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ICMDRSE

4th International Conference on Multi-Disciplinary Research Studies and Education

29th & 30th June 2021 | Virtual Conference

ICMDRSE-2021

Organized by

Institute For Engineering Research and Publication (IFERP)

4th International Conference on Multi-Disciplinary Research Studies and Education

(ICMDRSE -2021)

Kuala Lumpur, Malaysia

29th- 30th June 2021

Organized by

Institute For Engineering Research and Publication

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PREFACE

We cordially invite you to attend the *4th International Conference on Multi-Disciplinary Research Studies and Education (ICMDRSE-21)* which will be held at **Kuala Lumpur, Malaysia** on **June 29th–30th, 2021**. The main objective of **ICMDRSE-21** is to provide a platform for researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and development activities in relevant fields of Engineering, Technology and management. 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 the review process, and to the authors for contributing their research result to the conference.

Since April 2021, the Organizing Committees have received more than 112 manuscript papers, and the papers cover all the aspects in Engineering, Technology and management. Finally, after review, about 59 papers were included to the proceedings of **ICMDRSE-21**

We would like to extend our appreciation to all participants in the conference for their great contribution to the success of **ICMDRSE-21** 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 ***4th International Conference on Multi-Disciplinary Research Studies and Education (ICMDRSE -21)*** this year in month of June. 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 hearty 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 attain this conference.

Sincerely,

Rudra Bhanu Satpathy
Chief Executive Officer
Institute For Engineering Research and Publication.

Keynote Speakers

Prof Ir Dr Mohammad Syuhaimi Ab-Rahman

Professor of Optical Communication

Director, Alumni Relation Center, Universiti Kebangsaan Malaysia

On behalf of the Organizing Scientific Committee the Chair, Prof Ir Dr Mohammad Syuhaimi Ab-Rahman is honoured and delighted to welcome you to the "4th International Conference on Multi-Disciplinary Research Studies and Education (ICMDRSE-2021)" to foster the progress in the field of multi-Discipline studies by contributing with your expertise to what promises to be a very comprehensive and exciting meeting.

The "4th International Conference on Multi-Disciplinary Research Studies and Education (ICMDRSE-2021)" will be held during June 29-30, 2021 in Kuala Lumpur, Malaysia. The theme of this conference revolves around bringing engineering, technology, and management research areas synchronically on an indivisible platform. This conference will draw collectively research fellowships from diverse fields in unitedness, to share their research findings and latest ideas. The main intention of this conference is to integrate interdisciplinary inquiry to deliver the best applications.

It is a great eminent conference for all candidates who awaiting to exhibit extensive knowledge with other inventors and researchers as well as scientist in different field of studies.

Therefore I invite you all to Kuala Lumpur to share and to discuss current opinion and achievement in this very exciting and interesting multidiscipline studies. All the best and good luck with your future endeavors. See you in Kuala Lumpur!

Dr. Hatem Hatef Abdulkadhim Alyasari

Professor Of Econometrics

Cihan University Suliaymani

On behalf of the organizing committee, it is our pleasure to welcome you to the "4th International Conference on Multi-Disciplinary Research Studies and Education (ICMDRSE-2021)" to be held on 29th -30th of June 2021 in the city of Kuala Lumpur. This conference will attract researchers in the areas of engineering, technology, and management. It is indeed a great place for us to meet in this international conference in order to exchange our experiences and knowledge.

I hope that you will find time to explore Kuala Lumpur City and the surrounding areas. Kuala Lumpur City is a great place to tour and explore on your own. Please take full advantage of this opportunity during your stay in the City.

The scientific program of the conference is designed to provide valuable benefits and networking opportunities to its participant, it also provides a tremendous atmosphere for fresher researchers and post graduate students to learn about future prospects and professional development activities.

4th *International Conference on Multi-Disciplinary Research Studies and Education*

Kuala Lumpur, Malaysia, June 29th - 30th, 2021

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Siti Sarah Maidin

Lecturer, School of Technology, Asia Pacific University of Technology & Innovation, kuala Lumpur Malaysia

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ICMDRSE-21

4th International Conference on Multi-Disciplinary Research Studies and Education

Kuala Lumpur, Malaysia
29th – 30th June, 2021

ABSTRACTS

Correlational Study of the Impact and Adaptation of Virtual Education among University Students

Israel Barrutia Barreto
Innova Scientific

Renzo Seminario Córdova
Innova Scientific

Carlos Coacalla Castillo
Micaela Bastidas National University of Apurímac

Ilsse Bedoya Gomez
National University of the Altiplano

Abstract

Objectives: To determine the level of correlation between the implementation of virtual education and the adaptive process of students in a private university and a public university in Peru. Methods: Surveys were made consisting of 13 questions which focused on measuring the level of adaptation of students in the new virtual learning system. The sample consisted of 104 students divided proportionally by each university. Once the information was obtained, they were processed and the degree of association between the questions was determined using the Spearman correlation coefficient. Results: The students of the private university showed that there is a moderate probability that as the information provided by the institution improves, so will its adaptive process. On the other hand, public university students hope that virtual classes will be more didactic in order to capture their attention and feel more comfortable in this new context. Conclusions: The students from both universities presented a significant correlation related to the difficulty represented by coordinating with their work team, which was exacerbated by the feeling of not receiving adequate information for their training.

A Segmentation of Brain Tumor Detection from MRI Images Transform Information Using Algorithms in CBMIR

Sheetal Ashokrao .Wadhai

Department of Computer Science and IT, Dr. Babasaheb Ambedkar Marathwada,   Aurangabad, Maharashtra, India

Dr. Seema S. Kawathekar

Department of Computer Science and IT, Dr. Babasaheb Ambedkar Marathwada,   Aurangabad, Maharashtra, India

Abstract

Automatic defect identification in MRI (Magnetic Resonance Image) is now critical in a wide range of diagnostic and therapeutic applications. This paper presents a novel automated brain tumor identification system for identifying any abnormality in the brain. A variety of characteristics that represent a picture of the brain are presented here. The Content-Based Image Retrieval (CBIR) scheme is used for image retrieval based on visual characteristics. Essentially, the purpose of this framework is to facilitate image retrieval based on content properties (e.g., form, colour, texture), which are traditionally encoded into feature vectors. In this article, the features of each image contained in the database are extracted and compared to the features of the query image. The software output is the image that is more identical to the input image and its definition. The program's performance in terms of having a good definition for a new input picture was evaluated. It has a productivity of about 98 percent.

Embedding Game-Based Learning Approach to Strengthen Student's Achievement in Geometry

Joana De Guzman Quinto

De La Salle University

Abstract

This study aimed to explore the influence of embedding a game-based learning approach (GBL) to learning achievement in geometry. A quasi-experimental nonequivalent-control group design was adopted in a two-week learning activity. The participants included 685 junior high school students from selected private schools in Metro Manila. Each class was grouped into two. One class was assigned to be the control group, and the other was designated to be the experimental group. The experimental group learned with the game-based approach, while the control group learned with the traditional teaching approach. Geometry Knowledge Test and Survey on Learning Attitudes were used to obtain data. ANOVA was conducted to determine the game-based learning approach's influence on students' learning achievement and attitudes towards geometry.

Results revealed that the experimental groups' learning achievement in geometry was significantly better than that of the control groups'. In terms of the respondents' learning attitudes, similar results were obtained. Furthermore, most of the students revealed quite positive attitudes toward using the game-based learning approach in learning geometry. An in-depth analysis showed no significant difference between genders in terms of learning achievements in geometry and learning attitudes. This study showed that using a game-based approach can enhance learning achievements and learning attitudes. Hence, this study's implication lies in the fact that it alleged to capture a more holistic view of using the GBL approach.

Keywords:

game-based learning, geometry knowledge, learning achievements, learning attitudes, gender

Adaptation of Authentic Hadith Requirements as A Method of Determining the Authenticity of Islamic Information Communication

Muhammad Taufik Md Sharipp
UiTM Cawangan Melaka, Malaysia.

S Salahudin Suyurno
UiTM Cawangan Melaka, Malaysia.

Abdul Rauf Ridzuan
UiTM Cawangan Melaka, Malaysia.

Zulkefli Haji Aini
UiTM Cawangan Melaka, Malaysia.

Mohammad Fahmi Abdul Hamid
UiTM Cawangan Melaka, Malaysia.

Muhammad Faidz Mohd Fadzil
UiTM Cawangan Melaka, Malaysia.

Abstract

The condition of authentic hadith is the method of 'ulum al-hadith outlined by the muhaddithīn (hadith scholars) to determine the degree of authentic hadith. This is to ensure that a hadith is protected from distortion and falsification. Knowledge such as this requirement is designed to justify the authenticity of the process of transferring hadith matan (text) through the correct sanad (chain of narration). This study found that these conditions can be adapted as determinants of the authenticity of Islamic information. Therefore, this paper has two main objectives. The first objective is to identify the requirements of authentic hadith. Meanwhile, the second objective is to analyse the requirements to be adopted in the method to determine the authenticity of Islamic information communication. Content analysis and library methods were used to address both issues. In conclusion, it is found that the elements of requirements of authentic hadith, namely continuous chain of narration, impartiality of the narrator, excellence of the narrator's memory, and there is no doubt on the sanad and matan can be used as a method to determine the authenticity of Islamic information communication.

Developing a Method of Understanding Tafsir Nur Al-Ihsan Using Intertextual Reading: A Study using the Parallel Method

Mohd Sholeh Sheh Yusuff
Sultan Abdul Halim Mu'adzam Shah International Islamic University (UniSHAMS), Malaysia

Yusuf Haji-Othman
Sultan Abdul Halim Mu'adzam Shah International Islamic University (UniSHAMS), Malaysia

Mat Rani Abdul Manaf
Sultan Abdul Halim Mu'adzam Shah International Islamic University (UniSHAMS), Malaysia

Abstract

Tafsir Nur al-Ihsan is the second interpretation after Tarjuman al-Mustafid written in the Malay language in the 19th century AD by Sheikh Muhammad Sa'id ibn Umar. The main objective of this study is to identify the influence of the external source in the text of Tafsir Nur al-Ihsan. This study employs intertextual reading based on dialogism in the process of analyzing Tafsir Nur al-Ihsan based on parallel method. The research design used is documentation and field work using the subjective approach that employs descriptive and qualitative data. The study reveals that there are 11 works which have influenced the essence of Tafsir Nur al-Ihsan which are Tafsir al-Jalalyn, Tafsir al-Jamal, Tafsir al-Baydawi, Tafsir al-Khazin, Tafsir al-Baghawi, Tafsir al-Tabari, Tafsir al-Qurtubi, Tafsir al-Razi, Tafsir al-Nasafi, Tafsir Ibn Kathir, and Tafsir al-Tha'labi. The finding analysis also reveals that Tafsir Nur al-Ihsan is mostly influenced by Tafsir al-Jalalyn.

Keywords:

Dialogism, Tafsir Nur al-Ihsan, intertextual reading, parallel method.

21st Century Technological Pedagogical Content Knowledge (TPACK) Level Among English Language Educators: A Pilot Study

Hidayu Shafie
Faculty of Education, Universiti Teknologi MARA (UiTM)

Faizah Abd Majid
Faculty of Education, Universiti Teknologi MARA (UiTM)

Izaham Shah Ismail
Faculty of Education, Universiti Teknologi MARA (UiTM)

Abstract

Today, the role of technology in education is so crucial, that educators can no longer use the traditional method of teaching (chalk and talk method), but they have to integrate technology in their teaching. Not only that, but they are also required to teach and equip students with 21st century skills, on top of teaching their subject matter. Therefore, educators need to prepare themselves with sufficient technological pedagogical content knowledge (TPACK). In this pilot study, the purpose was to determine the level of 21st century TPACK among English language educators in Malaysia. This was a quantitative descriptive study which involved 30 respondents who were selected through two-stage cluster sampling technique. Based on the results of the study, it was found that the respondents scored themselves the highest on the pedagogical content knowledge (PCK). Meanwhile, they scored themselves the lowest on the technological knowledge (TK) and technological content knowledge (TCK) domains. In general, their score on the overall 21st century TPACK domain was moderate.

Analysis of Employee Turnover in China's State-Owned Enterprises

Guo Zhen

SEGI University

Abstract

As one of the most important economic entities, state-owned enterprises have their particularity during the period of China's economic transformation. However, the outdated rewards and benefits system, insufficient attention to employee learning and development, unbalanced work and life status, poor organizational culture management and age factors have affected the turnover of state-owned enterprise employees. The current situation of employee turnover has become an increasingly anxious problem. The high proportion of employees turnover not only takes away business opportunities, technical secrets and customers, but also makes enterprises suffer direct economic losses, and increases the replacement cost of enterprise manpower. If it is not controlled, it will ultimately affect the potential and competitiveness of the sustainable development of enterprises. In response to this problem, this article analyzes the reasons and countermeasures for employee turnover in state-owned enterprises in Heilongjiang, Jilin and Liaoning provinces, China. In order to increase the attention of academics and state-owned enterprise managers to employee turnover.

Index Terms

Age, employee turnover, learning and development, organization culture, rewards and benefits, work-life balance.

Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) Preparedness: A Review

Nor Yazjehan Yahya

Malaysia-Japan International Institute of Technology (MJIIT),Universiti Teknologi Malaysia,Jalan Sultan Yahya Petra, Kampung Datuk Keramat, 54100 Kuala Lumpur, Wilayah Persekutuan Kuala Lumpur.

Ts. Dr. Abd Halim Bin Md Ali

Malaysia-Japan International Institute of Technology (MJIIT),Universiti Teknologi Malaysia,Jalan Sultan Yahya Petra, Kampung Datuk Keramat, 54100 Kuala Lumpur, Wilayah Persekutuan Kuala Lumpur.

Ts. Dr. Nor Ruwaida Binti Jamian

Malaysia-Japan International Institute of Technology (MJIIT),Universiti Teknologi Malaysia,Jalan Sultan Yahya Petra, Kampung Datuk Keramat, 54100 Kuala Lumpur, Wilayah Persekutuan Kuala Lumpur.

Ts Dr. Khairunnisa binti Mohd. Pa'ad

Malaysia-Japan International Institute of Technology (MJIIT),Universiti Teknologi Malaysia,Jalan Sultan Yahya Petra, Kampung Datuk Keramat, 54100 Kuala Lumpur, Wilayah Persekutuan Kuala Lumpur.

Pramila Tamunaidu

Malaysia-Japan Advanced research Centre, Off Jalan Edu Hub Gunasama 1, Pagoh Higher Education Hub,Malaysia

Abstract

Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) threats are one of the main safety concerns and a global threat. Recent Coronavirus disease 2019 (COVID-19) for example has caused much concern for the public and killed more than 2 millions people worldwide and badly affected healthcare facilities, economy and communities. First responders usually the first on the scene play a vital role to mitigate the impact of these CBRNE treats with the minimum health cost to them. In order to maximize first responders potential with minimum health impact to them, it is important to have a good understanding of the demands of their work. Thus, this article provides a review of critical factors on preparedness of the first responder to CBRNE threats by highlighting important findings and areas of uncertainty.

Mathematics Competency of Graduating Engineering Students of Mountain Province State Polytechnic College (MPSPC)

Emily Ann B. Marrero
Mountain Province State Polytechnic College (MPSPC)

Rose B. Amoy
Mountain Province State Polytechnic College (MPSPC)

Abstract

Mathematics is an integral part of the Engineering curriculum and Engineering licensure examinations which includes Algebra, Trigonometry, Analytic Geometry, Solid Geometry, Calculus, and Probability and Statistics. Little research has been conducted to explore engineering students' learning of mathematics, in particular with respect to what mathematical competencies are needed for Engineers. This study assessed the Mathematics competency of graduating Electrical, Civil, and Geodetic Engineering students along the different subject areas. It also evaluated the level of competence of students along the 3 groups of learning outcomes (knowledge, problem analysis, and application to real world situations). The narrative descriptive survey was used. Weighted mean was used to determine the level of competence of the students and chi-square test for significant differences in their competence levels. Result shows that the level of competence of the students in Mathematics as a whole is unsatisfactory with satisfactory competence level in Probability and Statistics, unsatisfactory in both Algebra and Trigonometry, and poor in Calculus, Solid Geometry, and Analytic Geometry. There are significant differences in their level of competence along the different subject areas. The students' competence level in knowledge and application is poor, while unsatisfactory in analysis. With an unsatisfactory competence level in Mathematics, the graduating Engineering students lack the necessary mastery in Mathematics that warrants a better chance of passing the board.

Enhancing Students' Online Engagement among Online Distance Learning Institutions' Students in Malaysia. The Role of Digital Readiness as a Mediator

Zahir Osman
Open University Malaysia

Ratna Khuzaimah Mohamad
Open University Malaysia

Liana Mohamad
Open University Malaysia

Abstract

This study evaluates the relationships between e-learning attitude, digital readiness and online engagement among online distance learning students in ODL higher education institutions in Malaysia. The structural equation (SEM) technique was employed to assess the relationship between e-learning attitudes and the influence of digital readiness mediating online engagement. The model was developed based on the conceptual development and subsequently analysed by adopting Partial Least Square (PLS) procedure on a total of 307 students completed the online survey. Statistically, the data analysis outcomes have clearly shown that all four suggested hypotheses developed in this study are positive and significant. The results showed that e-learning attitudes influence digital readiness while e-learning attitude and digital readiness influence students' online engagement. At the same time, digital readiness influences the relationship between e-learning attitudes and online engagement among students in Malaysia from higher institutions. This study is important for the practice of higher education; as a result, it can be considered while developing online courses for students in higher education to encourage the students to engage in their online study.

Keywords

e-Learning Attitude, Digital Readiness, Online Engagement, Online Distance   Learning

The Importance of Metacognitive Awareness in Preparing Future Graduates

Sharon ROMEO
Faculty of Science, University of Nottingham, Malaysia Campus

Jane Jeevamoney DAVIES
Faculty of Science, University of Nottingham, Malaysia Campus

Abstract

Many employers are suggesting that fresh graduates today do not have what it takes for them to be sustainable in the workforce. Research shows that metacognitive awareness is important in preparing our students for the workplace. Metacognitive awareness comprises two major components – knowledge about cognitive (metacognitive knowledge) and regulation of cognitive (metacognitive regulation). This study examined the link between the two components in metacognitive awareness. The sample consists of 81 students from the 4 different foundation programs in The University of Nottingham Malaysia Campus. The students were asked to complete the Metacognitive Awareness Inventory (MAI). The Metacognitive Awareness Inventory was developed by Schraw and Dennison in 1994 with 52 statements. It measures the 2 major components of metacognition. Metacognitive knowledge comprises three subscales: Declarative knowledge, Procedural knowledge, and Conditional knowledge. Metacognitive regulation consists of five subscales: Planning, Information management, Monitoring, Debugging, and Evaluation. A correlation test was run to see if there were a correlation between metacognitive knowledge and metacognitive regulation. The findings suggested that the students who obtained high scores in the metacognitive knowledge component also scored high in metacognitive regulation. The implication of this study showed us that as educators, we would need to incorporate teaching the commonalities that are related to metacognitive rather than simple cognition in breeding effective future employees.

Keywords:

Metacognitive awareness, metacognitive knowledge, metacognitive regulation, workplace learning, graduate employability

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Association between Family Involvement, Play, and Literacy Skills among Preschoolers from Low-income Families in Nigeria: The Mediating Role of Literacy Interest

Nyah Mohammed

Department of Human Development and Family Studies, Faculty of Human Development, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor Darul Ehsan, Malaysia

Zarinah Arshat

Department of Human Development and Family Studies, Faculty of Human Development, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor Darul Ehsan, Malaysia

Ju Ern Tun

Family, Adolescent and Child Research Centre of Excellence (FACE), Faculty of Human Development, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor Darul Ehsan, Malaysi and Department of Human Development and Family Studies, Faculty of Human Development, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor Darul Ehsan, Malaysia

Abstract

During the early years, some children experience rapid growth in learning which provides a vital framework for their future success. However, other children especially those with poor literacy skills have to struggle very hard with reading and writing. Hence, understanding potential factors that improve literacy skills especially at an early age is highly desirable. Therefore, this study was designed to determine the direct and indirect relationship between family involvement and play with literacy skills through literacy interest. This study employed a total of 394 preschoolers from low-income families aged between three and five years old with their parents in Nigeria. The sample of this study was recruited using the proportionate stratified sampling technique. Path analysis revealed that family environment and play were associated with literacy skills both directly and indirectly via literacy interest. The findings have implications for parents and policymakers in educational sectors especially on how to make effective use of play and family involvement in improving literacy skills especially among preschoolers from a low-income families.

Keywords:

Play, Family Involvement, Literacy Interest, Literacy Skills, Preschool Children, Nigeria.

The Problem of Online Teacher Training Problem in the Curriculum of Teacher Professional Development (CPD)

Alesa Durgaryan

Student, Armenian State Pedagogical University, Yerevan, Armenia

Abstract

Modern technology offers today's teachers many different methods to improve and develop their professional knowledge and skills. Due to them it is available to take part in the different trainings on the virtual platform using modern technologies as additional basements for their professional development.

The situation in the world today has completely changed not only the nature and structure of the educational process in schools and other educational institutions, but also the teachers' completely different requirements to carry out the educational process online. In order to make the educational process more effective, teachers not only change their curricula and work style, but also change the materials and methods they use to fit the online platform. The latter, in turn, promotes the acquisition and application of many new knowledge and skills. There are various online programs and tools in the media field today to make online learning more effective.

Virtual training is considered to be one of the most prominent and necessary method of teacher training which is quickly spreading all over the world. All of these virtual training opportunities give a chance to keep in touch with fellow teachers from around world. Teachers can share their experience and knowledge and get advice on different teaching problems and difficulties. In addition, virtual training is always updated and includes the latest changes and approaches to the teaching sphere.

Keywords:

training, face-to-face training, online training, hybrid training, teacher participation.

The Evidence of Microfinance as a Tool in Poverty Alleviation in Malaysia – A Survey

Ahmad Nazrie Bin Mohd Nor

Universiti Malaysia Pahang (UMP)

Dr. Senthil Kumar T

Universiti Malaysia Pahang (UMP)

Abstract

Poverty issues still prevalent in Malaysia and microfinance is one of the best available tools to overcome that situation because it provides loans with fewer regulations. Response from 330 respondents were acquired to bolster this fact and this paper projects strong evidences on the effectiveness of microfinance and its potential to eradicate poverty in Malaysia using Partial Least Square-Structural Equation- Modelling (PLS-SEM). The results of the study show that there is a significant relationship between loan characteristics, family status, borrowers' characteristics, business features and training development on social wellbeing, employee generation, household income and micro enterprise performance.

Initial Study on the Effect of the 1% and 2% TiO$_2$ Nanoparticles to the Microhardness, Microstructure and Contact Angle of the SnBi/Cu Solder Alloy

Amares Singh

Faculty of Engineering, Built Environment and Information Technology, SEGi University, Jalan Teknologi, Kota Damansara PJU 5, 47810 Petaling Jaya, Selangor, Malaysia

Rajkumar Durairaj

Lee Kong Chian Faculty of Engineering and Science, Universiti Tunku Abdul Rahman, Jalan Sungai Long, Bandar Sungai Long, 43000 Kajang, Selangor, Malaysia

Shamini Janasekaran

Faculty of Engineering, Built Environment and Information Technology, SEGi University, Jalan Teknologi, Kota Damansara PJU 5, 47810 Petaling Jaya, Selangor, Malaysia

Wei-Hong Tan

Faculty of Mechanical Engineering Technology, Universiti Malaysia Perlis (UniMAP), Main Campus Pauh Putra, 02600 Arau, Perlis, Malaysia.

Abstract

This paper investigates the influence of the 1 % and 2 % titanium dioxide (TiO2) nanoparticles to the microhardness, microstructure, and contact angle of the Sn58Bi (SB) solder. Results showed increase (2 % increment) on the microhardness for the nanoparticles reinforced solder with the recorded microhardness value of 22 Hv and 23.6 Hv for 1 % and 2 % additions respectively. The TiO2 presented at the solder side with more Bi island observed in the TiO2 reinforced solders. Contact angle increased minorly (≈5 °) as the weight percentages of additions increases because of the presence of nanoparticles that will increase the viscosity of the molten solder. The introduction of TiO2 into the SB solder resulted in satisfactory effect without interrupting the low melting aspect of the solder alloy. Enhancement on the hardness properties via better microstructure affect and presence of TiO2 as additional strengthening mechanism provides an initial suggestion on the usage of this combination of nanoparticles in to the SnBi solder alloy as the remedy to replace the lead solder in the electronic industry.

Physical and Mechanical Characterization of Concrete with Crushed Clay Brick with Mortar Attached for Irrigation Channels

José Rodríguez
Universidad Peruana de Ciencias Aplicadas, Lima, Perú

Karina Vilela
Universidad Peruana de Ciencias Aplicadas, Lima, Perú

Abstract

The continuous population growth that has been taking place worlwide generates greater needs of people, the construction sector in response to this must act in harmony with the environment to build infrastructures and buildings; the latter being those that, due to the end of their life cycle or the interruption of their time of use and serviceability, require demolition. The materials obtained from this demolition are varied, highlighting the clay bricks that are presented in significant quantities, generating a problem that needs to be managed in a different way, due to their own characteristics inherent to their composition; an alternative solution is to recycle them to obtain recycled clay brick aggregates and use them in the elaboration of a recycled concrete of f_c= 175N/mm² that has good physical and mechanical performance. The present research contemplates the use of the recycled coarse aggregate of crushed brick with mortar attached 25mm Ø as a 75% replacement of the natural coarse aggregate, evaluating the density, voids, water absorption and compressive and flexural strengths to the 7, 14 and 28 days; the results indicate that density, voids, water absorption and the compressive and flexural strengths present a good physical and mechanical behaviour, making it suitable to be used in the lining of irrigation channels.

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Placement of Dry-Mix Shotcrete in Tunnels: Literature Review on Rebound

José Rodríguez
Universidad Peruana de Ciencias Aplicadas, Lima, Perú
Karina Vilela
Universidad Peruana de Ciencias Aplicadas, Lima, Perú

Abstract

Shotcrete is widely used in tunnels construction due to its flexibility in placement concrete as underground support, whose rebound material directly affects its quality and cost of projects. In the present work, a review of the state of the art of the last four decades is carried out on the placement factors that influence the rebound of dry-mix shotcrete; where the main parameters that affect it have been identified first, then its behavior is analyzed; next, the relationships and implications related to its process are discussed, giving the necessary explanations for its understanding; then, case studies on simulations of applications in the laboratory and site are included for their quantification; and finally, recommendations and rebound are provided as short or medium term research topics. After this extensive review, it is concluded that the minim rebound percentages for the spraying velocity of 100-114m/s is 25%, for the nozzle distance of 0.5-1.5m is 10%, for a spraying angle of 90°, for the angle of the surface of 0° and 90° is 5-15% and for a layer thickness of 50mm is 30%. Likewise, the two case studies presented reflect the need to carry out simulations in the laboratory and or on site to have a better representation of the real conditions of application in construction projects; On the other hand, the recommendations and future perspectives include conclusions on the study of other parameters associated with dosage and transport, and the need to include nanomaterials, ecological and cementitious materials

Online Education: Lessons Learned from Teaching Undergraduate Courses

Essam Zaneldin
United Arab Emirates University

Souzan Kabbani
University of Aleppo

Abstract

The urgent introduction of online distance education into the learning process as a result of the COVID-19 pandemic has become an eminent change in the delivery of courses, requiring urgent decisions and effective mechanisms to implement into the educational process as well as the analysis of the current traditional teaching process. This paper presents the result of an online survey conducted among instructors and undergraduate students of an institution in a developing country during the 'Spring 2020" and 'Fall 2020" semesters to explore their experience and feedback related to online education. Issues related to the interaction between faculty members and students, psychological aspects, communication problems, logistics, and methodological problems associated with online learning are described in detail. The data received from the questionnaire survey respondents was analyzed and the analysis results has suggested that online education may be more effective for theoretical subjects but when studying scientific disciplines, the priority should be given to traditional methods of teaching particularly for courses that have lab components. Despite facing some challenges and difficulties, the responses received from students indicated that, in general, they are quite satisfied with online teaching and expressed their desire to continue offering courses using this mode of delivery even during normal times. Data analysis results also showed that online teaching resulted in better-than-expected performance as compared to face-to-face lecturing and boosted student's learning experience. Course instructors and students indicated that the reason for this better performance is due to the online availability of lecture notes and other learning material, including the recordings of lectures. This is in addition to the fact that online classes allow students to attend from anywhere and conveniently access course material anytime and anywhere. Despite their better performance in general, students listed few disadvantages related to online learning including the inadequate time provided for online exams as compared to the number of questions provided and the unfair evaluation and assessment of students' work during the semester. This is in addition to the may technical problems frequently encountered during online classes and exams and the absence of a clear policy related to this relatively new delivery method. A good percentage of student (around 62%) indicated that blended learning, a combination of online learning and traditional face-to-face lecturing, can be useful and recommended to use it in future course delivery. Instructors, on the other hand, indicated that, despite the several benefits of online learning, the engagement of students was minimal, and the online learning infrastructure and management system need to be improved. Recommendations and lessons learned from the online learning experience are then presented.

Optimization Analysis of Screw Propeller Blade

Choy Hau Yan
Faculty of Engineering and Technology, Tunku Abdul Rahman University College

Cindy Wee Jia Yee
Faculty of Engineering and Technology, Tunku Abdul Rahman University College

Chay Tick Fei
Faculty of Engineering and Technology, Tunku Abdul Rahman University College

Abstract

Marine screw propeller is a fascinating invention. It transmits power by converting rotational motion into thrust force. The generated thrust creates pressure difference of fluid in the front and back surface of the propeller's blade for acceleration. In this project, the screw propeller, INSEAN E779A model was modified with the main objective to determine its optimized design that could achieve better performance during its operation. In determining the optimized design for the screw propeller blade, different modified models with various dimensions and properties were proposed and modelled in SolidWorks. Subsequently, Finite Element Analysis (FEA) was carried out to determine the Maximum von misses stress, strain, deformation and factor of safety along with flow analysis, velocity and pressure trajectories analyzed using Computational Fluid Dynamic (CFD). After comparing the analysis results, the optimized design for the screw propeller found in this project is having the dimensions of 3.0 mm thickness, 40° propeller blade twist angle, and 110° of angle between the leading edge and the propeller's hub. The Maximum Von misses stress was improved by 24.15%.

Parental Guidance on Mathematics Learning For Low-Grades Students during the Covid-19 Pandemic

Nia Fatmawati
Universitas Pendidikan Indonesia

Tatang Herman
Universitas Pendidikan Indonesia

Kisno
IAIN Metro

Abstract

Elementary school students in low grades are classified as early childhood with strong sensitivity during their development. This period expects parents to optimize guidance and provide appropriate direction for children's learning activities. Based on mathematics importance in life, the subject's skills need to be developed from an early stage through proper guidance. Since the Covid-19 pandemic, all learning activities are carried out from home, therefore parents have a bigger role in guiding the children. Parental guidance implementation is important for maximum learning achievement and success. Therefore, this research's objectives were to (1) provide an overview of mathematics learning guidance implementation in the low grades during the pandemic, and (2) knowing parents' needs, constraints and obstacles in carrying out the learning process. The method used was descriptive analysis with quantitative and qualitative approaches. The data were obtained through questionnaires, documentation and interviews. Also, the results showed that parental guidance in mathematics learning during the pandemic had not been implemented properly. Parents also experienced various obstacles in guiding the children.

Facial Expression Recognition: A New Dataset and a Review of the Literature

Mohamed A. Saleh
School of computing and creative media, UCTS, Sarawak, Malaysia

Alan Ting Yong
School of computing and creative media, UCTS, Sarawak, Malaysia

N. Marbukhari
Faculty of Electrical Engineering, Universiti Teknology MARA (UiTM), Malaysia

YM.Yussoff
Faculty of Electrical Engineering, Universiti Teknology MARA (UiTM), Malaysia

N. Nabila Mohamed
Faculty of Engineering & IT, Mahsa University, Selangor, Malaysia

Ali Abd Almisreb
Faculty of Engineering & Natural Sciences, International University of Sarajevo, Bosnia & Herzegovina

Abstract

One of the biggest challenges in computer vision and deep learning is recognizing the emotion based on facial expression. Besides the challenge of model development in Deep Learning (DL), the dataset is considered one of the main factors that plays a crucial role in producing highly accurate deep learning frameworks for pattern classification, features extraction, and emotion recognition from images. Despite the existence of several dedicated datasets for the FER, the desired accuracy was not being achieved due to the enormous size of the available dataset, where some of such are unfeasible for regular computers or cloud computing services. In contrast, there is a lack of the other datasets' size, generalization, and quality. The objectives of this paper are two-fold. First, reviews the existing datasets. Second, presents a significant new dataset for facial expression called Emot-FE. This dataset contains 276,305 images of facial expressions formulated in a single file in the form of xlsx format. Emot-FE dataset has been filtered, pre-processed, labeled, and classified based on the seven labels (emotion's expressions). Thus, this dataset will be the largest in such format with high-quality images. This new dataset has been evaluated using VGGNet Convolutional Neural Networks where the recognition accuracy outperforms the previously achieved accuracies of the previous studies. This dataset is available for distribution to the researchers.

Keywords

face dataset; emotion recognition; CNN, Pattern classification, facial expression, Deep Learning

The Application of Statistical Quality Control Methodologies within SMEs in Johor Bahru

Tan Owee Kowang
Azman Hashim International Business School, Universiti Teknologi Malaysia, Johor Bahru, Johor, Malaysia

Lim Kim Yew
Faculty of Business, Communication & Law, INTI International University, Nilai, Negeri Sembilan

Goh Chin Fei
Azman Hashim International Business School, Universiti Teknologi Malaysia, Johor Bahru, Johor, Malaysia

Ong Choon Hee
Azman Hashim International Business School, Universiti Teknologi Malaysia, Johor Bahru, Johor, Malaysia

Abstract

Statistical quality control (SQC) methodology has been well recognized as a systematic approach for continuous quality improvement. Hence, SQC is adopted widely by both manufacturing and service industries as part of their operational strategy to improve quality performance. Holistically, SQC methodologies could be grouped into two categories, which are detection based methodology, such as Sampling Inspection, Statistical Process Control (SPC); and prevention methodology for instance Process Capability study, Design for Manufacturability (DFM). Findings from literature review suggested that the implementation of SQC methodology does improved organizational quality improvement. However, SQC methodology is generally viewed by prior researchers as single entity without exploring the attribution or type of SQC methodologies that are driving quality performance. Hence, this research close the literature gap by assessing the application level of each SQC methodology within Small and Medium Enterprises (SME) manufacturers in Johor Bahru (JB), and explore the relationship between implementation level of SQC methodologies and quality performance. The study is quantitative based via survey questionnaire and responded by 110 SME manufacturing companies within JB. The implementation level of SQC methodologies and their relationship with quality performance are examined separately via descriptive analysis and Pearson correlation test. Finding from the study revealed that SME manufacturers in JB tends to adopt detection based SQC methodologies (i.e. SPC and Sampling inspection) as their continuous quality improvement methodology. While prevention based methodologies (Process capability and DFM) are still not the common practices. In addition, result of this study also suggested that prevention based methodologies are more likely to improve organizational quality performance. The finding and the SQC framework developed in this study has descriptive value in terms of studying, classifying and defining the attributes of SQC and the relationships that govern continuous quality improvement in SME.

Index Terms

Sampling Inspection, Statistical Process Control, Process Capability, Quality Performance

Characterization of Pre COVID-19 poverty associated with human capital in rural areas of Perú

Belinda Navarro
San Luis Gonzaga, National University (Ica - Perú)

Héctor Carlos
San Luis Gonzaga, National University (Ica - Perú)

Edwin Delgado
San Luis Gonzaga, National University (Ica - Perú)

Marina Oré
San Luis Gonzaga, National University (Ica - Perú)

Karim Roca
San Luis Gonzaga, National University (Ica - Perú)

Abstract

The study was carried out in order to determine the influence of human capital on household poverty in the province of Ica, in the period 2019.

The research was of an applied type, explanatory level and ex post-facto design, correlational of transactional cut, using a sample of 384 households, for data collection the survey technique and documentary analysis were used.

From the comprehensive diagnosis, (54.69%) their monthly income is from 931 to 1500 soles, where (54.17%) their expenses are in food, (50.78%) carry out temporary jobs, (13.28%) has completed university education, In the event of illness, (50.26%) goes to a rural health post, When contrasting the hypothesis, the null hypothesis is rejected, accepting the alternative hypothesis, where (75%) determines that human capital significantly influences poverty in households in the province of Ica.

Keywords:

Human capital, poverty, unemployment, well-being

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Conceptual framework of Google' s Online Learning Tools for Python Programming Activity on Challenge-Based Learning

Chacharin Lertyosbordin

Faculty of Industrial Education and Technology, King Mongkut's University of Technology Thonburi. Bangkok, Thailand

Sorakrich Maneewan

Faculty of Industrial Education and Technology, King Mongkut's University of Technology Thonburi. Bangkok, Thailand

Surapon Boonlue

Faculty of Industrial Education and Technology, King Mongkut's University of Technology Thonburi. Bangkok, Thailand

Abstract

The objective of this study was creation and assessment suitability of Conceptual framework of Google' s online learning tools for Python programing activity on challenge-based learning. From the study, Google Online learning tool for Python programming activity on challenge-based learning was composed of 1) Google Classroom, 2) Google Meet, 3) Google Jamboard, 4) Draw.io, 5) Google Colaboratory, 6) Google Site, 7) YouTube, 8) Google Doc, 9) Google Sheet, and 10) Google Slide.

The Conceptual framework comes from procedure of arranging tools; in process of challenge-based learning; by using Google Classroom, environment. Moreover, appropriateness of the conceptual framework was strongly agree (Mean= 4.69, S.D. = 0.46), from 4 of Educational Technology experts and 3 of Computer Engineering experts.

Footprint of TPF entities in Trade Liberalization and International Commercial Dispute Resolution Mechanism with Reference to India

Seemasmiti Pattjoshi
Ph.D. Scholar, KIIT School of Law, Bhubaneswar

Dr. Puranjoy Ghosh
Assistant Professor, KIIT School of Law, Bhubaneswar

Abstract

Lately International Commercial Arbitration has witnessed a remarkable development in the contribution of Third-Party funders not only in litigation but also in in arbitral proceedings, raising queries regarding the legitimacy of TPF in international arbitral proceedings. Presently, more and more litigants are seeking to take advantage of external funding, "either because they lack the necessary funds to commence arbitration proceedings or because they want to maintain cash-flow and offset the risk of an uncertain outcome." Dispute resolution mechanism in India tends to be a cost-heavy proposition for the parties involved. And being the developing country India is now willing to open its door towards the outside funding practices in dispute resolution mechanism. The present discussion highlights the footprint of third party funding in trade liberalization and the governing principles of International Commercial Arbitration with reference to Indian Legal Policies.

Key Points

Third Party Funding, Trade Liberalization, Dispute Resolution Mechanism, International Commercial Arbitration

Sustainable Retirement Village: A Segment of Existing Legal Provisions in Malaysia

Nor 'Adha Ab Hamid
Associate Professor, Faculty of Syariah and Law, Kolej Universiti Islam Antarabangsa Selangor (KUIS), Bandar Seri Putra, Kajang Selangor

Sharifah Hana Abd Rahman
Lecturer, Faculty of Syariah and Law, Kolej Universiti Islam Antarabangsa Selangor (KUIS), Bandar Seri Putra, 43000 Kajang Selangor

Nur Zulfah Md Abdul Salam
Lecturer, Faculty of Syariah and Law, Kolej Universiti Islam Antarabangsa Selangor (KUIS), Bandar Seri Putra, 43000 Kajang Selangor

Mohd Farok Mat Nor
Lecturer, Faculty of Syariah and Law, Kolej Universiti Islam Antarabangsa Selangor (KUIS), Bandar Seri Putra, 43000 Kajang Selangor

Mashitah Nabees Khan
Postgraduate Student, Faculty of Syariah and Law, Kolej Universiti Islam Antarabangsa Selangor (KUIS), Bandar Seri Putra, 43000 Kajang Selangor

Abstract

Aging population remains a global phenomenon in this new millennium and is poised to become a major issue in developing countries. Malaysia is one of the upper middle incomes country that is experiencing rapid aging of its population. Most of the time, aging population associated with abandonment by family and loneliness. As Malaysia's ageing population is keeps increasing, the needs for an environment for fellowship and social interaction while enjoying the support services and amenities are becoming critical for retirees. In Malaysia, the development of sustainable retirement villages is offering a "continuum-of-care" concept face regulatory obstacle. At the outset, there are two distinct Acts under two separate ministries — the Care Centres Act 1993 under the Ministry of Women, Family and Community Development and the Private Healthcare Facilities and Services Act 1998 under the Ministry of Health. Both overlap in regulating such retirement villages. The Private Aged Healthcare and Services Act 2018 could relieve the duplication, but it has not been brought into force by the minister of health. Nevertheless, even with this new legislation, it is necessary to have clear guidelines and a regulatory framework to facilitate the development of a viable and sustainable ecosystem for interested and committed developers to participate in the development of retirement villages. Some of the challenges are outlined in the paper. The present study aims to investigate several statutes which are applicable to the implementation of retirement homes in Malaysia namely the Private Healthcare Facilities and Services Act 1998 (Act 586), Private Elderly Care Facilities and Services Act 2018 (Act 802) and the Care Centers Act 1993 (Act 506). This study uses a qualitative approach by using the library method and documentation of the statutes to analyze the effectiveness of existing laws on the implementation of retirement homes in Malaysia. The findings shows that there are needs for well-structured legal framework in Malaysia, for the sustainable development of 'retirement village' which will promote healthy aging among the elderly and could be part of good choice of living for them.

Keywords:
Aging population, retirement, village, sustainable, legal framework

Determinants of Female Entrepreneurship in E-Commerce in a Developing Country

Elizabeth Emperatriz García-Salirrosas
Universidad Nacional Tecnológica de Lima Sur, Lima-Perú
Mitzi Darlene Castro Vargas
Universidad Nacional Tecnológica de Lima Sur, Lima-Perú
Mireya Brigit Parian Gonzales
Universidad Nacional Tecnológica de Lima Sur, Lima-Perú

Abstract

Entrepreneurial intention is important because it highlights the value and power of the person. In an underdeveloped country like Peru, entrepreneurship has a high level, but the opportunity to start a business is affected by social, cultural and governmental factors. Therefore, the present research aimed to identify the determinants that influence female entrepreneurship with respect to electronic commerce. The study found that for e-commerce entrepreneurs, management skills, e-commerce attitude and motherhood are significant. The results based on the regression analysis suggest that the model fits well as it predicts the value of business intent at 95% with a significance value of 5%. Based on the findings of the study, an evaluation model of the entrepreneurial intention of electronic commerce is developed that includes all the significant variables. This study will help other academics guide their efforts to strengthen the theory about the entrepreneurial intention of women.

Index Terms

Female entrepreneurship, e-commerce, entrepreneurial intention in e-commerce.

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Medical Treatment in Malaysia after Covid-19: Travel Intentions among Foreign Tourists

Aziean Jamin
Universiti Teknologi MARA, Melaka City Campus

Mohd Hasrul Yushairi Johari
Universiti Teknologi MARA, Melaka City Campus

Sharifah Adlina Tuan Sayed Amran
Universiti Teknologi MARA, Melaka City Campus

Abstract

The study sought to ascertain foreign tourists' intent to seek medical treatment in Malaysia following Covid-19. The Theory of Planned Behavior (TPB) model allows for the investigation of foreign tourists' intentions as well as the measurement of tourists' attitudes and feelings toward traveling to Malaysia for medical treatment after Covid-19. The study has implemented a quantitative approach. A survey was carried out on an online platform using Google Forms. The proposed research model is likely to contribute to a better understanding of how these medical tourists express their desire to travel to Malaysia for medical reasons after Covid-19. According to the findings of the analysis, attitude, subjective norm, and perceived behavioral control all significantly reinforce the intention to seek medical treatment in Malaysia after Covid-19. In conclusion, the variables predicted by the TPB model can be viewed as motivators for push and pull, where they can aid in the development of marketing strategies. To attract foreign tourists, marketing practitioners will need to facilitate more inbound medical tourism in Malaysia through advertising and to place more emphasis on specific procedures, preventive methods, and facilities, as well as other promotions that elicit indulgence and confidence.

Index Terms

Medical Treatment, Foreign Tourist, Covid-19

Gulf countries no longer the dream land for Indians migrates

Neetu Mahendru
GNA University, Phagwara

Dr. Monika Hanspa
GNA University, Phagwara

Dr. Pankaj Sharma
Heritage Institute of Hotel and Tourism

Ravi Parkash
Maharishi Markandeshwar University

Abstract

Relations between India and the UAE have traditionally been friendly. 27% OF TOTAL POPULATION OF UAE constitutes Indian Migrates. Money remitted by the Expatriates is an important part of economic development of Indians. Indians in Gulf countries are doing various business activities but still there are many problems which Indians are facing there due to which the numbers are decreasing.

Key words:
Indian Migrates, Opportunities, Persian Gulf.

A study on Gamification toward Engineering Students' Engagement in the University Level

Lee Chin Kho
Department of Electrical and Electronic Engineering, Faculty of Engineering, Universiti Malaysia Sarawak

Ji Liang Hau
Department of Electrical and Electronic Engineering, Faculty of Engineering, Universiti Malaysia Sarawak

Sze Song Ngu
Department of Electrical and Electronic Engineering, Faculty of Engineering, Universiti Malaysia Sarawak

Annie Joseph
Department of Electrical and Electronic Engineering, Faculty of Engineering, Universiti Malaysia Sarawak

Siti Kudnie Sahari
Department of Electrical and Electronic Engineering, Faculty of Engineering, Universiti Malaysia Sarawak

Mohd Ridhuan Bin Mohd Sharip
Department of Electrical and Electronic Engineering, Faculty of Engineering, Universiti Malaysia Sarawak

Shafrida Sahrani
Department of Electrical and Electronic Engineering, Faculty of Engineering, Universiti Malaysia Sarawak

Abstract

Most of the engineering students may struggle with difficult theories, heavy assignments, lack of motivation and disengagement in classroom. According to studies, student engagement in classroom is very important in the learning process. It can increase students' attention and motivate them to practice critical thinking skill. It may also promote positive learning experiences. By this, the learning outcomes in technical understanding and application definitely can be improved. But, how to increase the student engagement particularly for engineering courses in the classroom? There are several student-centered teaching methods being introduced by educators to replace the traditional direct instruction teaching methods, such as inquiry-based learning, project-based learning, service-based learning and others. This study is to explore the gamification toward the engineering student to increase their engagement in class. A class with 109 students in a second year course of Electrical Engineering Technology (EET) are invited to participant the study. A gamified learning model with 4 stage of game are created in the online platform and participate by willingness of the EET students. This gamified learning model has implemented rank, interactive map and video guide. A survey related to gamification are collected from the EET students who completed the gamified learning model. This survey is mainly to obtain the feedback of the gamification experience of the students. The results are generally positive and indicate the gamification can potentially improve the engineering student engagement and enjoyment toward the learning process

Adopting Industry Practices in Delivering Professional Presentations: A New Approach to Teaching Presentation Skills in University

Maisarah binti Ahmad Kamil

Akademi Pengajian Bahasa, Universiti Teknologi MARA, 40450 Shah Alam, Selangor Darul Ehsan, Malaysia

Professor Dr. Ahmad Mazli bin Muhammad

Akademi Pengajian Bahasa, Universiti Teknologi MARA, 40450 Shah Alam, Selangor Darul Ehsan, Malaysia

Abstract

In an effort to increase graduate employability and minimize university-industry mismatch, concerted efforts have been taken by the Malaysian government to encourage collaboration between universities and the industry. Such linkages have led to a more informed curriculum review process, especially for language and communication courses. This research examines the current practices of industries in delivering quality professional presentations to be incorporated into the teaching and learning of presentation skills at tertiary level. Ten industry representatives consisting of managers, heads of departments, and directors from established telecommunications, plantation, medicine, property, financial services, and e-commerce corporations in Malaysia were interviewed. The results show that storylining and incorporating infographics using minimal slides are among the best practices in current corporate presentations. Additionally, the ability to deliver a clear purpose statement and curating the delivery to suit the perspective of the audience were also considered as fundamental to deliver effective presentations. Thus, the practices identified in this research are crucial to be incorporated into current presentation courses in university to enhance students' presentation skills and develop their ability to do well in delivering pitches and performing in interviews, especially to increase their employability and ensure the courses are relevant to current industry needs.

Keywords

presentation skills, industry practices, tertiary education, communication course, university

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The Effect of Learning Factory Approach on Technology Management Education for Social Science Students

Kuei-Chien Chiu
Chaoyang University of Technology/ Dept. of Bus. Adm. / Dept. of Info. Mgmt., Taichung, Taiwan

Chih-Sung Lai
National Taichung University of Education/ Department of International Business, Taichung, Taiwan

Hsing-Hui Chu
Chaoyang University of Technology/ General Education Center, Taichung, Taiwan

Rung-Ching Chen
Chaoyang University of Technology/ Department of Information Management, Taichung, Taiwan

Abstract

To cultivate technology management talents for industry, higher education institutions have developed technology management education since the 1990s. The purpose of introducing technology management course into non-technology discipline, especially Business School, aims to help enterprises foster talents to make appropriate technology-related decisions. This work addresses students' conception performance of learning technology management. This research employs a modified Importance-Performance Analysis method to analyze the course contents' understandability before and after learning by a questionnaire survey. As the results show, the mean scores of almost all themes before learning are below average and median. However, after class, the scores show minor deviation and notable progress, almost twice the scores before learning. That is to say; a scenario-based learning factory approach is effective for the non- technology students to learn technology management knowledge. Besides, there are two teaching themes with low prior knowledge creating major performance and nine teaching units with little prior knowledge creating less improvement. The teaching effort should be addressed in these nine teaching units to improve learning performance in technology management.

Keywords:

Importance-Performance Analysis, Scenario-based Learning Approach, Learning Performance, Technology Management.

Sex Differences in Screen Time and Playfulness among Chinese Preschool Children

Ju Ern Tun

Department of Human Development and Family Studies, Faculty of Human Development, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor Darul Ehsan, Malaysia

Zarinah Arshat

Department of Human Development and Family Studies, Faculty of Human Development, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor Darul Ehsan, Malaysia and Family, Adolescent and Child Research Centre of Excellence (FACE), Faculty of Human Development, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor Darul Ehsan, Malaysia

Nellie Ismail

Department of Human Development and Family Studies, Faculty of Human Development, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor Darul Ehsan, Malaysia

Abstract

Past researches showed that there are sex differences in screen time and playfulness and it does affect children's development. The purpose of the present study is to determine the sex differences in screen time and playfulness among Chinese preschool children in Kuala Lumpur. There were 217 mothers of Chinese preschool children aged between four to six years old study at selected private preschools in Kuala Lumpur were recruited as respondents in this study by using Stratified Proportionate Random Sampling technique. Self-administered questionnaire was distributed to mothers. Children's screen time was assessed by using Screen Time Questionnaire (STQ), whereas the information of playfulness was collected by using Child Behavior Inventory of Playfulness (CBI). All instruments used in the current study showed good reliability in the local context with overall reliability score of above .70. Independent t-test was used to determine the gender differences in screen time and playfulness. As the results, there was no significant gender difference in screen time ($t = -1.25$, $p > .05$) and playfulness ($t = -1.46$, $p > .05$). In sum, the study provides valuable information about screen time and playfulness among male and female preschool children.

Keywords

Playfulness; Preschool children; Screen time; Sex difference

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Does HRM Practices and Integrity Impact Performance in Malaysia: The Mediating Role of Job Satisfaction

Chong Kok Yeow

School of Management, Universiti Sains Malaysia, Universiti Sains Malaysia, Pulau Pinang

Daisy Mui Hung Kee

School of Management, Universiti Sains Malaysia, School of Management, Universiti Sains Malaysia, Penang

Abstract

The articles describes a new method research aims to investigate the HRM practices and integrity as a determinant for police officers' performance in Royal Malaysia Police (RMP) in Malaysia. Thus, this research aims to find out the HRM practices and integrity in RMP in terms of its effectiveness in managing police officers. This study is using the survey research design. The study population involves 369 police officers who are currently working in Royal Malaysia Police (RMP) in the Klang Valley located in Kuala Lumpur and Selangor. The total of the responses was collected directly using a structured questionnaire. Data were analyzed using the SmartPLS 3.2.9 software. The results of our analysis have confirmed the following: (1) HRM practices and integrity have a positive and direct relationship with police officers' performance, and (2) HRM practices and integrity have an indirect relationship with performance mediated by job satisfaction. Based on our findings, it can be summarized that information mediates the linkage between HRM practices and performance, which is empirically significant. Also, information significantly mediates the connection between integrity and performance. Therefore, the study findings work as evidence about new realization among the RMP police officers in Malaysia about the importance of adapting the HRM practices and integrity in public sector.

Keywords

HRM Practices, Integrity, Job Satisfaction, Performance

Students' Response to Online Learning during COVID-19 Pandemic: Case Study of an Outcome Unit in Malaysia Private University

Kuok King Kuok

Faculty of Engineering, Computing and Science, Swinburne University of Technology Sarawak Campus, 93400, Kuching, Sarawak, Malaysia

Md. Rezaur Rahman

Faculty of Engineering, Universiti Malaysia Sarawak, Jalan Datuk Mohammad Musa, 94300, Kota Samarahan, Sarawak, Malaysia

Muhammad Khusairy Bin Bakri

Faculty of Engineering, Universiti Malaysia Sarawak, Jalan Datuk Mohammad Musa, 94300, Kota Samarahan, Sarawak, Malaysia

Chiu Po Chan

Faculty of Engineering, Universiti Malaysia Sarawak, Jalan Datuk Mohammad Musa, 94300, Kota Samarahan, Sarawak, Malaysia

Mohd Elfy Mersal

Faculty of Engineering, Computing and Science, Swinburne University of Technology Sarawak Campus, 93400, Kuching, Sarawak, Malaysia

Abstract

COVID-19, an extremely infectious disease or illness caused by the extreme acute respiratory syndrome Coronavirus-2 had killed about 3 million people globally till to date. The only way to stop the virus from spreading is avoiding close contact. Hence, the conventional teaching and learning environment was transformed from face-to-face to online education through Zoom, personal to interactive, and seminars to webinars. However, the impacts and feedbacks from the students are unknown. Therefore, this survey study was conducted to evaluate the responses from students. The selected study unit is CVE40004 Water Engineering, an outcome unit with complex engineering problem offered in Swinburne University of Technology Malaysia Sarawak Campus. The teaching pedagogical approaches that had been adopted are crossover learning, context-based learning, computational thinking, and adaptive teaching. Most of the students proclaimed that learning quality, effectiveness, interest and comfortability were reduced significantly after attending online classes. With adequate computer skills and facilities, most of the students still felt isolated and faced difficulties in communicating with group members. It is believed that the situation and responses will get better after the students adapt to new online teaching and learning environment.

Keywords

COVID-19 Pandemic, Case Stud, Malaysia, Private University, Online Learning

Isolation of alkalophilic pectinolytic bacteria and their bio retting effect on kenaf fiber compositions

Mohammad Munir Hossain

Biotechnology Research Institute, Universiti Malaysia Sabah, Jalan UMS, 88400 Kota Kinabalu, Sabah, Malaysia and Bangladesh Jute Research Institute, Manik Mian Avenue, Dhaka 1207, Bangladesh

Shafiquzzaman Siddiquee

Biotechnology Research Institute, Universiti Malaysia Sabah, Jalan UMS, 88400 Kota Kinabalu, Sabah, Malaysia

Vijay Kumar

Biotechnology Research Institute, Universiti Malaysia Sabah, Jalan UMS, 88400 Kota Kinabalu, Sabah, Malaysia

Abstract

Retting is the most limiting process of high-quality cellulosic kenaf bast fiber production which facilitating the separation of useable fiber from the plants' cell wall matrix. Existing traditional water retting approach confronts ineptitude and eutrophication related complications. Aiming to enhance the kenaf bio-retting process, sixty-seven alkalophilic bacterial colonies were isolated from paddy land soil sediments and kenaf retting water. These isolates were subsequently screened, of those two isolates were selected based on hyper qualitative and quantitative pectinolytic enzymatic measures. 16S rDNA gene sequence analysis revealed that both two strains were closely related to Bacillus pumilus species and designated as KRB56 and KRB22. These strains were applied in augmented non-sterile kenaf tank retting to investigate their kenaf retting efficiency and yielded fiber were analyzed for chemical compositions. Results revealed that, stains KRB56 and KRB22 significantly improve the retting process by degradation of 82.78% and 75.28% non-cellulosic gums, respectively comparing with uninoculated treatment niche (62.12%). Based on un retted raw kenaf fiber 24.38% material losses were reported in KRB56 retted fiber, 22.17% with KRB22 and uninoculated with 18.29%, respectively. These bacterial treated fiber samples showed thinner, smooth, and cleaner fibers surface morphology by SEM indicates sufficient non cellulosic gums (NCGs) removal comparing with unretted raw kenaf fiber. Moreover, yielded fibers were examined for chemical composition, FTIR, XRD test. Results indicated that compare to un retted and non-inoculated kenaf fiber, bacterial treated kenaf fiber increases cellulose portions, and their crystallinity index increases 35.50-41.30 % due to sufficient NCGs removal. This study's findings indicate that isolated alkalophilic bacterial strains KRB56 and KRB22 were effectively to be used as kenaf bio retting agents to produce quality kenaf fiber.

Key words:

Bacterial retting, Alkaliphiles, Kenaf bast fiber, non-cellulosic gums, Pectinolytic bacteria

Effect of Cognitive Influence on Consumer Online Health Information Seeking for Supplemental Nutrition - An Explanatory Study of Young Urban Professionals in Kuala Lumpur

Raja Shuja-ul-Haq
Asia Pacific University of Technology & Innovation / APU Malaysia

Dr. Behrang Samadi
Asia Pacific University of Technology & Innovation / APU Malaysia

Dr. Jugindar Singh
Asia Pacific University of Technology & Innovation / APU Malaysia

Abstract

This study examines the influence of contemporary literature-supported cognitive influences on consumer Online Health Information Seeking (OHIS) and Online Health Information Usage (OHIU) Intentions; taking a case of supplemental nutrition-related information seeking and Kuala Lumpur's resident young urban professionals (23 to 38 years of age, educated professionals or business owners of Malaysian nationality) as the target survey population. This study found that Internet Self-Efficacy and Perceived Health Risk both exhibit a strong positive influence on consumers' Intention of OHIS, while Perceived Health Value and Perceived Value of Information Seeking exhibit a moderate positive influence on Intention of OHIS. On the other hand, Health Self-Efficacy and Perceived Value of Privacy were found to exhibit a moderate negative influence on Intention of OHIS. Similarly, Perceived Information Content Quality exhibit a strong positive influence on consumers' Intention of OHIU, while Perceived Information Source Quality and Perceived Information Value exhibit a moderate positive influence on Intention of OHIU. It was also found that Personal Bias exhibit a moderate negative influence on Intention of OHIU. Also Intention of OHIS was found to exhibit a moderate to strong positive influence on Intention of OHIU. The study utilised a Self-Completion Questionnaire Survey and analyzed the collected survey data using a PLS Algorithm Path Analysis Test on Smart-PLS 3 statistical software.

QoS Optimization in Cloud Computing Networks

Abhikriti Narwal

Department of Computer Science and Engineering, University Institute of Engineering and Technology, Maharshi Dayanand University, Rohtak

Sunita Dhingra

Department of Computer Science and Engineering, University Institute of Engineering and Technology, Maharshi Dayanand University, Rohtak

Abstract

As an increasing era of virtualization, resources are considered as services. To achieve the efficient utilization of the resources, a proper Scheduling and Load balancing technique is required on the Cloud Network. Quality of service parameters plays a vital role in achieving this good goal of utilization. Different load balancing and scheduling strategies of cloud computing studies held to survey QoS optimization. This paper aims at QoS efficiency to develop scheduling and load balancing algorithms to achieve optimization in the cloud networks. This paper briefly talks about the computing model concepts and QoS optimization study executed in various algorithms. In this paper, the performance optimization comparison of improvised algorithms CBSA_LB, EMOSA, and EMOSA_LB with base algorithms MOSA and CBSA has been carried out. The results show that the improvised version has significantly improved the optimization percentage of all performance parameters.

Index Terms

Cloud Computing, QoS Optimization, Quality of services, task scheduling

Process Oriented Guided Inquiry Learning on Students' Achievement in Biology

Noronihar Datu-Dacula

Integrated Laboratory School – Mindanao State University, Philippines

Asgar Anda

Institute of Science Education – Mindanao State University, Philippines

Abstract

The purpose of this study was to investigate how Process Oriented Guided Inquiry Learning (POGIL) affected students' biology achievement at Mindanao State University-Integrated Laboratory School (MSU-ILS). The study used quasi-experiment with pre-test and post-test control group designs. The participants were the grade 8 Biology students who were grouped into two groups, control and experimental. The experimental group consisted of 41 participants who obtained teaching biology under the POGIL, while the control group consisted of 41 students who obtained teaching biology under Traditional Learning Based Approach (TLBA). The instrument used to collect the data in the form of test scores is the achievement test. Findings showed that before the intervention, there was no significant difference on the control and experimental groups of students' achievement test mean score but after the intervention, there was significant difference on the control and experimental groups of students' achievement test mean score. Similarly, there was significant difference on the control and experimental groups of students' achievement test mean gain score. It can be concluded that the POGIL in teaching Biology improved the achievement of the students compared to the TLBA. It is recommended that Biology teachers can use this approach in teaching the students to understand Biology well and improve their academic performance.

Keywords:

Process Oriented Guided Inquiry Learning, Traditional Learning Based Approach, Achievement

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Students' Soft Skills Level Through Involvement in Club Activities

Azura Ishak

Faculty of Information Science and Technology

Siti Fadzilah Mat Noor

Faculty of Information Science and Technology

Amirah Ismail

Faculty of Information Science and Technology

Zurina Muda

Faculty of Information Science and Technology

Abstract

The main purpose of this study is to identify the levels of soft skills and compare the differences in the levels of soft skills before and after they are acquired by students during club activities in higher education institutions. This study used the soft skills instrument by Malaysian Institutions of Higher Learning as the primary data collection method. The study sample consists of 57 members of the Interactive Multimedia Club (IMeC) from the Faculty of Technology and Computer Science, Universiti Kebangsaan Malaysia (UKM). The association conducted UKM 2020 Computer Camp activities through the Animation and Graphic Design Program. The reliability of the instrument was tested using Cronbach's alpha value. The descriptive and inferential statistical analysis using the paired t-test was used for various types of pre- and post-users' soft skills from IMeC for a large-scale activity in UKM Computer Camp 2020. The results show an increase in students' soft skills after conducting the UKM Computer Camp 2020 activities. The implications of this study show the students' involvement in conducting club activities and their improvement in soft skills which are in line with the needs of employers that demand marketable employees.

Index Terms

Soft skills, students club, activities, higher education

Potential of San Fernando Province of Romblon as Ecotourism Destination

Sandy B. Ramilo, MBA

Romblon State University – San Fernando Campus

Abstract

Sibuyan Island, deemed as Galapagos of Asia, is rich in flora and fauna were some are endemic to the place. These opens the door of opportunity for ecotourism industry. Thus, this study was conducted to determine the potential of San Fernando, Romblon on becoming an ecotourism destination. It also aims to identify different sites favorable for the industry and classify it as focal, complementary and support attraction. Guided by enhanced Ecotourism Opportunity Spectrum (ECOS), the study focused on biological-physical, socio-cultural, historical-archeological, and economic structure. Questionnaires and interviews was utilized to gather relevant data. Results revealed that there were numerous sites in the area identified as focal and complementary attractions. Identified ecotourism sites have a thick forest and diverse wildlife. However, the municipality has limited dinning places and recreational activities. Plant and animal production was low making supply not enough to cover the demand needed, while transportation infrastructure and healthcare services are limited. Despite those facts, the weighted mean of 3.86 for ecotourism potential and the ECOS point of 69 suggests that San Fernando Romblon has strong potential for ecotourism industry. To increase its potential it is recommended that the Local Government Unit together with the Non-Governmental Organizations and other stakeholders should work hand in hand to improve the services and facilities of the ecotourism site, address the problem in supply of plant and animal products, and improve tourism infrastructure.

Synthesis and Characterization of Xerogel Sorbent From Coconut Shell Char

Deana Qarizada

Industrial Process Reliability & Sustainability (INPRES) Research Group, School of Chemical Engineering, College of Engineering, Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia and Faculty of Chemical Engineering, Jawzjan University, Jawzjan, Afghanistan

Hamasa Kambakhsh

Engineering Faculty, Faryab University, Faryab, Afghanistan

Azil Bahari Alias

Industrial Process Reliability & Sustainability (INPRES) Research Group, School of Chemical Engineering, College of Engineering, Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia

Abstract

Xerogel is a type of solid-formed gel that has been produced by slowly drying at the oven with unregulated shrinkage. Xerogels have historically been used for highly efficient isolation and specific uses, such as capturing interstellar particles. Due to its higher porosity, low density, and large surface area available, xerogels are essential materials in the 21st century. In academia and industry, carbon xerogel receives significant attention, although preparation for high-performance carbon xerogel is complicated. This study aimed to synthesize and characterize the carbon xerogel from coconut shell char by oven drying at 60℃, and the coconut shell char has 2.3033m2/g Surface area, pore volume 0.000791 cm³/g, and pore diameter of 13.7434 Å. Furthermore, a characterization process is implemented into analytical procedures such as scanning electron microscopy (SEM), Fourier Transform Infrared Spectroscopy (FTIR), Emmett- Teller Theory (BET). Based on results, Xerogel has a great potential to be applied as an adsorbent to remove toxic substances from wastewater and gases.
Keywords: Xerogel, Coconut shell, Coconut Shell char, Sodium Alginate, oven dryer

Work Motivation in Mediating Emotional Intelligence to Improve Employees' Job Performance of State-Owned Enterprise in Port and Maritime Management

Edgar Octoyuda
Department of Business Administration, School of Management, Chaoyang University of Technology, Taiwan

Andri Dayarana K. Silalahi
Department of Business Administration, School of Management, Chaoyang University of Technology, Taiwan

Dr. Pantas H. Silaban
Univesitas HKBP Nommensen, Indonesia

Abstract

This study tested the correlation between emotional intelligence on job performance and mediated by work motivation of the employees of State-Owned Enterprise in Port and Maritime Management at Medan City. 60 respondent of State-Owned Enterprise in Port and Maritime Management at Medan City has selected according to the number of the enterprise. Structural Equation Modelling was conducted to analyze the data to obtain both a direct and indirect relationship between emotional intelligence and job performance. The result shows that emotional intelligence significantly and positively affects the employees' work performance, where emotional intelligence also significantly and positively affects the employees' job performance. However, the study showed that emotional intelligence would directly influence the employees' job performance without mediating by the employees' work performance.

Index Terms

State-Owned Enterprise, Port and Maritime Enterprise, Emotional Intelligence; Work Motivation; Job performance

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Blended Learning Curriculum Approach Through Learning Management System (LMS) Towards Higher Education: A Systematic Literature Review

Fazilah Razali
Universiti Putra Malaysia
Tajulariffin Sulaiman
Universiti Putra Malaysia
Ahmad Fauzi Mohd Ayub
Universiti Putra Malaysia
Noraziela Abdul Majid
Universiti Putra Malaysia

Abstract

This study generated a Systematic Literature Review (SLR) by following proven and stringent guidelines. PRISMA 2009 is used to retrieve 15 study papers that were selected and analyzed in the SLR. The scientific research on the complexities of blended learning program approaches to students has been examined. The papers' publishing years range from 2015 to 2020. The methodological designs, foci, and results of the experiments have all been thoroughly examined. According to the study, the major problems, and challenges that students faced in learning included getting distracted in the classroom due to large class size, inaccessibility to online lessons due to Learning Management System (LMS) severe crash, the complexity of internet communication with teachers, and classmates, lack of skills and experience with digital tools, and time management for learning.

Correlation between Quranic Preaching Methods with Communicator's Credibility among The New Media Users in Malaysia

Muhammad Faidz Mohd Fadzil
UiTM Cawangan Melaka & Universiti Kebangsaan Malaysia

Muhammad Taufik Md Sharipp
UiTM Cawangan Melaka & Universiti Kebangsaan Malaysia

S Salahudin Suyurno
UiTM Cawangan Melaka & Universiti Kebangsaan Malaysia

Abdul Rauf Ridzuan
UiTM Cawangan Melaka & Universiti Kebangsaan Malaysia

Mohammad Fahmi Abdul Hamid
UiTM Cawangan Melaka & Universiti Kebangsaan Malaysia

Zulkefli Haji Aini
UiTM Cawangan Melaka & Universiti Kebangsaan Malaysia

Abstract

Communicators refer to the Muslims who convey Islamic messages for the benefits to mankind. Every Muslim individual bears the responsibility as an Islamic communicator and needs to equip themselves with da'wah method known as Quranic preaching methods for the communication process to be effective. Quranic preaching methods encompasses the three basics of preaching outlined in the Quran, namely wisdom, good instruction and arguing with the best manner. Furthermore, Islam also emphasises some of the characteristics of a quality communicator such as trustworthy, fair, trustworthy, adopting good methods, truthful and responsible so that the communicator is seen as a credible person. Therefore, this study aims to analyse the Quranic preaching methods elements and their relationship with communicator's credibility. The results of the study found that all three Quranic preaching methods elements and communicator's credibility factors have high Cronbach's Alpha values exceeding α> 0.7. In addition, the Pearson correlation between Quranic preaching methods and communicator's credibility also recorded a strong relationship of α > 0.6. The good instruction element showed a higher correlation coefficient value than two more elements, so it was concluded that the good instruction element was the most significant compared to the other two. This is likely because the respondents are members of the public, in line with the opinion of scholars who deem members of the public are more suitable to be preached through the good instruction method.

Develop a Remotely Operated Vehicle (ROV) for Dam Inspections and Oil & Gas Industry pipeline inspection cum monitoring purpose

Balaji Thiru
Bharath Institute of Higher Education and Research

V.Balambica
Bharath Institute of Higher Education and Research

M.Elangovan
Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai,India

Abstract

India is an agriculture-based developing country where there is a need of Dam to store water for an entire year. There are a lot of Dams that are already constructed to storethe water and planning to build more Dams in near future for cultivation purposes. The engineering domain is well developed in civil and other domains as well. Presently, physical inspection is done outside of the dam whereas inside the dam is not done effectively because of insufficient technology to reach the bottom of the Dam and wall inside the water. Keeping those requirements in our target, this project is planned to develop an ROV which can dive inside the Dam water to take video and possible picture to justify the quality of current status.

From the picture and camera, engineers can evaluate the current strength whether to increase the strength or not. It is also possible to get the water at different depths and which will help us to verify the water quality. This ROV can be used for lifting any items which are at Dam's bottom can be lifted by ROV where a human cannot reach.There fore ROV is very much needed for now and the future generation for Dam inspection, water quality inspection, and lifting of any item from the deep area.

The same ROV can be extended for Deep-sea pipeline inspections. IN this ROV, the body must be designed to withstand the high pressure at the deep sea.

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Constructivism: A New Approach to Teach Set Theory in Classroom

Dr. Subrata Saha

Bhavan's Tripura College of Science & Technology, Anandanagar, Agartala

Abstract

The concept of a 'set' is basic in all branches of Mathematics. The truism of this mathematical theory is so exuberant that all mathematical objects can be formed as sets. As we all know that, we cannot teach a man anything; rather it is much more perdurable and advantageous to help him find it within himself. To teach set theory in a classroom through constructivist approach, teachers should present different real-life examples and some problems related to sets and inspire the students to think in a creative and generative way about possible solutions of these problems. Teachers can help students to connect their ideas with different concepts of set theory. Teachers can use distinct mathematical ideas to develop students' understanding of different concepts related to sets. If teachers can use constructivism approach successfully in the classroom then it can be expected that students will be able to solve problems and apply the concepts of sets to real-world situations and enlarge on what they already know. Rather than stating the solution of a problem directly by introducing the answer, teachers should allow the students to reflect and to construct their own methods of solution. Now, this paper seeks to highlight how a teacher can apply the constructivism technique to explain set theory in a classroom such that students can realize the abstract concepts.

Key Words:

Set, Constructivism, Mathematical idea

Wireless Body Area Networks: Research Issues and Future Trends

Mridul Chawla

Associate Professor, ECED, Deenbandhu Chhotu Ram University of Science and Technology, Murthal, Haryana -131039, India

Seema Chawla

Associate Professor, BMED, Deenbandhu Chhotu Ram University of Science and Technology, Murthal, Haryana -131039, India

Ravi

PhD Scholar, ECED, Deenbandhu Chhotu Ram University of Science and Technology, Murthal, Haryana -131039, India

Abstract

The paper discusses the basic concept and issues of Wireless Body Area networks (WBANs), and its applications in various domains. The basic architectural requirements of WBANs, the current scenario, energy consumption issues, authentication, reliability, integrity, data security, compatibility, traffic load, periodic scheduling, switching, real time working etc are discussed in length. The need of algorithmic research has also been highlighted. After these, the main application areas over which WBANs have been applied are discussed which further elaborates the implications of the technology. After all these deliberations we have focused on the research issues and future scope in the field. The paper is expected to be able to draw attention towards the vast scope of research in this domain.

Key words:

Wireless body area networks, periodic scheduling, WBAN protocols

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The Impact of Work Stress to Job Burnout Among Employees in the Malaysian Construction Companies

Xiaojie Hu
Faculty of Information Science and Engineering College, Shenyang Ligong University

Diyana Kamarudin
Faculty of Industrial Management, University Malaysia Pahang, Centre for Software Development and Integrated Computing, University Malaysia Pahang

Yasmin Hussain
Faculty of Education and Liberal Studies, City University Malaysia

Siti Hazelin Mustafa
Faculty of Industrial Management, University Malaysia Pahang

Abstract

The impact of stress from factors such as absenteeism, work load, work-life balance, and work stress on job burnout among employee has been widely discussed. Job burnout can affect both physical and mental health which often leads to low productivity and job performance. The purpose of this study is to examine the relationship and impact between absenteeism, work-load, work-life balance, and work-stress with job burnout. The objective includes assessing the model fit and statistically significant indicator detection. 123 construction companies were sampled using simple random sampling. Data were collected through questionnaires. Results showed adequate fit of a PLS-SEM model, and indicators of absenteeism and work stress were statistically significant on job burnout. The implications of this study is that burnout could affect employee productivity and performance. Burnout is also a serious concern within the healthcare industry as it could affect a person's mental and physical well-being.

Keywords:

works stress, job burnout, construction company, employee impact

Inclusivity in the Workplace for Persons with Disabilities: Analyzing Communication Effectiveness within Malaysian Companies

Haziman Zakaria
Faculty of Industrial Management, University Malaysia Pahang

Diyana Kamarudin
Faculty of Industrial Management, University Malaysia Pahang, Centre for Software Development and Integrated Computing, University Malaysia Pahang

Yasmin Hussain
Faculty of Education and Liberal Studies, City University Malaysia

Manisah Mat Lazim
Faculty of Industrial Management, University Malaysia Pahang

Abstract

As the COVID-19 pandemic hit globally and changed the way how organizations work, communication is one of the key factor that plays a major role in organization sustainability. As of 2018, 488,948 people were registered as Persons with Disabilities (PWDs) with the Department of Social Welfare which reflects to 1.53% of Malaysia's population. Malaysian government has allocated a 1% policy for hiring PWDs in the public sector giving employment opportunities to 3,782 PWDs in 2015- 2017. The percentage is of PWDs employed is lower at 0.7% compare to others country like India that managed to obtain 1.43% employment rate of government jobs. The main objective of this paper is to evaluate the effectiveness of communication in the companies and to evaluate factors that can improve better disability employment communication support. This ethnographic qualitative research approach uses inductive data reasoning with quota sampling from 535 respondent from both public and private sector in Pahang, Malaysia. In descending order the themes found from this study were appropriate communication device, communication flow, communication barriers and communication behavior. The findings from this research is then implicated to managers of companies to be used when it comes to planning and practicing inclusivity in the workplace.

Keywords:

communication effectives, communication barrier, covid-19, person with disabilities

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Don't Tell Me, Train Me: Employee Training, as the Most Significant Contributing Factor to Employee Performance in North of Malaysia's Tourism Industry

Diyana Kamarudin
Faculty of Industrial Management, University Malaysia Pahang, Centre for Software Development and Integrated Computing, University Malaysia Pahang

Faiz Azizul
Faculty of Industrial Management, University Malaysia Pahang

Haziman Zakaria
Faculty of Industrial Management, University Malaysia Pahang

Li Mi Tan
Faculty of Industrial Management, University Malaysia Pahang

Abstract

Globally, the tourism industry contributed nine percent of the world's Gross Domestic Product (GDP). The tourism industry has many and various competitors, regardless of small or large industry players. To ensure this industry's resilience and remains competitive, employees have become an essential resource in helping companies stay competitively ahead. This study delves into the methods that can help increase the employees' performance within the tourism industry. Four factors were addressed in this study, forming a causal model with a mediator. This study was administered using purposive sampling on 140 employees from 20 tourism-based companies in northern Malaysia by distributing questionnaires. Items were quantitatively analyzed using SPSS for demographic analysis and Smart-PLS 3.0 to assess the formative measurement models' PLS-SEM results. PLS-SEM analysis indicated that there is a significant relationship between the variables. Training and effective communication were the most effective contributing factors towards marketing competencies towards employee performance with a p-value > 0.05. The outcome of this research suggests that companies should construct innovative and novel ways to measure, train and manage staff performance, which includes the way they communicate with their employees on the feedback process.

Keywords

Marketing Competencies, Communication, Training, Tourism, COVID 19

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Evaluating Employee Innovation and Creativity Towards Employee Turnover Intention in the Malaysian Hospitality Industry

Diyana Kamarudin

Faculty of Industrial Management, University Malaysia Pahang, Centre for Software Development and Integrated Computing, University Malaysia Pahang

Xiaojie Hu

Faculty of Information Science and Engineering College, Shenyang Ligong University

Yasmin Hussain

Faculty of Education and Liberal Studies, City University Malaysia

Yee Kai Ling

Faculty of Industrial Management, University Malaysia Pahang

Abstract

Hospitality industry plays a main role and has become a major sector in Malaysia's economy. However, there are some challenges in the hospitality industry such as employee turnover which could have various consequences to organizations. The purpose of this research is to investigate the factors affecting employee turnover intention, either directly or indirectly. Previous studies have suggested that employee turnover intention could be affected by factors such as leadership, motivation, communication, work environment and infrastructure both directly and indirectly. Employee innovation and creativity as a mediating factor could also affect its relationship with turnover intention of employees. The research design for this study was quantitative research method using questionnaires as the data collection method. Purposive sampling was used to sample 152 hotel employees within the West of Malaysia. Structural Equation Modelling was used to analyze the data using SmartPLS software. Results indicated that leadership, motivation, communication, and work environment and infrastructure had significant relationship with employee innovation and creativity. Apart from that, leadership, motivation and communication also have significant relationship with the employee turnover intention. Turnover is a major issue within companies not only for the company's sustainability, but also for the health and wellbeing of their employees. As an implication, organizations should understand that their leadership characteristic and environment has a tremendous impact to burnout and employee performance.

Keywords:

Leadership, Motivation, Communication, Innovation and Creativity

Cloud Based Vehicle Tracking System

Dr.Chitra Kiran.N

Professor and HOD Department of Electronics and Communication Engineering,Alliance University Bangalore, India

Mohamed Amir Ahmed Abdalla

Department of Electronics and Communication, Alliance University, Bangalore, India

Shubham Kumar Pandey

Department of Electronics and Communication, Alliance University, Bangalore, India

Suhas Suresh

Department of Law, KLE Society's Law College, Bangalore, India

Abstract

The ability to track vehicles is useful in many applications including security of personal vehicles, public transportation systems, fleet management and others. Furthermore, globally, the number of cars on the road is also expected to dramatically grow. Therefore, Cloud based vehicle tracking system using the Global Positioning System (GPS), Global System for Mobile Communications (GSM) modem along with the raspberry Pi processing board is undertaken with the aim of enabling users to locate their vehicles with ease and in a convenient manner. Tracking system is developed by using GPS and GSM modules to locate the user's vehicle easily. GPS module is used to track the location of the vehicle in the form of values such as latitude and longitude. These values are transmitted to the user using GSM modem through an SMS. Different sensors are used to detect alcohol consumption and to identify the accident. The Sensor values can be monitored by the user using thingspeak channel. The latitude and longitude coordinates will also be sent to the user through an e-mail along with a website to plot the exact location of the vehicle. Raspberry Pi processing board is used to receive the values and gives the result. This paper presents the cloud based vehicle tracking and alert system's hardware prototype. The main hardware components of the system are GPS receiver module, GSM module, Raspberry Pi board along with a camera and MQ-3 alcohol sensor.

Keywords

PS,GSM,Raspberry Pi,MQ-3.

Investigational Study and Determination of Mechanical Characteristics of Woven Basalt Fibre Strengthened With Epoxy Resin and Vinyl Ester Resin

Hemanth Kumar J
Department of Mechanical Engineering, PES University - RR Campus, Bangalore, Karnataka, India

Dr. Mahesh Dutt
Department of Mechanical Engineering, DSATM,Bangalore, Karnataka, India

Dr.Babu E R
Department of Mechanical Engineering, BIT, Bangalore , Karnataka , India

Abstract

Basalt, a natural fibre extracted from igneous rock formed by lava flow, is a viable alternative to commercially available synthetic fibres including glass and carbon fibre. To deliver the constant fibre, this rock is thoroughly washed, dried, and expelled through small spouts. As compared to glass fibre, BF (basalt fibre) has superior mechanical, thermal, and chemical properties, and it is significantly less expensive than carbon fibre. As a consequence, it can be used for a broad array of applications, from structure development to verve competence, from locomotive to aircraft structures. In contrast to traditional carbon fibres and glass strands, basalt fibre has recently gained prominence as a strengthening material. In this research investigation, the tensile, flexural, and impact strengths of fabric reinforced epoxy and vinyl ester composites were determined and analyzed. The aim of this work was to provide mechanical categorization of basalt fibre mixed with epoxy and vinyl ester resins in various ratios, such as 35:65, 45:55, and 55:45. (Fiber: Resin). Fabric basalt fibre, epoxy, and vinyl ester is combined in compression moulding to create composite laminates. To assess the specimen's physical properties, such as bending, tensile, and impact forces, it was cut from composite laminates according to standards. Composites made from epoxy resin were found to have better properties than with vinyl ester resin.

Keywords

Basalt fibre (BF), woven fibres, epoxy resin, vinyl ester resin, compression moulding method.

College Going Females' Perceptions towards Polycystic Ovarian Syndrome

Renuka Jakhar

PhD Scholar, School of Medical and Allied Sciences, G D Goenka University, Gurgaon, Haryana, India

Elina Dewanji Sen

Medical Doctor and Associate Professor, School of Medical and Allied Sciences, G D Goenka University, Gurgaon, Haryana, India

Rohit Dutt

Associate Dean, School of Medical and Allied Sciences, G D Goenka University, Gurgaon, Haryana, India

Abstract

Polycystic ovarian Syndrome (PCOS) is the most common endocrine condition in place of in reproductive age with classic features of clinical or biochemical hyperandrogenism, oligomenorrhea or amenorrhea associated with chronic anovulation and polycystic ovary syndrome morphology. It has many co-morbidities including an increased risk for obesity, type II diabetes, cardiovascular diseases, infertility, mental disorders such as anxiety, depression, eating disorders along with low self-esteem, poor body image and reduced health-related quality of life. In the present cross-sectional study, 428 females from 3 colleges in Gurgaon with age 18 years and above were asked to complete a questionnaire containing 11 questions. The study revealed that only 18.22% (78) of respondents were aware about PCOS. 10.05%, 9.81%, 3.04% and 1.87% females knew about irregular or absent menses, weight gain, reduced fertility and abortion respectively as symptoms of PCOS. Endometrial cancer and ovarian cancer were recognised by 2.57% and 5.14% as long term complication. Treatment options of lifestyle modification, hormone replacement therapy and cognitive behavioural therapy were known by 3.50%, 2.10% and 0.47% % respectively. The study reveals that educating young adult females about the disease is urgently required to prevent and manage the disease and complications related to it.

Keywords

Polycystic Ovarian Syndrome, menstrual abnormalities, infertility, endocrine disorder.

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A common fixed point for six self-maps in fuzzy metric space using common limit in range property concerning two pairs of products of two different self-maps

Praveen Kumar Sharma
Department of Mathematics, SVIS, Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore-453111, MP, India
Shivram Sharma
Department of Mathematics, Govt. P. G. College, Guna-473001, MP, India

Abstract

In this note, we prove a common fixed point for six self-maps in fuzzy metric space using common limit in range property concerning two pairs of products of two different self-maps. we use the properties (CLRTH) and (CLRSR) along with contractive type implicit relations to prove a common fixed points theorem for six self maps in fuzzy metric spaces. In support of our main result, an example has been provided. Our findings are like those of Kumar and Chouhan [12]. Kumar and Chauhan demonstrated their primary result in [12] by improving and generalizing Aalam, Kumar, and Pants' [1] results. In past, many authors have proved results on common fixed point using (E-A) property (like Aalam et. al. [1] proved results using this property), and then these results were improved and generalized by using the concept of common (E-A) property as this property is superior over (E-A) property, as the closeness of subspace is required to prove a required result on common fixed point by using these properties, which is a drawback. We improve and generalize all results on these properties by using common limit in range property as this property does not require the condition of the closeness of subspaces. The goal of this note is to refine and generalize Kumar and Chauhan's [12] results on a common fixed point, as well as some earlier comparable results.

Key Words:

fuzzy metric spaces (FM-Space), common fixed point (CFP), weak compatible maps, implicit relations, CLR property.

Design of a Rescue Flyer

Mohamed Shabbeer Zayed S.S

Department of Mechanical Engineering, Hindustan Institute of Technology and Science, Padur, Chennai

Paul samuel

Department of Mechanical Engineering, Hindustan Institute of Technology and Science, Padur, Chennai

Thowsif Ahamed.Z

Department of Mechanical Engineering, Hindustan Institute of Technology and Science, Padur, Chennai

Thirumaran.R

Department of Mechanical Engineering, Hindustan Institute of Technology and Science, Padur, Chennai

D.Balaji

Professor, Department of Mechanical Engineering, Hindustan Institute of Technology and Science, Padur, Chennai

Abstract

Quadcopter is an unmanned aerial vehicle, which can be implemented in different applications. In paper it will be represented a development of a quadcopter system and potential application in which it can be implemented. Quadcopter structure model, basic components with block diagram, hovering stability, dimensions, and description of basic movements will be represented and discussed. Control algorithms with steps in empirical methodology will also be presented. Current civil and military application will be examined, and future applications will be suggested. The main aim of the project is to go and get to know the information in such kind of places which got fire, in which the people cannot get in. This drone does not catches fire because we are using polyester fabric material which can resist fire up to a high temperature.

ludwig's Angina Report of a Case and Literature Review

Dr.Smriti Gupta

Associate professor, KNP college, India

Abstract

Luwig's angina was first described by Willhelm fredreich von Ludwig in 1836 , it is rapidly spreading cellulitis involving the bilateral submandibular, submental, sublingual regions.This article presents a case of spreading cellulitis , A patient of 38 years had reported to Bhabha omdr department regarding pain in right and left lower back region since 10 days and difficulty in swallowing and thereafter swelling appear and spread to submandibular , submental , sublingual spaces bilaterally

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Input fields recognition in documents using Deep Learning Techniques

Atharv Nagarikar

High-Performance Computing Technologies Group, Centre for Development of Advanced Computing (C-DAC) Pune, India

Rahul Singh Dangi

High-Performance Computing Technologies Group, Centre for Development of Advanced Computing (C-DAC) Pune, India

Samrit Kumar Maity

High-Performance Computing Technologies Group, Centre for Development of Advanced Computing (C-DAC) Pune, India

Ashish Kuvelkar

High-Performance Computing Technologies Group, Centre for Development of Advanced Computing (C-DAC) Pune, India

Sanjay Wandhekar

High-Performance Computing Technologies Group, Centre for Development of Advanced Computing (C-DAC) Pune, India
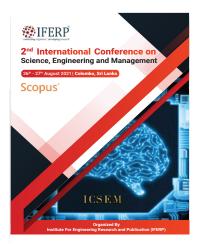
Abstract

Identification of input fields that appear on a document is a crucial requirement while digitizing any document. This paper presents a Deep Learning based approach to detect input fields from a form or document which consists of text, images and input fields like textbox, checkbox. The forms have been crawled and labelled manually to generate a dataset for training Deep Learning models. The YOLO V3 model is trained on the labelled dataset having four classes (static text, static image, input text, checkbox) with 1500 instances. We used bounding box techniques to label the dataset. The paper presents detection of limited types of input fields generally appearing on printed forms. We also discussed how such detection models can scale and sustain higher loads. If given the labelled dataset for other types of input fields, the existing YOLO V3 can be trained for them as well. The model is trained for 3500 iterations and the accuracy achieved is 71 percent.

Keywords

Deep Learning, YOLO, OCR, Forms, Document's input fields