ABSTRACT BOOK

23rd July 2022

I-CReST 2022

INTERNATIONAL CONFERENCE ON RESEARCH AND PRACTICES IN SCIENCE, TECHNOLOGY AND SOCIAL SCIENCES

UNIVERSITI TEKNOLOGI MARA CAWANGAN SELANGOR KAMPUS DENGKIL MALAYSIA

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I-CReST 2022

International Conference on Research and Practices in Science, Technology and Social Sciences

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I-CReST 2022 International Conference on Research and Practices in Science, Technology and Social Sciences: ABSTRACT BOOK/
Editors Zaid Mujaiyid Putra Ahmad Baidowi / Fadiatul Hasinah Muhammad / Salizatul Ilyana Ibrahim / Siti Nor Azimah Sabaruddin / Mohd Safri Mohammed Na'aim / Hasnorhafiza Husni / Janaki Manokaran / Nurul Raihan Mohd Suib / Megat Mohd Izhar Sapeli / Sharifah Norasikin Syed Hod / Fatma Nadiah Abd Hamid / Nor Faridah Hanim Mat Junit / Norazrin Zamri / Nurul Fatahah Asyqin Zainal / Ernee Sazlinayati Othman / Doreen Dillah

PREFACE

Assalamualaikum w.b.t. and Salam Sejahtera,

I would like to extend my heartfelt welcome and appreciation to all the participants of the 3rd [Virtual] International Conference on Research and Practices in Sciences, Technology and Social Sciences (I-CReST) 2022. This year, I-CReST aims to continue to provide a constructive and synergistic platform for academicians, researchers, and practitioners to partake in scholarly discussions on diverse topics within the interconnected fields of science, technology, and social sciences.

The call for participation for I-CReST 2022, via the theme of *"Transcending boundaries and sustaining livelihood through multidisciplinary research"*, has garnered around 180 registrations from participants within and beyond Malaysia. This theme reflects our move towards and the normalisation of the much-needed cross-disciplinary collaborations in interrelated areas of expertise among scholars across various geographical settings. This abstract book has been prepared to facilitate easy access to all the contributions to I-CReST 2022, as well as promote fruitful networking among the participants. Evidently, the abstracts demonstrate a wide range of cross-disciplinary research topics that will hopefully motivate budding researchers and boost the momentum of established scholars to participate in meaningful research endeavours in dynamic ways.

My sincerest gratitude goes to all the participants, and also to the backbone of this conference, our dedicated I-CReST 2022 committee members. Your unwavering support and contributions have been phenomenal and made the organisation of this conference a pleasurably enriching and successful one.

On behalf of the Centre of Foundation Studies, UiTM Selangor, Kampus Dengkil, thank you and welcome to I-CReST 2022. May we see you again in I-CReST 2023!

Dr Fadiatul Hasinah Muhammad
Chairperson
I-CReST 2022

FOREWORD

Assalamualaikum w.b.t. and *Salam Sejahtera*,

A very warm welcome to all the presenters, participants, and established members of various academic and research institutions to the 3rd [Virtual] International Conference on Research and Practices in Science, Technology and Social Sciences (I-CReST) 2022. It is an honour for us at the Centre of Foundation Studies, UiTM, to have all of you in this event. It is satisfying and fulfilling to have received, once again, a record number of abstracts submitted. The responses to the call for papers had been overwhelming - both from Malaysia and overseas. It is indeed a privilege to present this book of abstracts on various research works that befit the theme, "*Transcending boundaries and sustaining livelihood through multidisciplinary research*".

The human race has been challenged by one of the greatest threats to its survival through the spread of COVID-19. The repercussions are serious, and to some extent, fatal. The implications are felt by many throughout the world and these could clearly be seen in a myriad of sectors - healthcare, education, economic and financial services, tourism, and agriculture - to name a few. These are further worsened by the occurrences of a series of floods, political instability, rising costs of basic necessities, and many more. Hence, it is high time for the most crucial players – academicians, researchers, and those in the industries – to collectively work together in a conference like I-CReST 2022 through their research findings and intellectual discussions.

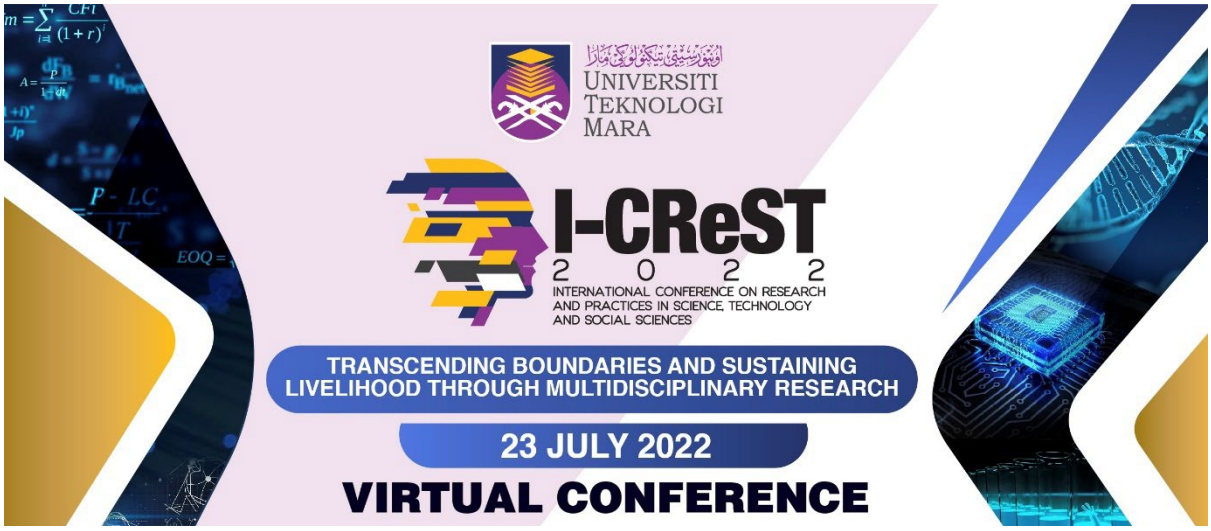
I am optimistic and full of hope that this conference will become an avenue for presenting and discussing issues, challenges, and opportunities, as well as for insightful sharing of knowledge and brilliant ideas on various subject matters. This way, possible solutions can be applied to the everyday challenges that have affected our lives and sustainability. These efforts can subsequently help us find the common ground to withstand challenges for a better, healthier, and merrier world.

My heartiest gratitude goes to the reviewers who worked hard to help maintain the high quality of the abstracts and manuscripts to be published in the proceedings or journals. This conference would not be possible without the laborious preparation by all members of the Organising Committee, headed by Dr. Fadiatul Hasinah Muhammad. A huge thank you for their extensive efforts.

I hope that everyone will have a wonderful and fruitful time attending the I-CReST 2022 Virtual Conference. Best wishes and I trust that all your hard work will yield positive results.

Professor Ts. Dr. Saifollah Abdullah
Director
Centre of Foundation Studies
Universiti Teknologi MARA (UiTM)
Cawangan Selangor
Kampus Dengkil

ABOUT THE CONFERENCE



The International Conference on Research and Practices in Science, Technology and Social Sciences (I-CReST) is an annual event organised by the Centre of Foundation Studies, Universiti Teknologi MARA (UiTM), Malaysia. With this year's theme, *"Transcending boundaries and sustaining livelihood through multidisciplinary research"*, it aims to provide a constructive virtual avenue for researchers and scholars across the globe to network with each other via the presentation of their impactful research works. In response to the spread of COVID-19 and its devastating effects, the conference focuses on providing a platform for the dissemination of research findings and intellectual discussions on diverse topics relating to sustaining livelihood. This conference has a typical format of 20-40 minutes of sharings or presentations by plenary and keynote speakers, as well as invited presenters, who are experts in their respective fields. The slots are subsequently followed by the Q&A or discussion session. This conference has also made it possible for more presentations in the form of pre-recorded videos that are streamed via YouTube, thus promoting more academic engagement. Since its inaugural event in 2020, I-CReST has received tremendous positive responses from participants of various educational and industrial backgrounds. I-CReST 2022 garnered around 180 abstracts on cutting-edge topics within the scopes of science, technology and social sciences, as well as those of cross-disciplinary nature. The conference also provides opportunities for publication in proceedings with e-ISBN. Selected papers will be considered for publication in journals indexed by WOS/Scopus/MyCite/MyJournal after a thorough peer-reviewed process.

THEME SYNOPSIS

I-CReST 2022's main theme addresses **FIVE** (5) tracks to encourage scientific writing/publication across multidisciplinary research in the broad fields of the following.

Physical Sciences:
Medical Physics; Nuclear Physics; Photonics; Optics; Spectroscopy; Device Physics; Material Science; Polymers; Nanotechnology; Solid State Ionics; Inorganic and Organic Chemistry; Natural Products Chemistry; Catalysis; Renewable and Sustainable Energy

Biological Sciences:
Botany; Forestry; Ecology; Zoology; Entomology; Microbiology; Biotechnology; Genetics; Bioinformatics; Nutraceutical; Cosmeceutical; Pharmaceutical; Pharmacology; Biomedicine; Health Sciences

Information Technology, Engineering and Mathematics
Human-Computer Interaction; Information Virtualization; Modelling and Simulation; Computer Security; Wireless and Mobile Communications; Software Engineering; Internet of Things; Data Analytics; Multimedia Computing; Information Retrieval; Electronic Learning; Artificial Intelligence and Machine Learning; Web Technology; Pure and Applied Mathematics; Mathematics Education; Mathematical Modelling; Mathematical Statistics; Fuzzy Mathematics and Applications; Operations Research

Social Sciences & Humanities
Education/Pedagogy; Communication Arts; Information Communication; Linguistics/Neurolinguistics/Sociolinguistics; Literature and Poetry; Educational Management and Leadership; Early Childhood Education; Panicgogy; Civil Law; Economics and Financial Law; Human Right Law; Public Law; Islamic Law; Contract Law; Consumer Law; Comparative Law; Commercial Law; Competition Law; Constitutional Law; Environmental Law; Family Law; Medical Law; Private Law; Social Policy and Social; Legislation; Legal Education; Criminology; Al-Quran and Hadith; Aqidah and Islamic Thoughts; Muamalat; Halal Management; Education and Shariah; Astrofiqh and Cosmofiqh; Dakwah and Human Development; Economics

Science, Technology, Engineering and Mathematics (STEM)
Life Science & Biotechnology; Mathematics and Engineering; Coding and Robotics; 3D Design and Printing; Drone and Aerospace; Internet of Things (IoT); Communication and Video Making; Educational Kits; Electronic Board; Virtual Reality; Virtual Classroom; Mobile Apps/Games; Others

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PLENARY SPEAKER

Transdisciplinary Research: Is It Necessary?

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ABSTRACT

As has been understood, the main task of universities is to play an active role in improving and developing the quality of life, culture, science, and technology for mankind. Transdisciplinary research in higher education that creates new conceptual, methodological, theoretical, and translational innovations to address common problems is necessary. The challenges of an increasingly complex modern world require this approach. Therefore, a research ecosystem is indispensable to answering these challenges. Maybe it's time for us to look back, reflect on ourselves and look around us whether higher education needs to be rationalized. We need to look at this issue from a bigger perspective. A new awareness is needed, which involves not only reason but also consciousness. Higher education needs to be placed at its initial goal, namely a sovereign, dignified and human society. Some examples and opinions based on personal views are described in this presentation.

Keywords: Transdisciplinary research; higher education; research ecosystem

Biography

YBhg. Prof. Dr. Hadi Nur is a professor at Universitas Negeri Malang and also Adjunct Professor in Faculty of Science, Universiti Teknologi Malaysia who expert in Materials Chemistry and heterogeneous catalysis. His research has centered on the integration of materials science, heterogeneous catalysis, fuel cell science and engineering in order to develop and characterize new materials for use in emerging technologies. Prof. Hadi Nur earned his Ph.D. in Chemistry, from Universiti Teknologi Malaysia and Magister Teknik (M.T.), equivalent to M.Eng., in Materials Science and Engineering (Cum Laude) from Institut Teknologi Bandung, Indonesia. Prof Hadi Nur is an author and co- author of over 300 publications on various S&T topics, focusing on heterogeneous catalysis and advanced with the ISI and Scopus h-index: 28, WOS h-index= 26 and the Google Scholar h-index: 38.

KEYNOTE SPEAKERS

SCIENCE & TECHNOLOGY

Quantum Physics: Deterministic and Randomness in Universe via Bell Theorem and Chaos Theory

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ABSTRACT

This is a fundamental question of science especially for physics and philosophy. Quantum theory is deterministic when describing Nature in the absence of observation or measurement. Meanwhile, it becomes a probabilistic when describing the observation's outcome as the particular outcomes of individual measurements arise not deterministically, but probabilistically. This randomness is not due to lacking of precision or predictive power; but in quantum mechanics, randomness is intrinsic to Nature. How do we elaborate this phenomena? What choice of question that we are going to ask Nature will be the key issues. How Nature responds as the answer, depends entirely on what questions we choosed to ask. Here, element of subjectivity and objectivity arise in the deepest level of universe. The correlation of Nature's response to choice of our questions are classically forbidden, based on the principle of local realism. Do we have a free will? Or everything has been pre-determined? This questions will elaborate more through Bell's theorem and chaos theory.

SOCIAL SCIENCES & HUMANITIES

Investigating the Impact of Intranet Usage on Middle Managers' Performance in the Port Industry in Malaysia

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ABSTRACT

The goal of this article is to investigate the impact of intranet usage on middle managers' performance in the port industry using the extended task-technology fit (TTF) model. 357 middle managers from diverse organisations in the Malaysian port business were surveyed for the study. The results of the structural equation modelling show both TTF and consumption account for a large portion of the variance in managers' performance. TTF predicts perceived usefulness and utilisation, but not user resistance. Although perceived utility predicts usage, it does not predict user resistance. Managerial performance is unaffected by user resistance. The study is limited to Malaysia's port business and focused entirely on the management perspective of intranet usage. The findings shed light on how the Malaysian port operates.

INVITED SPEAKERS: SCIENCE &TECHNOLOGY

Nanostructured Porous Silicon Knowledge and Applications

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ABSTRACT

The concept of nanotechnology was first discussed by Richard Feynman in 1959. Nanotechnology can be refered to science and engineering at the scale of nanometres. One of the main contributors to the nanotechnology development is nanomaterial. In nature, silicon could only emit UV light, and could not emit visible light due to a small and direct band gap. However, in 1990, Leigh Canham had discovered that nanostructured porous silicon could emit visible light through photoluminescence processes. There are several types of nanostructured porous silicon preparation methods including electrochemical etching, spark erosion and others. The most established preparation parameters are the composition of electrolyte ratio, etching time, etching current density and photo-assisted condition. Each combination of preparation parameters will produce different properties of nanostructured porous silicon. There is a wide range of potential applications including sensors, renewable energy, medical, and templates to produce other nanomaterials such as carbon nanotubes and graphene. This paper presents a nanostructured porous silicon that was prepared by an electrochemical etching method with an electrolyte composition ratio of 1:1 between ethanol and hydrofluoric acid (HF). The optimum parameters were 5 minutes etching time and 5mA/cm^2 current density with photo-assisted. The porosity of the sample was estimated to be about 30% measured by gravimetric method. The sample was used as a template for carbon nanotubes, graphene and ZnO nanostructured preparation and chemical sensors as well.

Keywords: Nanostructured porous silicon 1; photoluminescence 2; carbon nanotubes 3; graphene 4

Electrochemical Anodization Time Effects on the Characteristic of Titania Nanotubes Arrays for Humidity Sensing Applications

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ABSTRACT

Humidity sensors have become increasingly important and are widely used to improve the quality of life and industrial processes. Humidity monitoring is necessary for many industrial fields such as the chemical and medical industries. Commonly used sensing materials used in fabricating humidity sensors are metal oxide semiconductors particularly titanium dioxide (TiO_2) due to their unique properties and excellent performance boost. Highly-ordered titanium dioxide nanotube arrays (TiO_2 NTAs) films were synthesized via electrochemical anodization. An electrolyte solution containing ammonium fluoride, NH_4F (0.3 wt.%), ethylene glycol (25 ml) and deionized water (2 vol%) was used for deposition of TiO_2 NTAs at 35V with different anodization times (30, 60, and 120 minutes). Field emission electron scanning microscopy (FESEM) images revealed that the average diameter of nanotubes size becomes larger by increasing the anodizing time to 120 minutes. Energy Dispersive X-ray (EDX) analysis showed the presence of Ti and O elements conferment the formation of the stoichiometry of TiO_2 NTAs. X-Ray Diffraction (XRD) pattern showed the crystallite size of TiO_2 NTAs increases as the anodization times increase. The anatase phase at (101) diffraction peak anodized at 120 minutes exhibits the highest crystallite size (31.1 nm) compared with 30 and 60 minutes. Raman analysis results confirm an increase in all bands of anatase after electrochemical reduction. The current-voltage (I-V) characteristic showed the high current was measured for 120 minutes (9.12 µA) and exhibited high sensitivity (264.24) for humidity detection. Preliminary results on the anodization times showed that TiO_2 NTAs films could be a promising material for sensing applications, especially in humidity sensors.

Keywords: TiO_2 nanotube arrays; Electrochemical anodization; Anodization time; Humidity sensor; Sensing applications

Trigona Bee Products: From Laboratory to Community

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ABSTRACT

In Malaysia, the use of honey and propolis - including from the Trigona bee – has been widely-accepted as easily-accessible food supplements. Yet, few have specifically known about their antioxidant activities, and the protective potential against oxidative stress, atherosclerosis and infertility. The objective of our studies is to enhance the health benefits of Trigona bee products, especially on wound healing, atherosclerosis and infertility by capitalizing on its antioxidative properties. Specifically, we have determined that the optimum conditions of extraction temperature and time for aqueous propolis extract offering the highest antioxidant activity were at 43.75°C and 52.86 hours, respectively, whereas methanolic propolis extract should be done at 75.54 v/v concentration, 46.0°C and 25.41 hours, respectively. Similarly, the optimal combination of honey and propolis provided the highest antioxidant yield was determined to be at 15.26g (50.43%) and 15g (49.57%), respectively. This research output on aqueous propolis extraction will be directly shared with several small and medium-sized enterprises (SMEs) in an ongoing collaborative project among IIUM and Pahang apiculture SMEs. When tested on wounded guinea pig model, the supplementation of Trigona propolis has significantly promoted the wound healing process by reducing lipid peroxidation and inflammatory biomarkers, as well as increasing endogenous antioxidant enzymes, hence hasten the wound closure. Furthermore, we have investigated the anti-atherosclerotic effect of a mixture of honey including the Trigona honey in hypercholesterolemic atherosclerotic rabbits. The honey mixture has been shown to induce a significant increase in serum superoxide dismutase and glutathione peroxidase, as well as reduction in serum malondialdehyde, serum IL-1β, IL-6 and TNF-α cytokines, and serum ICAM-1 and VCAM-1 adhesion molecules in comparison to the rabbits in the high cholesterol diet group. In addition, the honey mixture has also been shown to positively affect male reproductive system in hypercholesterolemic male rabbits. Particularly, the honey mixture at the dose of 0.6 g/kg/day improved testicular weight, ameliorated the testicular tubular degenerative changes and enhanced spermatogenesis. Moreover, the honey-supplemented rabbits exhibited improved serum and intra-testicular testosterone and FSH, serum pro-inflammatory cytokines as well as higher percentages of progressive and total motility, normal sperm, live sperm and sperm concentration. Hence, we are currently looking into the next phase of clinical testing to understand its effect on infertile men. The findings of our continuous studies suggest that the Trigona honey mixture offers protection against atherosclerosis and male infertility. Eventually, these outputs are expected to be translated into clinical use and commercialization for the benefits of the community.

Modification of Zeolitic Imidazolate Frameworks-8 For Antibacterial and Photocatalytic Activity

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ABSTRACT

Different nanoparticles are encapsulated on zeolite imidazolate framework-8 (ZIF-8) to induce antibacterial and photocatalytic activity. Firstly, the ZIF-8 was successfully synthesized from the metal centre source of zinc nitrate hexahydrate ($ZnNO_3.6H_2O$) and 2- methylimidazole as organic linkers in water. For the antibacterial study, Ag was incorporated into ZIF-8 from silver nitrate salts ($AgNO_3$) at a certain ratio to give Ag/ZIF-8. The antibacterial assay of the Ag/ZIF-8 was conducted against Gram-positive bacteria (*Staphylococcus aureus, S. aureus*) and Gram-negative bacteria (*Escherichia coli, E. coli*) through disk diffusion technique (DDT), demonstrating the formation of inhibition zone towards both types of bacteria. Moreover, the introduction of Ti into Ag/ZIF-8 for Ag@Ti/ZIF-8 had escalated the photocatalytic degradation of methylene blue (MB) according to the first-order kinetic. It was deduced that the performance of the photocatalyst of all ZIF-8 follows the following order: Ag@Ti/ZIF-8 (98.03%) > Ti/ZIF-8 (96.35%) > Ag/ZIF-8 (93.71%) > ZIF-8 (91.04%). According to the XRD and FTIR measurements, the ZIF-8 frameworks were maintained after both Ag and Ti elements were introduced. From this study, it is learnt that ZIF-8 offer flexible functionalization of different metals into the meso/micro frameworks for wide applications in medical and industrial processes.

Keywords: Zeolitic imidazolate framework; antimicrobial agent; photocatalyst; silver nanoparticles

Enterprise Data Science for Drone Technology

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ABSTRACT

Drones perform different functions depending on their application; they can be used for surveillance, mapping, or even delivery services. Each of these applications requires another data collection method and processing technique because each task has its requirements for accuracy and efficiency. For example, if we are looking at surveillance drones that are supposed to monitor a specific area, then it would be vital that we have accurate visual information about what is happening within that area. In this session, we will share the design and development of enterprise data science for commercial drone industries. Firstly, we will dive into the basic understanding of enterprise data science and drone technology. Then, we will embark on the exploration of data analysis and AI techniques working for drone industries. Lastly, we will share our insights on the future of data science in the drone industry.

INVITED SPEAKERS: SOCIAL SCIENCES & HUMANITIES

Developing Methodology of Harmonising Syariah and Civil Law; Lesson Learned from *Indira Ghandi's* Case

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ABSTRACT

This study examines and analyses salient principles expounded by Civil court judges in *Indira Gandhi's* cases where the disputes relating to custody of children in a unilateral conversion of one parent to Islam and to determine their religious status have been a matter of national concern. This landmark case has changed the landscape on the rights of parents in deciding the religious status of a child in such cases and consequently the custody of the affected children. Although, there is no significant change to the law governing custody of a child in unilateral conversion, however, the decision has affected the way the states' religious authority administer the procedures of conversion of a minor to Islam where an expressed provision on the consent of both parents must be obtained for the purpose of the conversion is made obligatory. The study analyses principles underlying court decisions in developing methodological tools for harmonisation and examines consistency of those principles with Islamic law. An in-depth study of the case, Islamic legal principles involving interfaith relationships and relevant decided cases on unilateral conversion will be analysed to formulate the legal framework for harmonisation of laws. The study argued that the conflicts in interfaith relationships could be resolved by imposing the principle of parental responsibilities which is universally accepted in all jurisdictions, namely, civil and Shariah law and internationally recognised in the Convention on the Rights of the Child (CRC).

Unpacking the Link Between Early Childhood Education and Development Studies

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ABSTRACT

Early childhood education (ECE) is often seen as limited discourse that merely discuss about children in the early years and family settings. While in fact, the discussion about early childhood education, children, and childhood are very much interlinked with the discussion about a country's development. As mandated in the Sustainable Development Goals (SDGs) that accessing high quality ECE is seen global development goals. This presentation aims to explain the link between ECE and development studies. It is argued that understanding the link between the two will allow us to reimagine another meaning of ECE that will serve for the betterness of a society

The Internationalization Process as a Means for Ensuring the Quality of Higher Education

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ABSTRACT

Higher education systems have recently undergone the most significant transformation worldwide through the process of Internationalization under the impact of globalization. Internationalization insists on the need to strengthen partnerships and coordinate actions at both the national, regional and international levels in order to ensure the quality of HE systems around the world. International academic and research collaboration is considered one of the key indicators for determining the quality of education. Thus, a large number, if not all, higher education institutions (HEIs) around the world are engaged in international activities. The main objectives of the internationalization of HE is (i) to prepare students as "global citizens" who understand and value cultural diversity and are ready for the competitive global markets, (ii) to address and contribute to the resolution of the global problems, and (iii) to play a role in the promotion of the international values and address the global issues such as poverty, health and environmental change. The aim of the present talk is to look at the different aspects of the process of internationalization as a means to improve the quality of HE system, and to offer practical reasons for its introduction into HE systems. The talk will also look at the unintended outcomes of the internationalization process for the developing countries.

Keywords: Higher education; academic collaboration; intercultural communication; quality

Adapting 21st Century Pedagogy in Teaching Research Methodology for Multidisciplinary Postgraduate Students: A Case Study of Universiti Islam Sultan Sharif Ali

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ABSTRACT

The recent development of new technologies and globalization as well as the COVID-19 outbreak in the worldwide forced educators and academicians to incorporate creative teaching and learning methods in educational institutions. This highlight the usage of 21st Century pedagogy being the most appropriate way of teaching and learning, which emphasizes metacognition (reflection), critical thinking, technology, project and problem- based learning. This article focuses on the assimilation of the 21st Century pedagogy as an innovative teaching method of Research Methodology course for multidisciplinary postgraduate students in Universiti Islam Sultan Sharif Ali (UNISSA). Different virtual online communication and educational platforms, online presentation tools as well as the use of smart gadgets for different learning and teaching tasks, students' assessments and feedbacks, research experiences, teaching and learning experiences are discussed.

Orientalisme dan Kolonialisme dalam Islamophobia

*Warjio

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ABSTRACT

Understanding of Islamophobia so far is often only understood as a contemporary phenomenon and only from a Western perspective. This reality is exacerbated by the wrong understanding of Islam regarding their presence in the West. In fact, the phenomenon of Islamophobia is not new. It has become part of Western society and has its own dynamic. The era of colonialism along with the emergence of orientalism became an important part which in the form of intellectual discourse was rarely re-expressed. This article will discuss two important things; first reveals the presence of Muslims in the West in historical perspective. Second, understand it from a colonial perspective and Orientalism

Keywords: Islamophobia; colonialism; historical persfective; orientalism; west persfective

PHYSICAL SCIENCES

I-CReST 2022:021-006 - Particleboard from Oil Palm Empty Fruit Bunch (EFB): Effects of Density and Resin Content

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ABSTRACT

Particleboard is growing nowadays. In Malaysia, particleboard usually made from rubberwood or mix hardwood. However, because of the supply of the wood were decrease, new raw material is required. Empty fruit bunches are a waste from the oil palm industry. his study examined mechanical properties; modulus of rupture (MOR), modulus of elasticity (MOE) and internal bonding (IB) and physical properties; thickness swelling (TS) and water absorption (WA) of particleboard made from oil palm empty fruit bunch (EFB). The effect of different board densities and resin contents on particleboard properties also determined. Empty fruit bunch is obtained from Jengka Advanced Renewable Energy Plant (JAREP) located at Jengka 9. Three density levels (500, 600 and 700 kg m-3) and three different resin content (8, 10 and 12%) of urea formaldehyde (UF) resin used as a binder. The results showed with increased density and resin content of EFB, the board increased significantly for mechanical and physical properties of the EFB particleboard. It gives better performance to strength of particleboard. The best result is produced from board with density of 700 kg m-3 and resin content is 12% and did not met the minimum requirement for particleboard in Japanese Industrial Standard (JIS A 5908). Much work perseveres to be done with EFB. The treatment for the EFB maybe will enhance the properties of the particleboard.

Keywords: EFB; density; resin content

I-CReST 2022:023-007 - Characterization of Modified Magnetite Nanoparticles Extracted from Mill Scales Waste with Chitosan

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ABSTRACT

This work outlines a low-cost method for preparing chitosan-coated magnetite nanocomposites (Fe_3O_4/Chi NCs). Solid magnetite particles were magnetically extracted from mill scales (MS) waste. Then, the extracted magnetite particles were subjected to high-energy ball milling (HEBM) for 8 h to reduce the particle size to nanoparticles. Self-assembly was performed using an ultrasonication bath to coat chitosan onto the magnetite nanoparticles (Fe_3O_4 NPs). A difference in polarity between the magnetite nanoparticles and the chitosan was observed at pH 7 attributed to the self-assembly coating process. The success of the coating process was determined via measurements using a high-resolution Transmission Electron Microscope (HRTEM), zeta potential, Fourier Transform Infrared (FTIR), and a zetasizer. The coating mechanism was determined via characterisation. HRTEM showed a higher dispersity of Fe_3O_4/Chi NCs. The FTIR results revealed that the presence of amine and hydroxyl groups might help increase the affinity of Fe_3O_4/Chi NCs. The chitosan-coated magnetite nanoparticles had pH-dependent, high stability, so it can be used to remove ions from wastewater. In conclusion, the proposed method is one of the lowest-cost methods for developing Fe_3O_4/Chi NCs for wastewater treatment applications.

Keywords: Chitosan-coated; millscales; high energy ball mill; self assemble

I-CReST 2022:026-210 - FTIR Studies of Hexanoyl Chitosan/PVC Blend Polymer Electrolyte System Incorporated with NaI Salt

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ABSTRACT

Hexanoyl chitosan and poly (vinyl) chloride, PVC have been chosen as host for the development of a polymer blend electrolyte system. Sodium iodide, NaI is the sodium ion, Na^+ provider. The electrolyte system was prepared using solution casting technique. The concentration of NaI salt has been varied from 0 to 40 wt.%. The interactions among components in a system of hexanoyl chitosan-PVC-NaI-1-methyl-3 propyl imidazolium iodide (MPII) were investigated using Fourier transform infra-red (FTIR). No obvious shifting of the characteristic modes of hexanoyl chitosan upon addition of PVC to the blend system indicating incompatibility of the binary hexanoyl chitosan/PVC blend. The spectroscopic studies on the hexanoyl chitosan/PVC/NaI blend reveal that Na+ ions coordinate individually to the polymer components at the carbonyl, O=C-NHR of hexanoyl chitosan and C-Cl of PVC. Frequency and intensity changes of hexanoyl chitosan in the blend system with addition of NaI suggest that the complexation occur between hexanoyl chitosan and NaI salt. With the addition of NaI to the blend system up to optimal amount, it can be seen that the intensity of the carbonyl peak of hexanoyl chitosan increased as a resulted to the increase in the number of charge carriers.

Keywords: Hexanoyl chitosan; PVC; FTIR; polymer blend

I-CReST 2022:043-178 - Optimisation and Characterisation of Selenium Nanoparticle Synthesis using *Moringa oleifera* Plant Extract

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ABSTRACT

The emergence of nanotechnology has become more popular and the advancement had triggered much development in nanoparticle synthesis. Recent focus has shifted towards a greener approach in synthesising selenium nanoparticles (SeNPs) due to presumed quality, and safety as compared to other methods which is important in drug development. Therefore, the aim of this study is to optimise and characterise the synthesis of selenium nanoparticles using *Moringa oleifera* as a reducing agent. Here, we optimised the synthesis of SeNPs by modulating the concentration of precursor solution, incubation time and temperature as well as pH level. The properties of the synthesised SeNPs then were evaluated using ultraviolet-visible spectroscopy (UV-Vis), field emission scanning electron microscope (FESEM), and energy dispersive X-ray (EDX) to identify the most optimum condition to synthesised the SeNPs. Our result demonstrated that UV-Vis spectrometry of the suspension solution verified the formation of SeNPs with a single absorbance peak in the range of 240-560 nm. From the FESEM+EDX analysis, amorphous SeNPs showed to be of high purity as identified with the average size to be in the range of 90-130 nm. These results demonstrate that the *M. oleifera* plant extract possesses the potential to reduce selenium ions to SeNPs under optimised conditions and can be further tested for other bio-potential applications.

Keywords: Selenium nanoparticles; green synthesis; *Moringa oleifera*

I-CReST 2022:074-038 - Annealing Time Dependence in the Fabrication of Bismuth-based Perovskite Solar Cells (Bi-PeSC's) via Hot Immersion Method

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ABSTRACT

Lead-free perovskite solar cells have attracted attention as environmentally friendly future energy source, but the performance is still low at present. Annealing period as a key parameter has been identified to control the morphology of $MA_3Bi_2I_9$ (MBI) perovskite film fabricated by the hot immersion method (HIM) with the annealing period varying between 5 to 25 minutes. SEM images visually depicted that longer period of annealing induced perovskite film to form larger crystallite size, resulting in rougher surface. The MBI films fabricated at 25 minutes showed a high crystallinity of film and it exhibited a high absorption to longer absorption wavelength with a narrow bandgap, leading to enhanced solar cell performance. By optimizing annealing time, the efficiency of the device has been enhanced almost eight time than a shorter period of annealing. Our findings suggest the compact MBI can be obtained by using a simple method and yet the performance of solar cell devices can be achievable, and this provides another alternative way to fabricate MBI based perovskite solar cells (PeSC's) in the future.

Keywords: MBI; Bi-Perovskite; solar cells; hot immersion

I-CReST 2022:091-066 - Forensic Investigation to Retrieve 3D Shoe Impression: A Review

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ABSTRACT

In crime scenes such as burglary and murder, the search for physical trace evidence left behind by the suspect is a priority for forensic investigators. A shoe impression is a piece of trace evidence that can link the crime scene and the suspect. However, 3D shoe impressions are often neglected at crime scenes due to the complexities of retrieving and preserving the evidence. Casting is a standard method to retrieve shoe impressions. This paper reviews the various techniques to retrieve 3D shoe impressions and recently introduced techniques, focusing on casting with different materials, Structured from Motion (SfM), and 3D light scanning. Additionally, this review discusses alternative techniques to uncover shoe impressions, including each technique's benefits, drawbacks, and gaps.

Keywords: 3D shoe impression; casting; Structured from Motion (SfM); 3D light scanning

I-CReST 2022:092-064 - Synthesis of Benzoyl Carrageenan as Biopolymer Electrolyte Host

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ABSTRACT

Benzoyl kappa carrageenan (Bz-ƙcar), a new derivative of kappa carrageenan (ƙcar), has been successfully synthesized by Friedel Craft acylation method. The chemical structure and physical properties of Bz-ƙcar are synthesized by Fourier transform infrared spectroscopy, Nuclear magnetic resonance and elemental analysis. FTIR analysis showed successful substitution by the formation of new carbonyl (C=O) bond at 1716 cm-1. A pair of new peak is also detected at 1451 and 1605 cm-1 belongs to the aromatic C=C stretch, thus confirming the successful substitution of benzoyl molecule (C_6H_5CO-) into the ƙcar matrix. H-NMR confirmed the substitution of C_6H_5CO- into carrageenan matrix by the appearance of multiple new peaks at (δ =7.20-9.50 ppm) belongs to the characteristic signals of protons in aromatic benzoate group. Elemental analysis revealed the increase percentage of carbon and oxygen in Bz-ƙcar suggesting the successful acylation reaction. The electrochemical impedance spectroscopy (EIS) analysis of the gel sample Bz-ƙcar showed improved ionic conductivity as compared to ƙcar, thus has given new idea to improve the properties of ƙcar-based electrolyte.

Keywords: Benzoyl; carrageenan; electrolyte; biopolymer

I-CReST 2022:097-073 - Effect of Blending Kappa-carrageenan on Hydrophilicity of Polysulfone Membranes for Water Treatment

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ABSTRACT

The polymeric polysulfone (PSf) membranes have high mechanical strength and flexibility but it is a challenge to improve the permeability and removal capability of the membranes due to the hydrophobicity nature of PSf. In order to obtain this properties, Kappa-carrageenan (ƙ-car) which is extracted from red seaweed is a highly hydrophilic biopolymer and has been reported as pore former is introduced in this work. This study aims to investigate the effect of ƙ-car content in casting solution and its impacts on membrane morphology. The ƙ-car is blended with PSf that is dissolved in N-methyl-2-pyrrolidone (NMP) solvent and fabricated via wet phase inversion method. By adjusting the weight percentage ratio of ƙ-car (0.0 - 5.5 wt%) with PSf polymeric solution, it was found that the addition of ƙ-car with various ratio has increased the hydrophilicity and permeability of the fabricated membranes as the pure water flux has improved from 7.86 to 150.38 $L.m^{-2}h^{-1}$ at applied pressure of 1-5 bar. Results of FTIR showed that with the addition of ƙ-car, the peak 2900 cm^{-1} missing in which indicating that reducing or eliminating of the functional group due to the cross linking between PSf and ƙ-car. The surface morphologies of membranes show decreasing trend as they are more brittle with the addition of more ƙ-car. In conclusion, blending of ƙ-car is a promising method to produce membranes not only exhibited high water flux which is preferable in water industries, but also good separation performance and mechanically strong enough to withstand operating pressure.

Keywords: Kappa-carrageenan; hydrophilic; polysulfone membranes; permeability; water treatment

I-CReST 2022:103-079 - Physicochemical Properties of Newly Synthesized Benzoyl Kappa-Carrageenan

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ABSTRACT

The physicochemical properties of a novel benzoyl kappa-carrageenan (Bz-ƙcar) were analyzed. The hydroxyl groups in ƙcar were successfully substituted with benzoyl molecule by Friedel-Craft acylation method. The synthesized Bz-ƙcar powder then was analysed by using X-ray diffraction (XRD), thermogravimetric analysis (TGA), differential scanning calorimetry (DSC), and field emission scanning electron microscope (FESEM). Based on XRD data, the crystallinity index of Bz-ƙcar is 24.3% which is less than ƙcar at 26.7%, due to the disordered structural arrangement of Bz-ƙcar matrix as a result of the inclusion of benzoyl chloride salt. The decomposition temperatures of the synthesized Bz-ƙcar and ƙcar were 205.9 and 251.8 °C respectively, suggesting that the synthesis has weakened the inter and intramolecular hydrogen bond in Bz-ƙcar. DSC analysis revealed that the glass transition temperature of the Bz-ƙcar is 129.4 °C, lower than ƙcar at 179.8 °C. The FESEM analysis showed that the synthesis has significantly affected the morphology of the biopolymer as perforated structure was observed in Bz-ƙcar due to the inclusion of bulky and crystalline benzoyl chloride salt molecule into ƙcar matrix.

Keywords: Kappa-carrageenan; benzoyl chloride; physicochemical

I-CReST 2022:106-133 - Structural-Optical Properties Relationship of Gold Nanoparticles Embedded in Porous Alumina Film Membrane for Catalytic Degradation of 4-Nitrophenol

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ABSTRACT

Nitroaromatic compound such as 4-nitrophenol (4-NP) is widely in the manufacturing of fungicides, drugs, insecticides, or dyes and typically present in industrial wastewater. Nevertheless, this harmful pollutant can mainly be removed via catalysis reaction. Previous studies have shown that supported gold nanoparticles (AuNPs) can demonstrate excellent catalytic degradation on 4-NP. However, some of the works had drastically suffered from surface leaching, thus giving low reusability advocating unstable degradation performance which is insufficient for practical application. To overcome these problems, a design of thin film composite system comprising of AuNPs embedded in anodic aluminium oxide (AAO) channels acting as host are proposed for enhanced stability and catalytic behaviours. Therefore, this research aims to study the growth mechanism of AuNPs embedded in the AAO host for production of a highly stable catalytic membrane for degradation of 4-NP. The film composite catalyst will be fabricated by using gold(I) pyrazolate complex to act as a template and metal sources in sol-gel synthesis, followed by drop-casting on AAO film membrane before being thermally treated to produce AuNPs/AAO film. It is expected that design of AuNPs/AAO film membrane with enhanced stability and high re-usability towards catalytic degradation of 4-NP are produced and its possible reaction mechanism will be thoroughly discussed.

Keywords: Alumina; Anodized aluminium oxide; Catalyst; Gold nanoparticles; 4-Nitrophenol

I-CReST 2022:109-091 - Spectroscopic Properties of Erbium-Doped Zinc-Sodium Tellurite Glass via Incorporation of Bimetallic TiO2-Au Nanoparticles

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ABSTRACT

This study reports the spectroscopic properties of tellurite glass with composition of $(70-x-y)TeO_2–20ZnO–9Na_2O–1Er_2O_3–(x)TiO_2–(y)Au$ where x = 0, 0.3 mol% and y = 0, 0.03, 0.05, 0.10, 0.15, 0.20 mol% were synthesized using the melt-quenching technique. Glasses were characterized using XRD and UV-Vis. The glass samples containing erbium were orangish in color while the glass samples without erbium content were yellow in color. The XRD result shows the existence of broad humps in the range of 25° to 35° affirms the amorphous nature of glass. The UV-Vis spectra of glass samples show the appearance of eight absorbance peaks representing the transitions of erbium ion from the ground state to excited state.

Keywords: Tellurite glass; melt-quenching; nanoparticles; amorphous; erbium transition

I-CReST 2022:112-089 - Printing Inks: A Review on the Application of Laser Induced Breakdown Spectroscopy (LIBS) for Elemental Characterisation and Discrimination

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ABSTRACT

In recent years, a rapidly developing technology of printer has increased the number of forgery cases involving printed documents. As a result, the field of forensic document examination is now focused on several analytical instrumentations to analyse printing inks. Printing ink analysis is primarily focused on the chemical composition of the inks which consist of colourants, vehicles, and additives. Previous studies on ink analysis had shown an increasing trend in the utilisation of spectroscopy techniques, including the use of Laser-Induced Breakdown Spectroscopy (LIBS). The instrument's capability for printing ink analysis has been increasingly explored by forensic scientists due to its advantages of no standard preparation, multi-elemental detection, fast, precise readings as well as minimal destruction. Therefore, this work reviews the findings on the application of LIBS in analysis of printing inks. Contemporary approaches as well as the strengths and limitations on using this technique are also discussed.

Keywords: Document examination, Ink analysis, Printing ink, Spectroscopy technique, Laser Induced Breakdown Spectroscopy.

I-CReST 2022:114-092 - The Simulation Study of Extended Gate Field Effect Transistor and Double Gate Field Effect Transistor by using Nanohub Simulator

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ABSTRACT

The Field Effect Transistor (FET) is a three-terminal electronic device consist of a drain, source, and gate area. The FET-based devices can be used as a sensor for continuous monitoring and detection of contaminants by functionalizing the sensing area based on the selected target. This study aims to systematically compares between the results obtained from various research group regarding to the DNA as analyte of interest. Here, the double-gate field effect transistor (DGFET) biosensor and extended gate field effect transistor (EGFET) biosensor structure were used as the sensing devices. For this work, the settling time, sensitivity, and selectivity of the sensor will be analyzed with various sensor parameters using the BioSensorLab simulation program by nanoHUB. The result from this study shows that the sensors settling time, sensitivity and selectivity from the simulation work are similar to the simulation results reported by the other research group work. Interestingly, the simulation work regarding to the sensitivity of both DGFET and EGFET shows discrepancy with the simulation work that have been reported by other group. It is recommended that more detail simulation is needed to understand the root cause of the behaviour.

Keywords: Field effect transistor; nanohub online simulator; DGFET; EGFET; biosensor

I-CReST 2022:115-093 - Simulation of Field-Effect-Transistor Characteristic using ENBIOS 1-D and 2-D NanoHub Simulation Tools

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ABSTRACT

Field-effect transistors (FETs) are devices that used to control the flow of current in a semiconductor by applying an electric field and have been used extensively nowadays. FETs regulate current flow by applying a voltage to the gate, which changes the conductivity between the drain and source. However, comprehensive research involving simulation and experimental work focused on improving the characteristics of FETs for use as sensors is not widely conducted. Alas, most of the available simulation tools must be purchased and commonly restricted due to their expensive costs. This study is focusing on developing and understanding the characteristics of FETs by analysing the simulation results from Electronic NanoBiosensor Simulator (ENBIOS) 1-Dimensional (1-D) and 2-Dimensional (2-D) tools in the NanoHub online software. The simulators are run based on parameters obtained from other research groups in order to compare the results. For the simulation by ENBIOS-1D, the result shows the behaviours of the electrolyte-insulator-semiconductor (EIS) structures based on direct current (DC) potential, ion, and charge carrier concentration in a simple 1-dimensional EIS system. Next, the ENBIOS-2D simulation is the comparison between Si and Ge as main materials shows that silicon based ISFET with SiO_2 gate dielectric has significantly higher current than Si_3N_4 whilst germanium based ISFET has higher current compared to silicon based ISFET. For future study, we recommend that the simulation and experimental work need to be done simultaneously.

Keywords: Field-effect transistors (FET); NanoHub online software; electrolyte-insulator-semiconductor; ISFET

I-CReST 2022:116-094 - Effect of the Incorporation of Choline Chloride-based Deep Eutectic Solvent towards the Flexibility of Poly (Methyl Methacrylate) Films

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ABSTRACT

Even though poly (methyl methacrylate) (PMMA) electrolyte films exhibited stability towards lithium electrode, these films were brittle due to the polar nature of PMMA that prone to form interchain crosslinking via hydrogen bonding. Thus, this hydrogen bonding had been hindered by adding large structure of ionic liquid (IL) during free-radical polymerization of MMA. Unfortunately, IL is expensive, and its production requires tedious preparation technique. Therefore, in this study, the deep eutectic solvent (DES) consisting of ethylene glycol/1,4-butanediol (1:3 mole ratio) which is cheaper, non-polar and less toxic than IL was incorporated during free radical polymerization of MMA. Interestingly, the incorporation of 50 wt% of DES (PMMADES50) during free radical polymerization of MMA produced flexible film with improved ionic conductivity of 2.56 × 10−8 S cm−1. This was due to the improvement in the amorphous phase of the sample contributed by the breakage of the hydrogen bond of PMMA as large structure of DES occupied the space between the polymer chains. The decrease in the glass transition temperature (Tg) of PMMADES50 to 56.61 °C hence further confirmed the increase in the chain flexibility of the film. The FTIR analysis proved the occurrence of interaction between PMMA and DES and due to that, the improved in the thermal stability of the PMMADES system was observed in the TGA analysis. The incorporation of additional conducting species, 5 wt% and 10 wt% of lithium triflate (LiTf) into the PMMADES50 had tremendously increased the ionic conductivity to 1.07 × 10−7 S cm−1 and 2.56 × 10−6 S cm−1 respectively. This proved that PMMADES50 serves as a good and novel polymer host which provides amorphous phase that can ease the movement of lithium ions.

Keywords: Deep eutectic solvent; free radical polymerization; ionic conductivity; green polymer

I-CReST 2022:126-139 - Enforced Mechanical Properties of Composite Plaster of Paris with Addition of Bamboo Fibres

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ABSTRACT

Organic fiber attracts attention among researchers and emerges as alternative to reinforce brittle material instead of using synthetic fibers which are expensive and toxic. A series of Plaster of Paris with incorporation of bamboo fibers with distinct size in the range of 63 µm, 125 µm, and 250 µm were prepared using a conventional mixing method. The physical appearance and mechanical properties of plaster were determined using camera and Universal Mechanical Testing machine. Plaster without bamboo fibres appear greyish in color. However, the addition of bamboo fibres turns plaster to brownish in color. Compressive strength of plaster lies in the range of 7.754 − 9.232 N/mm^2. The incorporation of bamboo fibres with size of 63 µm evidenced an increase in the compressive strength of plaster from 8.554 N/mm^2 to 9.232 N/mm^2. Nevertheless, the incorporation of bamboo size with bigger size of 125 µm and 250 µm causes decrement in the compressive strength of plaster.

Keywords: Plaster; compressive strength; adhesive materials

I-CReST 2022:144-117 - Improving Flexibility of Regenerated Cellulose Nanofibre/PLA/Glycerol via Lamination Technique

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ABSTRACT

Nowadays, the growth of additive layer manufacturing industry evolved the urge for plastic and consequently aligned with increasing the plastic waste generated. Polylactic acid (PLA) is an extensively used polymer for 3D printing filament and eventually increasing abundance of PLA in the environment and becomes dilemma towards its stakeholders. Meanwhile, abundantly available biopolymer on Earth, cellulose was yet fully utilized despite it embrace unique properties such as renewable, biodegradable, and biocompatible. The aims of this study were to produce regenerated cellulose nanofibre (CNF) film by incorporation with polylactic acid (PLA) from 3D printed waste. Glycerol as a plasticizer was integrated into the to improve its flexibility, particularly for packaging. In this study, amalgamation of CNF/NaOH/urea solution freezed until -20 oC, thawed and stirred at -13°C to form a cellulose solution and eventually was cast to form regenerated cellulose films. Concurrently, 3D printing PLA waste was deliquesce in chloroform to form a 5% PLA solution. The film was coagulated in different percentages of glycerol in the existence of 5% PLA solution via lamination technique and consequently, all films were air-dried. The properties of the regenerated CNF/PLA/glycerol films were investigated in the functional group, water absorption, transparency, tensile strength, and flexibility. FTIR results showed the cellulose's functional group has been altered PLA and glycerol was react into the cellulose structure which verified the interaction of cellulose, PLA, and glycerol. Water absorption of the films was increased as the concentration of glycerol increased, and this result was in line with the transparency of the films. Moreover, the extensibility and flexibility of the CNF/PLA/glycerol. Consequently, this bioplastic film is also performed as green plastic for packaging which helps to reduce pollution which produced from natural source.

Keywords: 3D printing; bioplastic; extensibility; layer-by-layer; plasticizer

I-CReST 2022:144-135 - Hydrogels Inclusion in Soil as Slow Released Water to Promote Pak Choy Growth without Watering System

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ABSTRACT

Hydrogels are an emerging technology in the agriculture industry. Hydrogel refers to water-retention granule because of its ability to swell to many times its original size when it encounters water. Therefore, it is suitable to be used as water storage in the soil to grow vegetables and fruits. The aims of this study were to apply the concept of the self-watering system by applying hydrogel as a supplement for soil to grow Pak Choy and investigate the plant growth performance. Soil potting mix was prepared according to the suitable ratio and transferred into several vases. Commercial dry hydrogels were formulated at different hydrogel percentages and allowed to absorb water before mixing with the soil. Consequently, Pak Choy seeds were sowed directly on the potting mix, and water was added to the potting soil to allow a homogeneous mixture. Eventually, leave it self-grow under controlled conditions (UV light and black box). The growth performance of the Pak Choy was based on the height of the plant, the number of leaves and colour, soil condition, and moisture were investigated. Harvesting was performed after 2 weeks of the seedling. The result showed that the higher percentage of hydrogel demonstrated better Pak Choy growth performance based on the height of Pak Choy's stem which is higher and more no of leaves produced. The soil condition for the highest percentage of hydrogel was still wet and moist after 14 days as compared to the soil without hydrogel. This shows that the dissemination of hydrogel in soil for agriculture can be applied as an alternative technique for self-planting specifically in this modern lifestyle and better community economic management.

Keywords: Hydrogel; plant growth; potting mix; self-grow; self-watering system

I-CReST 2022:156-137 - Structural and Optical Properties of Sr_2MnRuO_6 Double Perovskite

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ABSTRACT

A double perovskites Sr_2MnRuO_6 were synthesized by a solid-state reaction method. The structural and optical properties of the sample were determined using X-ray diffraction (XRD) and UV-Vis diffuse reflectance respectively. The Rietveld analysis of XRD confirmed that the compound existed in single phase and crystallized in a tetragonal structure with a space group Fm3m. The determined lattice parameter obtained for Sr_2MnRuO_6 are: $a=b=c=$ 8.578(19) Å, and unit cell volume, V = 601.21 Å3. The tolerance factor for Sr_2MnRuO_6 was 0.994. From the UV-Vis diffuse reflectance spectroscopy, the band gap energy of the sample was 3.29 eV.

Keywords: Double perovskites; optical properties; structural

I-CReST 2022:175-158 - Comparative Study for Development of Bioplastics from Various Starch-Based Flours in Malaysia

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ABSTRACT

Pollution caused by conventional or petroleum-based plastics have been a worldwide problem since the past few decades. To reduce the effects of these non-biodegradable polymers, the development and study of eco-friendly bioplastics have been increasing throughout the years. Bioplastics can be made from different biomass sources such as vegetable oils, food waste, or starch. To date, bioplastics developed using various type of starches can be easily produced using glycerin as its plasticizer to display diverse physical, mechanical and chemical properties. In this study, the comparison of bioplastics from starches namely tapioca starch, corn starch, potato starch, and wheat flour will be assessed and investigated. The composition of the four samples mentioned are made with the same starch-glycerin-vinegar-water weight ratio which is 6:5:5:50 respectively. Each mixture is heated and stirred for 3 minutes and then poured into a glass petri dish taking account of same thickness and volume. After drying in the oven at 55 °C for 24 hours, the samples are measured and cut into pieces with dimension of 5 cm x 5 cm. Later, the appearance and surface morphology of the bioplastic samples will be carried out using optical microscope while its structure elucidation will be done using Fourier Transform Infrared and UV-Visible Spectroscopy.

Keywords: Bioplastic; pollution; starch

I-CReST 2022:184-173 - The Utilization of Scanning Electron Microscope-Energy Dispersive X-Ray (SEM-EDX) and Spectroscopy Techniques on Assessing Chemical Components of Consumer Fireworks

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ABSTRACT

Consumer fireworks are modest pyrotechnic displays that are commonly available for purchase by the public. This type of pyrotechnic are made to be lighted and produce effects like smoke, noise, colour, sparks, and flames through combustion. The pyrotechnic effects are achieved using creative chemical compositions and arrangements. The most often used chemical components include oxidizers such as nitrate, perchlorate, or chlorate salts, fuels such as charcoal, magnesium, or aluminium, and auxiliary chemicals such as potassium benzoate or strontium carbonate. The assessment of the chemical composition of consumer fireworks, both intact and post-blast residues, is of great forensic interest. This is critical during casework involving vandalism, injuries, workplace accidents, illegal commerce, or improvised explosive devices manufactured from their components. Despite the difficulty of analysing these types of samples, forensic specialists attempt to get a complete evidence characterisation and identification by employing a variety of unique analytical procedures based on various concepts and approaches. In this study, several regularly used consumer fireworks, including "mancis," "Happy Boom Sunset," "cili padi," and "Happy Boom Red Cracker," were collected as samples. The samples were analysed according to their chemical composition for pre- and post-blast explosion. The analysis was done by two reliable instruments which are SEM-EDX and FTIR. The results of the analysis demonstrated that the main chemical elements were successfully identify by these approaches, and the samples for pre-blast and post-blast residues had nearly identical chemical compositions. The findings of this study may be valuable to forensic investigators and analysts, particularly in situations involving consumer fireworks.

Keywords: Consumer fireworks; chemical composition; pre-blast and post-blast; SEM-EDX; FTIR

I-CReST 2022:188-184 - Identification of Alcohol Consumption in Fingernails by Gas Chromatography – Mass Spectrometry (GC -MS)

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ABSTRACT

Urine is considered as an indication of various reasons related to criminal cases such as violence, alcoholism and many more. However, over the recent years, the substitution of urine as a reliable alcohol biomarker is necessary since the suspect is usually not found for several days or weeks or even months. In order to identify long-term alcoholism, it is necessary to measure the concentration of EtG, EtS and FAEEs in other source of human body such as nails (fingernails and toenails). EtG is a direct metabolite of alcohol that accumulates in keratinous tissues such as hair and nails. Most of the previous research focus on the detection of EtG in hair, were only a few studies on the measurement of EtG in nails. In this study, nails (fingernails and toenails) were used as a sample for alcohol biomarkers and were analysed by using a chemical instrumentation which is GC-MS. The findings of this study are unable to detect any specific compound that is related to alcohol biomarkers. Therefore, the method used could probably be a steppingstone towards a new method on the detection of alcohol biomarkers in nails

Keywords: Alcohol biomarker; EtG; EtS; FAEEs; fingernails

I-CReST 2022:195-191 - Fabrication and Characterization of Polyurethane/Graphene Composite: Study on Conductivity and Thermal Properties

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ABSTRACT

This study investigated the potential of graphene for improvement of properties of thermoplastic polyurethane (PU) composites in sight of thermal property, electrical conductivity, hardness, gel content and bonding spectra (FTIR). Polyurethane/graphene (PU/G) composites were synthesized by exfoliating graphene with DMF and then blending it with PEG and IPDI via in-situ addition polymerization with varying graphene concentrations (0–0.18 wt %), resulting in uniform dispersion and partial exfoliation of graphene-sheets in PU matrix. The PU/G synthesis was analysed by IR spectra analysis, which revealed apparent urethane connections and hydrogen bonding. Glass transition temperature (Tg) property of PU exceeded by around 55% with the addition of graphene, and it improved steadily as graphene concentration increased. 7B pencil hardness replicated the hardness of the PU/G2, indicating an improvement in hardness. The inclusion of graphene had less of an influence on the gel content of PU, with a proof showing that all of the results gel content was between 80 – 90%. With the addition of 0.088% graphene to PU, the electric conductivity improved to 76%. The composite's conductivity was improved due to graphene's capacity to conduct electricity and the covalent link between PU and graphene.

Keywords: Graphene; polyurethane; conductivity; exfoliation

I-CReST 2022:215-196 - Elastic Studies of Mixed Glass Former $0.2Na_2O$-$0.8[xB_2O_3+(1-x)TeO_2]$ Glasses

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ABSTRACT

Mixed network glass former have obtained great attention due to its potential application in various industrial fields. Sodium borotellurite $0.2Na_2O$-$0.8[xB_2O_3+(1-x)TeO_2]$ glasses, which have been shown to exhibit a mixed glass former effect (MGFE) have been prepared using the melt-quenching method and examined using X-ray Diffraction (XRD), Fourier Transform Infrared (FTIR) spectroscopy and ultrasonic velocity measurement. FTIR analysis revealed the presence of TeO_3, TeO_4, BO_3 and BO_4 vibration groups. The longitudinal modulus (c_L), shear modulus (μ), hardness (H), and Young's modulus (E) of the studied glass system recorded maximum values at x=0.2 mol% of B_2O_3 because of the MGFE. Further addition of B_2O_3 lead to depolymerization of BO_4 which reduces the glass rigidity and weakening of the stiffness of the glass network.

Keywords: Glasses; mixed glass former; elastic properties; mechanical properties

I-CReST 2022:222-213 - Numerical Modelling of Thickness Variation in Cu_2ZnSnS_4 (CZTS) Thin Film Solar Cell using SCAPS-1D

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ABSTRACT

Cu_2ZnSnS_4 (CZTS) absorber material is a promising candidate to substitute $CuIn_{1-x}Ga_xSe_2$ (CIGS) thin film solar cell technology in the future. Therefore, in this work, a comparative performance evaluation based on thickness variation from 100 nm – 1000 nm of the absorber layer is investigated using SCAPS-1D numerical simulation. The proposed device structure of metal/CZTS/CdS/i-ZnO/metal has been simulated under light at AM 1.5G spectrum and the photovoltaic performance is analysed. It has been found that the optimum thickness of the absorber is 600 nm which gives J_{sc} = 23.215341 mA/cm^2, V_{oc} = 0.7681 V, and FF = 69.75 % which leads to 12.44 % PCE. These findings provide significant insight in designing practical experimental fabrication for the prospective CZTS.

Keywords: CZTS; SCAPS-1D; PCE

I-CReST 2022:225-208 - The Effect of *m*-Phenylenebismaleimide on Natural Rubber/ Polystyrene Blends

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ABSTRACT

The influence of HVA-2 on the mechanical and dynamic mechanical properties of crosslinked in 60/40 NR/PS blends has been investigated. Natural rubber (NR) and polystyrene (PS) were prepared by melt blending of the material in a plasticorder mixer with the processing conditions fixed at a mixing rate of 50 rpm at 120°C for duration 15 min. The gel content and swell index, mechanical properties such as tensile strength, shear strength, modulus 100% and impact energy were studies in NR and PS blends. It shows that for the blend with 2.0 phr HVA-2, the gel content of NR phase increases from 48% to 58% when exposed to 100 kGy of radiation. The swelling index for blends with HVA-2 is smaller compared to the swelling index of blends without HVA-2 as with the increase of radiation dose. It is found that the tensile strength for blends with 2.0 phr of HVA-2 is 10.4 MPa at 50 kGy of radiation dose. Meanwhile for blends without HVA-2, the tensile strength is just at 4.5 MPa and 7.9 MPa with 50 kGy and 200 kGy, respectively. With the presence of HVA-2 in the blends causes the glass transition temperature (T_g) for NR to move towards T_g for PS, make the blend NR/PS to become more compatible.

Keywords: Crosslinking; polystyrene; NR/PS blends; natural rubber; HVA-2

I-CReST 2022:227-211 - The Decomposition of Doped $LiMn_{1.9}Ti_{0.1}O_4$ Prepared by Combustion Method; Thermal Analysis and XRD Studies

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ABSTRACT

Spinel $LiMn_{1.9}Ti_{0.1}O_4$ ($Fd\bar{3}m$) is a material which can be applied as cathodes in rechargeable lithium-ion batteries due to their high voltage above 4V and has good cyclability. $LiMn_{1.9}Ti_{0.1-x}Sn_xO_4$ (x = 0.000, 0.001, 0.003 and 0.005) powder was prepared by a synthesis route namely modified self-propagation combustion method (SPC). The thermal decomposition behaviour of this compound was carried out by using Simultaneous Thermogravimetry Analysis (STA). The thermal decomposition for SPC occurred in three stages. The exothermic reaction process to form oxide compound was shown by the heat flow thermogram. Based on the STA results, all the samples were annealed at 700 °C for 24 hr in air and the annealed samples powder were characterized by X-ray diffraction (XRD) as to confirm the structure and phase of the materials.

Keywords: Cathode; spinel; lithium-ion batteries; thermal analysis; XRD

BIOLOGICAL SCIENCES

I-CReST 2022:008-002 - Comparative Assessment of Conservation Efforts of the Panabo Mangrove Park using NDVI

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ABSTRACT

The efficacy of conservation efforts may not be easily seen from the ground. This research models the mangrove density growth of the Panabo Mangrove Park using Landsat 7 and 8 satellite imagery. This study computed the Normalized Difference vegetation Index (NDVI) from 2000 to 2020. Data shows that the mangrove density increase from 2000 with a maximum value of .45 and a minimum value of -0.59 to maximum value of 0.48 and a minimum value of -0.14 in 2020. This shows that in 20 years there is an increase in the coverage of vegetation across the Panabo Mangrove Park however satellite image shows an increasing lack of growth at the mouth of the river which may be indicative growth inhibition due to siltation.

Keywords: Mangrove; Panabo Mangrove Park; Landsat 7 and 8; NDVI

I-CReST 2022:054-020 - Effect of Environmental Temperature, Relative Humidity and Wind Availability Towards Locomotor Patterns and Postural Behavior of Female Bornean Orangutans (*Pongo Pygmaeus*) at Bukit Merah Orangutan Island, Perak, Malaysia

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ABSTRACT

Global warming is known to have severe impact on nature. Previous research showed animals adapt to the temperature change by altering their behaviour and routine for their species survivability. This study aims to determine the strength of correlation between the environmental parameters with their locomotors and postural behaviour thus to identify how orangutan adapt to the warming temperature. This study is crucial to overcome the negative effect of the abnormal changes in temperature by providing orangutan with better enrichment tools and activities to maintain their wild behaviour. Focal sampling was carried out individually for 93 days from March 2021 until June 2021, twice per day, first in the morning and later in the afternoon. The morning observation started from 9.30 a.m. until 11.30 a.m. and the afternoon session started from 12 p.m. until 3 p.m. Four postural behaviour were observed which are sitting, lying, clinging and standing and four locomotors behaviour were selected which are resting, feeding, playing and moving. We used RS PRO DT-3893 Vane Anemometer to determine the environmental temperature, relative humidity and wind availability. The data was analysed via Mann-Whitney U-test and found that orangutan had longer resting ($p = 0.023$; $p = 0.015$) and lying duration ($p = 0.002$; $p < 0.001$) in higher temperature with lower humidity. The test also reveals that orangutan tends to rest more ($p = 0.028$) and displays less clinging ($p = 0.047$) behaviour when it is windy. The results of this study can be utilised to further enhance our understanding on the behaviour pattern of female orangutan in ensuring the effectiveness of their enrichment activities in future. This study will also serve as a baseline data to determine the basic behavioural pattern in response to abnormal environmental conditions which will alert the management team in climate changes that is affecting the behaviour of orangutan in captivity, thus helping them in improving their enrichment activities.

Keywords: *Pongo pygmaeus*; postural and locomotor patterns; environmental temperature; relative humidity; wind availability

I-CReST 2022:056-022 - Isolation and Characterisation of Endophytic Bacteria from Nam-Nam Plants (*Cynometra cauliflora*)

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ABTRACT

Endophytic bacteria colonize the internal tissue of living plants. Mutualistic symbiosis between these microorganisms and plants works in a way that the bacteria benefit from plants because of nutrients availability whereas plants receive benefits of growth enhancement and stress reduction from the bacteria. Nam-nam plant (*Cynometra cauliflora*), a small tree with thick and branched stems is indigenous to the eastern Peninsular Malaysia. This tree has the potential to be commercialized for its medicinal properties. This study aimed to isolate endophytic bacteria from different parts of Nam-nam plants (*C. cauliflora*) such as leaves, stems and roots. The isolated bacterial endophytes were screened for biochemical characterisation before the extraction of secondary metabolite using ethyl acetate. The extracts were tested for antimicrobial activity as well as production of indole-3-acetic acid (IAA). Molecular characterisation via analysis of 16S gene sequencing was also performed to identify the isolates with good antimicrobial activity and high production of IAA. A total of 33 endophytic bacteria were isolated from roots, stems and leaves of Nam-nam plants comprising of 6 Gram positive and 27 Gram negative bacteria. A total of seven bacterial endophyte extracts showed antimicrobial activity against pathogenic bacteria in which R1L3 and TKL2 extracts exhibited significant activity against *Bacillus cereus*, *Escherichia coli* and *Proteus vulgaris*. Production of IAA was exhibited by 15 isolates wherein R1S4 produced the highest IAA (20.62 µg/mL), followed by TKS2 (14.44 µg/mL) and R1S5 (12.05 µg/mL). Analysis of 16S gene sequence revealed that TKL2, TKS2/R1L3 and R1S4/R1S5 belonged to the genera of *Methylobacterium*, *Mycobacteroides* and *Sphingomonas*, respectively. This is the first study to report on antimicrobial activity against pathogenic bacteria and IAA production by endophytic bacteria from the Nam-nam plants. The findings from this study revealed that endophytic bacteria from Nam-nam plants exhibited a promising use in the medical, agriculture and food industries.

Keywords: Nam-nam plant; *Cynometra cauliflora*; antimicrobial activity, indole-3-acetic acid

I-CReST 2022:085-051 - Callus Induction of *Tacca integrifolia* using Stem Nodal Segment

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ABSTRACT

A study was conducted with the aim to determine the optimal concentration of auxin and cytokinin on *in vitro* callus for *Tacca integrifolia* by using stem nodal segment. Seven treatment including control (MS) were used with different concentration and combination are stated: NAA (0.1-2.0 mg/L), BAP (0.1-1.5 mg/L), 2,4-D (0.5-2.5 mg/L), BAP (0.1- 1.5 mg/L) with constant concentration of 1.0 mg/L NAA, , 2,4-D (0.5-2.5 mg/L) with constant concentration of 1.5 mg/L Kn, BAP (0.1-1.5 mg/L) with constant concentration of 0.5 mg/L 2,4-D. Fresh, dry weight and morphology of callus were evaluated and the results had obtained showed significant effects when analyzed at 5% level of significance on callus induction. Among of all the treatment used, MS supplemented with only BAP (1.0 mg/L) successfully produced highest result of fresh (2.421±0.37g) and dry weight (0.3173±0.05 g) and appeared compact and green in colour. While the lowest results were showed when 2,4-D (0.5 mg/L) in combination with Kinetin (1.5 mg/L) only produced the fresh (0.2476±0.07g) and dry (0.0326±0.01g) and appeared friable and yellowish. The result from this study has revealed that the presence of 2,4-D or NAA as combination hormone to BAP are not give much impact in addition while BAP alone, it can produce more callus.

Keywords: Callus induction; *Tacca integrifolia*; stem nodal segment; 6-Benzylaminopurine (BAP)

I-CReST 2022:086-052 - Changes in Amygdalar mTORC2, and PKC Epsilon Expressions in Alcohol use Disorder: A Rodent Model

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ABSTRACT

Protein Kinase C epsilon (PKCε) regulates various alcohol use disorder (AUD)-related behavioral changes, especially in the amygdala. Mammalian target of rapamycin complex 2 (mTORC2) facilitates the phosphorylation of PKCε at Ser729 prior to activation. In line with this, the present study was undertaken to evaluate the changes in mTORC2 and PKCε during various stages of ethanol exposure. Rats were allocated into control, acute ethanol, chronic ethanol, ethanol withdrawal (EW), and EW + EtOH groups. A modified liquid diet (MLD) with or without ethanol was given for 27 days followed by intraperitoneal administration of ethanol (2.5 g/kg, 20% v/v) or saline on day 28, and followed by bilateral extraction of the amygdala. The mRNAs of PKCε were significantly upregulated in the amygdala of EW and EW + EtOH rats. The gene expression of Sin1 was profoundly reduced following chronic ethanol intake. The protein expression of mTOR, Sin1, PKCε, and phosphorylated PKCε (Ser729) were significantly elevated in the chronic ethanol, EW, and EW + EtOH groups. Correlation analysis revealed a statistically significant moderate correlation between the PKCε gene and protein expressions. Our findings indicate that elevation in protein expression of PKCε seen in the amygdala during EW and EW + EtOH was taking place at the transcriptional stage, whereas, a significant increase in the PKCε protein expression, but not its gene expression during chronic ethanol exposure suggests alternative signaling pathways during chronic and withdrawal states of AUD.

Keywords: PKC epsilon; mTOR; alcohol; mTORC2; amygdala

I-CReST 2022:088-061 - Abnormal International Normalised Ratio due to Lupus Anticoagulant with Different Prothrombin Assays

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ABSTRACT

Lupus anticoagulant (LA) is a non-specific inhibitor of coagulation, which usually interferes with the determination of the activated partial thromboplastin time (aPTT) and less commonly the prothrombin time (PT). Presence of LA is associated with an increased risk of thrombosis rather than bleeding, and in the context of antiphospholipid syndrome, patients would be required to be on anticoagulants such as warfarin. The International Normalized Ratio (INR) has been used to monitor patients on oral anticoagulant. It is derived from PT. We report a case where LA interferes with the determination of INR. Our patient is a 45-year-old male who was suspected of having an antiphospholipid syndrome. Initial blood investigation showed a consistently high INR, despite not being on any anticoagulant. We decided to re-evaluate our methods. PT were performed using optical methods on three different analysers, which were CS2500, CA104 and ACL Top and also manually. When comparing between CS2500 and CS104, the PT results were 34s (reference interval (RI): 9.3s-10.8s) and 30s, respectively. When comparing between ACL Top and CA104, the PT results were 13s (RI: 10.3s-12.7s) and 53s, respectively. The recombinant thromboplastin Innovin was used in both Sysmex coagulation analysers CS2500 and CA104, whereas HemosIL was used in ACL Top used. PT was also performed manually in water baths using Innovin and HemosIL and the results were 52s and 13s, respectively. These results showed that PT was consistently prolonged when samples were analysed using Innovin. However when the PT reagent was changed to HemosIL, PT was almost within normal range. In addition, PT was performed using mechanical method on Stago Compact Max, and the result was within normal range. In conclusion, innovin is more sensitive to LA compared to other reagents such as HemosIL and STA-NeoPTimal. Failure to recognise this limitation may affect patient's management.

Keywords: Prothrombin time; innovin; international normalised ratio; lupus anticoagulant

I-CReST 2020:093-069 - Morphometric Characteristics and Length-Weight Relationship of Mud Crab *Scylla paramamosain* in Kelantan

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ABSTRACT

Mud Crab is one of the seafood delicacies, which are consumed worldwide due to its taste and health benefit. However, the population study of mud crab particularly *Syclla paramamosain* in Kelantan is still lacking and little information is known about the population management of this species. Hence, the study of their morphometric characteristics is indeed crucial to conserve its population and simultaneously sustain the mud crab fishery. In the present study, the mud crab *S. paramamosain* were obtained from local fisherman at Sungai Tok Jal in Pantai Sabak, Kelantan. A total of 24 characters were used as morphometric measurements. The relationship between the morphometric characteristics and length-weight of the mud crab *S. paramamosain* was explained by using descriptive statistics, linear regression, correlation coefficient and Student's t-test. The results show that the males (range: 69.1 – 431.2 g, mean: 219.94 ± 46.78 g) are marginally heavier than females (range: 70 – 244.6 g, mean: 129.47 ± 11.13 g). Strong correlations were also obtained between the length and width variables in male as compared to female. Therefore, the study has successfully shows the population of mud crab *S. paramamosain* in Pantai Sabak, Kelantan can provide information for better population management.

Keywords: Mud crab, *S. paramamosain*, morphometric characteristics, length-weight relationships

I-CreST 2022:120-096 - Antioxidant and Anti-inflammatory Effects of *Lepisanthes alata* Leaves Extract, on Carrageenan Induced Hind Paw Oedema in Male Wistar Rats

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ABSTRACT

Inflammation is a reaction towards disruption of tissue homeostasis due to biological reactions or physical agents in the body. Local effects on tissues due to inflammation are redness (rubor), swelling (tumor), heat (color), pain (dolor) and loss of function. Carrageenan induced paw oedema (CIE), is an experimental model of acute inflammation to evaluate the anti-inflammatory effect of natural and synthetic compounds. *Lepisanthes alata* (LA) is a local tropical tree belongs to the Sapindaceae family. LA leaf contains polyphenols consisting of proanthocyanidins, epicatechins, and epigallocatechins which are known to have anti-inflammatory activity. This study was done to determine antioxidant and inflammatory effect which occurs in the paw tissue of CIE rats with or without LA administration. A total of 24 male Wistar rats were equally divided into four groups. All groups received carrageenan injections followed by oral gavage according to their respective groups 30 minutes later. (i) Negative control group received distilled water (C+DW), (ii) positive control group, received Sodium Diclofenac 25mg/kg (C+SD), (iii) treatment group received 250mg/kg LA aqueous extract (C+LA250) and (iv) treatment group received 500mg/kg LA aqueous extract (C+LA500). Paw thickness measurement using digital vernier caliper, were performed and recorded at 0, 2, 4, 6, 8 and 24 hours. Tissue samples were collected at the end of the study for histology and inflammatory scoring. In this study, administration of 250mg/kg LA aqueous extract showed a significant decrease in paw thickness and inflammatory score compared to the negative control group. This dose also significantly lowered IL-1β and TNF-α levels, as well as significantly increased T-SOD levels compared to the negative control group. The MDA level for this dose is lower compared to the negative control group. These results indicate that, LA was beneficial in reducing inflammation and oxidative stress changes in the paw tissues of CIE rats.

Keywords: *Lepisanthes alata*; carrageenan; paw oedema; anti-inflammation, antioxidant

I-CReST 2022:123-131 - Application of Various Starch Based Coatings to Preserve the Shelf Life and Quality of Mango Cultivar (*Mangifera indica*)

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ABSTRACT

Mango is one of tropical fruits with numerous health benefits and it has relatively short postharvest life. Edible coating associated with proper room storage room can extend shelf life but it requires high initial cost to purchase equipment that is not available in the local market. Therefore, the study was conducted to study the effect of edible coatings obtained from the local availability market on the quality of mango during storage. Mango fruits were coated with rice starch coatings with different concentration (1 %, 2 % and 3 %) and stored at room temperature for 15 days. After 15 days, it was found that mango that has been treated with 2 % of rice starch coating showed slightly lower in weight loss in comparison with control. For appearance of diseases during storage, the uncoated fruit (CK) was showed less appearance of diseases than other treatments. The color changes during ripening have correlation with the taste. Rapid ripening can increase sugar content in the fruit accompanied with improvement of taste of the fruit. Mango that has been treated with 2 % of rice starch coating was showed ripen slightly slower in ripening process which indicate bitter taste. The results of the study showed that the use of rice starch coating was less effective in prolonging the shelf life and maintaining the quality of mangoes during the storage period.

Keywords: Edible coatings; mangoes; postharvest; storage; shelf life

I-CReST 2022:124-099 - Occupational Respiratory Hazard Exposure and Lung Function Deterioration among Sewage Workers in Malaysia

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ABSTRACT

Sewage workers have been reported to be exposed to hydrogen sulphide (H_2S) and particulate matter 2.5 (PM2.5), both of which are commonly found in sewage treatment plants. The exposure to these occupational respiratory hazards causes significant respiratory morbidity among the sewage workers, and the toxic effects are characteristically dose related. The present study aimed to determine the correlation between PM2.5 and H_2S exposure among sewage workers and its effects on their lung function. A cross-sectional study was conducted in eleven sewage plants located in Malaysia. One hundred ninety-one sewage workers were assessed using the BMRC questionnaire. Lung function assessment was performed using calibrated spirometry. Area air sampling was conducted in three different work locations for each sewage plant to measure the concentrations of PM 2.5 and H_2S.We determined the predictors of deterioration of lung function using simple and multiple linear regression analysis. Correlation analysis was performed between individual cumulative exposure to PM2.5 and H_2S and its effects on sewage workers' lung function. Sludge treatment facility (STF) and non-STF workers had higher exposure to H_2S and PM2.5 than office workers. There was a significant negative exposure-response correlation of cumulative H_2S exposure with %FEV1 ($P < 0.001$), %FVC ($P = 0.025$) and %FEV1/FVC ($P < 0.001$). Cumulative PM2.5 exposure was negatively associated with %FEV1 ($P < 0.001$) and %FEV1/FVC ($P < 0.001$). The four final predictors of lung function deterioration were cumulative exposure to H2S, compliance with safety practices, history of cardiopulmonary illnesses, and total daily exposure duration to hazards. Exposure-response relationships were found between sewage workers' cumulative exposure to PM2.5 and H_2S and lung function values. Thus, employers must take prompt actions to mitigate the risk of occupational respiratory hazard exposure on sewage workers' lung function. This may help prevent progression to occupational lung diseases.

Keywords: Respiratory hazards, particulate matter 2.5, hydrogen sulphide, sewage workers, respiratory symptoms

I-CReST 2022:140-112 - The Impact of Pandemic Towards Academic Activties of Health Sciences Students: A Survey

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ABSTRACT

The implementation of Movement Control Order (MCO) during Covid-19 has significantly shifted the education system from problem-based to virtual web-based learning. Assessments involving physical activities, particularly for health sciences and medical students, have become more difficult to conduct. This study aimed to investigate the impact of COVID-19 towards academic activities and its relationship between challenges faced and recommendations to improve the web-based learning. A cross-sectional study was conducted using a self-administrative questionnaire on 84 Optometry students in UiTM Puncak Alam. The questionnaire was distributed via social media platforms such as Whatsapp, Facebook, and Instagram. The collected data were recorded and analyzed using descriptive statistics and a Chi -squared test to identify the relationship between the common challenges faced and recommendations to improve online learning during COVID-19. Result showed that the pandemic has impacted the academic activities and the students by almost half of the participants (45.2%), were considerably affected. Most students spent their learning hours via laptop for online learning approximately 5-6 hours a day, with the most common tool used was Google Meet. All students (100%) agreed that their academic activities were affected to varying degrees. The majority of the students rated extremely poor to the average for both online theoretical and practical lessons (76.2%) and (94%), respectively. The practical lesson was significantly more affected than theoretical lessons during online learning. There was a significant correlation between challenges faced during the pandemic with the recommendation to improve online learning ($p < .01$). The most impacted academic activities was practical lessons due to full usage of online tools and online learning. Thus, recommendation regarding the virtual resources to mimic the laboratory work or live streaming directly from the laboratory and decreasing the amount of workload can be taken into consideration to improve the major challenges faced.

Keywords: Academic activities; online learning; academic challenges; Covid-19

I-CReST 2022:141-113 - Antioxidant Activity of Red Rice Callus Culture – A Review

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ABSTRACT

Rice is categorized as a staple food and is consumed by almost half of the world's population. It served as a carbohydrate source for humans and contains additional benefits compared to maize, wheat grains, and barley as they also prepared carbohydrates for their consumers. Rice has a lot of varieties including Indica and Japonica which can be found in Asian countries. Red rice is categorized as pigmented rice where the bran of the rice contains a lot of beneficial compounds such as flavones, tannins, phenolic, sterols, oryzanols, and essential oil while anthocyanin and proanthocyanidins content determine the color of the rice and antioxidant content. These compounds are beneficial to humans in nutraceutical and functional food. The antioxidant properties help in reducing the risk of disease by preventing oxidative damage in the body and slowing down the lipid peroxidation and the generation of secondary lipid in the food system. In this review, the information, data, and knowledge related to antioxidant activity in red rice callus culture and the protocol of rice callus induction have been reviewed. The frequency of rice callus induction is influenced by the medium, plant growth regulators, and special treatment that is applied during the culture, and it is found that different genotypes of rice need different requirements of medium and composition. It is reported that wild red rice recorded the highest callus induction frequency, 76% as the medium used is MS (Murashige and Skoog) media supplemented with 2,4-D and placed in the dark condition. This review also proved that secondary metabolite can be gained through in vitro process where antioxidant activity is present in red rice callus culture. It is proven there is an antioxidant activity in red rice callus culture as it has been found 0.42 mg GAE/ml in red rice callus culture extract.

Keywords: Red rice, Callus culture, antioxidant activity, Indica & Japonica

I-CReST 2022:141-114 - A Total Flavonoid Contents of Red Rice Callus Cultures: A Review

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ABSTRACT

World demand for high-quality rice and nutritional foods has risen, particularly among wealthy and health-conscious consumers. Rice (*Oryza sativa*) belongs to the Poaceae family of monocotyledonous plants. Rice has two major subspecies which are japonica and indica and indica subspecies is being the most frequently grown crop in South and Southeast Asian countries. In recent years, consumers have recently been more interested in colored rice types due to the existence of their high levels of bioactive compounds which may provide health advantages. Red rice has been chosen to be consumed over non-pigmented rice because of its nutritional health advantages content such as flavonoid contents. This review aimed to provide an overview of the information on flavonoid contents in red rice and the total flavonoid contents (TFC) of red rice callus cultures. The results of this study are based on a literature search such as papers, books, conference proceedings, and websites. According to the literature, there were many types of flavonoid content in red rice such as apigenin, quercetin, myricetin, catechin, and anthocyanins. The flavonoid contents in rice were determined by using the HPLC method. Meanwhile, total flavonoid contents of red rice callus cultures were determined using a colorimetric method by using a spectrophotometer and it was observed TFC of red rice callus cultures contains a total of 0.42 mg. In the conclusion, callus cultures are a promising strategy that can provide an effective process and it may be a very stable approach, hence producing consistent production of red rice. The optimum amount of plant growth regulators or suitable supplementation for callus culture will enhance the production of flavonoids.

Keywords: Antioxidant activity; callus culture; flavonoid, red rice

I-CReST 2022:196-168 - Caffeine Intake Association with Anxiety Disorder among Undergraduate Pharmacy Students in UiTM Kampus Puncak Alam

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ABSTRACT

Caffeine is a psychoactive substance that has been widely consumed over the past decade. The effect of caffeine can be either beneficial or harmful to the human bodies. High caffeine intake has the ability to induce anxiety-like symptoms such as rapid heart rate, restlessness and nervousness as caffeine can produce an anxiogenic effect. This study aims to associate caffeine intake with anxiety disorder status among undergraduate Pharmacy students in UiTM Puncak Alam. A set of questionnaires was distributed among the respondents and GAD-7 scores were used to assess the level of anxiety disorder among the participants. A total of 270 students were recruited that consist of 33 male (12.2%) and 237 female respondents (87.8%). It was discovered that 7.4% of the student's consumed caffeine, while 23.3% had previously consumed. In addition, 6.3% of the students have not consumed caffeine at all. About 59.6% of the respondents reported on moderate attitude towards caffeine and majority agreed that caffeine has short- and long-term effects. However, there was no association found between the caffeine intake and the anxiety disorder status of the respondents. More generalised respondents should be recruited in further study, to minimise bias and to increase the meaningful of data.

Keywords: Caffeine; mental health; anxiety disorder; depression

I-CReST 2022:219-198 - In Vitro Release and Permeation Study of α-tocopherol as a Model Drug using Automated Vertical Diffusion Cells: Device- and Drug- related Factor Study

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ABSTRACT

In present study, investigation was made to validate newly designed automated diffusion equipment with six vertical cells - Microette system. Validation included assessment of volumes of donor and receptor chambers, difference in temperatures of different cells, spinning speeds of stirring rods, consistency of sample volume during automatic sampling. Moreover, evaluation of evaporation of receptor fluid from collected samples as well as validation of work conditions for in-vitro release experiments for model drug, α-tocopherol alone and with combinations of penetration enhancers were carried out by using validated HPLC method. Internal volume variation was found to be 1.86%. No statistically significant difference was noted between values obtained in six chambers at 30 and 60 min ($p > 0.05$). Statistically, insignificant variation was noted in spinning speeds. Estimated loss of ethanol liquid solvent was less than 2 and 3 %, respectively in 8 and 12 h, indicating a negligible solvent evaporation rate within 24 h. Validated automated system showed good release profile of α-tocopherol. Release studies using the α-tocopherol demonstrated a maximum RSD of 6.68%. Hence it was concluded that use of automated Microette system for analysis of drug permeation is suitable.

Keywords: Franz diffusion cell; Microette system; permeation; synthetic membrane, validation

INFORMATION TECHNOLOGY, ENGINEERING AND MATHEMATICS

I-CReST 2022:022-010 - Using Centrality Analysis for Greater Influence over Others

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ABSTRACT

Centrality provides an estimation on how essential a node or edge is for the information flow of the network. In this article, centrality is explored as a measure throughout the collaboration graph which is connecting two secondary teachers with a common teaching field. Centrality shall be a useful parameter in signalling network and used to find nodes that have ability of influence others.

Keywords: Centrality; collaboration graph; network

I-CReST 2022:042-013 - Design, Built and Fly the UiTM Vertical Takeoff Landing (VTOL) Aircraft

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ABSTRACT

The Vertical Take-off and Landing (VTOL) systems is a new technology that have been discovered in the aircraft development. This technology usually has been implemented to the radio controlled (RC) vehicles, from simple multi-rotor to more complex transitioning vehicles. To implement this system, it is required coding to be used inside the Arduino and Teensy 4.0 itself to communicate to the aircraft system especially in take-off, landing, move forward or produce the forward thrust and make it flying without any complication. The Teensy 4.0 board used for this VTOL RCs is a powerful microcontroller that allows the coding run inside it to execute any command at a very high speeds which is perfect for a hobby-level flight controller. In this project, the UiTM Vertical Take-off and Landing (VTOL) “Rhinos” RC aircraft will be design, build and fly. The design is inspired by the Sukhoi SU-30M fighter jet design.

Keywords: VTOL, aircraft, radio control, micro controller

I-CReST 2022:077-041 - Application of Moving Average Models for Forecasting Temperature and Wind Speed

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ABSTRACT

Temperature and wind speed predictions are important components of temperature forecasting. There are several complex approaches and advanced technologies that have been proposed. This study has proposed a simpler approach of forecasting. The objectives of this study are to form a prediction model for predicting the trend of temperature and wind speed using a moving average method and to identify the best model based on errors to use in forecasting temperature and wind speed. Moving average applied in this research is calculated with a delay of a few days to determine the average and estimate the predicted value. There are three types of period moving average used and two models are tested for each temperature and wind speed. By using the moving average, the 5 days' model is the best model to forecast temperature since it has modest changes in value between the actual and predicted values and has smaller errors. Wind speed is one of the most difficult things to predict. Thus, the ideal method is to determine the average wind speed for a short period of time. The 3 days' model is the best for wind speed since it has less errors and more days of data with the precise value between actual and forecasted wind speed. The findings have shown that it is possible to use a simple mathematical approach and apply it to forecast weather for a specific time and place.

Keywords: Temperature; Wind Speed; Moving average

I-CReST 2022:078-045 - Students' Acceptance towards Mentor-Mentee Consultation System in Higher Education Institution

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ABSTRACT

This research explores undergraduate students' adoption of an online instructional consultation strategy. This study's major objective is to develop a viable online consultation platform for higher education institutions. This study's particular aims are to identify relevant multimedia components to be used in the online instructional consultation (OICon) model, to construct a system prototype, and to test and assess the OICon model's adoption by 40 students in higher education institutions (HEIs). Seven TAM components are used to generate eleven hypotheses, eliminating the actual system variable. Except for the predicted positive link between PEOU and attitude, the hypothesised correlations between these four variables (Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Attitude, and Behavioural Intention (BI)) are supported. Positive relationship exists between Perceived Importance of Communication Components and Features and PEOU. The majority of users regard favourably the adoption of multimedia communication technologies for consultation in higher education institutions. Users will perceive communication components as indispensable if they are easy to use. The OICon prototype will be utilised in the future, as they all agreed.

Keywords: Technology Acceptance Model (TAM); Online Instructional Consultation; Perceived Ease of Use; Perceived Usefulness

I-CReST 2022:078-072 - The Efficacy of An Improved Course Structure Design & Segmenting Process in Microlearning on Learners' Knowledge Retention

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ABSTRACT

This research presented an improved microlearning course structure and investigated the impact of the microlearning system's segmenting process on students' knowledge retention. A pretest posttest design was undertaken with 90 first-year students who were enrolled in an IT course (Information System Module). Pre-and post-treatments were assigned to the students. They learnt through the course contents, which were developed using Gagné's Nine Events of Instruction. During the pre-test and post-test, they were required to answer a total of 3 short-answer questions and 2 essay questions. Using quantitative research methods, we examined the effectiveness of the proposed segmenting process in microlearning on learners' knowledge retention through a semester-long lesson plan. We compared the final exam grade (post-test) to that of the mid-term exam grade (pre-test). The results indicate that students are capable of learning independently in a self-regulated learning environment with the proposed segmenting procedure. The results found that students in learn through the course design that integrating with proposed segmenting process have higher knowledge retention than the traditional learning group with perceived choice and perceived value as core predictors of intrinsic motivation.

Keywords: Microlearning; Gagne 9 Events; Knowledge Retention, Learning Performance, Pretest Posttest design

I-CReST 2022:081-044 - A Systematic Review of the Multi-Level Prediction and Classification of Breast Cancer based on Deep Learning and Machine Learning

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ABSTRACT

Breast cancer is the most commonly occurring cancer in women worldwide and is a major cause of mortality in women. Many studies have focused on breast cancer diagnosis and prognosis. However, each technique has a distinct accuracy rate, which varies depending on the situation, instruments, and datasets employed. This paper discusses the findings of the comparison of machine learning & deep learning techniques for breast cancer prediction in order to discover the best approach for handling massive datasets while maintaining high prediction accuracy. In the context of breast cancer, various machine intelligence techniques, such as machine learning (ML) and deep learning (DL), were analysed. This paper aims to highlight some of the previous studies of machine learning algorithms, segmentation and classification algorithms for multi-level prediction and classification of breast cancer that have been used to predict breast cancer. Comparative analysis obtained in this study indicates that multi-disease prediction using Long Short-term Memory (LSTM) Recurrent Neural Networks yields better classification performance for predictions related to breast cancer disease.

Keywords: Machine Learning; Deep Learning; Breast Cancer; LSTM; Recurrent Neural Networks

I-CReST 2022:094-065 - Mathematical Modelling of Covid-19 Endemic

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ABSTRACT

COVID-19 was discovered in Malaysia on 25th January 2020 and the infection rate continues until the transition to the endemic phase on 1st April 2022. Covid-19 still triggers large epidemics around the globe. The objective of this research is to predict the cumulative number of detected cases and the cumulative number of deaths since the virus was circulating at a high level that can cause huge amounts of death and devastation. A mathematical representation of the state-space model is presented from the SIR model of the multi-wave dynamic of covid-19. The data are taken from a real-time of the Ministry of Health in Malaysia and will be verified using MATLAB and Simulink. Based on the simulation conducted, the results show that the input plays an important role in determining the infection rate.

Keywords: covid-19; SIR model; State Space; Simulation.

I-CReST 2022:101-172 - Enhancement of Phishing Sites Detection Using Hybrid Machine Learning Technique in Weka

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ABSTRACT

Cybercrime is becoming more prevalent by the day. Phishing is one of the methods used to commit fraud and obtain personal information from victims. Various phishing detection technologies and simulations have been developed, with machine learning has been contributed in some of them. However, the effectiveness of using hybrid machine learning techniques for phishing detection is still limited. Therefore in our proposed method, we tried to combine J48, Bagging and Support Vector Machine (SVM) as the technique to increase the percentage of phishing detection. Weka is the platform used to generate this method as it is stable and contain a lot of data mining-related machine learning methods. The J48 algorithm is used to choose the best features, along with various types of evaluators, while Bagging and SVM algorithms are utilised as the combined classifiers. The chosen features from J48 were then employed in Bagging together with Lib Linear, a type of SVM classifiers to see which combination would give the best phishing detection accuracy. J48 is the algorithm that contributed the most in the development of the proposed method since it has a higher prediction accuracy and more accurately classified occurrences. As consequence, using J48 as a feature extraction evaluator was beneficial to this experiment. Using the same number of datasets as previous work (10,000), the results showed that the suggested strategy outperformed existing work by 96.27 percent. However, development of this proposed methodology can be continuously improved as attackers would generate additional phishing URLs to fake the original website.

Keywords : Phishing, J48, Support Vector Machine (SVM), Bagging, feature extraction, Classifier, Weka.

I-CReST 2022:121-097 - IOT-Based Smart Door Lock System

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ABSTRACT

This paper describes the development of a prototype for an Internet of Things (IoT) and fingerprint-enabled door lock system. The goal of this study is to create a smart door lock system that requires biometric input from users for security while also allowing the admin or owner to grant easy access via smartphone using a registered Adafruit Input Output (IO) account via If This Then That (IFTTT). The system is built around an ESP8266 NodeMCU microcontroller, a 5V relay that controls a 12VDC solenoid, and an R307 fingerprint scanner that scans and stores fingerprint features. The system is tested by scanning fingerprints, both registered and unregistered, to see if it can operate as intended and notify the users via Telegram. Furthermore, by implementing the Adafruit IO, the smartphone can also be used to activate the solenoid lock. It allows users to use a smartphone to open or close the door by pressing and releasing the digital push button in the Adafruit IO feed. The results show that both fingerprint scanner as well as the smartphone can match stored fingerprint features and triggers the solenoid lock respectively. This system can be improved further by incorporating an attendance system to track registered users or by including a display panel in addition to the attendance system.

Keywords: fingerprint-enabled door lock system, Adafruit IO, If This Then That (IFTTT), ESP8266 NodeMCU

I-CReST 2022:132-101 - Driver Drowsiness Detection System Through Facial Expression Using Convolutional Neural Networks (CNNs)

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ABSTRACT

Driver drowsiness is a serious problem worldwide resulting in many road accidents each year. It is quite impossible to count the exact number of accident cases related to drowsiness, although research by World Health Organization (WHO) shows that driver fatigue may be a contributory factor to approximately 6% of fatal and serious accidents caused by drivers driving in a drowsy state. This study aims to develop a system that detects the drowsiness facial expressions of drivers using a Convolutional Neural Networks (CNNs) algorithm. The proposed system enhances the accuracy of facial expression detection by analyzing the driver's eyes, mouth, and the pose of the head rotations with front angles or left and right yaw angles up to 90° simultaneously. The dataset for this study is collected from online public stock image websites and by capturing images manually. There are several algorithms previously proposed by researchers focused on detecting drowsiness using facial expressions such as Support Vector Machine, Artificial Neural Network, Viola and Jones Object Detection Algorithm, Electroencephalograph, and Convolutional Neural Network (AlexNet, ResNet, VGGNet, SSD MobileNet V2, SSD-Inception-v2, etc.). The present study focuses on locating and identifying the state of the driver's facial expression to calculate a drowsiness index, working under varying illumination levels in a real-time environment. This system precisely focused on the drivers' fatigue status; awake and drowsy, using video frames or image sequences. The facial key attributes are detected and trained using the SSD MobileNet V2 FPNLite 320×320 algorithm. Experimental results show that the system can detect the drowsy state of the driver using a bounding box by combining the features of the facial expressions. The evaluated results of the system achieved an accuracy of approximately 88% in detecting the drowsiness state of the driver.

Keywords: CNN, SSD MobileNet V2, drowsiness

I-CReST 2022:133-104 - A Systematic Review of the Challenges and Improvement Methods for Massive Multiple-Input Multiple-Output (MIMO) System Deployment

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ABSTRACT

In recent years, there has been an increase in interest in space-time coding (STC) and multiple input multiple output (MIMO) systems. In addition to focusing on the theory and practise of space-time coding, engineers are also striving to implement MIMO system in the real world. The study of space-time propagation theory, the construction of channel models, and the design of space-time coding modulation and receiver have reached an advanced level of development. This paper examines the issues associated with the implementation of the Massive Multiple-Input Multiple-Output (MIMO) System and the technology used to increase the capacity of MIMO. For massive MIMO wireless communication systems to maximise the benefits of space-time coding technology, it is important to study new transmission technology and space-time coding technology. The findings of the systematic review indicate that the combination of channel coding technology and antenna diversity technology can significantly increase the capacity of 5G wireless communication systems, provide diversity gain and coding gain for wireless transmission, and provide a higher rate of frequency band utilisation than traditional single antenna systems. Constructing high performance space-time codewords is thus a novel and efficient method for achieving high-speed and high-quality wireless data transmission.

Keywords: Space time coding (STC), multiple input multiple output (MIMO) systems, 5G wireless communication systems, high-speed and high-quality wireless data transmission

I-CReST 2022:135-103 - IOT-Based Smart Automated Controlling System for Residential

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ABSTRACT

Internet of Thing (IoT) is becoming the most promising and life changing technology in this modern world. To make the application more user friendly, web based and android based technologies have gained their importance in this cutting-edge technology. IoT-based smart automated controlling systems integrated with solar powered generation systems are designed to monitor and control the ordinary home appliances remotely. This project presents a concept and prototype for an automation system that will link to other appliances using the ESP8266 NodeMCU Wi-Fi module as a network provider. Through Wi-Fi module, a web server can be added to the module which will help in controlling of devices over Internet. One server can manage many appliances as long as Wi-Fi is connected. It supports a wide range of home automation devices like power management components, and security components. A range of Wi-Fi devices collects and shares data via Internet protocols. Using a smart mobile phone, user(s) may access and manage the wireless appliances from anywhere or set up their workload entirely automatically. In addition, a Google Assistant application integrate with If This Then That (IFTTT) application is built to allow users to control their devices using voice command. The user(s) are able to access and manage their appliances easily by smartphone, voice over, and physical switches.

Keywords: Internet of Things (IOT); Smart Automated Controlling; ESP8266 NodeMCU; Google Assistant; If This Then That (IFTTT) application

I-CReST 2022:152-143 - Graphical User Interface for Bounded-Addition Fuzzy Splicing Systems and Its Variants

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ABSTRACT

A splicing system is one of the early theoretical proposals of the DNA-based computation device. The splicing operation starts when two DNA molecules are cut at specific subsequences with the presence of restriction enzymes: the first part is then connected to the second part of the other molecule, or vice versa, to produce splicing languages. Fuzzy with bounded-addition operation has been introduced as a restriction in splicing systems to increase the generative power of the languages generated. In this research, a graphical user interface is developed to generate all the splicing languages generated by bounded-addition fuzzy splicing systems and their variants. An algorithm is developed using JAVA language and integrated development environment for JAVA using visual code studio software in order to replace the time-consuming manual computation of the languages generated by bounded-addition fuzzy DNA splicing systems and its variants.

Keywords: Graphical user interface; Fuzzy bounded-addition; Splicing systems; Formal language theory

I-CReST 2022:163-147 - The Awareness, Knowledge, and Financial Literacy Towards Takaful Participation Among Muslim Workers

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ABSTRACT

Takaful Participation among Muslims workers has been on the rise lately. However, one must have a good awareness, proper knowledge, and adequate financial literacy before taking part on any Takaful product. This study aimed to identify people's knowledge on Takaful and the effect of financial literacy on Takaful participation. The data were gathered using a quantitative research approach by a sample set of questionnaire survey to our targeted respondents. The questions were divided into 4 sections which are demographic profile, Takaful participation, likert-scale of Takaful knowledge and financial literacy from 266 respondents with a selected area in Malaysia. Descriptive statistics, reliability test, multicollinearity and probit model were used to obtain the sample. From the analysis, it is found that takaful knowledge and financial literacy are found to be insignificant to the Takaful participation.

Keywords: Takaful participation; awareness; knowledge; financial literacy; Malaysia

I-CReST 2022:192-169 - Design and Implementation of Indoor Positioning System Technology Using Support Vector Machine (SVM) Classification Method on Mobile Attendance Application

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ABSTRACT

In Syiah Kuala University (SKU), attendance is required for both students and lecturers. Lecturers are required to have their attendance taken as a proof that the class has taken place, and students are required to attend a minimum of 75% of the total attendance in order to take the final exam. An application was built in 2019 that records such attendance. This application used Indoor Positioning System (IPS) technology using KNN classification method. However, the results of this method are still lacking due to the low accuracy rate and longer execution time. For this reason, improving the application is important that will increase the accuracy of the positions for both lecturers and students as well as faster execution times. In order to do this, the number of datasets are increased and the classification method is changed from KNN to Support Vector Machine (SVM). By using SVM, it is expected to improve both the accuracy and execution time. Increased datasets are achieved by adding more Bluetooth Low Energy (BLE) beacons in the classrooms. An android application was built to record the lecturers and student's attendance. This application was black box tested. The application successfully performed the necessary tasks. The usability of this application was tested using System Usability Scale (SUS). The lecturer's side of the application received a score of 83,9 and the student's side of the application received a score of 78,5.

Keywords: Bluetooth Low Energy; Indoor Positioning System; Support

I-CReST 2022:193-167 - Identification of Tree Species for Tropical Forest by Drone Aerial Image Using Convolutional Neural Network (CNN) Model

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ABSTRACT

Identifying tree species before logging is one of the new initiatives to support the management of tropical forest activity. The marking of individual tree species in densely wooded environments is crucial for the inventory of forests because they are exceedingly cost-intensive based on time consumption and workforce. The use of drones in forestry applications and applying deep learning approaches for data processing are growing as they are more economical than satellite data. With drones, datasets can be captured flexibly and at high spatial and time resolutions when needed. In this project, the drone will capture the image of forests and create a custom dataset to train and predict the image of tree species from the air. The study activity is to collect images of forests and their species in Malaysia because the species in Malaysia are different from other countries. We used a Faster Region Proposal Convolutional Neural Networks (R-CNN) algorithm using Facebook Artificial Intelligence (AI) research Detectron2 for tree species object detection from high-resolution RGB drone data. Based on our proposed method, the result shows a good prediction model where we can see the prediction model for detecting tree species with almost 95% of ground truth data verification. This approach is practical because the technique focuses on commercial wood species that are easy to see in the forest landscape. This initiative will save the cost of unnecessary ground inventory and uneconomic timber operations. The success of this initiative could provide the first phase of the forest inventory, which will impact the feasibility of logging operations and sustainable forest management for the forest area.

Keywords: CNN, RCNN, deep learning, drone images, tree species, tropical forest

I-CReST 2022:201-199 - The Relationship between Mathematics Anxiety, Attitude towards Mathematics and Mathematical Thinking among Mathematics Education Students at UiTM Puncak Alam

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ABSTRACT

Since the primary level of education in Malaysia and even worldwide, mathematics has been acknowledged as an important and fundamental subject among others. However, in the recent years, there were also discussions and debates on the performance and interest towards mathematics subjects among the students. A thorough study should be done to prevent future generation from becoming a non-mathematical thinking nation. Among the important role in education process is the pre-service teachers who will be the real educators. Hence, the objective of this study is to investigate the relationship between three mathematical aspects which are mathematics anxiety, attitude towards mathematics and mathematical thinking among mathematics education students who are also the pre-service teachers. The study also explored the relationship between gender and mathematics attitude. The study that was done in 2020 involved 62 mathematics education students from UiTM Puncak Alam who responded a set of questionnaires consists a total of 46 questions in three sections which are mathematics anxiety (13 questions), mathematics attitude (17 questions) and mathematics thinking (16 questions). The data was analysed using Statistical Package for Social Science (SPSS) version 20.0 software. The result from correlation analysis revealed that there is a significant relationship between mathematics anxiety, attitude towards mathematics and mathematical thinking among mathematics education students. However, T-test analysis indicated that there is no significant difference between gender and mathematics attitude among the respondents. In conclusion, actions should be taken to reduce the major effects of mathematics anxiety on attitude towards mathematics and mathematical thinking skills.

Keywords: Mathematics anxiety; attitude towards mathematics; mathematical thinking; pre-service teachers

I-CReST 2022:201-201 - The Factors of Mathematics Anxiety and Attitude towards Mathematics among Mathematics Education Students at UiTM Puncak Alam

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ABSTRACT

The importance of mathematics as a fundamental subject is well known by almost everyone. In the development of mathematics thinking, the educators play an important role. The educator-to-be who are known as pre-service teachers should be well prepared before entering the real career to guide their students in achieving the learning outcomes. However, the anxieties, attitudes, belief and thinking could also affect in mathematics achievement (McLeod, 1992). Hence, this study is to explore the factors of mathematics anxiety and the effects of mathematics attitude in learning mathematics among mathematics education students themselves before becoming a teacher. The study was done through telephone interviews in 2020. There were six mathematics education students from UiTM Puncak Alam who were the respondents in the individual interview sessions. Thematic analysis was applied to study the findings which revealed that negative experience, misconception and poor self-esteem were the factors of mathematics anxiety. The conditions influence them to feel insecure in solving mathematical problems as learners and also as trainee teachers when facing their good students. In conclusion, all of the six students experienced negative anxiety and attitude which has affected them in learning especially as mathematics education students.

Keywords: Mathematics anxiety; attitude towards mathematics; mathematical thinking; pre-service teachers

I-CReST 2022:202-209 - Learning Islamic Values Through Game for Preschool Children – Instruction Design In Khalifah Kecil

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ABSTRACT

Khalifah Kecil presents a game learning application for preschool children to encourage them to acquire Islamic values and apply good habits in their everyday life. The project applies fun and entertaining strategy in learning and playing through games to deliver sahsiah education for Muslim preschool children. The application highlights Prophet teaching using hadith related to manners that suit the potential and ability of young children. The paper discusses the instruction design of the application that guides instructors and developers to integrate learning plans, game elements and media so children are able to achieve the learning objective. The study applies ASSURE model that highlights the design phase to emphasise the decision on appropriate instruction strategies and delivery medium to support the learning content. Merrills five instructional design principles recognise several instructional design theories to categorise the main key principles in producing efficient instruction that maximise learning. The design aims to match the learning content with the needs of preschool children. Therefore, the learning content applies problem-based scenario to engage children in real and everyday situations by narrating stories related to their relationship with family members such as mother and the importance of treating everyone kindly. Since knowledge gap appears to be common for these children, a small bridge might help them by discussing the prevailing concept before introducing new element. This game learning application focuses on preschool children aged in the range of four to six years. The gameplay and fun characters are appropriate to the abilities of the child at that age. Preschool children are at the stage where they can learn and explore many new things. Children already have the necessary cognitive and affective levels and can be developed slowly according to their potential to learn among the most important lessons in their lives.

Keywords: game, instruction design, preschool children, Islamic values education

I-CReST 2022:214-190 - The Intention to Use REBER Line Application among Pre-Schoolers: A Proposed Theoretical Framework of Technology Acceptance Model (TAM)

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ABSTRACT

The use of ICT to aid with learning Mathematics is highly regarded in today's educational world. It allows for the creation of a more proactive teaching and learning experience. REBER Line is an application designed as a teaching and learning aid for mathematics, specifically in the fundamental concepts of whole numbers. Based on the Technology Acceptance Model (TAM), this study proposed a theoretical foundation for future research in this area by adding compatibility as a factor that could influence users' intentions to use the REBER Line. Therefore, the purpose of this research is to examine the influence of compatibility on the perceived usefulness and ease of use of REBER line which can speed up user's intention of using REBER line in teaching and learning basic whole number. The use of technology, such as REBER Line, will have a greater impact on students' ability to manage and implement their learning process, particularly in terms of deepening the fundamental concepts of addition and subtraction of value among pre-schoolers. Students will be more engaged in the learning process as a result of the use of technology, and instructors will be able to teach more effectively and interestingly when students explore the mathematical concept and work hands-on on their own.

Keywords: ICT in Mathematic; REBER Line; Technology Acceptance Model; Compatibility

I-CReST 2022:217-193 - Wear Particle Mode and Severity Level of Perodua 1300cc Automatic Transmission (AT) Mechanism at Different Operating Conditions via Surface Metrology Analysis

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ABSTRACT

This paper investigates the severity and mode of wear particles occurring in the Perodua MyVi 1300cc automatic transmission (AT) mechanism via ALICONA Infinite-Focus optical 3D surface metrology analysis. The analysis was conducted merely on automatic transmission fluid (ATF) Perodua original equipment manufacturer (OEM) (ATF-3) series. The ATF samples analysed were categorized into two main operating conditions, encompassing actual distance travelled and continuous chassis dynamometer testing. The operating mileage for actual distance travelled were divided into three main sample classes. The sample number (S1-S6) is categorized as travelling distance (TD1) between 800 km up to less than 20,000 km actual distance travelled. Sample numbers (S7-S17) and (S18-S26) were each representing the operating travelling distance (TD2) and (TD3) encompassed 20,000 km up to less than 40,000 km and 40,000 km up to less than 60,000 km, respectively. The operating mileage for the chassis dynamometer testing meanwhile, was observed at the beginning of 0 km, 1,500 km, 3,000 km, 4,500 km, 7,000 km, and 10,000 km travelling distance which was categorized into sample DY1 – DY6. The outcome of important surface roughness parameters regarded as Ra, Rq, Rsk, Rp, Rv, Rt and wear particle size (elongation) for both operating conditions were determined and justified accordingly. It was observed that the occurrence of wear particles throughout both operating conditions was non-severe and normal wear mode category. This further concludes that a sufficient lubrication layer existed between the surfaces of engaged mechanical components within the AT system despite the ATF having been used more than its recommended period without compromising its quality of performance in the aspect of effective viscosity and additives content.

Keywords: wear particle; surface roughness; Automatic transmission fluid (ATF)

SOCIAL SCIENCES & HUMANITIES

I-CReST 2022:015-003 – The Courts' Cognizance of a Private Lease Scheme in Malaysia: One Man's Loss and One Man's Gain

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Abstract

The private lease scheme (PLS) is a long tenancy or selling a lease to buyers by the Housing developers. It is not an ordinary process of sale and purchase of a house as the lessee will not have any proprietary rights on a lease. Consequently, the rights of purchasers which are available under the Housing Development (Control and Licensing) Act 1966 (HDA), and its' regulations are not available for lessee under this PLS. The legal position of PLS is questionable in few cases. It is important to analyze the implementation of PLS in Malaysia and how it has affected the rights of purchasers or correctly term as a lessee. In the context of discussions in this paper when the term "purchaser" is used, it is referred to "lessee". In order to protect the purchasers, their titles must be registered in their names to enable them to enjoy the indefeasibility of title as guaranteed by section 340 of the National Land Code 1965 (NLC). Even if a lease is also capable to be registered but the rights enjoyed by a lesee differs than the rights that can be enjoyed by the registered proprietor. This paper aims to investigate the perceptions of the Malaysian Courts on the dissatisfaction of purchasers buying residential properties under a PLS.

Keywords: Lease, Purchasers, Title, indefeasibility, Residential Properties

I-CReST 2022:016-004 - Assessment of Student Engagement in Open and Distance Learning Environment in Construction Management Studies

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ABSTRACT

The proliferation of online learning in higher education has started to change the traditional classroom method of teaching and learning in recent years. The concept of Open Distance Learning (ODL) enables students to access teaching materials online and attend class through multiple technological platforms. Through ODL environment, emerging research attempts to investigate the student engagement in relation to online learning in higher education. However, limited studies have explored student engagement in the ODL mode environment. This study assesses student engagement in ODL mode of study in construction management programme. The Online Student Engagement (OSE) instrument has been adapted and distributed to construction management students via online survey. A total 121 undergraduate construction management students completed the online survey. The results indicate that skills and emotional components are the most important in engagement of students in the ODL environment.

Keywords: Online Learning, ODL, Student Engagement, Online Student Engagement

I-CReST 2022:019-021 - A Study of Continuous Quality Improvement for DCC30093 (1:2021/2022)

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ABSTRACT

This study was conducted to determine the causes why CLOs achievement for semester 1:2021/2022 decrease compared with the previous semesters. The respondents were Geotechnical Engineering (DCC30093) students, was given a several questionnaires through a Google Form after the result of the semester has announced. The study was focused on three semester which is Jun 2020, December 2020 and 1:2021/2022 where a virtual learning is still ongoing because of pandemic situation. Since Jun 2020, a videos tutorial has built up respective to a topic related and has used as a teaching aid (Emmy Liana ,2021) by given to a student to help on their study. CLOs achievement on Dis 2020 was increased compared with Jun 2020. It was proved, those tutorial videos were useful and contributed to this achievement. However, the percentage CLOs has decreased on 1:2021/2022 and this matter need to analyse to determine the cause and to find a best method for Continuous Quality Improvement (CQI) for DCC30093. The finding of the study has showed, respondents need additional of Student Learning Time (SLT) and tutorial questions. Respondent also agreed that a good personality and compliment by lecturer has made a class fun of excitement, indirectly will boost up their self-confidence. To respect the SLT, WhatsApp application is a good way to get fast and easy responses from these two parties when outside of class period. All this finding will be use as a CQI for the next semester ahead.

Keywords: CQI; SLT; Personality; Compliment; WhatsApp

I-CReST 2022:025-009 - Recognising Intertextual Connections in Literary Works Enhances Literary Competency

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Abstract

This conceptual paper expounds the ways in which recognizing inter and intratextual connections enhances literary competency. Literary texts have been regarded as a source of rich linguistic experience while they, in truth, extend beyond providing knowledge of authentic language use and usage. This paper, therefore, examines the ways in which a literary text leads a reader from the text being read (hypertext) to other texts that the author has used to develop the subject matter of her literary work. The scope of this paper is confined to aspects of literary study which are the theoretical framework and the application of the framework to analysing a literary text. In the context of this study, two concepts, namely, Claude Levi-Strauss' concept of *bricolage* and Gerard Genette's concept of transtextuality which would be used to analyse excerpts from Rani Manicka's novel *Touching Earth* to illustrate the rich non-linguistic knowledge that transtextuality offers in literary studies. The finding of this study would enable language and literature teachers to include transtextuality as a tool for enhancing students' knowledge of the world through reading literary works.

Keywords: bricolage; constructivism; transtextuality; literary competency; literary studies; Rani Manicka

I-CReST 2022:031-025 - The Acceptance of Using Internet for Learning among Islamic Boarding School Graduates in West Lombok, Indonesia

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ABSTRACT

The use of the internet in Indonesia is widespread nowadays, especially in education. Since the development of technology like smartphones and social media, most students are adaptive to the internet. Moreover, after the long period of online classes due to covid-19 pandemic in Indonesia, students used the Internet more than before. Meanwhile, the students of Islamic boarding schools are different from other kinds of school students in Indonesia. Islamic boarding school students are basically traditional students where they live together in a dormitory and study under the guidance of teachers widely known as *kyai* or *ustadz*. The access for the media technology and the Internet are limited for Islamic Boarding School students in order to prevent the bad influence of the internet on students. However, when they graduate from Islamic boarding school, the students are exposed to the internet. Hence, this study used the UTAUT2 model to identify the acceptance of using the Internet for learning among Islamic Boarding School graduates. The study was quantitative research which used purposive sampling to sample 100 graduates of Islamic Boarding School in West Lombok, Indonesia and distribute questionnaires to the respondents. Mean scores were used to answer research questions and t-test analysis was used to test research hypotheses. The findings of the study were that Islamic Boarding School graduates had positive acceptance towards the use of the Internet for learning. The study concluded that Islamic boarding school graduates use the internet for learning due to the positive acceptance they had towards usefulness and ease of use of the internet. However, this study recommended that the use of the internet should be encouraged in facilitating learning irrespective of Islamic boarding school graduates exposed after their graduation.

Keywords: Acceptance of using; Internet; learning; students; Islamic boarding school graduates

I-CReST 2022:033-031 – The Importance of Digital Comics Reading Culture as an Edutainment Tool among Mass Communication Students in UiTM Shah Alam

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ABSTRACT

Reading ability is important because it influences an individual's intellectual and emotional growth. Those who read well have a better chance of broadening their mental horizons and succeeding. In modern times, comics have become a means of interaction, entertainment, or even a method to render people informed by addressing a plethora of issues. Reading comics is an alternative way of reading in comparison with traditional books, for instead lines of words forming sentences, that are made up of images, which could either be technicolor or monochromatic, and lines that are much shorter. However, the introduction of images challenges the way comics are presented in printed form, very much akin to the challenge offered by the internet, which changes the culture of reading comics – from accessing those in printed form to those they could procure from websites instead. Therefore, this research, which was conducted by an in-depth interview with students from the Faculty of Mass Communication in UiTM Shah Alam is to collect the necessary data and aims to explore the importance of students reading culture as an edutainment tool on digital comics. The questions were designed to elicit information about the students' reading habits, preferences, and attitudes toward reading. The qualitative analysis of the research findings revealed that the students had an overall positive attitude toward academic and leisure reading, as they read academically and leisurely daily or at least once a week. By recognizing the emerging technologies available for supporting and accelerating educational comic development, this research addresses the diverse research opportunities for innovating effective strategies to enhance the students reading culture of digital comics and their importance of it.

Keywords: Reading Culture; Digital Comics; Mass Communication; Edutainment; Shah Alam

I-CReST 2022:035-053 - Malay's Acceptance Towards Controversial Marketing Used by Malaysian Products Founders and its Purchasing Behaviour Towards Their Products

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ABSTRACT

Recently, there are many product founders or business owners used controversial approach to gain publicity and attention from Malaysian about their products or brands. Using controversial approach are not something alien among the product founders and business owners, in fact, it seen as a trend and a phenomenon especially in the era of high-tech technology where news can be delivered more quickly through viral power. Issues arise when the controversial approach can be overboard sometimes but Malaysian still do support the brands or businesses. Therefore, the present study aims to identify Malaysian's acceptance towards the controversial approach used in the marketing and their purchasing behaviour towards the controversial brands. In achieving this objective, quantitative used by the present study by distributing the questionnaire to 200 Malay in Malaysia. In current study, stratified random sampling was used to obtain respondents' number. Finding shows there are significant impact towards controversial marketing used by local product founders and Malay's purchasing behaviour towards their products with correlations results >.50. Results shows that Malay tends to not purchase any product from any brand that applied controversial approach in their marketing. The negative effect of using controversial approach in marketing are somehow could be offensive and violating cultural sensitivity sometimes.

Keywords: Controversial approach; marketing strategies; product founders; purchasing behaviour; Malay

I-CReST 2022:036-054 - The Factors Influencing Working Styles/Modes During the National Recovery Phase Among Malaysian at Astro

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ABSTRACT

On the 1st of April 2022, Malaysia entered a new phase (in terms of the COVID-19 situation) known as the endemic phase. Modifications in phases frequently result in a slew of SOP changes, which disrupts the entire organization's routine. Issues emerge when, prior to the introduction of the endemic phases, certain organisations use rotating shifts or provide employees the option of working from home or in the office. Despite the urges from the Minister of Health, YB Khairy Jamaluddin, for employers to enable their employees to work from home, but it appears that everyone has been summoned to the office, disrupting the workers' routine once more. Therefore, the current research tries to uncover the media factors that influence media practitioners' decisions and the reasons behind their decisions. This research also will uncover the challenge that they face during the transition. A quantitative method is used in this study and 200 media practioner were involved using the snowball sampling technique in completing the questionnaires given. The findings suggest that working from home and from the office has a considerable impact on the issues that occur. According to the findings, many media practitioners prefer to work on a rotating schedule because the obstacles they experience, such as traffic and childcare, are reduced.

Keywords: working style; working modes; Media Practitioner; National recovery phase; Malaysian

I-CReST 2022:037-046 - The Effect of Social Media Influencer Marketing on Consumer's Perceived Brand Image and Purchase Intention among Youth in Malaysia

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ABSTRACT

Social media influencer (SMI) marketing has become widely used by both big and small brands in order to promote their products and services as well as improving their brand image among consumers. SMI are Key Opinion Leaders (KOL) who disseminate information through electronic word-of-mouth (eWOM) and are able to influence their followers, as people are more likely to believe information from people, they consider trustworthy. Issues arise when SMIs are sharing paid marketing materials as a part of a brands' online marketing campaign, without having a clear indication between a social media post with an honest opinion or a paid content. Therefore, the present study aims to identify the trustworthiness of social media influencers among youth and its effects towards the youth's perceived brand image and purchase intentions. In achieving this, a quantitative method is used in this present study by distributing the questionnaire to 200 youth in Malaysia who are active social media users and follow at least one SMI. Stratified random sampling used in the present study to obtain respondents' numbers. The data was stratified based on top 4 social media platforms in Malaysia. Findings show there is a significant impact of social media influencers' paid posts on youth's perceived brand image and purchase intention with correlation results >5.0. Results show that the stronger the youth's trust towards social media influencers will lead to the positive effects in perceived brand image and purchase intention to young social media users. Positive perception in brand image and purchase intention by youth is a result of the positive representation or image of SMIs and trustworthiness of the information delivered to the followers. Meanwhile, for users who perceive the SMIs as dishonest or lack credibility will give negative perception towards the SMI, brand image of the advertiser and lessor no purchase intentions present.

Keywords: Social Media Influencer (SMI) marketing; Key Opinion Leader (KOL); electronic word-of-mouth (eWOM); brand image, purchase intention.

I-CReST 2022:038-036 - Social Media and Its Influence on Vocabulary and Language Learning: Perspective from University Students in Malaysia

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ABSTRACT

Social media is a popular form of communication that is used by people of all ages. In addition to being used as a communication tool, institutions have integrated social media platforms such as Twitter, Facebook, and YouTube as learning tools to disseminate new information and connect with students. The rise in popularity of social media platforms has sparked debate about whether they are effective teaching and learning tools. This study sought to determine the influence of social media on English vocabulary development among students at Malaysian public and private universities, as well as the influence of social media on language learning interest. Additionally, this study examines the positive and negative effects of social media on language learning and vocabulary development. A quantitative research strategy was used in this study, with a questionnaire distributed to 200 students at private and public universities in Malaysia. This study obtained respondent numbers through a simple random sampling technique. The findings revealed that social media has a significant influence on teaching learning tools among students in Malaysian public and private universities. Furthermore, the study found that social media significantly improved vocabulary knowledge. The positive impact indicates that social media provided students with authentic and meaningful English materials such as videos, posts, captions, and tweets. However, the use of Internet slang and informal contractions on social media has an impact on students' formal speaking and writing style.

Keywords: social media; vocabulary; language learning; positive impact; negative impact

I-CReST 2022:039-057 - Sexting Behaviour and Its Effects Towards Young Adults in Malaysia: Perspectives from University Students in Malaysia

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ABSTRACT

Researchers have paid close attention to the phenomena of sexting in recent years, as various detrimental outcomes have been linked to it. However, in the context of Malaysia, such phenomena are poorly understood, as just one local qualitative study has been dedicated to understanding this behaviour among a group of teenagers. As a result, the current study chose a quantitative, cross-sectional, and correlational research strategy to better analyse this topic. This study aimed to look at the incidence of sexting among Malaysian young adults, gender and relationship status disparities in sexting behaviour, and the variables that influence people to sext (self-esteem, sexual experience seeking, and perceived peer pressure). As a result of the purposive sampling strategy, a total of 200 Malaysian young adults were recruited, with an online survey serving as a data collection tool. The participants did engage in sexting, according to the findings of this study, and there was no significant gender difference in sexting behaviour. In terms of relationship status, people in relationships sext more than singles, but there was no discernible difference in married people. Furthermore, only sexual pleasure seeking was found to be a major predictor of sexting behaviour, while self-esteem was found to be unrelated to sexting. As a result, the findings of this study could add to the body of knowledge in the field of sexual media studies in Malaysia, as well as provide important information for future researchers.

Keywords: sexting; behaviour; young adults; peer pressure

I-CReST 2022:040-182 - A Study on How Often the English Language is Used as a Communication Tool Among Secondary School Students in Malaysia: A Comparative Study between Private and Public Schools

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ABSTRACT

Since Tanah Melayu was ruled by the British and since Malaysia gained her independence in 1957, English has always been a part of our everyday communication. Our main language of choice is usually Malay, or Bahasa Malaysia, and it is even taught in formal settings, such as schools and universities. However, the English language was a large part of communication among the people of Malaysia, even till to date. The current issue that has arisen recently, is how the usage of English has lost its hold on the local population. People, especially the younger generation seem to be more comfortable speaking in Bahasa Malaysia. They hardly use English properly in their daily conversations and some only use it to get by on social media. Even then sometimes the English is atrocious. Therefore, by using quantitative method, this study will focus on how often students in private schools and students in public schools use the English language for their daily communication. This research will then go into detail on how fluent each group of students are when it comes to the English language and whether it will affect their ability to communicate. The study will conclude that while students in public schools have an understanding and an average usage of English, students in private schools tend to use it more, due to the medium of teaching being in English.

Keywords: usage of English language; communication tool; private school students, public school students.

I-CReST 2022:041-067 - Impact on YouTube Usage Among Children for Self-Satisfaction

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ABSTRACT

Children in Malaysia are increasingly using the internet, especially YouTube, which is a social medium that has played a vital role in supporting children in their daily lives, particularly when their parents are too focused with work. This study aims to examine the impact on YouTube usage among children and to assess the level of their self-satisfaction. Besides that, this study also wants to determine the relationship between entertainment motive and education information-seeking motive of using YouTube. It is expected that the entertainment motive and the education information-seeking motive have a positive and negative relationship with self-satisfaction. A quantitative research strategy was used in this study with distributed a questionnaire to 50 children and 50 parents in Putrajaya. Convenience sampling technique was also used to obtain the number of respondents. The findings revealed that children's motivations for accessing YouTube are mostly for entertainment, followed by information seeking. These findings suggest that YouTube can provide self-satisfaction to children seeking entertainment and educational knowledge.

Keywords : Impact, YouTube, Usage, Children, Self-Satisfaction

I-CReST 2022:044-014 – The Impact of Harry Potter Films on Children's Behavior based on Concrete Operational Concept by Jean Piaget

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ABSTRACT

Exciting movies are films with components that can affect a person's psychology and emotions including towards children. The Harry Potter movie is basically a show aimed at children after being adapted from a novel. It is about a world that full of magic and beautiful personalities that even adults are amazed by the links made between the minute details within every scene. However, there are several different opinions related to the story that say that the story has either a negative or positive effect on the children. This research was done to analyse the relationship between element of concrete operational concept and the impactful scene from one of Harry Potter movie, which is Harry Potter and the Sorcerer's Stone (2001). This research uses qualitative approach to answer all the research objectives with applying the method of descriptive analysis and focus on the materials collection based on phenomenally recorded news and feed backs from public as well as the support with authors, newspapers, journal, and other sources. Also, the cognitive operational concept by Jean Piaget's cognitive development theory is use in this research to draw the conclusion at the end of the study. Thus, Harry Potter and the Sorcerer's Stone (2001) can be watched by the children especially children under the age of 7 until 11 years old after analyzing through each scene and relate it with the theory mentioned above. Article in Bahasa Malaysia must include title and abstract in English.

Keywords: Harry Potter's movie, children, behavior, children's psychology

I-CReST 2022:046-019 - The Transformation of Television Programs in the Convergence of Media: Case Study on Shanxi Radio and Television Station

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ABSTRACT

Great changes have occurred in China's media environment as a result of the growth of new media, particularly for Television and Radio stations. These media which were once considered powerful media in the conventional era are now under tremendous pressure to modernize There are new potential and challenges for China's television programme transformation, given the country's rapid economic and social development, as well as its continual improvement of its comprehensive national power. New media technologies play a crucial role in increasing productivity and transforming organizational structures. Growth and transformation in the Chinese TV industry are also due to the continuous development and evolution of media convergence. Through observation and in-depth interview this paper examines the transformation of television programs of Shanxi Radio and Television Station in terms of content, technology, and policy. By referring to theory of media convergence, it also lays forth a framework for readers to consider how to apply communication tactics for the building of media industry in the context of China. It gives a thorough analysis of the mechanisms through which Shanxi Radio and Television Station utilise proper communication techniques to attract its audiences as well as stakeholders.

Keywords: Television Program; Media Convergence; Transformation

I-CReST 2022:049-016 - Sustainability and Performance: A study of Malaysian Waqf Institution

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ABSTRACT

As waqf becomes a well-known and prominent socio-economic instrument across the world, it has caught the interest of researchers and policymakers. However, the performance of waqf institutions in Malaysia has been afflicted with inefficiency issues in recent years, particularly in waqf management. Despite the fact that the development of waqf institutions has been positive, there are still some problems that prevent them from reaching their full potential. There has been little research into the factors that can influence the sustainability and performance of waqf institutions. Therefore, a series of three case studies were conducted with Malaysian waqf institutions utilising the protocol discussion to study the factors influencing their sustainability and performance. Three propositions are revealed as a result of the findings, namely (i) transparency; (ii) governance and controls; and (iii) utilisation of online digital media. In summary, the current study has added to the waqf literature in terms of sustainability and performance, which will benefit policymakers and future research.

Keywords: Performance; Waqf; Sustainability; Reporting; Governance

I-CReST 2022:050-017 - Prisoners' Rights to Vote: A Review of Literature

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ABSTRACT

Democracy is a well-known form of government practiced in many countries across the world. One of the fundamental criteria pertaining to democracy is how it promotes basic human rights like equality, which can be proven by the people's ability to vote during the general election. However, some issues arise in the case of disenfranchisement, where prisoners are restricted from voting. These prisoners' rights to vote as fundamental liberty are automatically waived when committing the offense. Due to that, this paper aims to discuss the relevant reasons why prisoners should be allowed to vote. To attain this goal, scholarly literature reviews were conducted via thematic analysis to determine the primary themes for this study. The analysis has indicated several significant reasons why convicted people or prisoners should be allowed to participate in that event. One of those reasons is prisoners are given unfair treatment in the selection of voters. The authorities do not consider their voice and opinion on this topic and are merely believed to be uninterested. Besides that, barring them from voting violates fundamental human rights. In reality, numerous international laws protect this right but are ignored in some parts by the countries. Lastly, prisoners should be allowed to vote as it enforces democratic values. Restricting prisoners to vote is not aligned with the aim of the sentence of imprisonment. Thus, this paper will present information to convince government entities to recognize that voting is an intrinsic human right and that all people, including prisoners, should not be denied it.

Keywords: disenfranchisement; human rights; law; prisoner; vote

I-CReST 2022:051-030 - The Use of Celebrity Endorsement and its Effects towards Car Aficionados' Purchase Intention: A Study on Automotive Industry in Malaysia

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ABSTRACT

Celebrity endorsement is one of the popular marketing communication strategies used by many brands to draw attention and attract the consumers. Advertisers are willing to spend huge amounts of money to endorse these celebrities knowing that they are the personal and social favourites to influence consumers' purchase intention as well as their lifestyles, especially in the beauty and fashion industry. Previous research regarding the effectiveness of celebrity endorsement have been done widely, but very little or no studies have been done towards automotive brands specifically in Malaysia. Therefore, this study aims to identify the use of celebrity endorsement towards car aficionados' purchase intention, to identify the effects of celebrity endorsement towards car aficionados' purchase intention and to identify the relationship between the use of celebrity endorsement towards purchase intention. In achieving this, this study used quantitative method by distributing to 177 automotive club members. Finding shows there are significant impacts towards using celebrity endorsement as marketing communication strategy towards car aficionados' purchase intention. Results show the attractiveness, trustworthiness, expertise and congruence of the endorser will lead to purchase intention. The implication of this study is that automotive brands should plan strategically in deciding the right celebrities to represent their brands based on their knowledge and expertise instead of just focusing on the physical appearance of the celebrities.

Keywords: Celebrity endorsement, car aficionados, purchase intention & automotive industry

I-CReST 2022:052-080 - Abstract Template for International Conference on Research and Practices in Science, Technology and Social Sciences (I-CReST) 2022

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ABSTRACT

Discovering the issues and challenges faced by different parties, departments, and agencies throughout the process can help find solutions to solve these issues and challenges. Then, achieving the article's goal of sustaining the Gambus Johor musical instruments and music for future generations. The purpose of this article is to list out and discuss the issues and challenges of sustaining the Gambus Johor musical instrument and music faced by the radio stations, television stations, the government especially the Ministry of Tourism, Arts, and Culture, school authorities, and Ministry of Communications and Multimedia in Malaysia.

Keywords: Gambus Johor sustainability; Gambus Johor; Issues; Challenges

I-CReST 2022:053-048 - The Use of E-Commerce and the Issue Faced by Business Owners in Achieving Business Stability in Malaysia

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ABSTRACT

Electronic commerce which is commonly known as E-commerce refers to the purchasing and selling of goods and services, as well as the transmission of payments and data, over an electronic network, most commonly the internet. E-commerce, which is the largest sector of the electronics business, is driven by technological breakthroughs in the technology sector. In 2020, Malaysia's e-commerce market was worth 30.2 billion Malaysian ringgit. This was a 24.8 percent rise over the previous year, when the e-commerce value was 24.2 billion Malaysian ringgit. As the e-commerce has its booming and glorious side, the business owners who put their business on the various e-commerce platform faces some issue that cause few sets back for the business owner in their quest to attain a good business stability. Therefore, the present study aims to identify the various issues that are faced by e-commerce business owners in Malaysia, that causes various setbacks in their businesses. In order to accomplish this, quantitative method used in the present study by distributing questionnaire toto 70 e-commerce business owners in Malaysia by using a simple random sample method. Findings shows that e-commerce has impacted the business sectors in Malaysia being the largest sector of the economic business. The issues faced by the business owners are cyber & data security, attracting the perfect customer competition & competitor analysis among many more. It must be of not that despite all the various issues e-commerce is still a leading business sector.

Keywords: E-commerce; Business; Business Stability; Malaysia

I-CReST 2022:055-071 - The Use of Instagram and Its Effects Towards Students' Social Lifestyle: A Comparative Study Between Public University in Kuala Lumpur and Public University in Melaka

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Abstract

The social media Instagram is commonly used by people nowadays, this is because of its features that allows people to share pictures and videos instantly with their friends. Instagram users share their social life activities online through Instagram feed posts or Instagram stories such as socializing with friends, going to fancy restaurants, spending time with family and other various activities. However, issues arise when students start to compare their social lifestyle among each other. This comparison can lead to a change in social lifestyle of students as they may have the tendency to try something out of their norm. Therefore, this present study aims to identify the content shared by students in Instagram and its effects towards their social lifestyle. The present study deployed a quantitative research method involving questionnaires research instruments to 200 students in Public University in Kuala Lumpur and Public University in Melaka. A stratified random sampling technique will be used in order to acquire the number of respondents. Results show the longer the time students spend on Instagram watching their friends post online will lead to the negative effect of their social lifestyle on both students in Public university in Kuala Lumpur and Melaka. As students spend more time watching their other friends having a great time doing different activities, it may have a negative effect on them but students that spend less on Instagram will not have a negative effect towards their lifestyle.

Keywords: Instagram, Students, Social Lifestyle, Public University, Kuala Lumpur, Melaka

I-CReST 2022:058-029 - Exploring the Influence of Digital Piracy towards the Growth of Malaysian Media Industry and Actions to be Taken

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ABSTRACT

During the COVID-19 pandemic, audience media consumption has shifted to digital media as online streaming became the new norm and Malaysia is no exception. Digital media penetration has also increased due to its easy accessibility and a variety choice of content. This has also seen the growth of over-the-top (OTT) platforms that cater personalised content to multiple audience segments at the same time. However, issues arise when digital piracy occurs as consumers are able to consume content for free and at cheaper price. This causes the creative works among the media industry players to be stolen, risking thousands of jobs and loss of profit. This study is conducted with the aim to discover digital piracy abilities towards the growth of the Malaysian media industry and what are the proposed regulations and actions that should be taken to combat this issue. Qualitative methodology approach was used in this research study by conducting in-depth interviews with six respondents among Malaysian media industry players. To select the respondents, the researcher applied convenience sampling on several characteristics such as a minimum of three years working experience in the media industry and minimum education level of bachelor degree. Findings show that digital piracy does have a significant impact towards the growth of the Malaysian media industry as it affects all layers of industry players from producers to presenters. Acknowledging the cruciality of this issue, respondents suggested to enforce the law and to ensure public awareness and knowledge on the negative consequences of digital piracy to all parties.

Keywords: Digital piracy; digital media; Covid-19; Malaysia

I-CReST 2022:059-134 - The Exposure of Advertisements and Its Effects towards Millennials Buying Decision

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Abstract

Advertisement is one of the best ways to communicate with customers in order to introduce a certain brand or products in the market. Advertisements help to inform customers regarding the available products in store, what is new in store and what the products are about. Issues arise when millennials nowadays are no longer watching advertisements, they tend to skip the advertisements. Most shocking is, they are willing to pay extra for premium access or pass just to skip the advertisements. In the past, there was no choice to watch or not to watch the advertisements as there was no "skip ads" button. Now they can choose to skip the advertisements and this is bad for advertisers. The level of exposure towards a certain brand or product will be affected. Thus, this present study aims to identify the exposure of advertisements influencing millennials buying decision. In achieving this, a quantitative method was used by distributing the online questionnaire to 200 millennials. Stratified random sampling used in the present study to obtain respondent number. Findings show there are significant impacts towards buying decisions when millennials are exposed towards advertisements with correlations results >.50. Results show that when they frequently watch advertisements, it influences buying decisions. Millennials tend to purchase unnecessary products. It is one of the negative effects from watching too many advertisements in the media. Meanwhile, millennials that skipped advertisements are not exposed themselves towards advertisements and this will avoid them to spend their money on unnecessary products or services.

Keywords: Exposure, Advertisements, Millennials & Buying Decision

I-CReST 2022:060-126 - The consumption of TikTok Food Content and its effects towards university student's eating habits in Malaysia (I-CReST) 2022

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Abstract

In recent years, TikTok usage has been on the rise especially during the pandemic, and many videos were generated by users and brands with contents such as humour,educational, collaborations, and tutorials. One of the biggest content pools is under the FoodTok or Food TikTok contents where it features food reviews, recipes, how-tos, food diary, and food trends. The application plays a huge role in the way we eat and how we develop eating habits, in 2021 it was found that amongst the FoodTok contents was a hashtag #WhatIEatInADay where people shared their diets and eating habits most of which showcases unhealthy eating habits by eating lesser calories to stay thin thus making it a pro-eating-disorder content. Amongst the consumers who are exposed to these contents are also university students as the largest age group on TikTok are between 18 to 24 years old. Current study aims to identify the acceptance or consumption of TikTok food content amongst students and its effects towards students' eating habits. To achieve this, a quantitative method is used in the present study by distributing questionnaires to 100 students in the public university at the Universiti Teknologi MARA. Snowball sampling is used in the present study to reach the targeted number of respondents. Findings show that there is a significant impact towards using TikTok and students' eating habits. Majority of the results shows that longer period of consuming the #WhatIEatinADay or dietary related contents leads to significant negative effects on students' eating habits from both faculties. The negative effects led to overspending on food, developing early stages of eating disorder, and body image issues.

Keywords: TikTok, students, eating habits, eating disorder

I-CReST 2022:061-033 - Opportunities Offered by Social Media Algorithm towards Self-Branding Visibility and User Engagement among Local Content Creators in Malaysia

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ABSTRACT

Social media algorithm is used to sort posts in a user's feed based on relevance rather than publication date. The content that appears in a user's feed is organized based on the user's preferences. Facebook, Twitter, Instagram, TikTok, and all other advertisement-supported social media platforms use their users' behaviour to determine which content to display in their feed. The issue arises as social media has evolved to optimise for social scale as the value of social has shrunk into a progressively smaller niche, to the point where social media is now truly relevant only for a specific type of content associated with a specific type of behaviour called a "micro moment." Therefore, the current study aims to explore the opportunity offered by Social Media Algorithm towards self-branding visibility and user engagement among local content creators in Malaysia. A quantitative method used in this current study and 200 active social media users in Malaysia were selected using purposive sampling to complete the questionnaire. The finding indicated through social media algorithm system have a great deals to promote and maintaining relationship between user and content creator. Results positively shows that social media algorithm have successfully aided in increasing the visibility of content creators in Malaysia by allowing users to conduct specific searches through the use of hashtags, locations, and brands to help them become more widely known. Nevertheless, the study also discovered that this "micro moment" behaviour has both positive and negative consequences for the content creator. Future research should examine the effect of 'micro moment' towards Malaysian e-commerce business.

Keywords: Social Media Algorithms; content creator; self-branding; user engagement; micro moment

I-CReST 2022:062-023 - An Overwiew Pertaining To The Tight Spot Of Different Work Types That Can Be Protected By Copyright

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ABSTRACT

The Copyright Act 1987 (Act 332) provides the author, copyright owner, and performer the exclusive right to regulate artistic works generated by them for a set length of time (Malaysia). The issue at hand concerns the types of works that are protected under the Act. The second point to consider is the copyright owner's rights. It is necessary to ensure that anyone who uses any copyrighted works without consent or authorisation from the author, copyright owner and performer, may constitute an infringement under Copyright Act 1987. Therefore, the article attempts to explore and address issues relating to types of works that can be copyrighted and the rights of the copyright owner, and the infringement of copyright. The research methodology used in this paper is qualitative. Finally, it is critical to note the pertinent provisions of the Copyright Act 1987 in order to determine whether the Act provides full copyright protection in Malaysia or is insufficient.

Keywords: artistic works, Copyright Act 1987, copyright infringement, intellectual property, Malaysia

I-CReST 2022:063-024 - Error Analysis: The Correlation between Justification Inclusion and Learners' Performance in an English Grammar Assessment

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ABSTRACT

Error Analysis (EA) is regarded as an essential element in the English language which facilitates learners to identify and correct language errors that they have produced themselves or from other discourses. Nevertheless, especially among learners of an ESL program, their actual understanding of the reason for the errors might become undetermined if they do not justify the reasons of the error analysis. Hence, how do English instructors certify that students truly know the reason instead of simply guessing the errors and corrections? This study investigated the relationship between error justification inclusion in a Grammar assessment and post-secondary ESL learners' performance at one higher learning institution in the Klang Valley. The study sought to examine if there was a significant relationship between justifications of EA and students' performance. Quantitative method was utilized to analyze data using 131 samples from an error analysis assessment. Findings suggested that the inclusion of EA justification has a strong correlation with the students' performance in the assessment.

Keywords: error analysis; error justification; grammar; noticing

I-CReST 2022:064-027 - Research on City Image Communication Strategy of China's New Government Media: The Case of Douyin Account "Hefei Traffic Police"

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ABSTRACT

The city image is to disseminate the public's comprehensive evaluation and understanding of a city's internal overall strength, apparent development vitality and future development prospects. With the development of new media technology and changes in the communication environment, new government media has entered the era of short videos and become an essential media for disseminating urban images. Through questionnaire survey and other research methods, this paper studies the urban image communication strategy of the government Douyin account "Hefei Traffic Police". Based on the survey results, the article summarizes the strategy of the government Douyin account "Hefei Traffic Police" to spread the city image from the aspects of form, contents and audience. It analyzes the acceptance of its communication effect. According to the problems found, it proposes that the government Douyin account "Hefei Traffic Police" must pay attention to the profound cultivation of content, meet the audience's needs, innovate the way of communication, and promote positive concepts.

Keywords: City Image; New Government Media; Douyin Account "Hefei Traffic Police"; Questionnaire Survey; Strategy Analysis

I-CReST 2022:065-058 - The Use Of Social Media Tiktok In Influencing Generation Z Online Purchasing Behaviour In Malaysia

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ABSTRACT

TikTok is one of the world's fastest-growing social media platforms, with over 170 million downloads, making it the most downloaded app in the world in 2022. Almost half of TikTok's user base comprises young people aged 18 to 24. TikTok has been used by many sellers and companies to spread their advertising and marketing campaigns in order to sell their products due to its large number of users and exponential popularity. However, purchases made by the younger generation were made impulsively and simply by following social trends, resulting in unnecessary purchases. This behaviour is seen as widespread, particularly among the younger generation. The purpose of this research is to look into the factors that influence Gen Z's purchasing habits. The data is gathered using a qualitative method that includes a focus group discussion. A semi-structured interview with 5-6 people was divided into two groups. Despite the fact that the products are not required, the majority of respondents said they would buy them after viewing a product or service-related video post on TikTok. The findings offer recommendations for future TikTok research as well as an opportunity for relevant authorities to design appropriate frameworks to reduce impulsive purchases among Generation Z.

Keywords: TikTok, purchasing behaviour, generation Z, marketing, advertising.

I-CReST 2022:066-059 - Audience Perception Towards the Age of Newscasters and Its Credibility in Buletin Utama, TV3

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ABSTRACT

Newscaster is the key person as part of the end product in news gathering and production. Thus, the credibility of newscasters is a crucial factor to grasp its audiences. Nowadays audiences lean into engaging with new media that is easily accessible with just a click. The issue arises when news organisations have to compete in social media trends to sustain their audiences. Image is a significant factor that affects the credibility of the newscasters. Hence, it affects the audience's preferences and viewing pattern. More importantly, it impacts the overall ratings of the newscasts which is the major source of income from advertisers. Therefore, the current study aims to explore the audiences' perception on how image affects the credibility of the newscasters. In achieving this, a qualitative method is applied in this study by conducting in-depth interviews through emails with loyal audiences of Buletin Utama. In this method, non-probability sampling of purposive sampling is used. Moreover, the concept of saturation is applied. Finding shows that audiences perceive mature newscasters as more credible that signify experience, professionalism and competence compared to the younger newscasters. The outcome also suggests that mature newscasters are perceived as the influence of audience engagement, loyalty and trust in Buletin Utama. Overall, seasoned newscasters are the asset of TV3 who reflect the ratings and build the reputation as the leading broadcaster in Malaysia. This study suggests that television news has to embrace the legacy of seasoned newscasters in order to sustain its credibility and popularity. In addition, it has to strengthen its content and presentation in order to stay relevant and sustain as the most credible source of news platform in the future especially among youth.

Keywords: Audience perception; age; newscasters; credibility; Buletin Utama

I-CReST 2022:068-026 - *Tazkiyat al-Nafs*/Purification of Soul as a Treatment of Mental Health Problems Due to Covid-19

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ABSTRACT

The mental health problems faced by the community since the COVID-19 virus hit the world and Malaysia are increasingly worrying all parties. The existence of this virus greatly affects the aspects of physical and mental health which are important elements of a human being. This study aims to highlight *tazkiyat al-nafs*/purification of soul as a method of treatment in dealing with mental health problems. This study uses the method of content analysis through the collection of data from authoritative primary and secondary sources related to *tazkiyat al-nafs* recommended by Islamic scholars. The results of the study explain that *tazkiyat al-nafs* is suitable to be applied to individuals who face mental health problems in order to return to normal and better life. This study produces a corpus of knowledge according to the views of Sufis in living a better life mentally and physically. Efforts in managing the stress of life experienced by the community nowadays through the appropriate approach need to be applied so that the problem of stress in life can be overcome and treated with effective methods in surviving life throughout the spread of COVID-19.

Keywords: counselling; spiritual; tasawuf

I-CReST 2022:069-028 - The Usage of Online Distance Learning and its Effect towards Students' Face to Face Communication Skills in Klang Valley: A Comparative Study Between Public and Private Kindergarten Students

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ABSTRACT

Online distance learning (ODL) is an alternative way of learning process that has been widely used in Malaysia by the educational institution since Movement Control Order (MCO) started in March 2020. The alternative was not only limited to students who already have basic communication skills, it also applies to students who just started their educational life such as kindergarten students in public and private educational institution. Issue arise when MCO was extended and the kindergarten students did not have the chance to socialize with people has led them to having problem in doing face to face communication. Therefore, the present study aims to identify either this physical separation could lead to positive or negative effects towards kindergarten students' face to face communication skills. In achieving this, quantitative method used in the present study by distributing questionnaires to 200 parents of public and private kindergarten students in Klang Valley. Purposive sampling used in present study. Findings shows there are significant impacts towards the usage of ODL and students' face to face communication skills with correlation results >.50. Result shows the longer usage of ODL will lead to the negative effects in students' face to face communication skills. Negative effects in using ODL for longer period of time is due to easier way of the learning process but not for the engagement with the students. Meanwhile, for educational institution which provided interactive ways of teaching, it gives a positive result in students' face to face communication skills.

Keywords: Online Distance Learning (ODL); face to face communication skills; kindergarten students; public and private kindergarten

I-CReST 2022:070-060 - Occupational Burnout among Public Relations Practitioners in Malaysia and the Impact on the Organisations

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ABSTRACT

A branch of communication practice, Public Relations (PR) often seen as demanding, incredibly challenging and a fast-paced career. This is in relation to the nature of the work that involves deadlines, handling different sorts of stakeholders and round the clock communications especially during crises. Issues arise when these practitioners suffer occupational burnout, which affects the quality of their performance. Therefore, the present study aims to ascertain the prevalence of occupational burnout among PR practitioners in Malaysia and to identify the impact on the organisations the PR practitioners represent. Using a quantitative approach with a non-probabilistic sampling technique, 75 questionnaires which include the Maslach Burnout Inventory (MBI) are distributed to PR professionals in both the public and private sector in Malaysia. The MBI, a psychological instrument commonly used to measure the level of occupational burnout, consists of three factors that are Emotional Exhaustion, Depersonalisation and Personal Accomplishment. The findings show that 68% of the respondents have a high degree of occupational burnout concerning Emotional Exhaustion, 74.7% have a high degree of burnout concerning Depersonalisation while 58.7% of the respondents shows a high degree of burnout concerning Personal Accomplishment. Overall, 37% of the respondents recorded a high degree of burnout for all three factors. Occupational burnout also shows a significant impact on the turnover intention. Therefore, the present study suggests that organisations to take a closer look on their PR practitioners, formulate appropriate methods in coping with and avoiding burnout thus mediate the impact especially on turnover intention.

Keywords: Public relations; burnout; work stress; Malaysia

I-CReST 2022:071-047 - The Usage of Instagram and its Impact on Women's Appearance and Lifestyle in Malaysia

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ABSTRACT

Instagram is one of social media that has a lot of users and is being used worldwide. Instagram help people to stay connected with their smartphone at any time. People update their photo and video on Instagram daily to share their activities and attract an audience to see it. Most influencers gain their follow through their social media activity especially on Instagram. There are complications, which is the usage of Instagram gives an impact towards women's self-esteem as they see the beauty standard that is being implemented in social media. Therefore, the present study aims to identify the usage of Instagram and its negative impact on women's appearance and lifestyle. A quantitative research has been conducted by distributing the questionnaire to 300 respondents. Simple random sampling was used in the present study to obtain respondents' numbers. The data is only eligible to those using Instagram. Findings show there is correlation between the usage of Instagram and women's appearance with correlations results >.50. Results show the usage of Instagram leads to the negative impact on the women's appearance. The negative impact of Instagram, women strive to satisfy beauty standards set on social media by following an excessive diet to get their ideal body.

Keywords: Instagram; women; appearance; lifestyle

I-CReST 2022:072-035 - Crime Prediction Using Geospatial Intelligence System for Crime Preventing

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ABSTRACT

Crime prediction relies on significant amounts of various data sources and is analysed through mathematical models, predictive analytics techniques, and machine learning algorithms to identify patterns of crime. To date, there has been little research conducted to examine and extend which repeat and near-repeat victimisation within crime hotspots can be collocated for crime prediction (Chainey et al., 2018). Therefore, this paper aims to identify crime patterns using crime prediction with repeat and near-repeat analysis. This study employed the GIS tool, namely, repeat and near-repeat analysis as the primary methods. Historical crime: all types of data used in the years 2015 and 2016 are analysed. The area of study is Petaling Jaya, Selangor. By using repeat and near-repeat analysis, the results reveal that there is a significant ($p=0.01$) and a meaningful near-repeat victimisation pattern were found in the study area. The most over-represented space-time range that is significant is the zone from 1 to 100 metres and from 0 to 7 days from the initial incident. The likelihood of another crime incident is approximately 22% higher than if there is no discernible pattern. The most over-represented repeat victimisation range that is significant is the zone from 0 to 7 days after an initial incident. The likelihood of another incident is approximately 78 percent higher than if there were no repeat victimisation patterns. This result also shows there are five local hotspots as prediction zones in the study area. The importance of the study is that it provides useful information for assisting law enforcement in improving crime prevention strategies using geospatial technologies.

Keywords: Crime mapping; GIS; spatial statistic; crime prediction

I-CReST 2022:073-037 - English Language Trainee Teachers' Perceived Understanding and Development of Pedagogical Content Knowledge

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ABSTRACT

Pedagogical content knowledge (PCK) as introduced by Shulman in the 80s is argued to be the most important component of teacher knowledge that differentiates between a subject matter expert and an effective teacher. Understandably, there is extensive research investigating the development of pedagogical content knowledge among teachers of various fields of specialisations and its impact in the teaching and learning process. While the concept of PCK has been around for more than 30 years, research investigating trainee teachers' perceived understanding of PCK is still limited. This study argues that development of PCK is futile if trainee teachers do not possess clear comprehension of PCK, thus affecting successful development of PCK. The aim of this qualitative study is to explore English language trainee teachers' perceived understanding of PCK and their perception as to whether they possess PCK. Two trainee teachers undertaking practicum participated in the study. The semi-structured interview and observation are used to gather data for the study. Findings revealed limited understanding towards PCK, which affected the development of PCK among the trainee teachers.

Keywords: Teacher knowledge; Pedagogical Content Knowledge (PCK); teacher trainees

I-CReST 2022:075-039 - The Use of Instagram and the Acceptance of Medical Cannabis Decriminalization in Malaysia: A Content Analysis of Selected Instagram Pages of Cannabis Advocates

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ABSTRACT

Instagram has become a popular platform for communities or organizations to convey messages for an engagement to the general public for the reason of educating of an unfamiliar topic. In Malaysia, it is notified of a heated conversation about medical cannabis in the social media such as Instagram. Medical cannabis content has received a distinguishable acknowledgement throughout the world for its benefits and also recognized in the US as the future of wellness that provides daily and occasional needs of its consumer, hence helps in contributing to economic growth. Issues arise when in Malaysia, cannabis is still classified under the Dangerous Drugs *Act* 1952 which punishes those individuals caught in custody of 200 grams of cannabis with a mandatory death penalty if convicted as trafficking drugs. This issue, then has inspired conversation of cannabis activism in Instagram. Therefore, the present study aims to identify the acceptance towards medical cannabis decriminalization through readers' response to the postings of Instagram pages in Malaysia. In realizing this, a qualitative method used in the present study by analyzing responses to postings from Instagram pages that is deemed providing exposure to medical cannabis or as an act of education for cannabis decriminalization in Malaysia. Findings show there are significant positive acceptance towards medical cannabis decriminalization. The responses are categorized by themes emerges from the data found. The global exposure of medical cannabis has somehow broken the taboo of cannabis as a dangerous drug and therefore its negative conversation in the media is seen less.

Keywords: Medical cannabis; decriminalization; acceptance; Instagram; Malaysia

I-CReST 2022:076-040 - Pedagogical Integration: Study on the Integration of Intellectual Property into the Music Composition Teaching

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ABSTRACT

A musical work is a type of work in copyright law. Most national copyright laws and regulations and international copyright conventions classify and outline the types of works, of which dramatic or musical theatre works with or without words fall into the category of works. In the teaching of musical composition, teachers often focus more on training students in performance techniques and neglect to explain the legal implications of musical works, resulting in a large number of musical works being infringed in practice. By incorporating intellectual property rights into theoretical teaching, students can develop their performance skills while strengthening their awareness of copyright, thus enhancing both their skills and literacy. This paper uses qualitative research methods to illustrate the teaching of music composition, and provides an in-depth analysis and discussion of the awareness of music composition and the possible infringement problems that can occur in music composition and the ways to defend rights. As a result of the study, a curriculum that is different from the traditional music teaching system, the teaching of the identification of infringement in music, and the strengthening of learners' awareness of the similarity of musical works can better prevent the occurrence of infringement in society.

Keyword: Integration of teaching; intellectual property; music composition; teaching; work

I-CReST 2022:079-042 - Psychological Analysis of Child Witness Testimony

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ABSTRACT

Witness testimony plays a vital role in obtaining leads in cases, collecting evidence of crimes, determining the direction and scope of investigations, effectively combating crimes and trials. And therefore obtaining correct and reliable witness testimony is a key point in the investigation, prosecution and trial process. With the increasing number of children's cases in recent years, the importance of child witness testimony has become increasingly apparent. This is not only the focus of jurists, but psychologists have also been working on this issue. In the context of the development of psychological and cognitive science, the debate on the competence of the child witness has changed to one of determining the reliability of the child's testimony, as the child's perception, memory and expression are different from those of the adult witness. Because of their physiological and psychological characteristics, child witnesses have deficiencies in encoding, storing and extracting information from their memories, so it is critical and difficult to judge the reliability of children's testimony. On the contrary, practical principles should be developed to enhance the reliability of child witnesses' testimony, taking into account the physical and psychological characteristics of children. With this in mind, this paper further analyses child witness testimony as the focus of the study, which I hope will be helpful.

I-CReST 2022:080-043 - A Literature Review of the Early Childhood Education: Developmentally Appropriate Assessment Practices & Strategies

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ABSTRACT

Early Childhood Education (ECE) is a large, dynamic, and ongoing system that requires extensive educational planning and policy support. Early childhood articulation in the United States has developed a complete system and planning system in terms of management, teacher training, teaching stage, curriculum articulation, and teacher employment. In China, however, kindergartens blindly adopt reading, writing, and calculation as early childhood articulation curriculum goals, ignoring children's development laws and characteristics. To address the issue, this research will systematically review and synthesize literatures and evidence from China and the United States in order to discuss education development issues such as quality, assessment, and strategies. The studies covered in this review can be classified as follows to improve understanding of assessment in ECE in China and to make comparisons with findings from US studies: (1) studies that concentrate on ECE assessment concepts and aspects; (2) studies that concentrate on specific elements of the ECE assessment process, such as participants, standards, and instruments. This paper also examines the curriculum reform process and demonstrates the reform's heavy reliance on Western theories and practices in early childhood education. We proposed future research and practice directions based on the findings, stating that evaluation concepts, strategies, and components need to be defined and characterized more explicitly. This research suggests future research and practice directions for improving education development and achieving a sustainable future. Additionally, the diversity of participants, standardization, and instrument localization should all be emphasized.

Keywords: Early Childhood Education (ECE); developmentally appropriate assessment practices; systematic literature review; child development; early learning

I-CReST 2022:083-049 - Study on Notarial Evidence Forensics for Intellectual Property Crimes in China's Legal System

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ABSTRACT

Traditionally, people have focused more on the basic function of notary publics as notarial witnesses. In practice, in addition to the notary public's ability to conduct evidentiary depositions of witness testimony, documentary evidence, physical evidence and audio-visual materials (including electronic evidence) in the general civil field, the notary public is also heavily involved in corresponding evidentiary depositions in the field of intellectual property. In China, many notary offices have set up departments specialising in the evidence forensics in relation to intellectual property. China's Civil Procedure Law makes it clear that legal acts, legal facts and documents that have been notarised through legal procedures shall be used by the people's courts as the basis for finding facts. Therefore, notary offices, as traditional third-party certification institutions, provide notarised documents as part of the legal evidence. In the investigation and evidence stage of IPR protection, rights holders also prefer to rely on notary publics to obtain evidence of crimes. At present in China, although notarial evidence is widely used in practice, some of the problems relating to the notarial evidence forensics have not been well resolved. The main focus is on how defective notarial evidence can be recognised in procedural law, and the reasons for the defects mostly stem from the irregularities and professionalism of the notary's evidence forensics procedures. Based on this, this study uses qualitative research methods to analyse the Latin notarial system in civil law countries and to explore the issue of how defective notarial evidence is recognised in procedural law in China. As far as the findings of the study are concerned, the successful experiences of foreign countries are combined to strengthen the proof of notarial evidence by optimising the right of investigation of notarial evidence, strengthening the notarial ex officioism and guaranteeing the independent attestation status of notaries. In addition, in terms of reducing defective evidence, it is also important to strengthen the notary's ability to obtain evidence, standardise the format of notarial documents and improve the chain of proof of evidence.

Keywords: Intellectual property; evidence law; notarial evidence; evidence forensics; procedural law

I-CReST 2022:083-050 - Ceramic Copyright: A Study of Intellectual Property Rights Based on Ceramic Artworks

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ABSTRACT

At present, on the international front, developed countries and regions are gradually shifting their labour-intensive industries to developing countries due to energy and raw material constraints and rising human resource costs. Companies keep their technological development and pattern design in their home countries and transfer their raw materials and product manufacturing processes to developing countries. As a result of these factors, the production of ceramic products in developing countries has increased significantly. From the Chinese side. In 2013, China proposed the "One Belt, One Road" foreign development strategy, which has brought more business opportunities for the ceramics industry and promoted the development of China's ceramics industry. However, behind the strengthening of competitiveness, the weakness of insufficient protection of intellectual property rights in ceramics has also been exposed. As of February 2022, a total of 3,029 court decisions involving patents, trademarks and copyrights could be found on the China Judicial Documents website under the keyword "ceramics intellectual property", covering the four levels of grassroots courts, intermediate courts, high courts and the supreme court. Therefore, the legislature needs to think about how to strengthen the protection of intellectual property rights in ceramics. This study uses a qualitative research approach to analyse the current state of the ceramics industry, the protection of intellectual property rights in ceramics, and incorporates a survey of data on Jingdezhen as a centre for the protection of intellectual property rights in ceramics in China. It will provide a good external environment for ceramic enterprises to develop and innovate, achieve a benign mechanism for market competition, protect the legitimate interests of rights holders, stimulate the enthusiasm of ceramic innovation and creation, and promote the development of the ceramic industry.

Keywords: Ceramic copyright; intellectual property right; ceramic artwork; ceramic industry; art and law

I-CReST 2022:083-142 - Study of Fingerprint Forensic Evidence in the China's Legal System

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ABSTRACT

Fingerprint evidence is a type of evidence that makes use of the papillary line pattern feature on the surface of the finger and palm is being personal information. In judicial practice, fingerprint evidence is widely used. For example, in criminal cases (e.g. theft, murder, etc.), prosecutors can use fingerprint evidence identification techniques for personal identification and thus locking up criminals. In civil and commercial cases, fingerprint evidence is also widely used in contracts, agreements, notarial documents, wills, etc. Due to its accuracy, stability and uniqueness, fingerprint evidence is often considered to be the foremost evidence. However, the process of fingerprint evidence analysis also has some drawbacks. The prerequisite for fingerprint evidence analysis is the existence of a fingerprint database, but the current establishment of fingerprint data is not sound. Based on this, this study defines and analyses fingerprints and fingerprint evidence. The use of fingerprint evidence in socialist, common law and civil law systems is analysed through qualitative and comparative research methods, and the characteristics of fingerprint analysis are described. As far as the results of the study are concerned, fingerprint evidence can be combined with DNA evidence and other documentary and physical evidence to form a complete chain of evidence. In addition, the construction of fingerprint databases should be strengthened in order to establish a more accurate and stable analytical basis for fingerprint identification. In summary, this study provides a theoretical basis for building a more robust fingerprint identification analysis in China.

Keywords: Fingerprint; evidence; forensic law; China; legal system

I-CReST 2022:084-132 - Physical Appearance Insults Used by Malaysians Social Media Users

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ABSTRACT

Cyberbullying is a type of bullying which takes over digital devices and it has been typically identified with the presence of potentially profane or offensive words that can cause aggravation to others. This paper proposes a study on physical appearance insults used in cyberbullying among Malaysian social media users. Data collection is conducted in two phases. A self-constructed questionnaire is distributed to tertiary students of public university in Malaysia to elicit imperative keywords and phrases related to this type of bullying from different perspectives (perpetrator, victim and bystanders), while a streamed Twitter data provides a qualitative interpretation for this research. The analysis of the data is completed using a corpus- based approach where themes are gathered and categorised in contexts and clusters using SPSS Statistics 23 and AntConc software. Initial results indicate the linguistics realizations of physical appearance-related insults which use metaphors such as food imageries, a mixed code of Malay and English, (code-mixing and intersentential code-switching), and there is also a presence of unusual keywords and phrases used to criticise someone's physical appearance in Malaysian social media platforms.

Keywords: Cyberbullying; online insults; physical appearance; social media

I-CReST 2022:087-056 - The Use of Abbreviations and Slangs on Social Media Among Youths in Malaysia

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ABSTRACT

Malaysians' use of social media is increasing by the day. Almost everyone in Malaysia possesses a smartphone, and with those devices, they can access social media platforms such as WhatsApp, Instagram, Twitter, Facebook, and so on, anywhere and whenever they want. With the advent of social media came the birth of a new writing style known as internet slang. Any term with more than one syllable has also been seen to be abbreviated to one. Most youth aren't even aware that they're utilizing linguistic shortcuts in their classroom work. This study will look at the factors that influence young people's use of abbreviation and slang terms when writing on social media. Furthermore, this study seeks to describe the effects of abbreviation and slang terms in social networking. The data demonstrates the factor that leads to the usage of abbreviation and slang terms, which implies that these types of words are very easy to use while writing in social networking. Quantitative method is used in this study where 200 youths that active on social media from the age of 15-24 were selected to complete the questionnaire. The findings shows that the use of abbreviations and slangs have been actively used among youths on social media as their social language to interact with others. Results shows that youths use abbreviations and slangs to be on trend and become a lifestyle. This also affects their academic writings as they are well known to use abbreviations and slangs daily.

Keywords: Social media; abbreviations; slang; youths; students

I-CReST 2022:095-068 - Restitution in a Minor's Contract: A Comparative Analysis between Malaysia and England and Wales

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ABSTRACT

Every day, people of all ages enter into agreements when they purchase goods or services. Matters pertaining to contract law in Malaysia are governed by the Contracts Act 1950 (Act 136)(CA 1950). The requirement of legal capacity to enter into a contract is stated in section 10 of the CA 1950. Section 11 of the CA 1950 further explains the categories of competent persons, one of which is a person of the age of majority. This means that a minor lacks legal contractual capacity to enter into a contract, and the legal effect of a minor contract is void as was decided in *Tan Hee Juan v Teh Boon Keat* (1934) MLJ 96. This research employs legal research consisting of a detailed analysis of the CA 1950, the Minor's Contracts Act 1987, case law, textbooks, journal articles, and scholarly writings related to this area. The data collected from this research were critically analysed to discuss restitution in a minor's contract with reference to England and Wales. The research found that restitution stemming from a void contract can be sought under section 66 of the CA 1950 because of the general wording in the section. That said, the relief under the section can only be invoked if the agreement is discovered to be void. Conversely, if an adult contracting with a minor already knew the latter's age status, then the relief under section 66 of the CA 1950 will fail. This provides less protection to adults who deal fairly with minors. Therefore, it is proposed that section 66 of the CA 1950 is amended by taking into account section 3 of the MCA 1987, which leaves the issue of restitution to the discretion of the court based on fairness and justice.

Keywords: Contracts Act 1950; legal capacity; minor; void; restitution

I-CReST 2022:096-070 - The Use of Social Media and Its Influence Towards News Reportage Among Young Adults in Malaysia

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ABSTRACT

Social media has become ingrained in our daily routines. We use it to stay in touch with friends and family, keep up with current events, and entertain ourselves. With the rapid demise of print, social media has emerged to create a new universe of news reporting. All of the information required to read and listen to news are available at our fingertips. The issue arises when the young adults are spending too much time on social media and become too dependent on it without doing fact checking on the sources. The young adults are increasingly turning to digital channels as their primary news source. Hence, this study aims to identify the factors of using social media as a source of news and its influence towards the news reportage among the young adults in Malaysia. In achieving this, the quantitative method is used by distributing the questionnaires to 200 young adults in Malaysia. Three factors of using social media for news reports are such as the news travels faster than the traditional media, less time consuming and it's convenient to be accessed at anywhere and anytime. Finding also shows a significant impact towards using social media for news reports among young adults with correlation results >.50. This is also supported by using regression analysis. Results show the longer attachment to social media for news reporting will lead to positive impacts among young adults in their knowledge about current issues. However, using social media as the news source also leads to the spread of fake news due to these news reports not being credible enough.

Keywords: Social media; news reportage; young adults; Malaysia

I-CReST 2022:110-085 - Job Satisfaction Index Among Academics and Non-Academics Staff in TVET Institution

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ABSTRACT

The combination of environmental circumstances, and psychological and physiological may affect how people feel about their job. Lacking job satisfaction from one aspect may impact employees' motivation and commitment to the organization including in Polytechnic Kuching Sarawak. However, there is very limited research conducted to focus on the job satisfaction index in Polytechnic Kuching Sarawak in the context of both academics and non-academics staff. Therefore, the objective of this study is to identify the job satisfaction index among academics and non-academics staff in Polytechnic Kuching Sarawak (PKS) is conducted. A total of 218 respondents answered the survey using the Job Satisfaction Survey (JSS) by Spector in 1997 and the quantitative method was employed. The results show that PKS's employees are satisfied with supervision, nature of work, coworkers, pay, and communication subscale. The areas that they most satisfied were coworkers, the people they work with, and their supervisor. While this study also found that the employees were ambivalent about contingent rewards, promotion, fringe benefits, and operating conditions. However, there are some areas that they are dissatisfied which are many of the institution's rules and procedures that make doing a good job difficult, having too much to do at work, and having too much paperwork. The outcome of this research may guide decision-makers to improve job satisfaction among academics and non-academics staff in Polytechnic Kuching Sarawak.

Keywords: Job Satisfaction index; academics; non-academics; polytechnics; subscales

I-CReST 2022:113-090 - The Cyberbullying Behavior and its Emotional Effects Towards Social Media User in Malaysia

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ABSTRACT

Social media use has become a part of our community lives especially among young generation. Its benefits include the ability to communicate with friends, quickly access information and gain a new knowledge, in additional through social media people also can stay in touch with adult mentors including parents, family members and teachers. However, excessive usage of social media can lead to cyberbullying issues. This will have an impact on a user's emotions, particularly for those who are engaged as influencers. The purpose of study is to identify cyberbullying behavior and its emotional effects towards social media user in Malaysia. A quantitative method is use to collecting data by distributing the questionnaire to 100 social media usage in Facebook, Twitter and Instagram. Purposive sampling used in the present study to obtain respondent number. The findings show the victims of cyberbullying can experience wide-ranging effects, including mental health issues, poor academic performance and effects on low self-confidence and even suicidal ideation. Because of the widespread use of social media, new avenues for online hostility have opened up. Cyber-bullying is linked to the amount of time peoples spend on social media, their problematic use, and their online conversations with strangers, all of which warrant public health action. The strongest and most constant risk is problematic usage of social media.

Keyword: Cyberbully behavior; emotional effects; media social; Malaysia

I-CReST 2022:118-095 - An Exploration on the Study of Fake News During Covid-19

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ABSTRACT

The Coronavirus pandemic increased the discussion about the phenomenon of fake news in the whole world. It is logical that researchers in different continents and societies addressed the phenomenon of fake news. The effect of fake news varies from one society to another, it is a reason that researchers may have different perspectives in the way they addressed its impact. The researcher tries to explore the study of fake news during Covid-19 using content analysis, the way researchers addressed the issue of the effect of fake news during the pandemic. Some researches focused on the dissemination of fake news on psychological health. While others tried to quantify the effect of misinformation on behavior. The perception of the researcher on the studies conducted on the effect of fake news, most of the researchers tries to describe the consequences of the phenomenon during the pandemic. The meaning is the relationship between fake news as a phenomenon and crisis. Moreover, the effect of fake news on the covid-19 individual responses. Some researches raise the level of awareness regarding the phenomenon, while others tried to measure its impact on psychological health of the individuals. The concepts employed in the researches raise awareness of the seriousness of the phenomenon such as disastrous consequences, hefty deleterious consequences. On the other hand, the concepts used in terms of psychological health: panic, fear, depression, and fatigue. Researches are between quantitative and qualitative research.

Keywords: Coronavirus; fake news; individual responses; psychological health

I-CReST 2022:127-108 - Smart Technologies for Improving Social Support Among Older Adults in Asia

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ABSTRACT

Smart technologies provide innovative solutions for social support, thereby improving older adults' life satisfaction and psychological well-being. This review aims to identify and analyze the smart technologies used to improve social support for older adults in Asia and how effectively these smart technologies work. After a systematic literature review process, relevant studies published between 2018 and 2022 were searched on Google Scholar, IEEE Xplore, PubMed, Scopus, Springer Link, and Web of Science databases. A total of 15 papers met the inclusion criteria. The findings discuss three main areas, including the types of smart technologies currently used to improve social support for older adults in Asia, how smart technologies stimulate and enhance social support, and the elements of these smart technologies that are effective for social support. This study suggests that future research needs to fully assess the relationship between smart technologies and the social needs of older adults. Smart technologies developed for older adults in Asia need to consider different cultural and life contexts, and involving older adults directly in technological innovation can compensate for the differences in technology use capabilities of the aging population.

Keywords: Social support; media art; smart technology; older adults; Asia

I-CReST 2022:129-102 - Ministry of Health's Preparations on Transition to Endemic Phase in Malaysia and Public's Reactions on Social Media

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ABSTRACT

Malaysia is transitioning to the endemic phase of COVID-19 as what was being addressed by the Prime Minister of Malaysia, Datuk Seri Ismail Sabri during a press conference on March 2022. With public dependency on social media to be informed ever since the pandemic started in early 2020, Ministry of Health Malaysia (MOH) took the initiative to be active and responsible in updating information and preparing the citizens on their social media platforms such as Instagram and their official website. MOH's official Instagram account has over 1 million followers with the engagement rate of 0.09%. Through this paper, the author will discuss the preparations made by MOH to prepare the public to face the transition to endemic phase and the public's reactions upon the news on social media. An analysis will be made through the Instagram posts started in March 2022, when the news was announced until April 2022, when it is being implemented. The public's reactions will be analysed through their comments on the posts made by MOH within the duration of March to April 2022. The methodology that will be used for this paper is qualitative method where content analysis technique is used to analyse the data gathered from the posts and comments. Throughout the analysis, people's reaction could have been analysed whether they are prepared for the new phase and if MOH had done their responsibilities to keep the public informed with their social media postings. Social media has become a main tool in disseminating information especially during the transitioning period to endemic phase and both the public and MOH are using social media for that purpose.

Keywords: COVID-19; endemic; social media; Instagram

I-CReST 2022:130-109 - An Analysis of the Hashtag #MakeSchoolASaferPlace Twitter Campaign Movement Among Twitter Users

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ABSTRACT

A school should be a safe place to learn, not a battleground for sexual harassment. School can be a wonderful lifetime experience for some people, but not for some who find the school to be a frightening place. The *#MakeSchoolASaferPlace* hashtag trend began when a Malaysian student posted a video on TikTok expressing her discomfort after her male teacher allegedly joked about rape during class, which quickly went viral. This prompted her to start a social media campaign, particularly on Twitter, to advocate for making schools a safer learning environment and encourage other students to come forward with unpleasant school experiences. During the issue, her Twitter account was one of the most discussed and viewed. The account has 33.4K followers and a 3.09% engagement rate, with 851 replies and 182 likes on average for each tweet. In this paper, the author will look at two analyses: (a) How have people responded to the hashtag *#MakeSchoolASaferPlace?* (b) What are the implications of the hashtag *#MakeSchoolASaferPlace*? The methodology employed is qualitative, utilising content analysis instruments. The author will analyse tweets from the Twitter account that started the hashtag (April 2021 - June 2021). According to the analysis, tweets with the hashtag *#MakeSchoolASaferPlace* by the targeted sample provide followers and Twitter users with the option to engage with the issue and voice their thoughts on the matter. We recognise that different people learn in different ways. Therefore, researcher uses all Twitter elements creatively, including tweets, quotes, and likes. Based on the hashtag engagement, most Twitter users appear to support the campaign and demand that higher authorities take action.

Keywords: Online campaign; sexual harassment; Twitter; content analysis

I-CReST 2022:131-100 - Exploring Pre-Service ESL Teachers' Practice in Enhancing Reticent Students' Participation

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ABSTRACT

This study intends to explore pre-service ESL teachers' practice in enhancing classroom participation among reticent students. In addition, the behaviours of reticent students and the challenges encountered by pre-service ESL teachers in enhancing reticent students' participation were also explored by the researcher. The method of this research is qualitative as data were collected through the means of interviews and documents analysis. Interviews were carried out on a sample of three pre-service ESL teachers from University of Malaya. The data of this study were then analysed using open coding, axial coding and generating themes. The findings were then tabulated in a coding matrix. Documents provided by the research participants in the form of lesson plans were also analysed for the purpose of research triangulation. Results revealed that there are six significant strategies used by pre-service ESL teachers in enhancing reticent students' participation. The behaviours of reticent students and the challenges encountered by pre-service ESL teachers were also discussed. Further discussion and recommendation are explained in this study.

Keywords: Reticence; ESL classroom participation; pre-service teachers

I-CReST 2022:134-123 - The Survey of Students' Learning Style Tendency as the Practical Worksheet Delivery Strategy with Adaptation to New Norms for the Course Wireless Communication System in Politeknik Port Dickson

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ABSTRACT

COVID-19 has left a great impact to the teaching delivery strategy today. Online teaching and learning (OTL) have gained popularity due to the movement control order, control of the disease contagion, and the enforced limitations. Nonetheless, a question arises on how the OTL developed needs to lessen the students' cognitive burden in developing meaningful learning, especially for abstract course delivery that requires high cognitive processing. Thus, a survey is conducted to see the learning style tendency of the Electronic Engineering (Communication) (DEP) diploma students in Politeknik Port Dickson (PPD) undertaking the course Wireless Communication System using the Felder-Silverman Learning Style Model (FSLSM) as its basics. Using the Felder-Solomon Learning Style Index, the domination of the student learning style dimension can be measured, if it has a tendency towards the active-reflective, verbal-visual, or sequential-global learning type. Based on the finding, DEP PPD students have a strong tendency towards the visual learning style. The reliability of both the pre-test and post-test also shows a significant consistency on the study results. Finally, the finding from this study is able to assist lecturers in preparing and implementing an effective delivery strategy in line with students' learning style so that meaningful learning can be achieved.

Keywords: Learning style; online teaching and learning (OTL); Felder-Silverman Learning Style Model (FSLSM)

I-CReST 2022:137-106 - Semiotic and Cultural Analysis on Local Product Brand Name

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ABSTRACT

A well-received product can transform any business with a valuable proposition of branding efforts including brand naming strategy. To create strategically relevant and significant brand names, factors such as culture is one of the most powerful and immediate ways to communicate an identity-image and linkage to the consumer. Thus, enables potential buyers to relate by delivering brand communication value of the brand by inspiring or persuading them by certain images and associations. However, interpretation of each brand name can be tricky as manipulation of social interaction as well as multiple types of relationships with the brands, called "noise", leading to varying brand images. The aims of this research were to explore cultural aspects and their meaning as brand communication value of 50 local brand names of various products as a purposeful communicative act in branding strategy. The brand names were sampled limited on a simple random sampling selected from billboard advertisement. Content analysis method through Charles Sanders Peirce's semiotic model was used in this analysis to describe and analyse the connotation, denotation, concepts, and relationships in making inferences about the cultural messages imprinted on the brand names. The findings of the study indicated culture still can be a source of influence by local producers in brand naming strategies. Malay language and terms by the usage of local names giving local value expression of culture that need to be taken into account in basic strategy of brand-building as future reference. This is the consumer self-image in branding, while behind cultural expression usually lies religious motivation to influence formation of a consumer behavior such as stressing out the use of Arabic terms and *Jawi* script. Therefore, the study gives more insight on the brand name patterns and culture as symbolic meaning which created emotional ties of brand preference. And, the decision-making process can be much easier for producers or marketers in strategizing brand names, especially for local markets that need to be tailored to target the local community.

Keywords: Branding; brand name; culture, semiotic

I-CReST 2022:142-118 - MySejahtera Application: Issues and Challenges from the Perspective of Privacy Rights

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ABSTRACT

World Health Organization (WHO) declare that virus of The Covid-19 was a Public Health Emergency of International Concern back on the 30th of January 2020. Due to that reason, Government of Malaysia took a proactive approach by creating MySejahtera, a contact-tracing software that will aid the government in monitoring outbreaks and allowing the Ministry of Health to track the virus's spread. However, the technology has generated concerns about data privacy because the software requires various users' personal information to be submitted before it can be used. Thus, the objective of this paper will be on the government's breach of the rights to privacy from a legal standpoint. This research is qualitative in nature and relies on primary sources such as the Federal Constitution and legislation, as well as secondary sources such as published data, studies, research, and publications. Based on the findings, it is permissible for the government to acquire sensitive information from citizens in the case of a pandemic of COVID-19, because of public interest. This paper concludes that contact tracing apps is a necessary tool for combating breakouts despite privacy breaches and the authors further provide suggestions and solutions related to this issue.

Keywords: Covid-19; MySejahtera; breach of privacy; Personal Data Protection Act 2010; Malaysia

I-CReST 2022:142-119 - Right to Education: Education for Undocumented Children in Malaysia

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ABSTRACT

Rights to education is one of the most important issues when people talk about the Fundamentals of human rights. However, the vast majority of the stateless children in Malaysia are being neglected their rights to education solely on the basis that they do not have legal documentation saying that they are a citizen. These children are supposed to be given the right to education in order for a country to grow forward and compete on the international stage. It has been reported by Unesco (Manos Antoninis, 2017) that important improvements have been made ranging from Chad and Uganda to Lebanon and Turkey in regards to rights to education, especially for the children who do not have legal documentation or residence status, and it is time for Malaysia to follow suit. People do know that the citizens of Malaysia have been nourished by free education starting from primary schooling to secondary education. However, this privilege has not been applied to stateless children, it is worse that they have been rejected enrollment into public schools and alternative education is the only remedy for this problem. As such, the purpose of this paper is to identify, explain, and contextualize the various categories of undocumented children in Malaysia and their educational opportunities. This paper will highlight some of the big cases regarding the issue of stateless children being denied their right to education. Some recommendations also will be given for the government to consider in regard to this issue. This research is based on a doctrinal basis. It is qualitative in nature and uses published data, reports, research, articles, case laws, newspaper articles, and case studies as its sources. This paper concludes that the Malaysian policy is not yet enough to cure this cancerous problem even with the so-called “zero reject policy”.

Keywords: Stateless children; right to education; tertiary education; alternative education

I-CReST 2022:143-115 - Legalizing Steroids in Sports: Yay or Nay?

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ABSTRACT

Steroids are performance-enhancing medications that can increase one's strength while boosting one's ability. However, despite having the ability to improve athletes' performance, steroid usage has been banned in the sports industry. This enforcement has stopped the athletes from reaching their best performance. Hence, this paper aims to discuss the benefits of legalizing steroids in sports. Based on the aim, scholarly articles were reviewed. The articles were analyzed via thematic analysis to determine the primary themes for this study. Findings from the thematic analysis showed three main themes: 1) legalizing steroid usage would enhance the athlete's performance, 2) make the game more competitive, and 3) side effects of steroid usage could be overcome. Findings showed that by legalizing steroids, athletes' performance could be enhanced. Steroids increase the growth of various tissues, such as skeletal muscle and bone. Besides that, the game would be more competitive when steroid usage was legalized. The sports level would be upgraded since more money could be used to upgrade sports facilities and hire experts. The last reason is that every side effect of steroid usage could be overcome as the best solution has been developed. Precaution steps would be prepared to prevent any harm to the athletes. Therefore, this paper contributes to a new field of knowledge whereby the sports industries and government could look into legalizing steroids for better sportsmanship.

Keywords: Athlete; law; medication; sport; steroid

I-CReST 2022:145-116 - Solid Waste Management Awareness, Practise, and Knowledge among Hawkers in Kampung Luadi, Kota Belud, Sabah

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ABSTRACT

The purpose of this study is to determine the level of knowledge, awareness, and practise of solid waste management among the hawkers in Kampung Luadi, Kota Belud, Sabah. Understanding how the hawker community manages their waste is crucial, as they indirectly contributed to waste generation. The study consists of 31 hawkers from Kampung Luadi who were chosen through a purposive sampling method. Questionnaires and interviews were used to gather primary data. To draw a conclusion from the data, a descriptive analysis was performed using the Statistical Package for the Social Sciences (SPSS) in terms of frequencies and mean score. Overall, the findings show that the majority of hawkers in Kampung Luadi Kota Belud have a high level of awareness, knowledge, and practise when it comes to managing their solid waste.

Keywords: Knowledge; awareness; practise; hawkers; solid waste management

I-CReST 2022:146-122 - An Analysis of #KerajaanGagal in Calling Out for Social Justice Among Twitter Users: A Look into Government's Act in Managing Flood Disaster

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ABSTRACT

Flooding occurs periodically in Malaysia, and even the home roof was not safe enough to be holding on to as the water level was inching closer to the unfortunate victims. One hour of rain is enough for flash floods to damage properties and play havoc with the lives of Malaysians in some areas. This annual occurrence of floods is a yearly event that has dramatically impacted the lives of humans, but surprisingly there is still a slow action from the government to handle such a disaster. Due to the frustration growing in Malaysian over the government's slow flood response, the use of the #KerajaanGagal hashtag as a virtual call out for social justice and a form of a social movement to raise social awareness has become prevalent in today's digital era where netizens have become more social media savvy. The public has taken to Twitter to express disappointment with the iconic #KerajaanGagal hashtag over the government's passivity and incompetency in tackling the flash floods. In this paper, the researcher will look at two analyses (a) What are the implications of the hashtag #KerajaanGagal with the act of the government in managing the flood disaster? (b) How the Twitter users utilize the hashtag #KerajaanGagal to help the flood victims? The methodology used is qualitative with content analysis techniques. The author will analyze most viral tweets with the hashtag #KerajaanGagal related to flood disasters from the Twitter users' accounts from December 2021until June 2022. The researcher will categorize 10 tweets among Twitter users with the hashtag #KerajaanGagal related to the flood crisis that went viral with over 1000 retweets. From the selected samples, all features offered by the Twitter platform will be analyzed, including replies, quotes, and likes. As a result, apart from the hashtag campaign becoming increasingly harmful as public disenchantment grew due to the government's weak handling of such issues, there were multiple significant and proactive welfare movements as a result of the use of the #KerajaanGagal which enabled Malaysians to help the less fortunate affected by the flood by rendering food aid and other assistance. Hence, blaming our government for failing to tackle this problem and perpetuating the use of "#KerajaanGagal" doesn't do justice to its efforts. While there is room for improvement, all we need is fast action from high authorities to tackle such issues with the responsible act.

Keywords: Twitter; twitter users; hashtag; content analysis

I-CReST 2022:147-120 - Parenting Controlling Applications: How It Affect Parents and Children's Relationship

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ABSTRACT

The COVID-19 pandemic altered all of an individual's patterns, from working to learning. The majority of learning is done online, which requires underage children to be given a device by their parents. As a consequence of this issue, parents are concerned on what were their children doing on the Internet. By installing Parental Control Applications on both children's and parents' devices, will allow parents or guardians to supervise their children's cyberspace activity. The objectives of this paper are: 1) to understand parents' knowledge of the parenting control application; 2) to assess how the parenting controlling application assists parents in controlling their children's activities and; 3) to verify how well parents comprehend the specifics of each parenting control application. The methodology used is qualitative with a mix of content analysis technique and in-depth interview. The author will analyse and categorize reviews from Google Family Link by Google LLC with the topics under "Parental Control" and "Great Tool". From the selected samples, the author will attempt on having an in-depth interview with local parents that use Google Family Link through Google Meet or ZOOM Meeting. The application Google Family Link is chosen because it is more flexible to download and easier to set up whereby, they just need to have a g-mail account.

Keywords: Parenting control application; media literacy; google family link; content analyses; cyberspace

I-CReST 2022:148-121 - Silencing the Media: A Case Study of Shireen Abu Akleh's Death

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ABSTRACT

Journalism safety has become a key worldwide policy problem because of the changing character of international war and conflict, where journalists have become targets, and the growing death toll paired with the issue of impunity. According to UNESCO, a journalist has been slain every four days on average in the last decade. Since 1993, 1526 journalists have been murdered, demonstrating that journalists are always at risk while performing their professions. The terrible news of Shireen Abu Akleh's killing on Wednesday, May 11, 2022, adds to the lengthy list of slain journalists in a globe where there is a rising worry about the purposeful targeting of journalists. In this article, a single case study of Shireen is explored as the tip of an iceberg using secondary sources to show and create a picture of the traumatic and degrading experience of physical and other types of attacks on journalists throughout the world, as well as the implications for press freedom and people's fundamental human rights. The study goes on to look at the global implications of these violent acts on media reportage. The findings show that, while no apparent comprehensive solution for protecting journalists has yet to be generally approved, this worldwide issue has gotten more attention. To further safeguard journalists' safety, this report offers journalist and media employer training, policymaking and implementation of guidelines, risk assessment, counselling, and other recommendations. Because of the unique nature of their profession, journalists should be free to obtain, hold, express, and spread information and ideas without governmental or unofficial constraints, according to the research. Furthermore, this study concludes that resolving the numerous unresolved incidents of journalists' murder may minimise violent acts against journalists.

Keywords: Journalists; press freedom; human rights; violent acts; journalism safety

I-CReST 2022:150-127 - The Use of TikTok in Influencing Public University Students' Lifestyle in Malaysia

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ABSTRACT

TikTok is a social media platform for short video creation, sharing, and discovery. Young people use the application to express themselves through singing, dancing, comedy, and lip-syncing and it allows them to make videos and share them with others. Tiktok has a strong influence on students, and they enjoy following the trend. The focus of this research is to see how Tiktok affects students' lifestyles. Because they used social media on a daily basis, the majority of the students surveyed did not follow the preventative care recommendations. A quantitative method is used in the present study by distributing 100 online questionnaires to students aged 18-25 years old. Findings show that there is a significant in impact toward using Tiktok and students' lifestyle. TikTok has the potential to affect students' ability to pay attention in class and do their homework, therefore students who have and use the app TikTok may perform poorly in class. In dealing with social media, the students thought it be managed effectively as an entertainment platform.

Keywords: Tiktok; students; lifestyle

I-CReST 2022:151-128 - Social Support as a Mediator of Stress and Life Satisfaction for People with Intellectual or Developmental Disabilities during the COVID-19 Pandemic

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ABSTRACT

This study examined factors that predict stress level and life satisfaction among adults with intellectual or developmental disabilities during the COVID-19 pandemic and the role of social support. Stress was significantly correlated with both mental illness and severity of behavior problems, with each additional stressor increasing the odds of poor mental health by 20%. This relationship held, even after controlling for level of ID, gender, and place of residence. Lack of social support was associated with having a mental illness; individuals who lacked social support were twice as likely to have a mental illness. The importance of considering these factors in the prevention, diagnosis, and treatment of mental health in this population is discussed. In this paper, the author will analyze three formulations of the main analysis: (a) How were individuals with intellectual or developmental disabilities impacted by the pandemic, including impacts on employment and on their life in general? (b) What demographic, personal, and environmental factors predict stress level and life satisfaction during the pandemic for adults with intellectual or developmental disabilities? (c) Does social support mediate the relationship between stress level and life satisfaction for adults with intellectual or developmental disabilities during the pandemic? The methodology used is qualitative with convenience sampling. The author will gather responses widely in Malaysia, a web-based survey was developed and translated in English and Malay Language. Using convenience sampling, the author will reach out to personal contacts within universities, as well as local and international agencies and groups and ask them to distribute the survey to potential participants with and without disabilities within their networks.

Keywords: COVID-19; employment; satisfaction with life; social support; stress; well-being

I-CReST 2022:157-140 - Dialogue Learning Method in Hadith Shareef

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ABSTRACT

Education and teaching require skills and methods that students easily understand. Prophet Muhammad (PBUH) was an excellent educator, so he had succeeded in producing students who became the first generation of the best Muslims in a short time. His success in education cannot be separated from the teaching methods he uses in educating, including the dialogue method. This study aims at knowing the teaching method based on the Hadith Shareef, especially the dialogue method, and to determine the relevance of the application of the dialogue method to educate students in formal and non-formal educational institutions. The research methodology used in this study is a library research methodology with data collection techniques for literature observation and classifying. The researcher then uses descriptive analysis techniques to describe and analyze the dialogue between the Prophet and his companions to reach the essential points contained in the dialogue. The findings of the study showed up that the learning dialogue method is very effective in its application because the concept of education in the Hadith Shareef is not just a transfer of knowledge, but more than that, namely instilling faith in the souls of the students, producing students who are pious and have noble character. In the dialogue method, there is active communication between teachers and students because, in the dialogue method, there are two directions of communication that reflect each other. In the light of the findings of this study, it can be concluded that the dialogue method in the Hadith Shareef is very effective and can be applied in learning both in formal and non-formal educational institutions.

Keywords: Dialogue method; prophet dialogue; learning method in hadith; education in hadith

I-CReST 2022:158-141 - Is Health Court a Feasible Solution for Covid-19 Vaccine Compensation Claims?

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ABSTRACT

It is generally established that any medical product carries a risk of damage or death. Although the benefit-risk ratio of COVID-19 vaccinations is extremely low, there is an urgent need to determine whether health courts are a viable option for compensating the public, particularly children, for AEFI caused by COVID-19 vaccines. The aim of this article is to explore whether an alternative dispute resolution such as a health court could be a feasible method for compensating those who have AEFI as a result of COVID-19 vaccination. This qualitative study employs that of pure legal studies to determining whether the current system is appropriate in light of the current issue of compensation for vaccine COVID-19. The findings reveal that, while health courts may be a desirable compensation mechanism, it would affect the traditional tort system in several fundamental basis by which physicians and hospitals are evaluated i.e replacing negligence with a new "avoidability" standard. Hospitals would also be required by health courts to evaluate if each patient's damage was an injury arising out of medical treatment. However, further study is needed to determine the success rate of health courts in the United States as well as the initiatives that have been implemented due to AEFI as a result of vaccination COVID-19.

Keywords: Vaccine court; compensation; vaccine; special court

I-CReST 2022:160-144 - Communication Tools of Politicians in Malaysia via Twitter: Content Analysis of Political Communication

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ABSTRACT

In today's advanced technology, new media has created many platform for people to communicate, specifically social media have been used as one of the medium to disseminate information and political propaganda, in order to retain and gain the number of followers of their political party. Particularly on social media platforms, where fake news or crises involving experts or higher-ups can cause havoc and easily pique public attention. The objective of this paper is to see how politicians use social media to gather and attract the attention of young voters. The methodology use is qualitative with content analysis techniques to 2 accounts to get the results. The researcher will analyze two big politicians account, Syed Saddiq with 1.3 million followers and Khairy Jamaludin with 2.8 million followers, then compare the tweets about politic (from 1 January 2022 - 31 March 2022) between these 2 accounts and see which one are able to attract more attention from the public with their tweets. Twitter unique features such as retweet, reply and quote retweet offers followers from these 2 accounts to interact and engage in a virtual comm.

Keywords: Communication tools; social media; twitter; content analysis

I-CReST 2022:161-145 - Tahap Pengetahuan dan Amalan Solat di Kalangan Pelajar Jabatan Pelancongan dan Hospitaliti Politeknik Muadzam Shah

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ABSTRACT

Solat merupakan rukun Islam yang kedua yang menjadi asas dan tiang agama dalam Islam. Walau bagaimanapun masih terdapat golongan yang tidak melaksanakan ibadat solat terutamanya di kalangan pelajar. Menurut kajian oleh Bidin dan Khalid (2020), para pelajar didapati kurang menitikberatkan perlaksanaan solat yang difardhukan keatas mereka. Kekerapan pelaksanaan solat di kalangan pelajar berkait rapat dengan gaya hidup dan pelajar menganggap solat hanya perlu dilakukan oleh golongan tua sahaja. Kertas kajian ini dilaksanakan bagi memeriksa tahap pengetahuan dan amalan ibadah solat di kalangan Politeknik Muadzam Shah. Terdapat tiga objektif kajian ini iaitu yang pertama untuk mengkaji tahap pengetahuan pelajar berkaitan rukun solat, yang kedua untuk mengkaji tahap pengetahuan pelajar terhadap perkara sunat dalam solat Ojektif ketiga kajian pula adalah untuk mengukur tahap amalan solat di kalangan pelajar. Dalam kajian ini, soal selidik yang digunakan diadaptasi daripada Makmud, Mohamed Darul dan Rosli (2017) dan telah diedarkan kepada pelajar Jabatan Pelancongan dan Hospitaliti Politeknik Muadzam Shah. Data responden telah dianalisis menggunakan Statistical Package for Social Sciences (SPSS) versi 22. Dapatan kajian mendapati tahap pengetahuan pelajar tentang rukun solat adalah pada tahap yang sederhana, manakala tahap pengetahuan pelajar berkenaan perkara sunat solat adalah pada tahap lemah. Selain itu, tahap amalan solat pula adalah pada tahap yang sederhana iaitu nilai min 3.08. Hasil kajian ini dapat memberikan satu kesedaran bagi pensyarah politeknik untuk melaksanakan penambahbaikan terhadap amalan solat pelajar. Hal ini dapat dilakukan dengan menganjurkan pelbagai program, kursus atau kem solat yang bertujuan khusus untuk meningkatkan pengetahuan serta kesedaran tentang amalan solat dalam kehidupan seharian pelajar.

Keywords: Pengetahuan; amalan; ibadah solat

I-CReST 2022:165-149 - TikTok as a Catalyst for Social Representation among Youth Engagement

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ABSTRACT

Since 2019, formerly known as Musical.ly, the platform has evolved to become one of the world's most successful applications. TikTok, which has over 500 million active users globally, was one of the most downloaded apps on both iOS and Android. TikTok is unlike any other social networking app that people have used in the past. The clips or videos range from everyday amusement and enjoyable video to talent displays to information delivery. Because of the popularity of TikToks, the videos on this site are quickly spreading, giving the spectator with a sense of security and a momentary break from real world. As the world evolve into the modern technologies, everyone especially young people are more attached to the apps. In this study, the author will discuss (a) To determine how TikTok functions as a technological object for younger users, b) To analyse the types of content posted on TikTok by younger users and c) To assess the response of social representation on youth engagement. The methodology used is qualitative study in the form of document analysis. In this part, we will gain conceptual understanding through investigating the environment's digital change. By doing this research, this paper will help pave the way for future serious involvement in this growing but under researched aspect of digital culture.

Keywords: TikTok; social representation; digital; youth; engagement

I-CReST 2022:167-151 - Exploring Student's Acceptance on the use of Learning Management System in Polytechnic English Language Classroom: LMS-CIDOS

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ABSTRACT

The adoption of a Learning Management System (LMS) is seen to be increasingly popular in recent years and has been used by many higher education institutions in the belief to create more engaging and accessible learning environments. In fact, studies have shown the positive impact LMS has offered on the quality of learning. However, the acceptance of LMS among the user is determined by accounting for the use of the platform and the users' experience. It is crucial to gain real responses from the perspective of the user to improve the quality of the system. Currently, all Polytechnic in Malaysia is embracing their own learning platform known as CIDOS and studies involving this platform is sparse. This study was conducted to gain perception from the end-user of the CIDOS platform, the student. A semi-structured interview was designed and posted to 10 respondents to understand their attitude, actual use and challenges they face while using the platform. The student's perceptions were measured and viewed within the extended theory of the Technology Acceptance Model (TAM) by Davis (1989). Through thematic analysis, four themes emerged which reflect the students' acceptance of the platform. It was concluded that respondents' attitudes were primarily influenced by their perception of the role of the LMS in facilitating learning activities. Furthermore, respondents' primary concerns are the site appearance and content organization and the lack of media sources to support activities which reflect the perceived usefulness. Meanwhile, difficult to enrol, unfriendly features for group interaction in a forum, reflecting on the role of perceived ease of use. The findings of this study offer an expanded understanding of LMS acceptance among higher education students and a reference for related areas of study.

Keywords: Learning Management System (LMS), Theory Acceptance Model (TAM), CIDOS, perceived usefulness, perceived ease of use

I-CReST 2022:168-152 - The Influence of Perceived Usefulness, Ease of Use, and Perceived Security on Consumer Acceptance of Cashless Payment

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ABSTRACT

Cashless payment is a new trend that has emerged due to technological advancements. Furthermore, the cashless payment method is essential and benefits consumers who frequently visit food service establishments. Eating out at restaurants or ordering meals with cashless payment has become increasingly popular. It is related to today's endemic situation that forces people to use contactless payment methods. This study examines the influence of perceived usefulness, ease of use, and perceived security on consumers' willingness to accept cashless payment at food service establishments and applies the argumentative research design approach. The study's findings reveal a positive relationship between perceived usefulness, perceived ease of use, and perceived security with customers' acceptance of cashless payment at food service establishments. Furthermore, the findings encouraged customers to use cashless payment methods, which eliminates the possibility of criminal activity.

Keywords: Cashless payment; perceived usefulness; perceived ease of use; perceived security; foodservice establishment

I-CReST 2022:173-194 - Marketing Practices and Halal Logo Adoption Among Small-Scale Enterprises in Malaysia

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ABSTRACT

Entrepreneurship is the creation of organizations. What differentiates entrepreneurs from non-entrepreneurs is that entrepreneurs create organizations, while non-entrepreneurs do not. In behavioral approaches to the study of entrepreneurship an entrepreneur is seen as a set of activities involved in organization creation, while in trait approaches an entrepreneur is a set of personality traits and characteristics. Small-scale industry has generally been discussed against the background of poverty, unemployment, and underemployment, diversification of the economy, rural-urban imbalance, regional disposal of industrial growth/development and the long-term contribution which entrepreneurship can make in resolving or eliminating some of the problems. Hence, they play an important part of stimulating and sustaining the economy. Therefore, this paper will explore the small-scale business startup and its marketing mix practices in their operation among 5 companies that run their business in two rural areas situated in the peninsular Malaysia. Both areas are at Sepang, Selangor and Jempol, Negeri Sembilan. In relation with their similarities in terms of their nature of business, that is in the food and beverages industry, this paper also will explore and identify the adoption of halal certification among them. Halal Certification is fast gaining worldwide recognition and not only is being recognized as a new benchmark for safety and quality assurance, but more significantly act as a marketing tool which ultimately helps in promoting the products.

Keywords: Small enterprises; entrepreneurship; marketing mix; halal logo and certification

I-CReST 2022:180-160 - The Effectiveness of Enrichment Programs Among Secondary Gifted and Talented Muslim Students

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ABSTRACT

Gifted and talented students have an extraordinary ability to perform or demonstrate the potential for performing at strikingly large amounts of achievement contrasted with other students at their age. This makes the students discovered the current education system is low or moderate level of practice based on their mental age. An enrichment programs are proposed to recognize the impact of capacities and ability improvement amongst gifted and talented students. In this research, we determine the acceptance of advanced syllabus on chemical analysis by using FTIR which is normally offers during undergraduate level toward secondary gifted and talented students in Kolej GENIUS Insan. A pre-test and post-test were conducted to measure students' performance in knowledge over the program. Besides that, both tests also determine the effectiveness of the enrichment program amongst gifted and talented students which related to teaching and learning aspects and the level of preference toward science.

Keywords: FTIR program; chemical analysis; pre-test; post-test

I-CReST 2022:182-161 - Communication Barriers Perceived by Undergraduate Students in Virtual Learning Effect on the Students' Motivation

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ABSTRACT

Communication is an important and common notion in everyday life, and it occurs in many areas of life, including business and education. During the communication process, there appear to be hurdles and barriers that may be avoided, yet some of the barriers cannot be avoided. As a result, as a student should be able to instil all of the necessary abilities, attitudes, and attributes in yourself so that effectively overcome communication barriers. The researcher wants the readers to note the presence of communication obstacles in virtual learning and the impact on motivation in this study publication. A total of 100 students from the Undergraduate Students of UiTM Negeri Sembilan, Rembau Campus were chosen at random to participate in this study between semesters 1 and 5. A series of questionnaire was created in order to collect information from respondents regarding their awareness of communication barriers in virtual learning. Communication barriers can be defined in a variety of ways, but the researcher separated them into three categories: environmental and physical barriers, semantic barriers, and psychological barriers. The Communication Accommodation Theory and UTAUT are the theories used to support the research. Finally, the impacts of students' motivation on communication obstacles in virtual learning will be discovered through this research.

Keywords: Communication barriers; environmental and physical barriers; semantic barriers; psychological barriers; virtual learning; student motivation

I-CReST 2022:186-164 - The Effectiveness of Social Media Advertising in Promoting News, Events, and Products among Broadcasting Students's Purchasing Behaviour in UiTM Rembau

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ABSTRACT

The world is now currently in the era of digitalization. Everything can be digitalized, from marketing the products until the process purchasing the product by utilizing the social media. Social media can be a powerful thing because it is a comprehensive marketing strategy. On the same point, social media advertising or viral marketing uses pre-existing social sites and produces heightened brand awareness through replicating processes similar to the spread of a virus which also can be applied for promoting and informing news and events among the people. The researcher decides to study this situation among Undergraduate Broadcasting Students in UiTM Negeri Sembilan, Rembau Campus. A total of 169 Undergraduate Broadcasting Students that range from semester 1 until semester 5, were randomly selected to participate in this research. The samples are chosen as they will have their very own opinion and experiences of the effectiveness of social media advertising in informing news and events and promoting products among broadcasting students in UiTM Rembau. The research will be done through the utilization of questionnaires to the students as a survey using online survey. The purpose of this study is (1) To identify the frequency of pattern usage being used on social media advertising as promotional tools for news update, event publicity and brand products among broadcasting students in UiTM Rembau, Negeri Sembilan, (2) To identify the type of broadcasting students' purchasing behaviour in UiTM Rembau, Negeri Sembilan and lastly (3) to determine the effectiveness of social media advertising as promotional tools for news, events and products among broadcasting students' purchasing behaviour in UiTM Rembau, Negeri Sembilan.

Keywords: Social media advertising; viral marketing; frequency of pattern usage; type of purchasing behaviour; effectiveness of social media advertising

I-CReST 2022:187-165 - Exploring the Impact and Survival Strategies of COVID-19 Pandemic: A Conceptual Study on Independent Hotels in Kota Kinabalu, Sabah

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ABSTRACT

COVID-19 had a devastating effect and made a huge impact on the entire global economy, particularly in the hospitality business. The accommodation sector is one of the hardest hit, especially the smaller tourism businesses like independent hotels. In line with this, this conceptual paper aims to study on how COVID-19 impacted the independents hotels and how these hotels respond to the pandemic's effect and remain viable in a competitive market. Given their limited ownership structure and absence of a distinct brand identity in comparison to chain hotels, these hotels are often short on resources and have trouble adapting their operations to any crisis such as COVID-19. Thus, this research is an early attempt to explore the strategies and practices adopted by the independent hotels that managed to survive during this troubled period. The implications of the applied strategies and practices during the various movement restriction control orders will also be explored in this study. The outcomes of this prospective study should aid independent hotels in regaining revenue following a pandemic, as well as dealing with future pandemic scenarios. It will also be valuable to the government and other relevant agencies who support the tourism and hotel industry's growth and sustainability.

Keywords: Impact and survival strategies; COVID-19; Independent hotels; Sabah

I-CReST 2022:189-166 - Digital Marketing Communication and Consumers' Purchasing Decisions During the Covid-19 Pandemic

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ABSTRACT

Digital marketing communication, that is, communication between businesses and consumers using digital or electronic media, is expanding quickly, particularly during the COVID-19 period. The widespread interruptions causedby the epidemic have highlighted the advantages of digital communication even more. As a consequence of the epidemic, more than 80 percent of customers are more receptive to companies' digital products and value digital interactions with businesses more highly, according to a survey. Simultaneously, the COVID-19 epidemic has slowed globalization tendencies, at least in the medium term, creating digital communication obstacles and exposing weaknesses in the worldwide movement of people and goods. However, it has also created new digital marketing possibilities. As the modern world evolves into modern technologies, the author will examine: (a) how fast the digital marketing communication occurs; (b) the effectiveness of digital marketing communication; (c) how modern marketing communication affects recipients'/consumers' purchasing decisions; and (d) how digital marketing communication benefited the brand during the pandemic. To get a contextualized knowledge of how digital marketing works and consumer behaviors, attitudes, and purchase motives, qualitative research was undertaken. By doing this study, this paper will assist business owners and entrepreneurs in comprehending how current marketing technologies operate even in the pandemic and lockdown period.

I-CReST 2022:190-188 - Factors Influencing Household Waste Management Behaviour in Klang Valley

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ABSTRACT

Sustainable household waste management has long become a priority for policy makers and relevant stakeholders in Malaysia. As one of the topmost criteria towards moving from developing to developed nation, this country is still struggling to find the right formula to encourage recycling as part of its community habit. This study hence attempted to examine factors influencing current household waste management, placing emphasis on recycling behaviour among Malaysians. Theory of Planned Behaviour was modelled in examining how these factors are able to predict recycling behaviour. Questionnaire survey method was used in collecting primary data. Samples were selected using simple random sampling which yielded 127 usable responses. In assessing factors influencing recycling behaviour, linear regression analysis suggested that perceived facility condition, prior recycling knowledge, and attitude have significant and positive impact on the extent of recycling behaviour among respondents. Among these, prior recycling knowledge was found to be the strongest factor. In contrast, subjective norms and awareness were found to have no significant influence. This study hopes to help policy makers, waste management strategists, local administrators, and researchers in the field to formulate sustainable policies, and identify further areas of study in the relevant field.

Keywords: Waste management; recycling behaviour; Theory of Planned Behaviour; household waste; sustainable management

I-CReST 2022:194-207 - Stress Management of Online Academic Learning among Students

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ABSTRACT

This study was conducted to identify stress management among students of Universiti Sains Islam Malaysia (USIM). In addition, the study aimed to determine the relationship and factors between online academic learning on stress management. The study sample involved respondents consisting of bachelor's degree students from various faculties. The data obtained were analyzed using Statistical Package for Social Science (SPSS) and SMART PLS software, including descriptive data, correlation analysis, regression analysis, and mean scores used to determine the factors driving stress management as a dependent variable. The findings of the study indicate that factors influencing stress management among respondents related to online academic learning.

Keywords: Stress management; online academic learning; students

I-CReST 2022:197-170 - University Students' Perceptions of Hybrid Learning in ESL Classrooms

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ABSTRACT

The higher education institutions have changed unexpectedly since the COVID-19 pandemic swept across the globe. It is a big challenge for most of the daily routines and negatively impacts the higher education institutions. Hence, the situation demands quick changes, from the traditional method of teaching to blended pedagogy as depending on online teaching and learning is not an ideal option. Therefore, in order to optimize teaching and learning experiences, face-to-face learning mode and online learning mode or named as hybrid learning is conducted. This transition of learning potentially raises various perceptions among university students. Thus, this paper aims to investigate the university students' perspectives on hybrid amidst COVID-19. By using the convenient sampling method, a total of 60 diploma students have participated and shared their feedback on hybrid learning implementation. This study was carried out through a survey research design and the data of this study was gathered by using a closed-ended questionnaire via Google Form. The findings revealed that the students showed positive perceptions regarding hybrid learning in pedagogical and social aspects. Nevertheless, the negative perceptions were found in the technical aspects relating to students' concentration in deeper learning and students' difficulties in learning English during hybrid learning. It is concluded that hybrid learning can be considered an effective learning approach as a learning solution in this endemic era.

Keywords: Hybrid learning, ESL classrooms, higher education institutions

I-CReST 2022:197-171 - Profiling on Oral Questioning Techniques in ESL Online Classroom

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ABSTRACT

The new normal practices impacted by the Covid-19 pandemic have proved that online distance learning (ODL) can be executed in the Malaysian education system. Due to the current changes, sustaining teacher-learner engagement by probing critical thinking oral questioning practice in an online classroom is a challenge. Questioning stands at the core of massive communication in general and between a teacher and a learner. It is a powerful tool to stimulate and support critical thinking. Being an active element in the whole teaching and learning process, oral questioning fulfills a fruitful conversation between students and teachers and the whole community. Therefore, there is a need for educators to find ways in confirming that the teaching and learning process in the new normal can be continuously effective and exciting as in the normal face-to-face classroom practices. Hence, this study aims to investigate whether teacher-learner engagement in developing learner critical thinking can be achieved by using oral questioning techniques in ESL Online Classroom. Instructors strategically vary the types of questions they ask to generate meaningful responses that support the development of higher-order thinking skills. The mixed-method, qualitative and quantitative measures were used to address the research questions developed. Three instruments namely, a checklist for classroom observations, semi-structured individual interviews and questionnaires were used to collect relevant data. The results showed a significant impact in developing oral questioning techniques as it promotes teacher-learner engagement in ESL Online Classroom. It is also shown that oral questioning techniques help teachers to ascertain how well students can share their understanding of a subject matter during their oral responses.

Keywords: Online distance learning, oral questioning techniques, critical thinking skills

I-CReST 2022:198-174 - Penggunaan Microsoft Teams sebagai Platform E-pembelajaran dalam Kursus Pengajian Islam di Jabatan Pengajian Am

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ABSTRACT

Pembelajaran berasaskan teknologi yang diaplikasi masa kini boleh meningkatkan kualiti proses pengajaran dan pembelajaran kerana mengintegrasi elemen teknologi yang menarik perhatian seperti audio, visual, grafik, animasi dan sebagainya. Oleh itu, kajian ini bertujuan mengenalpasti tahap penggunaan Microsoft Teams bagi kursus Pengajian Islam dalam kalangan pelajar semester dua. Tiga konstruk yang diuji ialah tahap pengetahuan, kesediaan dan penerimaan pelajar terhadap penggunaan Microsoft Teams sebagai platform e-pembelajaran dalam kursus Pengajian Islam. Rekabentuk kajian yang digunakan adalah berbentuk tinjauan deskriptif dengan menggunakan pendekatan kuantitatif melalui instrumen soal selidik. Nilai kebolehpercayaan alpha cronbach 0.983 daripada kajian rintis yang dijalankan terhadap 27 orang pelajar. Soal selidik dikumpul, disemak dan dianalisa dengan menggunakan perisian Statistical Package of Social Science (SPSS) 26 dalam bentuk kekerapan, min, peratusan, dan sisihan piawai. Responden terdiri daripada 140 orang pelajar semester dua dari tiga program yang mengambil kursus Pengajian Islam. Secara keseluruhan, dapatan kajian mencatatkan dapatan min dan sisihan piawai bagi konstruk tahap pengetahuan, kesediaan dan penerimaan pelajar adalah tinggi. Kesimpulannya kajian ini mendapati pelajar yang terlibat sangat mengetahui, mahir menggunakan dan menunjukkan kesediaan yang positif dengan penggunaan Microsoft Team sebagai platform e-pembelajaran kursus Pendidikan Islam. Implikasi kajian menunjukkan penggunaan Microsoft Team sangat penting dalam pengajaran dan pembelajaran di politeknik demi menyokong usaha untuk memartabatkan pembelajaran dalam talian di era pandemik ke tahap global sejajar dengan lonjakan kesembilan dalam Pelan Pembangunan Pendidikan Malaysia 2015-2025 (Pendidikan Tinggi)

Keywords: Microsoft Teams; Pengajian Islam; pengetahuan; kesediaan; penerimaan

I-CReST 2022:200-212 - Rights of Children to Education in the United States of America, and Malaysia; A Brief Review of Issues in Delivering the Rights.

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ABSTRACT

This paper reviews the children's rights to education in Malaysia and the United States of America. It will also examine some issues in carrying out those rights. Legislations of the respective states will be examined as well as the relevant provisions in the United Nations Conventions. Doctrinal methodology will be employed throughout the paper. Observation concluded that different countries have different sets of problems unique to its people. Ultimately, overcoming the issues are challenges that each country must formulate by itself. The results may vary from one country to another.

Keywords: Children's rights to education; unique problems; peculiar solutions; doctrinal methodology.

I-CReST 2022:203-177 - Acceptance and Readiness in Augmented Reality Use among Lecturers in Classroom

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ABSTRACT

Technology contributes a lot of advantages in teaching and learning. In fact, in this recent COVID-19 pandemic situation, most teaching and learning are conducted online. Therefore, lecturers need to prepare themselves and adapt to the changes and technological progress in line with the government initiatives in digitalising the education system. Continuous online classes can be dull for the students hence lecturers need to find ways to make the classes interesting and engaging. One way in creating engaging and interesting classroom is by applying augmented reality (AR). This paper is looking at the acceptance and readiness among the lecturers in adopting augmented reality in classroom and factors that are affecting their acceptance and readiness. Interviews were conducted with five (5) lecturers from various teaching background in a local university to understand their acceptance and readiness in applying augmented reality (AR) in their classroom and factors affecting them. The findings revealed that all respondents accepted AR but majority of them are not fully ready to adopt the technology in their classrooms due to various reasons. Thus, before the integration of AR in the classrooms, it is important for the lecturers to be exposed to AR in order to increase their level of readiness to adopt AR in their teaching.

Keywords: Augmented Reality; lecturers' readiness; lecturers' acceptance; teaching and learning; technology in education

I-CReST 2022:205-176 - Online Shopping: Let the Buyer Beware

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ABSTRACT

The outbreak of a pandemic Covid-19 makes the usual business dealings change to online business. The pandemic has led to a surge in e-commerce and digital transformation. Online business is a significant commercial innovation that utilises some of the most advanced technological advancements. Buying things online is becoming commonplace today as the variety and availability of products and services on the internet make consumers choose online shopping. Despite of some issues and flaws on the safety and security of online transaction such as 'scamming' or fraud, phishing and other online predators, online shopping being chosen because of its system makes dealings easier and convenient from the payment to delivering products or services to consumers. Therefore, this conceptual paper will look into several laws and legislations in order to protect consumers and get their rights through online shopping dealings. Apart from that, this paper will also significantly highlight several cases within this context. The research methodology of this paper is doctrinal and secondary sources of information are relied upon, such as journal articles, case law, previous research and studies. The finding indicates that consumers must be aware of their online shopping transactions in order to be satisfied with the products or services received from the seller, as well as be alert to avoid being tracked online.

Keywords: Online shopping; legislations; rights

I-CReST 2022:205-195 - Legal Implications of Online Harassment in Malaysia

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ABSTRACT

The use of social media as a communication channel has exploded. It is now considered a need rather than a luxury. Anyone with Internet access anywhere in the globe has ability to speak with and attract a vast global audience. While the internet has numerous advantages, such widespread communication can also be utilised for harmful reason such as online harassment. Online harassment such as posting rumours, threats, sexual remarks, cyber stalking, trolling, flaming, distributing negative and inaccurate content may cause significant and negative consequences in a person's life, including death. Therefore, this paper will illustrate legal implications of online harassment. This study adopts a doctrinal legal research methodology to examine the Malaysian law and regulations regarding this issue. Apart from that, this paper will also highlight several cases within this context. At the end, finding indicates that people must be aware and alert to protect themselves from being victim of online harassment and legal authorities must play their role in combatting this issue.

Keywords: Online harassment; communication; legislations; victim

I-CReST 2022:206-179 - An Exploration of Practicum Teachers' Preparation and Implementation of Higher Order Thinking Skills (HOTS) Problems in the Teaching and Learning of Mathematics Subject

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ABSTRACT

Teachers and students are having difficulties in tackling Higher Order Thinking Skills (HOTS) questions as a part of preparation to seat for Sijil Penilaian Menengah (SPM) especially in Mathematics subjects and practicum teachers should also have their important roles in helping fellow students to face problem solving questions. This study was done to identify the preparation of practicum teachers in implementing HOTS elements in teaching and learning. The study used survey research through online Google Form questionnaire and was distributed to the respondents via WhatsApp application. The questionnaire is focusing on the preparation of the practicum teachers and their level of confidence to implement it in teaching and learning. The respondents consist of 63 students from the semester seven students who were pursuing in the Bachelor of Science in Education for Mathematics at local university in Selangor. These students were chosen due to accessibility factor. The collected data was analysed via the latest version of IBM SPSS Statistics 26 with the written descriptions, tables, and figures. This study had shown the overall preparation of the practicum teachers in implementing HOTS elements in teaching and learning for Mathematics subjects. It indicates that the practicum teachers are very well equipped with problem solving for HOTS questions except there are a few problems that might hindered the practicum teachers to be able to implement the HOTS questions into the teaching and learning process. It also showed that these practicum teachers are high quality production of public university where the respondents enrolled their study. Overall, the study proven that the level of preparation of practicum teachers in implementing HOTS questions into teaching and learning for Mathematics subjects is at high level.

Keywords: HOTS; practicum teachers; teaching and learning

I-CReST 2022:207-189 - Pendidikan Berasaskan Hasil (OBE): Hubungan Penyampaian Pensyarah dan Penilaian Kerja Kursus bagi Subjek Penghayatan Etika & Peradaban

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ABSTRACT

Pendekatan Outcome Based Education (OBE) melihat kepada pencapaian pelajar dalam mengaplikasikan pengetahuan dalam pembelajaran. Oleh itu, kajian ini dijalankan bagi mengenalpasti maklumbalas penilaian kerja kursus sesuai dengan penyampaian pensyarah. Selain itu, kajian ini akan mengenalpasti hubungan pendekatan penyampaian dengan aktiviti di dalam kelas yang paling berkesan. Sampel kajian ini terdiri daripada 215 orang pelajar yang mengambil kursus Penghayatan Etika dan Peradaban di Politeknik Sultan Idris Shah. Kajian ini berbentuk kuantitatif yang menggunakan instrument soal selidik. Analisis data dalam kajian ini menggunakan perisian *Statistical Packages for Social Sciences* (SPSS) menggunakan analisis korelasi pearson di antara penyampaian pensyarah dengan perlaksanaan penialaian kerja kursus pelajar. Hasil analisis menunjukkan terdapat perkaitan yang signifikan di antara penyampaian pensyarah dengan penilaian kerja kursus pelajar. Oleh itu, kajian ini mampu memberi penambahbaikan dalam penyampaian pensyarah dalam meningkatkan penilaian kerja kursus pelajar dalam subjek Penghayatan Etika & Peradaban.

Keywords: Outcome Based Education; penyampaian pensyarah; penilaian kerja kursus

I-CReST 2022:209-181 - Working from Home: The Utilisation of Digital Tools & Technology in Effective Communication and Employee's Productivity in a Work Organisation

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ABSTRACT

Working from home (WFH) has become a new norm now for employees all over the world amidst the COVID-19 outbreak. Because of this, usage of digital tools had received it's significant rise among the employment field, with employers trying to subscribe to the best online channels in promoting effective communication and productivity among members of the organization. In WFH, employees will be faced with multiple positive and negative aspects while also encountering problems in adapting to the new style of working. Previous studies have highlighted challenges for virtual workers revolves around productivity and effective communication. This study will uncover three sections: the digital tools used in optimising productivity and effective communication, positive and negative aspects of technology in working from home and productivity and communication challenges in working from home. The author adopted an interview with a few members of a corporate organization for data collection. The findings of this study ultimately benefit the work organisations in a sense where the top management will have a broader understanding in the working from home culture and the relation of digital tools and technology for employee's productivity and communication process.

Keyword: Working From Home (WFH); effective communication; digital tools; technology; productivity

I-CReST 2022:213-206 - Melaka Malay Traditional House (MTH) Interior Architectural Components Act as a Visual Privacy

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ABSTRACT

Malay Traditional House (MTH) is one of the heritage architecture in the Malay peninsula, where it is located in a remote area and was resided by the Malay. Generally, it is inherited from the past generation also it is aligned with the Malay culture, custom, belief, daily social interactions and environment. The privacy value can be seen in the spatial planning involved in the design of MTH floor plan and the opening on the wall is a prime determinant in MTH. The MTH consists of the "front space" known as serambi, next area is "middle space" which consists of bedroom and open space, and the "rear space" consists of dining, kitchen and bathroom. The MTH spatial planning highlights the privacy space hierarchy and components of visual privacy for family members and the female in the house. The spatial planning demarcations emphasized on gender separation and interior architectural components are provided to control the gaze from an outsider (male which is not a family member) in order to maintain female internal privacy in the MTH. It is vital to study female visual privacy because the entire MTH space is accessible by female. The objective of this paper is to study the privacy, space provisions and interior architectural components that are based on culture, custom, belief, daily social interactions and environment. The research method employs on-site observations, spatial measurements and semi-structured interviews with the occupants. The result reveals the interior spatial planning privacy provision and the applications of various architectural elements. The results affect the privacy on spatial planning provisions and MTH occupant's behaviors. Moreover, these findings assist to produce new spatial design recommendations for modern houses.

Keywords: Spatial planning; interior architectural components; visual privacy; Malay Traditional House; gender separation

I-CReST 2022:221-200 - Private Defense in Malaysia: From a Legal Point of View

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ABSTRACT

Private defence has become a common phrase that capture the imagination of any individual as a consideration to take action if they are being physically threaten by other individual with ill intention towards them. Mainstream media also play a large part envision the nobility behind private defence in the eyes of the public as seem that it is nothing wrong with private defence and the path is open without any repercussion. This normally directed into the main idea or assumption that as long the action is taken as a measure of private defence, everything is justified. Nevertheless, this common misconception should be address in a legal point of view since private defence is much complicated and should be dealt cautiously and restrictively. Section 96 of Malaysian Penal Code Act 574 stated nothing is an offence which is done in the exercise of the right, however this particular section does not give blanket justification towards any action of private defence scenario. Predominantly in the discussion of self defense is the use of force, in private defence the force utilized may be sufficient for protection from apparent harm (not just an empty verbal threat) or to halt any danger from attack, but cannot be an excuse to continue the attack or use excessive force. This have been coined as the use of reasonable force, the use of reasonable force is applicable to protect oneself or members of the family from bodily harm from the attack of an aggressor, only if the defender has reason to believe he/she/they is/are in imminent danger. The significant difficulties in the public perception arose in order to determine what exactly reasonable force and its limit. Doctrinal analysis from secondary sources is used in this research. This research found that determination of reasonable force acquire the parties involve to assess the situation and act cautiously with proper restrain. This research recommend further discussion on right of self defense in Malaysia within this legal point of view to become simple guidance to general public on the rights of self defense and its limitation.

Keywords: Self defense; Penal Code; reasonable force

I-CReST 2022:224-205 - Identifying Risk and Protective Factors Influencing Adolescents to Become Involved in Crime from the Perspective of Probation Officers

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ABSTRACT

Juvenile delinquency can be referred to as illegal and criminal actions conducted by young people under eighteen years old. This phrase covers a wide range of offences, from petty infractions like skipping school to more serious felonies like burglary and violent acts. It is critical to understand why a minor commits a crime so that future crimes can be prevented. Addressing the circumstances that lead to the child's decisions can help them improve their behaviour in the future. Children who break the law might be charged in a children's court and sentenced to a punishment. It is a huge concern as to why children at such young ages become involved in crime when they should be leading a safe and happy life, being in school and protected by the family. Another alarming concern is that what will happen to these young offenders once they have been released from the system and attempt to reintegrate into society. They require holistic intervention programmes that educate them the required information and skills to reintegrate positively into the community, allowing them to become productive adults and avoid repeating their mistakes. This study attempted to determine the risk factors that influence Malaysian offenders to get involved in crime, as well as the protective factors that can hinder them from continuing to repeat any kind of offences. This research adopted a basic qualitative study using a semi-structured interview with two probation officers in a district of a central state. Based on their experiences as probation officers, both of them stated that there are several risk factors as well as protective factors influencing children to become involved in crimes. The findings indicate that factors such as lack of parental involvement, peer pressure, inconducive living environment, as well as lack of concern from the society for examples school, teachers, neighbors highly influence children to become involved in crimes. The findings also demonstrate that parents, family, schools, and society at large play huge role in stopping them from committing criminal behaviours. This study hopes to contribute towards a better understanding of the risk factors that potentially affect adolescents' criminal behaviour as well as factors that can prevent juvenile delinquency.

I-CReST 2022:229-214 - Fake News on WhatsApp and its Impact Towards Media Trust: The Case of Malaysian Youngsters

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ABSTRACT

The advent of flurrying fake news is rampant and governments all over the world are trying to rebut this fake information as it has a fundamental impact towards the government's information delivery to its citizens. The alteration of news content either with malice intention or unintentionally is equivalent to spreading hearsay and inaccurate particulars. Fake news also affecting the publics perception towards Malaysia media fraternity this will later affect media consumption as a whole. Society needs to understand that the content conveyed in fake news may be in the form of pictures and it could be categorised as an incident, defamation or impersonation. The increase of fake news dissemination among youngsters are worrying and the survival of media industry is at stake. Hence, this study aims to identify factors contribute to the dissemination of fake news among Malaysian youngsters. The study also expected to explore the effects of fake news towards media trust among the youngsters, followed by identifying the challenges of fact checks available in Malaysia. Therefore, to achieve this, a qualitative study will be conducted through in- depth interview. Interview will be conducted to 10 respondents with minimum of 5 years working experience in media industry. WhatsApp found to be one of the main platforms used to disseminate fake news among youngsters. In turn, media credibility is also tarnished due to fake news followed by the lack of awareness on fact checks website available in Malaysia.

Keywords: Fake news; WhatsApp; media trust; youngsters; Malaysia

SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM)

I-CReST 2022:128-124 - Mobile Applications to Assist People with Mild to Moderate Dementia in Daily Lives

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ABSTRACT

The popularity of smartphones has made mobile apps an essential tool for people to solve their daily lives. Helping people with dementia to make good use of mobile apps can reduce the stress on the patient's family and society. Mild and moderate dementia can be eliminated by simple teaching and human-centred design for people with dementia who have difficulty using mobile apps. This paper aims to identify the functionality and usability of mobile apps for people with dementia by reviewing mobile apps that assist people with mild to moderate dementia in their daily lives. The study searched the literature in five databases - Pubmed, Web of Science, SpringerLink, Taylor & Francis and IEEE Xplore - and conducted a quality assessment. This review found that mobile applications to assist with daily living primarily support people with dementia with shopping and payment, location, image storage, medication reminders and social interaction. A personalised user interface based on the profile and condition of the person with dementia can enhance usability. Preliminary findings suggest that mobile apps for people with dementia can address daily living needs, increase independence and ease the stress of home care.

Keywords: People with dementia; mobile application; new media art; assistive technology

I-CReST 2022:138-146 - Komtreat: New Bioadsorbent from Kombucha Cellulose for Wastewater Treatment

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ABSTRACT

Over the last century, a great deal of research and development as well as applications has been devoted to pollution control advance technologies for treatment and management wastewater generated from various industries. Being listed amongst 42 parameters stipulated under Environmental Quality (Industrial Effluent) Regulations 2009, the color of final effluent discharge has withdrawn serious attention due to lack of concern and negligence from the industry player over the decades. In this study, a novel type of bio-adsorbent material that could potentially be incorporated to the filtration system in wastewater treatment system is proposed. Most bio-adsorbents in the market are made from charcoal residue produced by strongly heating wood, thus having environmental issues during its production. KOMTREAT on the other hand, is produced from bacterial cellulose collected from fermented tea also known as Kombucha tea. The main cellulose source of KOMTREAT which is the by-product from beverage industry serves as waste-to-wealth approach in this technology thus ensure the sustainability of the feedstock. This highly efficient bio-absorbent consist of 100 % pure cellulose that had been pyrolyzed at high temperature to remove all volatile matters. The remaining carbon-intense material was then packed in a filtration set to improve the application efficiency for contaminant removal in wastewater. The analytical data on the application of KOMTREAT in methylene blue solution resulted in reduction of the colour intensity, detected using UV-Visible spectrophotometer. This indicates the potential of further application of KOMTREAT as water treatment alternatives in related industries for years to come.

Keywords: Bio adsorbent; bacterial cellulose; pyrolysis; wastewater treatment; Kombucha

I-CReST 2022:138-148 - Keep It Fresh (Kif) Sticker

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ABSTRACT

In food industry, fruits that ripe so fast usually discarded without being consume contributes to abundance of unnecessary food wastes. Some fruit has very short shelf life and cannot be kept for very long time. Keeping fruits in refrigerator or in airtight container to prolong its shelf life consume more space and impractical. In this study, the development of an alternative way of fruits' preservation is described. Keep It Fresh (KIF) Sticker is a product specifically designed as an alternative fruit storage approach using sticker that can prolong the shelf life. The objective of this study is to produce alternative fruit storage approach using sticker that can prolong the shelf life. Several formulations were developed using different kind of chemicals with different reaction ratios to make the sticker more efficient in absorbing ethylene that cause fruit to ripe fast. Covered with harmless formulation of Potassium Chloride and glycerine combination, KIF Sticker is capable in slowing down the ripening process of fruits by eliminating ethylene to extend the shelf life of climacteric fruits such as bananas. This product is applied by pasting the sticker on the banana fruit, and the duration of the fruit being preserved in the presence of KIF is proven to be potentially promising for further application if market condition. The target customers are preferring to fruit sellers and fruit buyers, which could help in boosting the fruits trade for years to come.

Keywords: Fruit preservative; shelf life; ethylene absorber

I-CReST 2022:139-110 - Validity of the Coloured Landolt C Acuity Chart: A Pilot Study

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ABSTRACT

The purpose of the study was to investigate the validity of the coloured Landolt C acuity chart. The coloured Landolt C acuity chart, the original Landolt C acuity chart (black and white) version and the Early Treatment Diabetic Retinopathy Study (ETDRS) logMAR chart (reference standard) were administered to one eye of 10 subjects of normally sighted young adults (mean age: 24.6 years). Outcome measures were monocular logMAR visual acuity scores for each test. The 95%CI limits for test-retest variability of coloured Landolt C acuity data were ±0.029 logMAR. The mean differences between the coloured Landolt C and the original Landolt C (black and white) acuity chart and the ETDRS chart (reference standard) data were 0.07 (95%CI, 0.05-0.09) and 0.08 (95%CI, 0.06-0.10) logMAR, respectively, indicating that coloured Landolt C acuities agreed well with those of the original Landolt C and ETDRS charts. The Bland and Altman's plot showed good agreement for the coloured Landolt C acuity chart as most differences in logMAR scores were placed within the limits of agreement (LoA). High correlations were obtained between visual acuity tests, thus providing validity evidence. The study demonstrated that the coloured Landolt C acuity chart test is capable of accurate and repeatable acuity measurements consistent with published data on the test-retest variability of acuities measured using 5-letter-per-line retro illuminated logMAR charts.

Keywords: Visual acuity; visual acuity chart; validation; coloured Landolt C

I-CReST 2022:185-162 - Mobile Learning Perceptions among Technical and Vocational Education Training (TVET) Students

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ABSTRACT

Mobile Learning (ML) is evolving and has become a phenomenon in Malaysia's teaching and learning process due to the Covid 19 pandemic. The implementation of CIDOS 3.5 LMS has raised the necessity to investigate the students' perceptions and the tendency of using the tool. Therefore, the objectives of this study are to identify the students' perceptions to use CIDOS 3.5 LMS as a tool for their hundred percent online learning setting for the Communicative English course based on the student's level of readiness and acceptance. As for the students' readiness the Chapnick Readiness Model has been implied to see the students' technological, psychological, and equipment readiness while for the acceptance, the main construct of the Technology Acceptance Model (TAM) includes perceived usefulness, and ease of use. The questionnaire was adapted from Aha Rashid et, al, (2021) and the reliability value is α=0.95. Samples were selected using the purposive sampling where all 285 semester one Diploma students from three departments namely the Department of Civil Engineering, Department of Mechanical Engineering, and Department of Electrical Engineering at Politeknik Kota Bharu who had used CIDOS 3.5 LMS for 14 weeks participated in this study to represent the Technical and Vocational Education Training (TVET) students. Data were analyzed to obtain mean, frequencies, and correlation values using Statistical Package for Social Science (SPSS) software. Multiple regression was conducted to investigate the influence of CIDOS 3.5 LMS on the students' perceptions. The findings show that the student's level of readiness is very high, and they also highly accept the use of CIDOS 3.5 LMS as a Mobile Learning tool, useful and easy to use for their Mobile Learning session. However, the student's acceptance is not related to their readiness. Additionally, the student's type of devices used during the Mobile Learning session can influence inversely to the student's readiness to use the LMS, with the students' acceptance, and perceptions based on the usefulness and ease of use. The results of the study revealed that Mobile Learning implementation among TVET students offers highly positive perceptions of their level of readiness, usefulness, and ease of use. The outcome of this study will hopefully shade more light and actionable understandings for instructors to provide a solid and feasible improvement on the implementation of ML at the TVET institutions especially in designing learning materials and forming a suitable platform.

Keywords: Mobile learning; mobile learning acceptance; mobile learning perceptions; TVET

I-CReST 2022:218-197 - Development of Arduino Based Smart Laundry Hanger for Disabled Individuals

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ABSTRACT

For people with physical limitations, such as the elderly and disabled individual (eg: wheelchair-bounded individual), daily household chores could be a big issue. Thus, inventions of assistive device or technologies that can help them to perform their daily activities are very crucial, so that they can become more independent hence increase their self-confidence. One of the daily chores is laundry activity. In this paper, a Smart Laundry Hanger for Disabled using Arduino Embedded System is proposed specifically to cater the needs of disabled individuals which could also include the elderly. This device can automatically push out the hanger during sunny day and reversely pull it in during rainy day. Other than that, it also has the function of moving the hanger vertically (up and down) to make it easy for the disabled individuals especially those who are wheelchair-bounded to hang and retrieve their clothes. This project uses Atmega328P-PU to install all coding program that will give instructions to conduct this system properly. Voltage regulator LM7805 is also used to regulate the supply at 5V. Several sensors are used in this project, such as rain sensors and Light Dependent Resistor (LDR) sensors. Other than that, DPDT switch is also used to connect with the secondary motor in order to move the hanger vertically. It is hoped that the device can assist the disabled for a better quality of life and further increase their sense of independence.

Keywords: Assistive device; smart hanger; LDR, IC ATmega328P-PU; LM7805; DPDT switch

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