTS with an over-all mean value of 3.80 interpreted as Highly Complied with a corresponding description as moderately extensive and functioning very well.

Results of the ANOVA test showed significant differences in the assessment of the three groups of respondents on the three areas of environmental practices namely: proper waste disposal, cost-saving and clean and green programs.

**Keywords:** *cwts, nstp, environmental responsiveness*

**Impact Assessment of the Quality Assurance Units on Project Implementation  
in the Department of Public Works and Highways: Basis of  
Proposed Policy Revisions and Quality Improvement**

Medmier G. Malig

*Bureau of Quality and Safety, Department of Public Works and Highway*

**Abstract**

The main objective of the study was to find evidence on the impact of the Quality Assurance Units(QAUs) on project implementation in the DPWH in improving the Quality Assurance Program and achieve quality service. The study specifically aimed to determine the following:(1) technical and professional qualifications of DPWH QAUs and Field Engineer-respondents; (2) their assessment of the attainment of QAUs' objectives related to project implementation; (3) impact assessment of the QAU processes on the improvement of the following: regular assessment, validation of corrective measures, sanction mechanisms for erring engineers and rating of QA Performance; (4) assessment of QAUs' impact on agency operations and corruption prevention; (5) problems encountered in the conduct of quality audit process; (6) suggested solutions to achieve quality improvement; and (7) proposed policy revisions and quality improvement. The descriptive research method was used in this study. A survey questionnaire was employed to solicit the assessments of the QAUs, field engineers and the DPWH management. A total of 162 QAU and 169 accredited field engineers of the 17 Regional Offices and United Project Management Office participated as respondents. Results showed the objectives of the QAU were attained to a large extent. The three (3) policy revisions proposed by the researcher will improve the project implementation and address the requirement of ISO certification of continual improvement including the other proposals that are recommended to be implemented.

**Keywords:** *assessment, field engineers, impact, quality assurance, quality control, quality improvement*

**Lean Six Sigma Deployment in Business  
Process Outsourcing Industry  
in the Philippines**

Rey B. Fremista, DBA MBB, FRIBA  
*VXI Global Holdings BV, Asia Pacific Quality Organization,  
Philippine Society for Quality, Inc.*

**Abstract**

The paper determined the maturity level of Lean Six Sigma deployment in the BPO industry in the Philippines in terms of these aspects: strategy, projects, resources, training, and culture, as a basis to establish an industry-wide baseline so that the International Business Process Association Philippines (IBPAP) can craft a roadmap to a more solid implementation of Lean Six Sigma in the BPO space. A total of 368 professionals (from middle to top management levels) across different BPO organizations were surveyed. The BPO industry in the Philippines is at Initial Results level on strategy, projects, resources and training while culture is at Demonstrating Success level. Lean Six Sigma deployment must be aligned with the execution of the corporate strategy. It must be integral to the culture of the business, which means that there is nearly 100% awareness and strong, favorable opinion of the program. Invest in Lean Six Sigma training and resources. Include Lean Six Sigma cost savings in management goals and review. Top management and all the leaders must communicate its importance. Drive Lean Six Sigma projects. Recognize and support employee participation in the program.

**Keywords:** *lean six sigma, bpo, outsourcing, deployment, maturity*

**Overall Equipment Effectiveness (OEE) of Autobake Plant at Universal  
Robina Corporation, Rosario, Pasig City**

Maria Cecille Dogelio-Naga, MSIEM  
*Lyceum of the Philippines University – Cavite Campus  
and Polytechnic University of the Philippines*

**Abstract**

The main objective of the study was to improve the Overall Equipment Effectiveness (OEE) of the Autobake Plant at URC-Rosario. Specifically this study sought the following: (1) the current OEE of Autobake plant in terms of: Availability, Performance and Quality. (2) The system requirements of the proposed inventory monitoring system using its hardware and software aspects. (3) Impact of the proposed inventory monitoring system to the OEE of the Autobake Plant in terms of availability, performance and quality. (4) Perceived level of agreement of the respondents on the software-based inventory monitoring system. The study utilized the developmental and descriptive method. The respondents of the study were the 30 respondents: 2 supervisors, 1 production controller, and 27 maintenance personnel. The data was computed using weighted mean to determine the extent of agreement and satisfaction of the end-user on the proposed system. The researcher also used frequencies and percentages to define OEE rates obtained from the URC-Rosario. Results showed that the proposed inventory monitoring system gradually improved the company's OEE. Respondents' level of agreement on software-based inventory monitoring system showed high level agreement and satisfaction. Establishing baseline for spare parts replacement will help increase the OEE of the company. Furthermore, providing a software-based inventory monitoring system using push notification is an advantage. The researcher recommended continuing using the proposed system since the result will be best observed in long term. A mobile app or cloud-based inventory monitoring system that can be synced to SAP and automatically contacted the supplier was also recommended.

**Keywords:** *total productive maintenance, overall equipment effectiveness (oee), inventory monitoring system, push notification, spare parts baselining*

## **Policies and Practices of the Logistics and Freight Forwarding Industry in the Philippines**

Ma. Luz P. Bacani-Dasmarinas, LCB, LPT, Ed.D, Ph.D, DBA,  
FRIEdr, FRIBA, FRIM, FRICB, RIIVPF  
*Lyceum of Alabang*  
*Asian Institute of Maritime Studies*

### **Abstract**

Logistics and freight forwarding is one of the many industries which support the country's cargo trade, shipping, manufacturing and production industries. As such, its growth and development has been associated with the growth of trade and transport-related businesses.

The study assessed the strengths and weaknesses and the current benchmarking policies and business process of the selected small, medium and large logistics and freight forwarding companies in the Philippines and related these to their current resources for the purpose of developing a framework of benchmarked policies and business process that would guide them in competing well in a highly competitive business environment and sustaining the growth and development of the industry.

The study applied the descriptive research design because the description of data, interpretation thereof and corresponding discussions were done based on "present time".

The policies and practices of these companies were derived from 56 logistics and freight forwarding companies operating in Metro Manila, Philippines. They constituted about 20% of 281 population of companies accredited and listed in the Philippine's Shippers Bureau or PSB. The companies were randomly selected.

The policies and practices of selected logistics and freight forwarding companies in the Philippines in four areas were on the Implemented level only. There were significant differences in the responses of the three groups of respondents as regards the implementation of each key policy area. The high quality of service reliability, assurance, tangibility and responsiveness was excellent. The service timeliness and service factors were good. There were significant differences in the view of the three groups of respondents in the delivery of services.

Problems identified by the groups of respondents in managing logistics and freight forwarding services all were in the "Prevalent" level", with the corresponding ranking: No. 1 Freight Forwarding and Transportation, followed by 2 Removal and Relocation Services, 3 Project and Cargo Handling Services and 4 Value-Added Services

The four key policy areas had weaknesses due to a host of problems encountered in managing them. The delivery of service performance factors failed to reach the excellent level in terms of timeliness and cost of service. The Quality of Service was excellent or strong and supported the key policies of the companies. The weaknesses in the policies and business factors performance served as the justification for policy enhancement.

**Keywords:** *logistics, freight forwarding, policies, business process*

## **Service Quality among Authorized Service Centers of Selected Imaging Companies in the National Capital Region**

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*President, Master of Science in Industrial Engineering and Management Society*

### **Abstract**

This thesis deals with the service quality among authorized service centers of selected imaging companies in the National Capital Region. It looked into the following: the profile of the respondents in terms of Age, Gender, Photography field; and Photography Profession Status; respondents rate the service quality of the authorized service centers in the following key result areas: Service Accommodation, Service Repair Quality, Service Repair Turn-Around-Time and Service Status notification to client; significant difference in the respondents' rating of the three (3) authorized service centers when they are grouped in terms of profile. The respondents came from three (3) authorized service centers of selected imaging companies in the National Capital Region. This study utilized the descriptive method of research since it is an assessment on service quality of the target authorized service centers. Survey questionnaires were used as a tool for data gathering and Statistical Package for Social Science (SPSS) version 20 software and Microsoft Excel (MS Excel) was used as a tool for analyzing the gathered data specifically the Descriptive frequency and compare means function of SPSS. from 150 respondents, 64 or 42.7% are in the bracket of 21 – 30 years of age which attained the highest number of respondents, the respondents are dominated by males and 44 or 29.3% of them belonged to the general field of photography. Also, 104 or 69.3% were hobbyist/amateur photographers. This showed the general rating of 150 respondents that is Very Good and there was no significant difference in the respondents rating in terms of the key result areas. In general, the respondents of the authorized service centers were satisfied with the service rendered by the service centers.

**Keywords:** *service quality, service improvement, customer satisfaction, after-sales service*



# SALES AND MARKETING

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## **Commuters' Satisfaction on the Services of Bus Companies in the Province of Batangas**

Nickie Boy A. Manalo, DBA, CPME, MRIBA (Sr)  
*Polytechnic University of the Philippines*

### **Abstract**

The research study was conducted to determine the level of satisfaction of the respondents on the service quality provided by the Bus Companies in the Province of Batangas. The framework used to best describe the service quality of the mentioned subject is the SERVQUAL model with five aspects/dimensions namely: tangibility, responsiveness, assurance, empathy and reliability. More so, the respondents of the study were the 2,394 passengers/public commuters of bus transportation in the mentioned Province which represented the gathered population of study that were congregated through multistage cluster sampling procedure in the two weeks conduct of the survey on the hours with bulky number of passengers from 5am-8am and 3pm -6pm (based on the survey conducted with bus drivers, conductors, dispatcher and observation on the first day of the survey) of July 21- August 3, 2016 in eight (8) bus terminals in the Province of Batangas. The mentioned parameters were set by the researcher with the approval of his statistician and adviser as the gathering of the population followed probability procedure. The surveys in eight (8) bus terminals were done through the hired field interviewers of which research survey followed the same parameter. Memorandum of agreement stipulating guidelines, terms and conditions were signed by the researcher and field interviewer. The study arrived at 342 sample size that was computed using 5% margin of error. Furthermore, descriptive method was used to gather primary data to passengers regarding service quality provided by the bus companies operating and plying within and outside the Province of Batangas. The main instrument used to gather primary data was the self-surveyed questionnaire that was face and content validated by superb academician and industry experts. Also, dry run was conducted to pre-test the questionnaire which resulted to cronbach alpha value of .947. Lastly, frequency and percentage, mean, ANOVA: t-test and f-test were used to statistically measure the study based on the statement of the problem.

The study revealed that the respondents were satisfied with the service quality of Bus Companies in the Province of Batangas. Also, the study revealed significant difference on the level of satisfaction of the respondents on the service quality by responsiveness aspect when they are grouped according to civil status and types of bus service frequently availed of. In addition, there was significant difference on the level of satisfaction of the respondents on the service quality by responsiveness aspect when they are grouped according to age, civil status and highest educational attainment. More so, the study also revealed significant differences on the level of satisfaction of the respondents on the service quality by assurance when they are grouped according to civil status and highest educational attainment. Furthermore, there are significant differences on the level of satisfaction of the respondents on the service quality by empathy aspect when they are grouped according to civil status and highest educational attainment. Lastly, the study revealed significant differences on the level of satisfaction of the respondents on the service quality by reliability aspect when they are grouped according to civil status and highest educational attainment. The results of suggested analyses show that service quality is an ongoing factor of measuring customer satisfaction and differentiation strategy.

**Keywords:** *tangibles, responsiveness, assurance, empathy and reliability*

## **Marketing Strategies of Shopping Centers in Metro Manila**

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### **Abstract**

The study assessed the effectiveness of the marketing strategies of shopping centers in Metro Manila. The behaviour of shoppers in the area were evaluated in terms of how they are influenced by marketing mix components used by shopping center management. The study reviewed the service marketing mix or 7Ps concept. The impact to shoppers of each component of the 7Ps that includes product, place, price, promotion, people, process, and physical evidence were measured using the descriptive method. The respondents were 344 shoppers in Metro Manila who answered questionnaires that was purposively distributed to them. The collected data was analysed using several statistical tools. Results confirmed that the quality of interior design, variety of retail stores, discounts on products, security, safety, customer service, convenience facilities, and landscaping attracts the public to visit shopping establishments and influence shopper behavior. The study also showed that shoppers mostly visited the groceries, women's and men's clothing stores, and shoe stores. The following are recommended: shopping centers should design a marketing mix that will target different age groups; add promotional tools and events to attract highly educated shoppers; capture higher income shoppers; implement a well-designed tenant mix that allows shoppers to have myriad of choices on different store categories; increase activities on promoting upcoming events; widen the choice or mode of payment; coordinate with the local government to host a public terminal within their area so that the general public may easily access public transportation; know the needs of the community in their vicinity and reach out to them; conduct customer service trainings participated by tenants and operations staff and engage them to actively participate in the improvement of customer service and interaction programs; maximize the use of digital technologies to enhance interaction with their shoppers; and consult with architects and designers to improve the exterior design and signage of their establishment.

**Keywords:** *marketing strategy, marketing mix, 7ps, product, price, place, promotion, people, process, physical evidence, shopping center*

**The Filipino Millennial Prosumers Traits Preferences in the Fast Food Industry in the National Capital Region**

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**Abstract**

The study attempted an exploratory research on Filipino Millennial whether their traits preferences are similar to their global counterparts. There were 8 aspects used in the study namely Sense of entitlement, Always in a hurry, Narcissistic like personality, I'm a social creature both online and offline, Seemingly Lazy. Less friendly service, Dine, shop, travel with friends, and Cause Marketing. 7 aspects were found to be strong except I'm a social creature both online and offline. The study concluded that even if Globalization influences traits preferences of Filipinos there still are strong ingrained traditional beliefs and customs which serves as moral compasses for Filipino norms in a Filipino society.

**Keywords:** *Filipino millennial, millennial traits, norms*

# FINANCE

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## **Capacity Building for Research & Design of a New Program for Financial Education at the University of Makati (UMak)**

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*University of Makati*

### **Abstract**

There exists a major (and even urgent) need to build up the financial education of the poor, especially the youth. The Filipino youth hardly learn about personal finance in elementary and high school including the importance of saving, thrift values, and other financial habits such as expense tracking, wise spending and the concept of budget planning. More than 50% of the country's population is under the age of 23. Despite increased income after graduation, the cycle of poverty in the country continues due to a large extent to the youth's lack of financial education and acumen about better financial management.

The Central Bank of the Philippines reported that less than 5% of Filipino youth regularly saved. The Philippines has one of the lowest savings rates in South East Asia, despite similar GDP per capita and Purchasing Power Parity levels to countries like Indonesia and Thailand. Out of 100 Filipinos who get sick, more than 50% will borrow money from family members and relatives because their savings are not enough.

In general, Filipinos poorly manage their money and don't see the importance of nurturing good financial habits. Lack of financial education is a major cause why ordinary Filipinos encounter financial struggles.

This "financial education gap" directly impacts on the readiness of the poor to take on financial services responsibly and with greater accountability. The University of Makati (UMak) is cognizant of said gap. Thus, the creation of financial education modules and training of dedicated trainers were conceptualized.

The initial targets of the program were low income Senior High School Students (grades 11 & 12) and low income college youth. These represent the groups who are constantly confronted with the multitude of economic and social woes. The program is essential to help them navigate the increasingly complex financial challenges in life, starting with the acquisition of the knowledge, skills, and attitudes which will ultimately lead to their improved financial health and will later on provide them with financial empowerment. This is the same vein which, in the future, could transcend to the country's economic prosperity.

By the end of the 12-month study period, UMak received substantive inputs about how to develop a financial education program for low income senior high school and college students. Two (2) new Financial Education Modules with the appropriate delivery channels to bring about positive change in the financial behavior of students were developed. Ten teachers and 100 students (50 from senior high school and 50 from college) have been trained and from this pilot training, a minimum of 50% of the participating low income youth or the teachers have adopted positive financial behavior by accumulating and preserving assets equivalent to 10% of their total monthly allowance/income.

**Keywords:** *financial education, personal finance, budget planning, financial education gap*

## **Financial Management Practices of Medical and Laboratory Equipment Trading in the National Capital Region**

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and Polytechnic University of the Philippines*

### **Abstract**

Considering the importance of the financial management practices in businesses, SMEs role in the economy of the Philippines and significant contribution of Medical Device Sector in the economy, the main objective of the study was to understand the level of effectiveness of the financial management practices of SMEs engaged in Medical and Laboratory Equipment Trading as basis of action plan to improve and develop these specific practices that essentially contributed to the achievement of the financial goals of the companies. This study covered Financial Planning, Accounting Information System, Financial Reporting and Analysis, Cash Management, Receivable Management, Inventory Management, Payable Management, Fixed Asset Management, Tax Management, and Audit and Internal Control. This used descriptive research method and survey questionnaire as its primary research instrument. A total of four hundred thirty two (432) company respondents chosen using purposive sampling, consisting of the owners, managers, chief accountants and other personnel involved in finance related functions, were obtained for the assessment of the financial management practices. In this study, it was found out that SMEs prioritize complying with statutory requirements being tax management, audit and internal control and accounting information system ranked highest among the aspects. Fixed asset management was the least effective aspect. While the rest of the aspects which are operational by nature got an overall effective rating, there are practices under these which pose concerns that need to be addressed. Notable concerns amongst others are being lowly computerized, lack of training of the personnel, higher priority on selling more on credit and maintaining high level of inventories. It is recommended that SMEs invest in the training of the employees, implement cost effective Computerized Accounting System and establish a system to regularly evaluate customer, vendors, inventories and fixed assets to minimize related financial risks.

**Keywords:** *financial management, financial planning, accounting information system, financial reporting and analysis, cash, receivable, inventory, payable, fixed asset, tax, audit, management, sme, medical devices, healthcare*

## **The Role and Responsibilities of External Auditor in Corporate Governance**

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### **Abstract**

Corporate governance presence is a must in today's business world for sustainability and success. Implementing the principles of good corporate governance allows the company to have a positive and improved environment in terms of finance and operations. One of its principles is transparency which refers to reporting. The stakeholders will increase their trust in the financial report generated by the company if an independent CPA or external auditor will verify and validate the fairness and reliability of the said record. External auditor plays a vital part in corporate governance. He is with indirect responsibility in terms of corporate governance. The fairness and reliability of financial statements and responsibility to check the misappropriation of assets due to fraud or error still lie in the management though an external auditor provides opinion in the financial statements. In the light of the essential role of external auditor in corporate governance, assuming that all applicants for external auditor already passed the licensure examination of being an accountant, there shall be set of criteria to consider when hiring an external auditor such as technical know-how, professional skepticism, professional judgment, independence in fact and in appearance, objective mindset, eloquent communicator, with teamwork spirit, embrace and exhibit the professional ethics, courageous act with humility and loyalty and time management skills. Likewise, once an external auditor is chosen, assessment of the performance shall be measured to sustain the effectiveness of corporate governance in terms of reporting with transparency, reliability, objectivity and integrity.

**Keywords:** *Corporate Governance, External Auditor*



# HUMAN RESOURCES AND BEHAVIOR

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## **Career Path of Persons with Disabilities**

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### **Abstract**

This study aimed to determine the career path of employed persons with disabilities. It dealt with the transition of PWD after secondary education and presented the problem encountered by the PWD in their employment. Purposive sampling was utilized to obtain the participants in this qualitative research. Fifteen employed PWD research participants were identified and interviewed to determine their career path. Secondary research participants were also identified in the National Capital Region such as SPED Teachers and SPED Coordinators both in public and private schools, and parents with PWD children. The purpose was to confirm the transition program in school and the difficulties encountered by PWD. The study revealed that transitions for PWD were chosen according to the disability. Persons with physical disabilities due to poliomyelitis and visual impairment usually continued their studies up to the tertiary level. They were also competitive with the regular students starting from elementary level. They also held higher position in the field of work they belonged to. On the other hand, persons with hearing impairment engage in vocational courses to get job training. In addition, students with Autism and Down's syndrome sometimes enroll in a non-graded school to enhance their skills. However, speech therapy is always accommodated to improve speech and communication. In addition, parents of these PWD do not allow them to travel alone. They should be assisted by having buddies with them all the time. Their parents consider their submissive attitudes as making them vulnerable to abuse. Implications and future directions are discussed.

**Keywords:** *persons with disability, employment, transition*

## **Nakabuntis, Natauhan, Pinangatawanan, Pinanindigan: The Experience of Teenage Fathers**

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### **Abstract**

The study focused on the experiences and challenges brought by early parenthood to teenage fathers. Specifically, this paper tried to reflect the details of the experiences of teenage males once they become teenage fathers, before, during and after the pregnancy. This qualitative research used the method of Interpretative Phenomenological Analysis (IPA). Eight teenage fathers served as resource persons and went through one-on-one interviews for data gathering. Participants were between 15 and 19 years of age and had become teenage fathers not more than two years prior to the time of study. The study revealed that they experienced stress and anxiety after learning that they had accidentally impregnated their sexual partners and were about to become fathers. However, after some introspection, they came into realization and accepted their fate and embraced fatherhood by taking full responsibility for their families. This study shows how the teenage fathers rose above the challenges and emerged as more resolute fathers who harnessed their inner potentials to become good providers, protectors and nurturers as expected of Filipino fathers. This process can be summarized through the Filipino words: *nakabuntis, natauhan, pinangatawanan, pinanindigan*.

**Keywords:** *teenage fathers, fatherhood, provider, protector, nurturer*

## **The Human Resources Engagement in the Pharmaceutical Industry**

Dave Vincent A. Mangilet, DBA, CPM, SMRIBA  
*Polytechnic University of the Philippines*

### **Abstract**

The study sought to evaluate the importance of the elements of human resources engagement in the pharmaceutical industry. The aspects included meaningful work, hands-on management, positive work environment, growth opportunity, and trust in leadership. Furthermore, it was assessed according to respondent's profile by sex, age, civil status, number of years working as a Medical Representative, number of years in present company, and work assignment. The researcher employed the descriptive method of research in order to uncover the variables and quantitative methods using Statistical tools for hypotheses testing. The respondents were 490 Medical Representatives coming from local and multinational pharmaceutical companies. Results showed that growth opportunity and trust in leadership were deemed to be the most important elements of human resources engagement when grouped according to sex and number of years of work as Medical Representative. The researcher has drawn the conclusion that specific factors need to be considered like increased time and engagement, cross training opportunities, modern performance management, self-directed and dynamic learning, working closely with cross-functional teams, mission and purpose, and regularly meet with teams. Apparently, the demographic factors such as sex, civil status and number of years working as a Medical Representative, needs to be taken into consideration as well especially in the implementation of Human Resource (HR) activities like talent acquisition, training and development, and performance management. The following are recommended: expose Medical Representatives to jobs that adhere to Corporate Social Responsibility (CSR); provide cross-training opportunities for expanded roles based on strengths and capabilities; training methodologies that adapt to modern workplace learning; review performance management systems; opportunity to collaborate with enabling functions; sustain culture building activities; and give and accept feedback through coaching and mentoring sessions.

**Keywords:** *meaningful work, hands-on management, positive work environment, growth opportunity, trust in leadership*

# EDUCATION

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## **Rural Farm Schools in Lian, Batangas and Jala-Jala Rizal: A Case Study**

Jimmy M. Fernando, MEM  
*Polytechnic University of the Philippines*

### **Abstract**

The purpose of this study was to determine education's part in poverty alleviation and rural development. Particularly, this study sought to assess how Rural Farm Schools contribute to community development based on its: thrusts and direction, curriculum and pedagogy, strategies, and people's participation in management. Its significance is anchored on the lack of a comprehensive and people-centered rural education and rural development program. The literature reviewed were thematic that included the following areas: a) rural development, b) education focusing on thrusts and direction, curriculum and pedagogy, entrepreneurship education, and people's participation; and, c) rural farm schools.

The researcher used the descriptive approach as its research design. The case study was used since the study needs description and contextual analysis. A structured interview was used to collect information from eighteen (18) participants. Five (5) of them were key the informants and the remaining thirteen (13) were participants for the focus group discussion.

The study revealed the following results: (a) rural farm schools are directed towards rural development and human capital development; (b) rural farm schools follow the core subjects of basic education but are also integrating agriculture, fishery, and entrepreneurship subjects; (c) rural farm schools are implementing the alternating system or the 70 – 30 scheme meaning that 70 percent of time is devoted to practical education and 30 percent for lectures and instruction. Incorporated in the alternating system are various pedagogical tools employed by rural farm schools; and (d) parents' associations, students, tutors, and other stakeholders participate in school projects and in the formation of themes.

The researcher found out that through the development of rural farm schools, education remains as an effective strategy for rural development.

**Keywords:** *rural farm schools, education, rural development*

## **Total Quality Education in a PPP Model: University of Makati College of Allied Health Studies Experience**

Dr. Maria FayNenette M. Cariaga  
*College of Allied Health Studies, University of Makati*

### **Abstract**

The Constitution places responsibility for educational provision in the government, it recognizes that the State does not accomplish this alone, but with the private sector (Tabora, 2015). According to Guymon (2014), rather than looking at the shortcomings of the public-school system, a more sensible approach to the problem will be increasing accountability for the process of public education, and looking at the mission of other stakeholders, with emphasis on public-private partnership. Education plays a vital role in training future professionals who will practice their respective disciplines in the healthcare industry. With this, the research aimed to examine the educational delivery system in a private-public partnership entity such as the College of Allied Health Studies of University of Makati in line with total quality education. This was done through a qualitative and quantitative approaches (mixed-method) wherein documents were examined and reviewed, SWOT (strength, weakness, opportunities, and threats) and fishbone analyses, and the utilization of the Mukhopadhyay's Institutional Profile Questionnaire (MIPQ) through the College's learning management system (Moodle). College administrators, faculty members, representative students and parents participated in the study. The results of the SWOT analysis, which were also rated by the respondents, were mapped to the quantitative result of the survey questionnaire. The subthemes of the MIPQ are the following: A) Leaders, B) Teachers and Academic Support Group Quality, C) Linkages, Interface, and Marketing, D) Students, E) Co-curricular Activities, F) Teaching and Evaluation, G) Office Management, H) Relationships, I) Materials/Resources, J) Job Satisfaction, and an additional area, Technology and Innovation, which evolved from the results of the SWOT and fishbone analyses. The identified strengths of the College are along the areas of Leaders, Co-curricular activities, Students, Teachers and academic support group. The areas for improvement are on: office management; materials and resources; linkages, interface and marketing. The results were used as bases for the action plan of the college for AY 2017-2018 as immediate term, also these were considered for the medium and long term plans of the college.

**Keywords:** *total quality education, total quality management, total quality management in education, public-private partnership, educational delivery system, allied health studies*

## **Comparison of the Multiple Intelligences of Freshmen from Different Programs of San Mateo Municipal College**

Frederick Edward T. Fabella, Ph.D.  
*San Mateo Municipal College*

### **Abstract**

This paper studied the Multiple Intelligences of freshmen students from the 10 different programs of San Mateo Municipal College in the Province of Rizal, Republic of the Philippines. A 35-item instrument, which measured Howard Gardner's original 7 MI domains, was administered on the respondents. Out of a total population of 870 freshmen students, 398 respondents or a sample size of 45.74% was taken. The respondents were chosen from the programs of Bachelor of Science in Accountancy, Bachelor of Science in Office Administration, Bachelor of Science in Business Administration major in Marketing Management, Bachelor of Science in Business Administration major in Financial Management, Bachelor of Accounting Technology, Bachelor of Elementary Education, Bachelor of Secondary Education, Bachelor of Arts in English, Bachelor of Science in Psychology and Technical Vocational Education and Training. The data were subjected to statistical analysis using weighted mean, standard deviation and analysis of variance which was computed using F ratio. The researcher found differences among respondents from the different programs in all 7 Multiple Intelligences studied. The MI profile of the respondents according to each program was also found to be unique.

**Keywords:** *multiple intelligences, freshmen, education, students*



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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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*depends on scheduled JMRC*

*depends on scheduled JMRC*

*depends on scheduled JMRC*

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Paragraph alignment: justified.

**Title of Paper (except function words, 12 points; max 15 words)**

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### **Abstract**

An abstract is a single paragraph, without indentation, that summarizes the key points of the manuscript in 150 to 300 words.

Keywords: writing, template, sixth, edition, self-discipline, good (maximum 6 words)

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Paragraphs shall be single-spaced with indentation in each paragraph.

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Paragraphs shall be single-spaced with indentation in each paragraph.

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### **Findings and Discussion**

Paragraphs shall be single-spaced with indentation in each paragraph.

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