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**International Conference on  
Multi-Disciplinary Research Studies and Education (Virtual)  
29<sup>th</sup> - 30<sup>th</sup> April 2020 | Kuala Lumpur, Malaysia**

**ICMDRSE-2020**

*Organized by*

Institute For Engineering Research and Publication (IFERP)



International Conference on Multidisciplinary Research  
Studies and Education (Virtual)  
(ICMDRSE-20)

Kuala Lumpur, Malaysia  
29<sup>th</sup>-30<sup>th</sup> April, 2020

Institute For Engineering Research and Publication (IFERP)

[www.iferp.in](http://www.iferp.in)

Publisher: IFERP Explore

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IFERP-Explore

## **Editorial:**

We cordially invite you to attend the **International Conference on Multidisciplinary Research Studies and Education (Virtual) (ICMDRSE-20)** which will be held at **Kuala Lumpur, Malaysia** on **April 29<sup>th</sup> - 30<sup>th</sup>, 2020**. The main objective of **ICMDRSE** is to provide a platform for researchers, students, academicians as well as industrial professionals from all over the world to present their research results and development activities in relevant fields of Recent Challenges in Science and Technology. This conference will provide opportunities for the delegates to exchange new ideas and experience face to face, to establish business or research relationship and to find global partners for future collaboration.

These proceedings collect the up-to-date, comprehensive and worldwide state-of-art knowledge on cutting edge development of academia as well as industries. All accepted papers were subjected to strict peer-reviewing by a panel of expert referees. The papers have been selected for these proceedings because of their quality and the relevance to the conference. We hope these proceedings will not only provide the readers a broad overview of the latest research results but also will provide the readers a valuable summary and reference in these fields.

The conference is supported by many universities, research institutes and colleges. Many professors played an important role in the successful holding of the conference, so we would like to take this opportunity to express our sincere gratitude and highest respects to them. They have worked very hard in reviewing papers and making valuable suggestions for the authors to improve their work. We also would like to express our gratitude to the external reviewers, for providing extra help in there view process, and to the authors for contributing their research result to the conference.

Since February 2020, the Organizing Committees have received more than 112 manuscript papers, and the papers cover all the aspects in Science and Technology. Finally, after review, about 45 papers were included to the proceedings of **ICMDRSE -2020**.

We would like to extend our appreciation to all participants in the conference for their great contribution to the success of **ICMDRSE -2020** We would like to thank the keynote and individual speakers and all participating authors for their hard work and time. We also sincerely appreciate the work by the technical program committee and all reviewers, whose contributions made this conference possible. We would like to extend our thanks to all the referees for their constructive comments on all papers; especially, we would like to thank to organizing committee for their hard work.



## Acknowledgement

IFERP is hosting the ***International Conference on Multidisciplinary Research Studies and Education (Virtual) (ICMDRSE -2020)*** this year in the month of April. The main objective of ICMDRSE is to grant the amazing opportunity to learn about groundbreaking developments in modern industry, talk through difficult workplace scenarios with peers who experience the same pain points and experience enormous growth and development as a professional. There will be no shortage of continuous networking opportunities and informational sessions. The sessions serve as an excellent opportunity to soak up information from widely respected experts. Connecting with fellow professionals and sharing the success stories of your firm is an excellent way to build relations and become known as a thought leader.

I express my gratitude to all my colleagues, staffs, professors, reviewers and members of organizing committee for their hearty and dedicated support to make this conference successful. I am also thankful to all our delegates for their pain staking effort to travel such a long distance to attend this conference.



**AnkitRath**  
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**International Conference on  
Multidisciplinary Research Studies and  
Education (Virtual)**

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**Keynote Speaker**

**Organized by**

**Institute For Engineering Research and Publication (IFERP)**







**Prof. Dr. Franco Gandolfi**

*Georgetown University,  
The McDonough School of Business,  
Washington D.C., USA*

**MESSAGE**

It is with great delight and distinct honor that I would like to invite all of you to participate in the upcoming International Conference on “Multi-Disciplinary Research Studies and Education 2020” organized by The Institute For Engineering Research and Publication (IFERP).

The key objective of this conference is to gather leading academicians, scholars, and researchers as well as policy-makers to share their latest knowledge and insights on an international, distinctly multi-disciplinary platform. The conference participants will have a unique opportunity to meet with fellow participants and to discuss contemporary phenomena. Of particular relevance will be a gathering of experts to showcase their research and to deliberate how new insights might shape new policy and procedure.

We look forward to welcoming you to the vibrant city of Kuala Lumpur, Malaysia.

*Dr. Franco Gandolfi*



# ICMDRSE -2020

## International Conference on Multidisciplinary Research Studies and Education (Virtual)

Kuala Lumpur, Malaysia  
29<sup>th</sup>-30<sup>th</sup> April, 2020

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**PAPERS**

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# Implementation of Computerized Maintenance Management System based on Conceptual Strategic Asset Management Maintenance Framework for Oleochemical Industry

**Tee Wooi Keat**, Universiti Teknologi Malaysia  
**Mohamad Wijayanuddin**, Universiti Teknologi Malaysia  
**Harisun Ya'akob**, Universiti Teknologi Malaysia

## ***Abstract:--***

Oleochemical industry is expanding rapidly due to surge in global production and demand. Modern Oleochemical plants are being erected in Malaysia and Indonesia. These modern plants with excellent raw material integration, gives producers in ASEAN an importance competitive advantage over other global competitors. In order to ensure the industry stays competitive with reliable operation and maximize the return of the capital investment, it is prudent to have all invested assets to perform their design intended function in a safe, effective and efficient manner. This can only be achieved through established asset management system. However, one of the major challenges in Oleochemical industry is managing sophisticated assets with deficient asset management system to maintain production. Technology advancement and effective deployment of information technology in support of maintenance has created new options for maintenance such as computerized maintenance management framework (CMMS) which allow seamless flow of asset maintenance information and performance measurement. CMMS is computer-based software programs used to control work activities and resources used, as well as to monitor and report work execution which in turns become part of asset history. CMMS also served as a tool for data capture and analysis. It provides management with value added information necessary for maintenance decision making. CMMS often seamlessly links with enterprise resources planning (ERP) system to improve overall asset performance, such as from breakdown maintenance to preventive maintenance. Recognized the complexities in maintenance, the industry needs to leverage the new advancement in technology and CMMS to support maintenance function and as a basis of asset management system. Without a proper asset management framework, structural CMMS is hard to be established in Oleochemical industry. Therefore, it is important for oleochemical industry to implement CMMS based on conceptual strategic asset management maintenance framework in order for this industry to stay competitive. However, there is a need for theoretical as well as empirical research in the future to validate the multifaceted perspective in the present study and to obtain more insights into the nature of asset maintenance and management, to further improve the conceptual framework to suit the Oleochemical or other similar industry.

## ***Index Terms***

Asset Management System, Computerized Maintenance Management System, Maintenance Framework, Oleochemical.



## The Impact of WAF on Web Application Performance

**Mozamel M. Saeed**, Department of Computer Science, Prince Sattam Bin Abdulaziz University, KSA

***Abstract:--***

Web Servers are core components within the information technology industry, the need for security for these critical elements is tremendous. Security is critical, but so performance is also important for the continued success of the digital business. Using a web application firewall can inspect the data of the application traffic; you can parse, twist, and modify content wherever you want. You can afford, but it doesn't mean that security is free. it uses processing and memory power to inspect application traffic to find attacks. While many enterprises ignore the critical need for the web application's security layer, A vast amount of financial losses occurred compared to the average resources cost for deploying a web application firewall. This research, will try to explore a performance test for web application protected by web application firewall.

***Keyterms:--***

firewall, performance, security profiles, security, web application

## A Comparative Study on the Compressive Strength of Concrete Using Rice Husk Ash and Waste Paper as Partial Replacement for Fine Aggregates

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**T.M. Belgica**, Mapua Senior High School Department, Mapua University, Manila, Philippines

**A.J. Ornopia**, Mapua Senior High School Department, Mapua University, Manila, Philippines

### ***Abstract:--***

Waste materials has been used in different occasions to develop a sustainable concrete that is more economical and eco-friendlier. Particularly in the Philippines, rice husk ash is in abundance due to rice being one of the major produce of the country. Paper waste is also in question with it being one of the highest components of global waste. With these considered, the researchers evaluated and created a comparison on the compressive strength of concrete mixed with rice husk ash (RHA) and wastepaper to standard concrete. The researchers replaced 5% of the usual aggregates with these said waste materials. The other materials used for this study are Portland Cement Type 1, sand, gravel, RHA, old newspaper as the wastepaper, and water. Following a ratio of 1:2:3, the concrete mixture of both the experimental and the controlled samples were molded into cylindrical PVC molds measuring 152x302mm creating 18 samples; 9 samples for the experimental concrete mixture and 9 samples for the controlled concrete mixture. These samples were tested on the 7, 14, and 21 curing age marks, with 3 samples of each category being tested for each age mark. The statistical treatment of 't-Test for two independent means was applied on the results gathered through the Universal Testing Machine (UTM) with the significance level of 95% or 0.05 as recommended by ASTM International, specifically ASTM C39/C39M. The mean of the individual results was taken and compared. With the results of this study, the null hypothesis is rejected for the 7, 14, and 21 day marks due to having a weaker compressive strength – which is 8.58 MPa out of 22.50 MPa for the 14 day mark and 10.02 MPa out of 24.75 to 25 MPa for the 21 day mark – than the standard controlled concrete.

### ***Index Terms***

Rice Husk Ash, Wastepaper, Aggregate, Compressive Strength.

## A Survey on Components of a Serious Game for MR-Tawaf Mobile Apps

**Yuhanis Omar**, Universiti Sultan Zainal Abidin

**Dr. Syadiah Nor Wan Shamsuddin**, Universiti Sultan Zainal Abidin

***Abstract:--***

This paper presents the insight components of a Serious Game Mixed Reality for tawaf learning mobile application. This research is focusing on an interactive application that involves six major components; content, mixed reality (MR) technology, serious game (SG), self-directed learning (SDL) method, motivational Flow Theory (FT) and user interactions (UI). The mixed reality environment is chosen in this application to provide a realistic experience especially for the young pilgrims in tawaf learning. Thus, to ensure the MR-Tawaf is beneficial to the umrah pilgrims, the Technology Acceptance Model (TAM) and User Experience Design (UX-D) are adopted to develop this app. This paper will highlight the SG components used in the development of the apps. MR-Tawaf is focused only on the involvement of the pilgrim in every step of performing tawaf. It is hoped that the components can be referred to as a guideline to those who interested in developing a similar application in a virtual environment for umrah or hajj.

***Key words:***

Mixed Reality, Serious Game, Flow Theory, TAM, UX-Design.

## The Impact of Work Stress Factors on Employee's Performance An application on Bahri private sector companies - Sudan

**Abdulwahid A. Fadlallah**, Prince Sattam Bin Abdul-Aziz University, KSA

**Osama M. Ahmed**, Prince Sattam Bin Abdul-Aziz University, KSA

***Abstract:--***

Research conducted to identify the impact of work related stress factors such as (salary and monetary benefits, workload, organizational structure and work environment) on employee's performance. Moreover, to identify other work related stress due to personal characteristics such as (sex, age, educational level, marital status and number of years of experience) Of employees, working in local private companies (Khartoum, Sudan).

Research determined the relation, association and impact of work related stress factors and its dimensions on employee's performance in the companies.

Total sample size of research is (96) employees who are working in the local private companies (Khartoum, Sudan).SPSS(Statistical Package for Social Sciences) was used to analyze the data. Chi-squared test was used to review the results and test the independence between variables for each hypothesis. Then using (F) tests to test the moral differences.

Research examined that there is statistically a negative significant relationship between work related stress such as (monitory reward, work environment, organizational structure,) and employee's performance. Research also examined that there are statistically significant differences between work related stress and employee's performance due to personal characteristics such as (sex, age, education level, years of experience, and marital status).

Research concluded in accepting the first major hypothesis of the study along with all its sub hypotheses, when the level of significance ( $\alpha = 0.05$ ) at a degree of confidence ( $1-0.05 = 0.95 = 95\%$ ). And accepting the second major hypothesis of the study with all its subsidiary hypotheses – except the fourth sub-hypothesis which states that (There are statistically significant differences between work stresses and employee's performance due to years of experience). when the level of significance ( $\alpha = 0.05$ ) that by a degree of confidence ( $1-0.05 = 0.95 = 95\%$ ).

***Key words :***

Bahari, companies, private sector, Sudan, work stress, performance.

## Concrete Compressive Strength Evaluation: Water from the Marikina River as Mixing Water and Rice Husk Ash and Coir Fibre as Admixture

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### ***Abstract:--***

The water acquired from the Wawa Dam of the Marikina River was utilised as a portion in the mixing water, and the Rice Husk Ash, and Coir Fibre as admixtures in the experimental concrete samples. The aim of the study was to produce a concrete sample that would surpass the compressive strength of a standard concrete following the standards of a 1:2:3 cement, sand, and gravel ratio, and with a 1:1 water to cement ratio. The researchers had a total of 18 cylindrical concrete samples, wherein nine samples used the said admixtures and substitutes, which were labelled as the experimental samples, and another nine samples were made from the materials used in producing standard concrete, which were labelled as the controlled samples. The samples which followed the 7, 14, and 28- day curing periods were tested by the Universal Testing Machine. In conclusion, the 7, 14, and 28-day experimental samples failed to exceed the compressive strength of the controlled samples since the values of the 7, 14, and 28-day controlled samples were 10.32, 24.24, and 10.23 MPa, while the experimental samples were 7.73, 10.06, and 7.73 MPa respectively.

### ***Keywords:***

ASTM C192, ASTM C39, Water, Marikina River, Compressive Strength, Admixtures

## Partial Least Squares Modelling of Classroom Layouts to Learning Motivation and Student Performance

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### ***Abstract:--***

Building constructions and renovations require large amount of investments for educational institutions. However, classroom layout is a low-cost design factor that can significantly improve the performances of students. This research considered seat arrangement, seat distances, and seat assignment schemes, and its relationship to learning motivation and student performance. Mediating factors, which are social interaction and comfort level, found significant were included in the analysis of the relationships.

Through a partial least squares modelling in SMART PLS, it was found that all path coefficients are supported, therefore significant. However, their ability to predict the endogenous variables are unequal. Social interaction is a strong predictor while participation level is a stronger indicator of student performance. Multi-group analyses on the layout design components and other factors uncovered that the significance of motivation and participation level of students are greatest for the u-shaped layout, and seat distances influence the relationships for boxed and u-shaped, but not for clustered design.

### ***Index Terms***

Classroom Design, Educational Ergonomics, Partial Least Squares Modelling, Room Layouts

## FlexiVote – A Web-based Multifunctional Voting System

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**Julius Ivan I. Rodas**, Mapúa University

**Jeremy Ephraim N. Villa**, Mapúa University

**William P. Rey**, Mapúa University

### ***Abstract:--***

Despite the underlying issues that stem from online voting, the prospect of online voting has garnered much attention in today's world, especially due to its ease of access, feasibility, and scalability for most institutes and organizations. The power of the internet to connect people has been increasing daily in relation with the dependability of its users. This study discusses the effectiveness of the implementation and usage of FlexiVote, a web-based multifunctional voting system, on small-scale organizations and non-government electoral processes. It looks at how the multifunctional voting system affects different organizations within their respective electoral processes by providing its users a means to host their own voting processes as well as participate in it. FlexiVote differentiates itself from other similar voting systems by offering some of the more common voting templates, such as "Winner Takes All", "Party Bloc", "Bloc", and "Ranked Voting" that users can conveniently utilize and configure. The study concludes with the overall results of the user experience in their usage of the voting system.

### ***Index Terms***

Electoral Processes, Online Voting, Voting System.

## Job Demands, Job Resources, and Work-Life-Balance among Academicians in Egypt: The Role of Personal Resources

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***Abstract:--***

There is always a high competition among private universities in Egypt, this creates a burden on academicians and increases their work demands. Therefore, this study aims to review the academicians' perception of their ability to balance between their work and life. Because finding a way that could help individuals create barriers between those two important domains is challenging; this goes back to the heavy demands arising from work, home, and society at large. The study provides a review of the JD-R model, personal resources and work-life balance for the past 10 years. This paper proposes that personal resources could be a potential moderator on the relationship between job demands, job resources, and work-life balance. This paper focuses on psychological job demands, supervisor support and coworker support, and social support

***Keywords:***

Work-Life Balance; Personal Resources; Supervisor Support; Co-worker Support.



## Design and Application of 3D Printed Prosthetic Arm Controlled with an Arduino: A Didactic Strategy

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### ***Abstract:--***

The engineering industry is undergoing enormous structural changes that have led to an increased need for broader knowledge and skill sets among the entry-level engineering graduates. Thus, reforms in didactic strategy are essential to bridge the gap between expectation and reality of the engineering practice. Rapid advancement of three-dimensional (3D) prints technology, one of the five key technologies of the Fourth Industrial Revolution pillars forms as a unique way of nurturing to design centric innovation and problem solving skills among students. The purpose of this paper is two-fold: firstly demonstrates optimization of 3D technology as a didactic strategy in nurturing practical skills that encompass problem-solving, creative coding and design of a prosthetic arm. Secondly, utilize Arduino controller to control a customized 3D printed prosthetic arm to create a motion replicating the movement towards hold/grip of an object. The multiple 3D parts designed and produced are assembled to form a passive prosthetic structure with proper which entails codes to be programmed to enable the microcontroller to response to mimic of human fingers motion. This design effort practically established a successful communication link with the fingers to produce hold/grip motion pattern via a low cost assistive device.

### ***Keywords:***

Didactic strategy, Prosthetic arm; 3D technology, Arduino controller, Graduate attributes.

## Concrete Compressive Strength Evaluation: Coconut Shell Charcoal as Aggregate

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### **Abstract:--**

As the Philippines is a major producer of coconut products and goods, a lot of coconut shell is commonly turned coconut shells into charcoal. Because of this, the researchers evaluated the compressive strength of concrete mixed with coconut shell charcoal. With the objective of this study being focused on the coconut shell charcoal, the said material replaced the common fine aggregate component of concrete. Type I Portland cement, gravel, sand, and said aggregate were incorporated with a cement-sand ratio of 1:3 in a 150x300mm cylinder. 20% of the concrete mixture is composed of the powdered coconut shell charcoal. Consequently, 18 samples – 9 experimental samples and 9 control samples which is the common concrete mixture – were made for this study and was tested on their 7, 14, and 21 curing day counts. The statistical treatment ‘Paired t-Test: Two Sample Means’ was applied on the results gathered through the Universal Testing Machine (UTM) with the significance level of 95% or 0.05 as prescribed by ASTM International. Three samples were tested per curing day count and the mean of the individual results were taken. Through the results of this study, the 7, 14, and 21 curing day counts was rejected due to having 10.32 MPa, 13.76 MPa, 16.37 MPa respectively – failing to equal or surpass 65% of 25 MPa or 16.25 MPa for the 7 curing day count, 90% of 25 MPa or 22.50 MPa for the 14 curing day count, and 99% of 25 MPa or 24.75 to 25 MPa for the 21 curing day count. The researchers of this study recommend the lessening or modification of the coconut shell charcoal and the further testing of this experimental concrete through a trial-and-error method. The procedures used in this study are standards from ASTM C192/C192M and ASTM C39/C39M. .

### **Keywords:**

Concrete, Coconut Shell Charcoal, Aggregate, Compressive Strength.

## Comprehending Accountability and Learning Outcomes in School Education

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***Abstract:--***

Accountability, as a concept, has percolated through multi-layers of educational services. School management is drawn towards fabricating accountability strategies for imparting education that reflects on meaningful achievements. Teachers act as the primary source of imparting education and skills to the students. Ensuring the quality of education becomes an essential factor in the provision of adequate learning outcomes of students. The study tries to understand accountability with multiple perspectives in school systems. It analyses teachers' accountability as a systemic input and its contribution to promoting quality education and elevating student's learning outcomes at the school level. It reflects on identifying the existing gap in the literature and the attributes of accountability in the Indian context.

***Keywords:***

Teacher accountability, quality education, learning outcomes

## ICT competence and Self-Efficacy of The disabled in Indonesia

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***Abstract:--***

Disability welfare could be improved with the use of Information and Communication Technology (ICT). The Government of Indonesia seeks to improve ICT disability competencies with the implementation of the ICT Jamboree. ICT competency enhancement is expected to increase the disabled self-efficacy in entering the workforce. This study aims to identify the impact of increasing ICT competencies on disability self-efficacy in daily life. Qualitative approach with interviews and Focus Group Discussions were carried out for data collection in this research. Interviews were carried out among 100 people with disabilities those who are deaf, blind, and physical disabilities who had participated in the ICT Jamboree. The selected informants came from five major cities in Indonesia, namely Palembang, South Sumatra Province, Yogyakarta City, Special Region of Yogyakarta Province, Balikpapan City, East Kalimantan Province, Manado City, North Sulawesi Province and Jayapura City, Papua Province. The FGD was also carried out with experts and people with the disabled who work with the government institutions or the entrepreneurs. The results of the study found that increasing ICT competence can increase disability self-efficacy. Most disabled claim to be more confident in using Microsoft Office application and interacting socially with non-disabled people through social media. Likewise, one of the keys to success in enhancing ICT competence and self-efficacy is the role of the disability community, teachers, and parents.

***Keywords***

ICT Competencies, self-eficacy, disable.

## Estimating Electric Power Generation of Photovoltaic Power System with main variables that affect solar radiation by Artificial Neural Network

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### ***Abstract:--***

Solar energy is considerable one of the cleanest renewable energy comparing with other energy alternatives for example biomass energy, nuclear power and hydroelectric energy. Although it has questionably been the most expensive price as for particular equipment installation, some main components of PV power generation system have been declining distinctly. Since the pros and cons along with the expectation that solar energy price will continue to diminish, the future of solar energy is tendency to be substantial. However there are many factors that affecting the operation and efficiency of the PV based electricity generation systems, the forecasting methods of the solar power generation have been deliberated by many solutions. This paper exhibits one of the estimating electric power generation of photovoltaic power system with essential variables that affect solar radiation.

The proposed method is adopted using artificial neural network with multilayer feed forward method for estimating electric power generation of photovoltaic power system. Because in the network structure, the neurons can be arranged in layers and each of the neurons in the input layer can receive one of the variables for example humidity, temperature, and day time. Therefore this comparison between the experiment work of actual PV power plant and this proposed estimation was corresponding rationally. Furthermore, some parameters can be separated as either high or medium correlations to suggest for applying this estimating electric power generation of photovoltaic power system.

## Preliminary Evaluation of Laboratory Grown Graphene as an Additive: Compressive Strength Analysis on Reinforced Mortar

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### ***Abstract:--***

Graphene is structured in a hexagonal lattice of a one-atom-thick layer of carbon atoms which is assumed to be 200 times stronger than standard steel. It was proven that the inclusion of graphene in construction materials increases its strength indicating it suitable for resilience and maintenance. This presents that graphene can be a basis for a higher compressive strength of a material since the mechanical properties of graphene may contribute to the resistance of the material to any form of force. In this study, laboratory grown graphene was made from pencil lead was used as an additive to mortar cement. The procedure for the gathering of the data are the following: ASTM C109 and Blender Technique (Graphene Extraction). Based from the applied experimentation, the graphene had shown a significant effect within the mortar cement with the curing days of 3, 7, and 21 wherein compared to the controlled specimens, the values of compressive strength of the experimental specimens had doubled up. Thus, this concludes that a graphene-based mortar cement can be used as a sustainable construction material.

### ***Index Terms—***

Graphene, Mortar Cement, Compressive Strength, Blender Technique.

## Elementary Teachers' Perceptions towards Learning Models related to Creative Thinking and Engineering Skills

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**Wahyu Sopandi**, Elementary Education Department, Postgraduate School, Universitas Pendidikan Indonesia

***Abstract:--***

The 21<sup>st</sup> century competences needed by students can be developed by teachers through learning in schools. The purpose of this study is to investigate the perceptions of elementary school teachers about learning models that support creative thinking and engineering skills. This research used a survey method. The respondents were 40 teachers from different elementary schools located in one of the cities in Indonesia. Random sampling was used as a data collection technique. The research instrument was in the form of questionnaires and the data was collected by employing google form. The data were analyzed qualitatively and quantitatively. The results show that elementary school teachers knew various innovative learning models. The teachers also had positive perceptions about the implementation of creative thinking and integrated engineering skills. Then, the teachers selected the learning models that were properly suitable to provide the development of the creative thinking and engineering skills for elementary schools students.

***Keywords—***

Creative thinking, Engineering skills, Teacher perceptions.

## Analysis of the opinions of student of high schools (with a focus on engineering) on teaching with digital technologies in their studies and their self-assessment of their own digital competences acquired during their studies

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### ***Abstract:--***

The aim of the paper is to introduce the issues solved within TACR research project (Technology Agency of Czech Republic). The title of the project is “Education in engineering branches and its optimization for the needs of the labor market”. Its content focuses on the current needs of workers in engineering companies and innovation centers. The project proposal resulted from an analysis of the current situation in the field of technical education and the situation on the labor market in the sphere of technical professions. This study focuses on students of high schools with a focus on engineering and their attitudes towards equipping schools with specific tools for digital production process management, the use of tools by teachers of vocational subjects and also on students' attitudes towards evaluating the preparation of schools for their further development. The survey was conducted at the end of 2019 with a sample of 316 students.



## Unearthing the Personality Traits of Ecologically Concerned Youth in India

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***Abstract:--***

The present research study focused on understanding the ecological beliefs and attitudes of educated Indian urban youth. The study was an attempt to explore individual differences in their views from the perspective of personality traits. This study is relevant for understanding the Indian mindset on environmental concerns, as not much prior research is available to understand this perspective. This study examined personality traits and environmental concern in a sample of 352 urban educated youth of which 54.5% were female and the mean age was 21.4 years. The researchers used the 15-item New Ecological Paradigm Scale to measure ecological concern, which is one of the most widely used measures of environmental attitudes. The 44-item Big Five Inventory was used to assess the Big Five personality traits. A multiple hierarchical regression yielded a significant model revealing the personality pattern of the ecologically concerned young Indian. These observations shed light on an ecologically concerned educated young Indian.

***Keywords:***

personality, traits, ecological concern, attitude, youth, engineering, management

## Comparative Analysis of Hysteresis, PI and Fuzzy-PI Controller for Direct Torque Control of Induction Motor

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### ***Abstract:--***

The vector control is aimed at achieving decoupled control of machine torque and flux by two orthogonal components of stator currents namely d- and q-axis, respectively. However, it is difficult to understand, complex in implementation and requires enough knowledge of motor parameters. Vector control is successful only if the rotor position can be correctly established but in real, it is difficult to measure the rotor position correctly as it varies with time. The simplest vector control method which doesn't require to determine rotor position is Direct Torque Control (DTC). In DTC, the stator voltage is linked to the torque and flux component of the machine directly by alleviating the current synthesis step. It is much simpler to implement and requires less computational time compared to standard VC. However, the conventional DTC suffers from torque ripples in steady-state operation and also at higher sampling frequencies making it challenging to implement in DSP. Many research publications are made on making improvements in classical DTC by either the use of artificial intelligence and model adaptive systems. However, while doing so, the actual structure of DTC is being lost. This paper, therefore, aims at making a comparative study of three types of DTC structures: classical DTC with hysteresis torque controller with PI speed controller, DTC with PI controller for torque and flux controller and speed controller as well but switching table being replaced by Space Vector Modulation (SVM), and, fuzzy logic controller (FLC) being incorporated in second structure for speed controller. The model is developed and simulated using MATLAB/SIMULINK™ workspace. The results show that the latter structure showed reduced torque and current ripples.

## Prediction yield harvest Palm Oil with Takagi-Sugeno Kang Inference System (TSK+)

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**Erni Rouza**, Program Studi Teknik Informatika Fakultas Ilmu Komputer Universitas Pasir Pengaraian

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***Abstract:--***

Palm one of the main crop and seed in Indonesia. Oil palm plantations, oil palm yields is paramount. Oil palm yields in time and the right amount is something that is desired by the farmers. Therefore, the prediction of harvest needed to be used as reference targets palm oil yields. Determination of target yields required a method capable of predicting yields of palm oil. In this study, constructed a fuzzy inference system with TSK method (Takagi Sugeno Kang) which aims to predict harvest oil palm farmers. Shaped fuzzy rules IF antecedent THEN consequent, using consistent form of a linear equation input variables. Each coefficient on the variable linear equations consequently obtained based on an estimate of the crop. The test results of oil palm crop production prediction on 3 Season namely Drought, Rainy, Fertilization, with input the numbers of the value of each variable with range which has been fed to prove that the TSK fuzzy inference method could predict good harvest oil palm.

***Keywords:***

Inferensi Fuzzy Takagi Sugeno Kang, Prediction, Oil Palm

## Rehabilitation of people with disabilities through social networks (Study of Iranian users involved with disability)

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***Abstract:--***

Community-based rehabilitation and home care are among the WHO's programs that are based on three pillars: community, family, and the disabled. In societies where government and public authorities are unable to establish information and exchange networks due to inefficiencies, the least possibilities for engaging in different areas of disability should be exploited and networked. As long as people with disabilities and their families are unaware of their disability or family members, any action to help and rehabilitate the person with disabilities will at least work. This claim becomes more prominent when a person's disability is of a rare and specific type or when it is difficult for families to accept it because of social conditions and misconceptions. In such a situation, if the disabled person has a disability as a child or infant, he or she should be given special training so that their developmental and training stages are not delayed. An example could be a child who is blinded by congenital or accidental illness in the first few months of life. An event that may be difficult for the family to accept because of fear of being bullied by society and its people, and even a child with a disability for long to be denied or expected a miracle. This is where the importance of social networks, especially virtual ones, comes to light, because parents view these networks as an environment that can anonymously meet their information needs by finding those who have the same problem, and share their experience and knowledge in areas such as communication, training, etc. Of course, the use of these networks is not always based on the anonymity feature, but its special advantages include the cheapness that is the basis of the CBR so that families spend more on connecting to the internet and at a cost. Of course, the use of these networks is not always based on the anonymity feature, but its special advantages include the cheapness that is the basis of the CBR so that families gain access to what is most important in their child's rehabilitation as soon as they connect to cyberspace and at a cost. This research seeks to study this claim through the method of Netnography and interviewing with families with children with disabilities.

***Keywords:***

Special Disabilities, Social Networks, Rehabilitation and Blindness

## Enhanced Salazar's Method of Grouping: Effects on Grade 10 Learners Achievement and Motivational Levels in Mathematics

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**Adawiya Amanodin**, Mindanao State University- Iligan Institute of Technology

***Abstract:--***

The main purpose of this study is to improve the achievement and motivation level of Grade 10 learners in Mathematics using Direct Instruction with Enhanced Salazar's Grouping Method. This study used quasi experimental research design. It also utilized qualitative analysis, relative to data generated by the learners' math journal with interview. Based on the quantitative data, both methods of teaching are effective because the learners' achievement level were improved. However, the experimental group had a higher increase of mean score compared to the control group. Thus, the Enhanced Salazar's Grouping Method yields better achievement level than the traditional method. Furthermore, there is a significant increase in the learners' posttest scores in their achievement test. Both groups were motivated to learn mathematics before and after exposing them with the Enhanced Salazar's Method of Grouping. However, the decrease in the learner's posttest scores in the amotivational scale in Mathematics was not significant. Further, qualitative assessments showed that the Enhanced Salazar's Grouping method develops self-confidence, encourages effective communication, comfortable working with others and facilitates exchange of ideas towards a common goal. The learners from experimental group were in favor with the Enhanced Salazar's Grouping Method because they can learn more and perform better in mathematics. Also, it increases learners' interest towards mathematics as well as increase learners' confidence in learning mathematics concepts. The researcher strongly recommends the use of Enhanced Salazar's Grouping Method in the seatwork stage because it showed an improved achievement and motivation levels in Mathematics among grade 10 learners'

## The Development of "Paper Toys" Learning Media to Stimulate Children's Fine Motor Skills

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**Lutfi Hakim**, State Polytechnic of Banyuwangi

### ***Abstract:--***

This study aims to discover the feasibility and the effectiveness of the learning media development for fine motor skills of kindergarten students using the educative "Paper Toys". The research method used a R&D (Research and Development) method refers to the Borg & Gall model which has been simplified into 5 stages according to research needs. The subjects of this study included 15 kindergarten students of B level class (5-6 years old) at Aisyiyah Kindergarten, Surabaya, Indonesia. The data collection techniques used the questionnaires filling for feasibility test of material and media of Paper Toys and also used a direct observation. For data analysis, this study used a quantitative descriptive technique. The results showed that: 1) The material test received a score of 3,65 in the category "Material worth applying"; 2) The media test obtained a score of 3,83 in the category "Media worth applying"; 3) The results in a large scale test to stimulate children's fine motor skills showed a significant increase from 41,11% to 85,56%. The result of this study proved that the development of an educational tool of "Paper Toy" was considered feasible, effective, and able to improve the fine motor skills of Group B kindergarten children (5-6 years old) especially in the ability to cut, fold, and stick skills.

### ***Index Terms***

Learning media, Paper Toys, Fine Motor Skills, interactive learning for early childhood

## Betawi Language Mapping In Capital City Jakarta as an Endangered Language Revitalization

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***Abstract:--***

Betawi language is the language used by indigenous people in the capital city of Indonesia, namely Jakarta. But now the use of Betawi language has become scarce, which indirectly eliminates the identity of the Betawi people themselves. This research on mapping the Betawi language aims to inventory the Betawi lexicon based on its demographic zone. This is a strategic step in the restoration of the Betawi language as part of cultural preservation. The study was conducted in the margin zone and sub-margin of the Betawi tribe, which included 6 regions in DKI Jakarta, namely the Central Jakarta and North Jakarta (zone 1), West Jakarta and East Jakarta (zone 2), south Jakarta (Zone 3). Researchers will also conduct comparative studies in Banten (Zone 4), Bekasi (Zone 5), and Depok (Zone 6). The selection of these 6 specific points is based on the assumption of the native zone and the zone of spread of the Betawi tribe. The analysis is carried out by lexicon filtration and the accumulation of datums which are then formulated with the dialectometric formula. The expected result is a language map.

## Newspaper Innovations during Environmental Turbulence Due to the Covid-19 Pandemic

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**Dr Anton Widjaja**, Departement of Management Science, Universitas Indonesia

***Abstract:--***

This research will emphasize the influence of environmental turbulence in driving changes in newspaper business in Indonesia. In economic crisis condition due the Covid-19 pandemic, a number of newspapers are demanded to innovate in order to survive. One form of innovation is to change the business model. Newspapers that are still firm in making the printing business as their core business now inevitably have to switch to the digital platform.

Not only did it cause a decrease in the number of newspaper sales, the Covid-19 pandemic severed the newspaper business chain. Newspaper agents and loper stop operating. On the other hand, the newspaper distribution system is also disrupted by the implementation of lockdown in various regions.

The study will take samples in the two largest newspapers in Indonesia, namely Kompas and Republika.

In driving change, leadership competency becomes very important. Leaders who have competence will be able to prevent negative effects, such as inertia to change.

The study will look at the extent to which environmental turbulence factors and the capacity of leaders influence newspaper business changes.

This research will answer questions about how environmental turbulence and leadership capacity can influence newspaper organizations to remain sustainable in the midst of crises arising from Covid-19?.



## The Use of Educational Technology in Mathematics Teaching and Learning in Sulu State College a Survey on Readiness and Competency

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**Aurizia D. Siraji**, Department of Computer Science, Information Technology and Engineering, Sulu State College

***Abstract:--***

This study sought to determine the extent of the perceptions of teachers and learners on the use of educational technology in Mathematics teaching and learning in Sulu State College. Employed the quantitative and evaluate methods utilizing ninety (90) Mathematics students equally taken from the three schools of Sulu State College. This study revealed the following findings: 1. On the educational technologies – all teachers used calculators in their classes which are perceived as the most common type of instructional technologies. Some used video machine, overhead projector, internet and computer in their teaching; forty percent (40%) of the teachers have undergone computer training while sixty percent (60%) have no training at all; and “word processing” perceived as mostly attended by Mathematics teachers. Half of these teachers have attended training on the “use of internet to find information” with only few of them have undergone training in the “spreadsheet”, “using web resources”, and “information skills” areas of computer literacy. 2. On teachers’ and students’ perceptions – on the average, teachers and students are “undecided” on itemsteaching and learning. A training program should be made to encourage more Mathematics teachers to utilize the modern but relevant instructional devices.

***Keywords***

Readiness and Competency

## Aerobic Treatment of Molasses-based Distillery Wastewater using Moving Bed Biofilm Reactor

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**Cuenca, Ashley Mae R.**, Mapua University, School of Chemical, Biological, Materials Engineering and Sciences

**Riata, Charlene V**, Mapua University, School of Chemical, Biological, Materials Engineering and Sciences

### ***Abstract:--***

Molasses based distilleries are one of the most polluting industries that generate a large volume of high strength wastewater that is a problem in the environment. To control this problem, it is emphasized today the waste minimization and focus on finding other alternatives for the treatment of the wastewater. Aerobic MBBR with 30% and 60% filling ratio, enzyme with 1 g and 3 g as the initial concentration, and a combined treatment technique was investigated for 30 days for the treatment of molasses-based distillery wastewater. Experiments were performed in order to analyze the influence of various parameters such as COD, Total Suspended Solids, pH, Total Phosphorus. A maximum COD and Total Phosphorus removal efficiency of 52.76% and 56.67 were obtained for the system operating with aerobic MBBR with 30% filling fraction. A maximum TSS removal efficiency of 45.78% was obtained for the MBBR with 30% filling fraction and 1 g of enzyme and the pH for all the samples increases and are close to neutral. The removal efficiency for aerobic treatment was not enhanced by the enzyme due to the inhibitors present in MDWW. In addition, the enzyme was more susceptible to inhibition. For the system with MBBR, biofilm formation was also considered, the mass of the carriers before and after treatment were measured and the morphology of biomass were evaluated through the use of SEM.

### ***Index Terms—***

MDWW, MBBR, filling ratio, enzyme, biofilm

## Computer Games and Critical Thinking among Freshmen Students at Sulu State College: an Empirical Test

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### ***Abstract:--***

The purpose of this study was to explore the level of perception of the freshmen students towards the enhancement of critical thinking on computer games at Sulu State College. Employed was descriptive exploratory in nature. Using purposive random sampling technique, one hundred (100) freshmen student-respondents were drawn among the five (5) major Departments of Sulu State College. The findings revealed that: On Demographic Profile of the Freshmen Student-respondents: The results of the study found that majority of the students are between 19-21 years old and only 5 are 25 years old and above. On the Level of Perception of Students towards the Enhancement of Critical Thinking on Computer Games: The students are undecided on their perceptions towards the enhancement of critical thinking on Computer Games at Sulu State College. On the Difference on Perception of the students when categorized according to profile: There is no significant difference on the student's perception when they are categorized according to age, gender, and average family income. Thus, student's indecision towards the enhancement of critical thinking on computer games could only mean that most of them are not so much engaged on computer games either in school or at home considering their economic status.

### ***Index Terms***

Computer Games, Critical Thinking

## Renewable Energy Barriers in United Arab Emirates

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***Abstract:--***

The demand of energy is increasing day by day, and there is a need for new energy sources to maintain the top energy supplier rank and remain relevant in the market. Renewable energy resources are generally characterized by their nature of not being exhausted or naturally replenished. These technologies generate power and energy through conversion to electricity or motive power. However, there are multiple challenges associated with the renewable energy in the context of UAE. The aim of this research was to identify the significant barriers that can negatively affect the renewable energy. Therefore, an online survey was conducted to identify the barriers from UAE respondents. Results illustrate that, Lack of technical skills was the top-ranked barrier that negatively affect the renewable energy. The top-ranked barriers can be used as a guide for renewable energy. We believe that the results of this study can be useful in tackling the issues associated with the renewable energy in the context of UAE.

## Arts as a Solution to Insecurity and Unemployment in Nigeria

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***Abstract:--***

The influx of unemployed youths from rural areas to urban cities is illustrated by daily violent tendencies that result of insecurity in Nigeria. Insecurity therefore is partly linked up with unemployment. Arts is an employer of labor and its utilization by a nation can lead to the effective engagement of citizens in activities for economic benefits. This paper is anchored on the contribution of Arts to economic viability in engaging the menace of insecurity and unemployment issues that lead to delinquency, armed banditry, kidnapping and terrorism, such as the “Boko harem.” The search for national security and gainful employment through art, it comes to light that there were contradictions in the implementation of the National Development Plan. Finally, Arts is seen as a major option in the realization of employed and secured citizenship for development in Nigeria.

***Keywords:***

Arts, insecurity, unemployment, economic viability, Nigeria

## Adaptation Practices on Changing Climate in Chepang Community

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***Abstract:--***

Chepang communities are the indigenous Tibeto-Burman community inhabiting the ridges of Mahabharat mountain range of central Nepal. The cautious and traveling livelihood option is major characteristics of Chepang community with having over the past two or three generation been more outwardly and semi-nomadic. Now their habitant seems to be quite stable living. They usually had lived in caves or thatched houses but new generation increasingly habitant on new semi modern houses in local area of Gorkha & Chitwan district of Nepal. The major food pattern and production of crops such as maize, millet and bananas. Chepang community are influenced by both Hinduism and Buddhism, however, they follow Animism where people perceive everything such as animals, plants, rocks, rivers, etc as religious object. They speak Tibetp-Burman, Raute and Raji languages. Chepang are one of the most vulnerable communities of Nepal standing very low in Human Development Index (HDI). Chepang were highly affected by the April 2015 earthquake and now Government of Nepal has been addressing via Public housing to Chepang community on safe shelter. Generally, Chepang is an indigenous community living in the marginal and fragile landscapes of central Nepal. They highly depend on climate sensitive biodiversity resources, shifting cultivation and collection and utilization of forest products. With changing climate being a reality, how is this community perceiving and adapting to the climate change impacts needs to be explored to build on for sustainable development approaches and management of those landscapes and ecosystems and to develop adaptation strategies of indigenous and other local communities against adverse impact of climate change in targeted community. This qualitative research paper provides information on Chepang community's perceptions towards changing practices in impact of changing climate, micro climate, traditional shocks mitigation approach, native anticipating practices, absorptive practices and adaptive practices. Study were find out on changing pattern on livelihoods, culture and their associated forest ecosystems, seed preservation, vulnerability on seed preservation, imported domination and practices, which lead to food insecurity and high socio-economic vulnerability. Similarly, study paper presents the community's existing strategies and practices of adapting to changing climate pattern and it impacts. Study will try to provides way forward to increase resilience of the ecosystems and adaptive capacity of Chepang community against climate change impacts and existing challenges. This study analyzes the factors influencing the adoption of various adaptation practices by a highly marginalized indigenous community in Chepang community at Gorkha district of Nepal. The analysis is based on a household survey conducted among 49 Chepang households and more than 155 individuals who were selected randomly. Group discussion and open interview was used to analyze five categories of adaptation choices against a set of socio-economic, institutional, infrastructural, and perception variables. Perception of rainfall changes, size of landholding, status of land tenure, distance to motor able road, access to financial services, weather forecasting information access, public services received rate, development aid, training received on climate change, adaptation alternative training and skilled trainings are all influential to enable households to deviate away from traditional coping strategies and adopt suitable practices to adapt to climate vagaries.

***Keywords:***

Adaptive, absorptive, adaptation, changing climate.

## National Education Philosophy: The Formation of Maqasid As-Syariah-Based Human Capital

**Hasbollah Bin Mat Saad**, Faculty of Law, Multimedia University, Malaysia.

***Abstract:--***

The National Education Philosophy (NEP) is a key element in determining the direction of educational system in Malaysia. The ultimate goal of the NEP is to enhance the individual's potential through a number of core areas including spiritual, physical, emotional and intellectual formation by applying the concepts of believing in God, the application knowledge, morals, skills, responsible attitudes and the ability to achieve holistic well-being. In line with the government's aspiration in adopting the concept of "Rahmatanlil 'alamin" as the basis of the new governmental administration that seeks to underpin the pure values of the concept of Maqasid As-Syariah as a reference in implementing the fundamental principles of its administration; the harmonization between these two concepts, is seen as capable of producing sustainable and competitive human capital internationally in the future. The main objective of this paper is to examine both concepts for potential harmonization to further strengthen the educational system in Malaysia. The study of this paper will be carried out by applying the qualitative and reference law research. Basically, the harmonization between these two concepts can further enhance the goal of the NEP in producing holistic human capital in the future.

***Index Terms***

National Education Philosophy, Maqasid As-Syariah, harmonization, human capital.

## Development of a conceptual framework to Operationalizethe Flood Risk Management

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***Abstract:--***

Policy makers have progressively recognized the limitations of traditional decision-making frameworks of Flood Risk Management (FRM). This is mainly due to their incapability to manage inherent uncertainty of flood risk. Accordingly, the method of flood risk assessment, method of flood risk management and methods of operationalizing flood risk management have been recognized to be improved over the past years. The theory related to FRM has advanced over the years. However, there are visible shortcomings in operationalization of this concept mainly due to the lack of a framework for clear recognition and understanding the components of flood risk management system. Therefore, the objective of this research is to identify the FRM system, its components and make appropriate recommendations for its operationalization. State of art review was conducted to recognize the present level of flood risk management systems with its components. Further, it has identified the critical components for successful operationalization and develop a solution model for critical elements of the system. A satisfactory solution has been identified with accepted criteria and proposed solution for a Flood risk management system and developed recommendations for sustainable management of flood impacts.

***Keywords:-***

flood, vulnerability, stakeholders, uncertainty, integration



## Application of Information Communication Technology on the Management and Administration of Office Today

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***Abstract:--***

ICT which refers to processing, storage and transfer of information, sometimes describe as information technology (IT). It can be broken down into IT hardware and communication. ICT is a general purpose technology (GPT) that has a major impact on process technologies, organization technologies and product technologies also has social and political implication. If ICT can be applied into the management and administration of office there would be fundamental transformation in the organization such as new kinds of skills, capacity and attitudes and achieving the overall objectives. The study recommends the effective ways to apply ICT in the administration of office in order to achieve optimal results.

## Facebook as a Social Support among Parents with Cerebral Palsy Children

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***Abstract:--***

This study attempts to explore how Facebook is used among parents with Cerebral Palsy children. The focus will be on their use of Facebook with regard to its four basic elements namely background, benefits, media use, and impact and obstacles faced. The study however, will detail out more on benefits and types of social support. Each of the four basic elements play its own important role in identifying the use of Facebook among parents with Cerebral Palsy children. There are three research objectives to be achieved in this chapter. First is to identify the benefits of using Facebook as a social network among parents with Cerebral Palsy children. Second is to identify the level of social support gained through the use of Facebook as a social network among parents with Cerebral Palsy children. Third is to identify the relationship between benefits and obstacles through the use of Facebook as a social network among parents with Cerebral Palsy children. Findings of the study show that the parents are aware on the importance of Facebook as social support as part of their responsibility to their Cerebral Palsy child. The finding is observed through the second objective by looking at the four elements of social support. The highest score is information support, second is emotional support, third is appreciation support and the lowest score is the level of barriers encountered in using Facebook as a social network. The study findings show that benefits received through Facebook as a social network and the level of social support gained through Facebook as a social network among parents with Cerebral Palsy children are generally at high level. The findings further indicate that Facebook is useful for information exchanges, thus helping the parents with Cerebral Palsy children to communicate with a wider group in the Facebook as a social networking site in their daily lives.

***Keywords:***

Facebook, Cerebral Palsy, social networks

## Integrating Multi Criteria Decision Making Supplier Selection Approach Using Delphi and Analytic Hierarchy Process methodologies

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***Abstract:--***

Supplier selection is one of the most critical processes in supply chain management (SCM), as it is affecting the entire chain and the success of any enterprise. The majority of small and medium enterprises (SMEs) are facing difficulties in choosing the best supplier using the conventional methods. Thus, a new multi-criteria decision making (MCDM) approach is proposed, developing a framework to help those enterprises with their supplier selection. This framework is proposed to integrate the usage of DELPHI technique as a data-gathering tool, and Analytic Hierarchy Process (AHP) as the MCDM methodology for data analysis. Both were used to achieve the goal objectives and to get the effective supplier selection. This project includes the application of DELPHI technique letting the experts to choose the main criteria, then the trade-offs between the available alternatives depending on those chosen criteria, and then the selection. The criteria selected were: Price, delivery time, online ranking, rejection rate, and flexibility. Then using AHP approach, the criteria's weights were assigned. The highest was for price (43.84%), followed by the rejection rate (21.81%), then the online ranking (19.27%), a lower weight was for delivery time (9.44%), and the lowest weight was for flexibility (5.64%). Lastly, an example was presented to illustrate how to use this framework and to test the effectiveness of the proposed framework and its ability to be used by the targeted enterprises.

## Motivation and Learning Strategies on Foreign Language Acquisition

**NoemeMacatuno-Nocom**, Bataan Peninsula State University-Dinalupihan Campus

***Abstract:--***

Global competence is a 21st century imperative where learning foreign languages is vital. This descriptive study identifies learners' perceptions on motivation models and language strategies related to acquisition of Mandarin as Foreign Language. Employing survey-questionnaire as the main tool responded by foreign language learners of Bataan Peninsula State University, it tested null hypotheses that learners' learning motivation and strategy have no significant relationship on Foreign Language learning acquisition; and have no significant difference on Foreign Language learning acquisition. Statistical tools utilized include frequency count, percentage, weighted mean, standard deviation, and Spearman Rho correlation analysis. Results revealed that respondents are more motivated with respect to models, and strategies, are apparently very effective. While overall motivation is moderately correlated with learning strategies and is highly correlated with overall acquisition of learning, significant relationship showing high correlation between learners' motivation and learning strategy to overall Foreign Language learning acquisition rejected the hypotheses. Students are recommended to develop varied learning techniques and participate and expose themselves in group activities. Peer discussion, paired/group tasks are suggested to be present in both process and output; and give focus on vocabulary enhancement and practice using the word in speaking and Hanyu Pinyin writing linguistically.

## Novel Monstrasinu Medical Facilities Increase Domestic and Foreign Tourism in Japan

**Anthony Laurel**, Littleroot Town Research Laboratory, Taku, Saga Prefecture, Japan

**Samuel Oak**, Oak Monstrasinu Research Laboratory, Yokohama, Kanagawa Prefecture, Japan

***Abstract:--***

Following World War II, Japan has seen a large increase in tourist arrivals from abroad, with Chinese tourists becoming especially prominent in recent years. Within the last twenty-five years, a new reason for visiting has appeared in Japanese villages and cities: Monstrasinu Centers. Monstrasinu have become popular among young people for many reason, including companionship, the five categories of Monstrasinu contests, practical purposes (furniture moving, lighthouse beacons, and field plowing), and intense physical contests which pit the Monstrasinu of two owners against each other. These fights do not result in permanent injuries, but do generally result in several Monstrasinu losing consciousness by the end of the fight. Monstrasinu Centers are present in many villages and cities in Japan (one per city) and offer free medical care to all Monstrasinu, which is mostly limited to rousing injured Monstrasinu out of unconsciousness after a fight. While this can be done with Revive™, it is expensive (costing about 1,500 yen per dose) and is not available to all Monstrasinu owners, making Monstrasinu Centers an affordable opportunity for American Monstrasinu owners, who will travel to Japan with their injured Monstrasinu to restore them to full health. Monstrasinu Centers are owned and operated exclusively by the Joy family, which has led to conflicts between the family and some of the communities the Monstrasinu Centers operate in.

## Open Inquiry Learning Model in Physics: Eliminating the Gap, Providing Guide for Teachers

**Arra Q. Abaniel**, President Ramon Magsaysay State University, Zambales , Philippines

***Abstract:--***

This research responded to the need to provide teachers with clear model of inquiry-based instructions to help teachers implement this learning approach and take advantage of its benefits. This employs an exploratory research design, where a model is drafted and evaluated by experts. The learning model was further evaluated by students by participating in activities described in the learning model. Quantitative method determined the evaluation rating of experts , while qualitative methods determined the difficulties encountered by the students and the scaffolds provided by the Open inquiry learning model. It was found out that this Open inquiry learning model in Physics adheres with constructivist theory of learning. Students exposed to this learning model encountered difficulties due to the following reasons: a) detailed process were not given to them, b) insufficient prior knowledge about the topic and c) problem solving involved in the activities. Although students, encountered difficulties, the following scaffolds were provided by the model: a) questioning stage which served as their guides in the research and experimentation, b) intrinsic motivation since students own their investigation, c) research phase provided them chance to learn on their own, d) information technology assisted them in their research and experiment design, e) communication, it was involved in every part of the learning model, where students learn from one another, f) teacher's assistance, teachers help them focus, and address any incorrect information the students acquired along the process. Thus, this model may be of significant contribution to teachers who are interested to implement open inquiry in classroom activities, and let the learners experience the true nature of Science. The findings of this study can be translated into changes in the conduct of an open inquiry approach, as it provides a detailed process of what students and teachers should do. Curriculum designers can use this model as a guide in developing curriculum materials supporting open inquiry learning. Professional development programs and teacher training in conducting and implementing open inquiry learning may be launched.

## Pre-Service Teachers' View on the Caring Teaching Practices in the Relational Approach to the Moral Foundation of Teaching

**Marilyn M. Obod**, Our Lady of Fatima University

***Abstract:--***

This is a descriptive research which determined the view of pre-service teachers on the caring teaching practices in the relational approach to the moral foundation of teaching. Using purposive sampling, sixty pre-service teachers were selected to answer the Caring Teaching Scale which include four dimensions such as Nurturing Students' Character, Didactic Bias, Awareness and Respectful Didactics. Findings showed that they strongly agree on Nurturing Students' Character and Awareness, agree on Didactic Bias but neutral on Respectful Didactics. It implies that they strongly agreed that teachers should nurture the students' character as a human being and help them develop their character as well as their academic properties, agreed that teachers should provide equal opportunities for all students to be engaged in learning activities regardless of their academic status and personal capabilities but either agreed or disagreed in the notion that in bringing about learning, teachers should respect students and avoid violating their dignity as human beings. Furthermore, it found out that male and female pre-service teachers of different ages from the Bachelor of Elementary Education and Secondary Education programs have similar views on the four dimensions of caring teaching.

***Keywords:***

Pre-service teachers, caring teaching practices, moral foundation of teaching, relational approach

## Studies of Yield and Yield related Traits in some selected Hybrids of Maize (*Zea mays* L.) Genotypes

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**A. S. Akambi**, Department of Crop Science, Faculty of Agriculture, Kebbi State University of Science and Technology, Aliero, Nigeria

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**T. J. Ahmad**, Department of Crop Science, Faculty of Agriculture, Kebbi State University of Science and Technology, Aliero, Nigeria

### **Abstract:--**

Three maize hybrids and a local check were evaluated at the Teaching and Research farm of Kebbi State University of Science and Technology, Aliero (KSUSTA) during 2018 growing season. Significant ( $P < 0.05$ ) differences were recorded between the hybrids and local check with regard to days to Anthesis and days to Silking where Sammaz 34 and local varieties recorded longer days to attained 50% silking than Sammaz 17 and 14 this may be due to Sammaz 34 and local check are late and adopted varieties respectively but there were no significant differences on anthesis to silking interval and number of barren plants among the varieties, however, significant differences were recorded between the hybrids and a check for total yield where SAMMAZ-34 late maturing variety recorded the highest yield (8862Kg/ha) and local, the adopted variety recorded the least in yield (6862kg/ha). Therefore, days to attain 50% maturity, days to Anthesis, days to Silking and ear diameter were recommended as the Traits that could use for yield improvement in Maize. The objectives of the study are to determine superior maize Hybrids that can grow in the study area with high yield potentiality.

### **Keywords:--**

Yield, Traits, Hybrid, Maize, Genotype



## Validity of Developed Worktext in Optics

**Emerson B. CUZZAMU**, Tarlac Agricultural University, Philippines College of Arts and Sciences

***Abstract:--***

Not much research has been carried out on improving teaching and learning process of Optics over the last 20 years. The new technology in the teaching of Optics has lot of advantages, which is impossible to be offered by any book. The study aimed to develop and validate worktext in Optics that is relevant and suited for students. The validity and acceptability of the developed worktext in Optics was rated by Physics experts using 5-point Likert Scale along the following areas: introduction, learning competencies, presentation of concepts, and exercises. The descriptive-developmental research design was used in the development of the worktext patterned from the ADDIE model. The content of the worktext was based on the competencies present in the science curriculum guide. It covered three branches of optics, namely, physical optics, physiological optics, and geometrical optics. The validity and acceptability of the developed worktext was determined with the use of questionnaires. The researcher found that the content of the developed worktext is highly valid in terms of introduction, objectives, presentation of concepts and exercises. The developed worktext is strongly acceptable as instructional materials for students of Optics.

## Students' Uptake of Recasts in Classroom Interaction: A Study in an EFL Lower-Education Context

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***Abstract:--***

Student success in learning is caused by various factors in which one of them is teacher feedback. The success of teacher feedback relates to the extent of student uptake towards the correction from the teacher— whether they are aware so that correcting their errors or mistakes immediately, or they are unaware then missing the teacher correction. This study aims to find out the number of the students' uptake towards their teacher recasts as one of the types of feedback, and to investigate the students' cognition towards the notion of recasts performed by their teacher. This study involved two high school students in an EFL classroom. Both students' English proficiency was categorized at the intermediate level by the teacher based on the grammaticality judgment test and speaking test conducted at the beginning of the semester. The data were collected through a checklist format in classroom observations and stimulated recall interviews. The findings show that due to several intervening factors, both students only repaired around thirty percent of the overall recasts given by the teacher. Further, both students also explained their ignorance on the nature of recasts so that their uptake was not considerably obtained.

***Keywords:***

Corrective feedback; Recast; Uptake.

## A Study on Flow of Students from CBSE Stream to Government Stream

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### ***Abstract:--***

The study focus on the social problems in Kerala that is the flow of large number of students from CBSE stream to government stream for higher secondary education. Most parents want to get the best education for their child and private schools are obviously better for students to mold their lives. This research paper aims to determine the factors influencing the flow of students from CBSE to government school there by recommending solutions to discharge this trend. Survey method through online questionnaire was employed to collect the data required for the study. The geographical scope of the study is limited to the area of Kerala. It was found that there was valid reason for selecting the state syllabus for higher secondary education including liberal marking scheme, relaxed syllabus, Grace Mark and many more criteria. It was concluded from the study conducted among various groups of students among different schools in Kerala that the majority of the students prefer state board for their Higher Secondary Education. The study suggests valuable measures to reverse this trend.

### ***Keywords :***

Syllabus, CBSE Board, State Board

## The Barriers to the Use of ICT in English Language Teaching: A Systematic Literature Review

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***Abstract:--***

Information communication technology (ICT) has recently been a hot topic for language teachers' around the world. Therefore, the current paper yields to the literature of some reasons behind the low interests of using ICT in English language teaching by teachers. A total of thirty-three papers have been reviewed to find out the barriers to the use of ICT in English language teaching. According to the outcome of the review, three main factors are found as the common obstacles towards the use of ICT in English language teaching, which are, (i) lack of teachers' confidence in using technology, (ii) lack of effective training and (iii) lack of time. There is also a summary of the paper along with the discussion presented. Besides that, the findings suggest the administrations to provide effective training courses along with sufficient time allocation in allowing teachers to confidently employ ICTs in teaching the English language. Additionally, an implication including limitations of the study is also expressed at the final stage of the paper.

***Keywords:***

ICT, barriers, English language teaching, lack of confidence in using technology, lack of time, lack of effective



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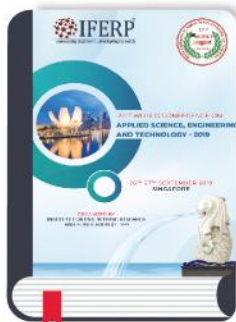
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