



16th INTERNATIONAL RESEARCH CONFERENCE

**ACHIEVING RESILIENCE THROUGH DIGITALIZATION, SUSTAINABILITY AND
SECTORAL TRANSFORMATION**

**MANAGEMENT, SOCIAL SCIENCES AND
HUMANITIES**

ABSTRACTS



**General Sir John Kotelawala Defence University
Ratmalana, Sri Lanka.**

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ORAL PRESENTATIONS

The Usage of E-Procurement in Sri Lanka Apparel Supply Chain and its Impact; Case Study

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Abstract

Advances in the supply chain can improve the quality and efficiency of physical, informational, and financial flows. Technical innovation brings significant changes to the structure of connections between vendors, manufacturers, distributors, intermediaries, consumers, and organizations, as well as productivity benefits. Organizations must maintain an effective procurement process to reduce overheads, stay updated on market conditions, and purchase products and services at the best prices. E-Procurement, a technology enabling corporate purchasing over the Internet, provides organizations with a range of advantages and performance enhancements. However, Organizations must overcome obstacles to successfully use E-procurement functions. Even though there has been a lot of research done on e-procurement, the Sri Lankan context was not common. The apparel sector was chosen as it has been regarded as one of Sri Lanka's most vital industries. This paper focused on the usage of E-procurement and its impact on the development of the industry. Data gathered from industry professionals to inspire Small and Medium-scale Enterprises (SMEs) in the apparel manufacturing sector to improve their productivity via E-procurement and to enter the market as well. The article further elaborates on the factors affecting implementation, challenges in usage, and the impact of E-Procurement strategies on the performance of the apparel supply chain. The findings of this research will elaborate the how leading apparel manufacturers have implemented E-procurement and the benefits and challenges they have identified throughout the usage. Also, this article will discuss how to overcome the challenges of E-procurement and how SMEs can inspire to increase their productivity and efficiency.

Keywords: *E-procurement, Apparel, Sri Lanka, Small and Medium-scale Enterprise*

Identifying the Improvement of Gross Motor Skills of Preschool Children in Monaragala District

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Abstract

Gross Motor Skills (GMS) are the foundations for more complicated motor abilities and movement patterns, and the underlying performance competency required for many types of physical exercise. This study was to identify the improvement of GMS of preschool children in the Monaragala district. Forty Students ($n = 40$) participated from two preschools (30 in the treatment group and 10 in the Control group). GMS was tested using the Test of Gross Motor Development (TGMD-2). Including six skills per subset and there were two subsets. Loco Motor Skills (LMS) (run, gallop, hop, leap, horizontal jump, and slide) and Object Control Skills (OCS) (striking a stationary ball, stationary dribble, catch, kick, overhead throw, and underhand roll). The gathered data were analyzed using, Pearson correlation, paired- sample t-test, and independent t-sample test in SPSS software and Microsoft Office 2013. According to the results, the paired t-test and independent t-test were utilized to achieve the main objective. Paired t-test showed that there is a significant difference between the pre-test and post-test in the LMS score ($p\ 0.000 < 0.05$), OCS score ($p\ 0.000 < 0.05$) in the treatment group, and LMS score ($p\ 0.024 < 0.05$) in the Control group. There is no significant difference in the OCS score ($p\ 0.274 > 0.05$) in the Control group. Finally, an independent t-test revealed that the mean difference of the treatment group is greater than the control group in both LMS ($11.87 > 0.60$) and OCS ($11.03 > 0.30$). It could be concluded that there is an improvement in the GMS of treatment group because of the training.

Keywords: *Gross Motor Skills, Loco Motor Skills, Object Control Skills, Preschool children*

Negative Effects of Integrating ChatGPT in the Higher Education System Concerning Achieving Resilience through Digitalization, Sustainability, and Sectoral Transformation

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Abstract

The integration of ChatGPT (Generative Pre-trained Transformer) in higher education has gained significant attention due to its potential for advancing digitization, sustainability, and sectoral transformation. However, it is essential to consider the potential drawbacks associated with this integration to ensure educational resilience. This research aims to identify and evaluate the negative effects of integrating ChatGPT in the higher education system, focusing on academic quality, customization, ethical concerns, and technology dependency. The study adopts a mixed-method approach, utilizing qualitative methods such as interviews and focus groups with educators, students, and stakeholders, as well as quantitative data gathered through surveys administered to a sample of higher education institutions. Preliminary research suggests that over-reliance on Artificial Intelligence (AI)-generated information may hinder the development of critical thinking and problem-solving skills among students. Concerns also arise regarding the quality and accuracy of AI-generated content, which can compromise the acquisition of reliable knowledge. The lack of personalized and human interaction during learning may impede student engagement and social participation. Ethical issues related to biases within ChatGPT models have been raised, as they can perpetuate biased behaviours and hinder inclusion efforts. Furthermore, the integration of ChatGPT requires robust technological infrastructure, posing challenges for resource-constrained institutions and exacerbating existing digital disparities. The findings of this research can inform decision-making in higher education, enabling policymakers, educators, and stakeholders to develop strategies and guidelines that mitigate potential drawbacks while maximizing the benefits of integrating ChatGPT in the pursuit of resilience, digitalization, sustainability, and sectoral transformation.

Keywords: *ChatGPT, Higher education system, Negative effects*

Analysis of Technology Utilization in Sri Lankan State Universities' English Teaching and Learning Process

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Abstract

This research paper intends to identify the technological devices utilized for English language acquisition processes in Sri Lankan state universities. The majority of non-linguistic undergraduates face the challenge of conducting their degree programs in English. Hence, both the English language lecturers and the undergraduates utilize different and innovative techniques and technological devices to upscale their English language proficiency. Being in the technological era, both the lecturers and the undergraduates use different digital approaches to make their language education successful. Hence, this research carries the results of eight lecturers and 16 undergraduates from eight geographically spread state universities selected under purposive sampling. The utilized data collection method was semi structured interviews and classroom observations in both virtual and physical contexts. The key findings revealed that the lecturers try to integrate digital games, online activities, interactive boards but do not have as much success with the higher number of undergraduates. Meanwhile, the discussions with lecturers revealed that digital literacy too creates a huge barrier to maximizing student participation. On the other hand, a considerable number of students are using artificial intelligence to get their activities done, and most of them heavily rely on online translators to produce the necessary English output they require as they expressed. Very few students out of the sample mentioned using the free subscriptions of BBC English Learning, Dulingo, and Englishpod101 to improve their proficiency, but not frequently. In a holistic view, undergraduates at state universities have found more instant remedies to get the tasks done than long-term, dedicated practices. While the lecturers' effort to familiarize podcasts, interactive boards, and real-time virtual games too find difficult but are not genuinely supported by the undergraduates in the teaching process.

Keywords: *Digital mechanisms, State universities, English, Teaching and Learning process*

Understanding the Phenomenon of Brain Drain: An In-depth Analysis of the Emigration Patterns and Implications for Information Technology Professionals in Sri Lanka

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Abstract

This research paper aims to comprehensively analyse the brain drain phenomenon within the context of Information Technology (IT) professionals in Sri Lanka. The study delves into the emigration patterns and explores the underlying factors contributing to the outflow of skilled IT personnel from the country. By employing a mixed-methods strategy encompassing surveys, interviews, and data analysis, this study illuminates the motivations and encounters of Sri Lankan IT professionals who opt to depart from the country. Analysis is carried out using a Python model that uses pandas and matplotlib libraries. The findings highlight several key drivers behind the brain drain of IT professionals in Sri Lanka. Factors such as limited career opportunities, inadequate remuneration, lack of professional development prospects, and a perceived lack of recognition and support for IT expertise emerge as significant contributors. Moreover, external factors like immigration policies in destination countries and global demand for IT skills also play a role. The consequences of brain drain on the IT sector in Sri Lanka are multifaceted. On one hand, the loss of skilled professionals hampers the industry's growth and innovation potential. This research paper concludes with recommendations to address the brain drain challenge in Sri Lanka's IT sector. Policy interventions focusing on improving local career prospects, enhancing work environment conditions, fostering collaboration between academia and industry, and promoting a culture of innovation and entrepreneurship are proposed. These measures aim to mitigate the brain drain effects and create a conducive environment for IT professionals to thrive within Sri Lanka, ultimately benefiting the country's overall development and technological advancement.

Keywords: *Brain drain phenomenon, Information Technology professionals, Mixed-methods approach*

Female Visionary Leaders for Development: A Sociological Reading on Importance vs Reality of Gender, Development and State University Education in Sri Lanka – A Case Study

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Abstract

Visionary leadership is more about having a long-run vision. Sustainable development is a holistic approach to development. The country's state universities provide free-of-charge higher education for selected students based on their Advance Level examination results. The research problem of the study was 'what is the importance of having female visionary leaders in navigating the country's development process?'. Research objective was to examine what is the reality of including female scholars of state universities of the country as visionary leaders, within the country's development process. This research was an exploratory, qualitative, field-based research. Purposive nonprobability sample was used, collected primary data through questionnaires and structured interviews. Discourse analysis was used in analyzing data. Since this was done by selecting a one-state university and 8 selected ministries of the country, this is a case study particular to those main research fields. Enhancing equal participation in the private and public spheres need gender-sensitive lenses. The popular view on leadership as which belongs to the public sphere restricts females' full participation in leadership, in a patriarchal world. Patriarchy has created a mindset that working under female/s is somewhat inferior. Although a considerable number of females are engaged in labour force of the country, bringing female visionary leadership into the mainstream is lacking. Theoretically state university curriculums made treating males and females, the other gender groups equal. There are clear gender patterns in male-female student proportions in different study streams; those are bounded by gendered social constructions and gender-based division of labour. Females are not genetically less visionary. Where the state policies do not promote female visionary leadership to navigate the development process of the country, it is difficult for females to cope with up challenges they face.

Keywords: *Development, Gender, State universities*

Social Importance to Encourage Sri Lankan Elders to Play Computer Games

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Abstract

Globally the number of elderly individuals increases, and this segment of the population is rapidly growing with considerable factors like their social well-being and overall quality of life. When it comes to Sri Lankan context it turns out to be a crucial factor because of the country's situation and unique socio-cultural aspects. Sri Lankan elderly individuals face cognitive function difficulties with ageing just like other elderly individuals globally and have solutions, but when it comes to social well-being there is no proper solution to address the problems like loneliness, social isolation, and lack of engagement negatively impact to their social well - being and these factors plays a vital role in their overall health. Computer games can be played via many platforms, variations such as multiplayer mode which improve cognitive abilities, improve problem solving skills and logic, speed up response time, increase hand to eye coordination, enhance prosocial behaviours such as; empathy, altruism, generosity, sharing, cooperation, and comforting, stimulate focus and visual memory and help to reduce stress. Some computer games are specially built to improve game players' mental health. Games such as Concrete Genie, Arise: A Simple Story and A Fold Apart specially focused on the improvement of mental health and improving social well-being using various game strategies such as puzzles. Recently, computer games have gained traction within elderly individuals, especially in European countries and actively participate just like the younger generation. Computer games offer a unique opportunity to address these elderly individuals' overall health challenges and provide a platform for social interaction, cognitive stimulation, and emotional fulfilment. The researchers' objective is to explore the social importance of encouraging Sri Lankan elders to engage in computer games and determine the potential benefits associated with this interactive form of entertainment.

Keywords: *Elderly, Aging, Computer games, Social well-being*

The Effect of Utilising Poetry Translation Strategies in Poetry Translation: with Reference to Selected Published Poetry Translations from English into Sinhalese

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Abstract

Given its personal and concentrated nature, poetry falls under serious literature. When translating poetry, most translators follow literal translation method. As a result, the poet sometimes may fail to carry across the Source Language culture to Target Language culture. As a result, it mostly does not preserve the aesthetic value of the translation. Hence, it is important to identify effective translation strategies for translating poetry. To investigate the effect of utilizing poetry translation strategies in poetry translation, the study selected published poetry translations which are literally translated from English to Sinhalese based on purposive sampling techniques followed by the theorists' interpretations on features of the literal translation procedure. The selected samples of poems were then again translated by the researcher using poetry translation techniques introduced by Lefevere to investigate types of applicable poetry translation strategies, their level of effectiveness compared to literally translated poetry and finally the most effective poetry translation strategies were identified. The reader responses were recorded by providing a questionnaire with an assessment criterion to evaluate literally translated poems and the translated poems were named as TT1 and TT2 respectively. It was highlighted that Rhymed Translation and Metrical Translation are more effective strategies to translate poetry after analyzing the data. Further, interpretation of Poetry into Prose Strategies was also revealed in this study.

Keywords: *Aesthetic value, Effect, Poetry translation, Strategies*

Sri Lankan English as the Standard/ Model for Language Assessment in English Language Teaching in Sri Lanka: Understanding Tertiary Level Teacher Resistance

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Abstract

While Sri Lankan English (SLE) has been prescribed as the standard for English Language Teaching (ELT) practices including Language Assessment (LA) in Sri Lanka, there has been considerable resistance to it both from scholars and teachers. Within this context, this study investigates why English teachers resist adopting SLE as the Standard/ model for LA in ELT. The study adopts a qualitative approach since similar studies of quantitative nature have been conducted. The study collected data from 10 teachers who teach English at two Faculties (Humanities and Social Sciences as well as Natural Sciences) at a state university through semi-structured in-depth interviews. The collected data were coded and then analysed using the method of thematic analysis. Seven themes explaining teacher resistance to SLE as the model/ standard in LA in ELT were identified through the analysis of data: SLE as ungrammatical and unacceptable outside Sri Lanka, teachers' sense of professional responsibility to train the students in "correct" language usage, lack of awareness regarding variation within SLE, difficulties arising in marking student answers due to lack of codification of SLE, image as a competent teacher and pressure from the academic community, SLE as unacceptable in the domain of English for Academic Purposes and accepting SLE as the standard as discriminatory against students whose mother tongue is Tamil. The study highlights the importance of further research, particularly of qualitative nature, on SLE as the standard in other practices in ELT such as material development and pedagogy.

Keywords: *Sri Lankan English, English Language Teaching, Language standards*

Leadership, Green Human Resource Management and Green Employee Engagement: Navigation of Sri Lanka Navy

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Abstract

Corporate and military settings are evolving to be more environmentally conscious. The aim of this study is to bridge the identified empirical research gap through a quantitative study. The identified research gap is that there is no empirical evidence on the mediating effect of Green Human Resource Management (green HRM) on the relationship between leadership and green employee engagement in the Sri Lanka military context or in the international military context. The research objectives are to identify the impact of green HRM on green employee engagement; to identify the impact of leadership on green HRM; to identify the impact of leadership on green employee engagement; to identify the mediating effect of green HRM on the relationship between leadership and green employee engagement. This cross-sectional study was carried out in a non-contrived environment under minimal researcher interference. The unit of analysis is an individual who is an officer in the Sri Lanka Navy. The sample size is 165 and the sample population is 3,200. The Sampling technique is simple random. The study utilized the Partial Least Squares Regression (PLS) model using SMART PLS 4.0 software to assess the reliability, validity, and relationships among latent variables in both the measurement and structural models. The results reveal that there is a significant partial mediating effect of green HRM on the relationship between leadership and green employee engagement.

Keywords: *Leadership, Green Human Resource Management, Green employee engagement, Military context*

Effectiveness of Teaching Vocabulary Using Presentation, Production and Practice Approach in a Blended Learning Environment

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Abstract

Vocabulary is getting updated on a daily basis and the teachers' role is vital in teaching vocabulary to the learners in the language classroom. Blended learning is a method that combines face to face learning and online learning where teachers can use virtual classrooms such as webinars and chat forums and platforms such as Zoom, Teams and Google Meet which support online education. Blended learning allows learners to utilize the ability to increase engagement in a more student-centric environment. With the development of modern technology, blended learning looks strong, and all signs point to its continued growth as more educators and students realize its benefits and provide more accessible communication methods within a digital classroom setting. When teaching vocabulary through blended learning, teachers can use online tools such as Padlet, Kahoot, Flipgrid, Mentimeter and Wordwall to teach vocabulary activities as it maximizes learning goal achievement by utilizing the appropriate learning methods to match with appropriate learning desires in order to deliver the relevant skills to the individual at the right time. Face-to-face classes maintain the liveliness meanwhile, virtual platforms aid students to expose to a wide range of materials available online as well as it is outdated to teach vocabulary entirely using either online or offline mediums. In this study we will demonstrate a blended learning approach can be implemented in a Presentation, Production and Practice vocabulary lesson and discuss how effective a blended learning approach is in teaching vocabulary.

Keywords: *Blended learning, Vocabulary teaching, Online tools*

Customer's Perspective on Dynamics of Digital Transformation in the Bank Industry of Sri Lanka

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Abstract

Digital transformation has changed the entire banking system, making it accessible, competitive, and improving effectiveness and efficiency. Most local banks in Sri Lanka are now moving towards technology-driven and internet-based banking services. However, in Sri Lanka relatively little empirical research has been carried out to examine the dynamics of digital transformation. Hence, there is a growing need to identify the relevant customer perspective on the dynamic of digital transformations. Therefore, this research aims to identify and explore the factors behind customers' perspectives on the dynamics of digital transformation in the bank industry of Sri Lanka. A general qualitative approach was used with in-depth interviews to achieve the purpose of the research. The research data were analysed using thematic analysis with a combination of theoretically derived themes and indigenous themes from the research findings. Finally, the researcher used both Unified Theory of Acceptance and Use of Technology and Theory of Recent Action commonly to build an empirically supported model. From the data analysis, the participants cited eleven major themes as answers to the two research questions, namely fitness for lifestyle, personal image and social standards, maturity of product or service, ease, usefulness, security, social factors, cost, time benefit, and reliability. As implications for bankers, it is found that when launching a marketing campaign for new digital products and services, it is essential to demonstrate the usage of digital technology to increase public awareness. This research helps understand customer perception, and banks can identify more personalized product models to motivate customers to access digital products and services further.

Keywords: *Banking industry, Customers' perception, Digital transformation*

Analyzing the Economic Impact of Brain Drain and Migration in Sri Lanka

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Abstract

Brain drain and migration have been a global phenomenon that has significant economic implications. In Sri Lanka, it has been observed that skilled professionals started migrating to developed nations due to many reasons. This has a significant influence on the economy of Sri Lanka in both direct and indirect ways. This study employs a combined methodology - a systematic review of literature over a period of 22 years (2000 – 2022) and thematic analysis has been used to analyze the in-depth interview data. The analyzed results show that skilled migration has increased. According to the results, it has been identified that some of the most common reasons for this issue is political instability, lack of job opportunities, poor living conditions, imbalance between skilled migrants' home country and the host country's earnings and, tax policy changes.

Keywords: *Brain drain, Economy, Skill migration*

Technology Mediated Vocabulary Assessment in Second Language Teaching

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Abstract

This study explores the concept of technology-mediated vocabulary assessment in second language instruction, concentrating on how technological tools and resources might improve the assessment process and give useful feedback to students. With the introduction of digital platforms, software programs, and online resources, educators now have access to a wide range of innovative techniques for evaluating students' vocabulary knowledge and skills. This study examines the different facets of technology-mediated vocabulary evaluation, including online tests such as the Expressive One-Word Picture Vocabulary Test, The British Picture Vocabulary Scale, Peabody Picture Vocabulary Test and Test of Word Knowledge. Moreover, vocabulary applications, digital flashcards, corpus tools, Natural Language Processing, and online dictionaries. These systems provide dynamic, individualized learning experiences, instant feedback, and the capacity to monitor students' development over time. The incorporation of technology in vocabulary assessment not only improves learner engagement and motivation, but also gives teachers insight into their students' lexical knowledge, helps them to spot their areas of weakness, and allows them to modify their lessons. While acknowledging the advantages of technology-mediated vocabulary assessment, it is vital to make sure that these tools are applied in a way that is in line with instructional objectives and delivers reliable and accurate assessment results. The purpose of the study's conclusion is to highlight the importance of using technology in second language assessment in order to maximize vocabulary learning and foster successful language learning.

Keywords: *Vocabulary, Assessment, Technology, Tools*

Intelligent Traffic Management System for the Development of Smart Cities in Sri Lanka

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Abstract

Traffic congestion in Sri Lanka is a pressing issue that leads to wasted time, financial burdens, and disruption of personal schedules. The inadequate road infrastructure, underutilization of various travel information sources, and transportation systems coupled with the increasing number of vehicles contribute to this problem. Despite the presence of two international airports, a railway system, and waterways for transportation, the populace predominantly relies on the road network, leading to consequential challenges such as traffic accidents, property damage, and environmental pollution. The objective of this research is to put forth and assess a smart system for managing traffic known as the Intelligent Traffic Management System (ITMS). This system utilizes technological progressions like Artificial Intelligence (AI), cloud computing, the Internet of Things, and data analytics to enhance traffic management and control. The objective is to optimize traffic flow, reduce wait times, alleviate congestion, minimize travel expenses, and mitigate air pollution levels. The proposed system employs machine learning algorithms to forecast optimal routes based on traffic patterns, vehicle classification, frequency of accidents, and weather conditions. The development and implementation of the ITMS demonstrate the potential of AI-driven solutions in addressing traffic-related problems and improving daily commuting experiences. In conclusion, integrating AI technologies into the ITMS presents a promising approach to mitigating traffic congestion challenges in Sri Lanka. By forecasting optimal routes and incorporating data-driven decision-making, the ITMS offers a solution to improve traffic management and alleviate the negative effects of congestion.

Keywords: *Traffic congestion, Intelligent Traffic Management System, Artificial Intelligence*

Evolving towards the Future: Internet of Things based Precision Aquaculture System

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Abstract

Humans and technology have been developing continuously from the prehistoric period to the present, and it has evolved into a key component for assisting with daily tasks in today's world of technology. As an approach to fulfilling nutritional needs and a variety of other necessities, civilizations established agriculture millennia ago. Aquaculture is yet another important concept in agriculture, where farmers cultivate fish in ponds and tanks for human consumption. Aquaculture, or fish farming, has long been recognized for its significance by agriculture, which has its roots in satisfying human needs and it is only one of the many industries that are undergoing advancements driven by modern technologies. As technology continues to evolve, Internet of Things (IoT) based aquaculture systems are gradually replacing traditional fish farming techniques. By applying IoT and AI-based technologies, the system enables fish farmers to accurately monitor the growth and wellbeing of fish as well as the water quality, temperature, and pH levels in fish tanks. This system, which is readily accessible through computers, tablets, and mobile phones, minimizes manual labor while significantly expanding aquaculture outcomes, resulting in advantages for the fishery's marketing industry. The primary objective of this research project is to explore the prospective benefits associated with implementing IoT and AI technologies in aquaculture and artificial intelligence utilization in aquaculture worldwide, focusing on analytical models, AI-powered image recognition and vision-based algorithms for disease management and sustainable methods to improve awareness of the role that technology plays in strengthening efficiency and ensuring long-term sustainability for the aquaculture sector by examining certain scenarios and possible benefits.

Keywords: *Aquaculture, Internet of Things, Artificial Intelligence, Remote access, Solar power*

Portfolios as a Student–Assessment Tool: A Study Based on Higher National Diploma in Engineering Students at Advanced Technological Institute, Anuradhapura

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Abstract

The current research was conducted to measure the impacts of the Portfolio Assessment on Higher National Diploma in Engineering Program (HNDE) learners using it as a continuous assessment method for the module Language Structure Usage and Linguistics. The sample group included 120 HNDE students from the 1st year batch. This research involved the planning and implementation of the portfolio assessment and collecting feedback from the participants. The data collected indicated that the HNDE followers are assessed through different assessment methods. As far as the experiences of the participants are concerned, this is a great assessment method since it helps them in many ways: memorization, exam preparation, displaying creativity, developing organizational skills, and expanding their knowledge. As the evaluating experience revealed, the lecturer found it time-consuming and hard work to mark over 100 individual portfolios. According to the conclusions, the portfolio assessment is really beneficial for learners since it engages them in a continuous learning process. Moreover, they are led to self-error-correction, discovering new knowledge, and independent learning. In conclusion, it was found that Portfolio Assessment is beneficial for both the learner and the lecturer in assessing language structure competency. However, this should be implemented with some other methods for large classes since it is time-consuming both to compile the book and to evaluate it.

Keywords: *Assessment, Creativity, Critical thinking, Portfolio, Reflection*

Investigating the Integration of Blended Learning Tools to Provide Formative Feedback on Students' Writing in Secondary level English Language Teaching Textbooks in Sri Lanka

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Abstract

Blended learning is an educational model which makes use of both traditional face-to-face classroom settings and online learning environment. Blended learning approach provides more freedom to adjust the learning process according to learner needs. With the advancement of modern technology, blended learning uses a variety of new ways that can optimize the maximum benefits of traditional teaching methods. In the English Language Teaching (ELT) field, blended learning can be successfully used in several ways in teaching and when giving formative feedback. Formative feedback is an ongoing process which makes learners reflect on their own work and evaluate their learning and providing formative feedback on students' writing drafts increases their confidence and develop better writing practices. This study aims to analyze a secondary English language textbook to determine the extent to which it incorporates blended learning aspects and formative feedback on writing. The study also aims to provide suggestions on effectively integrating blended learning aspects and formative feedback into textbooks. The methodology employed in this study involves a textbook analysis. Various aspects of blended learning, such as the inclusion of online resources, interactive activities, multimedia materials, and opportunities for self-directed learning, are examined. Also, the analysis identifies the strengths and weaknesses of the textbook in relation to formative feedback aspect and highlights areas where improvements can be made. These suggestions are based on best practices and emerging trends in blended learning pedagogy and they provide practical guidance to curriculum developers and educators.

Keywords: *English Language Teaching, Blended learning, Formative feedback, Textbook*

Factors Affecting the Effective Usage of Medical Equipment in Sri Lankan Hospitals

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Abstract

In Sri Lanka's public hospitals, a large portion of the medical equipment is nonfunctional, unusable, or poorly maintained. It is of paramount importance to limit the nation's resource wastage amid the current economic crisis where people's access to healthcare is compromised. Developing nations like Sri Lanka face several difficulties in striking a balance between limited resources and better-quality healthcare services. Therefore, it is important to take optimal usage of available resources in the healthcare system. There are many factors that have influenced the usage of the most recent technology in Sri Lankan Hospitals. In this study, 26 factors that influence the effective usage of medical equipment in Sri Lankan Hospitals were identified using the literature survey. A factor analysis was done to identify the main 4 factors with a higher influence on the effective usage of medical equipment. This study applied a cross-sectional study design, and 384 employees including nurses, biomedical engineers, medical officers, and doctors were selected by a convenient sampling method. Data were collected using structured self-administered questionnaires and analyzed using the SPSS at the level of significance of $p < 0.05$. Three reliability tests were performed namely Pearson correlation, Cronbach's alpha, and Cohen's kappa for the questions. This study shows that there is a positive influence of key factors financial resources, policy and regulatory framework, and training and education on effective usage of medical equipment. However, the main factor contributing to the effective usage of medical equipment is maintenance. A comprehensive analysis of the factors that influence the implementation of medical equipment management systems for Sri Lankan hospitals is presented in this research.

Keywords: *Medical equipment, Patient care, Inefficient usage, Health care system*

The Impact of Logistics Function on the Performance of an Organization

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Abstract

As an island, which seeks to thrive from area of logistics, the development of the logistics industry is significant since it acts as a vigorous supportive arm for the economy. Furthermore, the logistics functions in the industry are a paramount factor that assists to maintain a stable performances within the organizations and long term reduce the price of the end product with efficient logistics practices. With the challenges faced by the supply chains in the whole world there has been ups and downs in the logistics industry. Researchers have identified that there is contemporary requirement of assessing dimensions of logistics functions in order to find the impact on organizational performances. Moreover, the study has identified four functions of logistics which effect the organizational performance as warehousing, inventory management, transportation and order processing. In order to achieve the objectives of this study, the researchers have conducted multiple regression analysis by collecting the data from employees at MAS Holdings Borupana. Finally, thematic analysis was done on the collected data to prove or double assure the responses received from the managers. Further, SPSS analysis was done based on the collected data from the employees of the logistics department of MAS Holdings Borupana as per the quantitative data analysis. As per the research findings, the researchers exposed a strong positive correlation between the dimensions as warehousing as the most significant dimension of organizational performance at MAS Holdings Borupana. Furthermore, researchers can look into all companies within Sri Lanka and find the impact of logistics functions on overall performances of the company.

Keywords: *Warehousing, Inventory management, Organizational performance*

The Digital Transformation of Higher Education in Sri Lanka Due to COVID-19

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Abstract

Digitalization in education can be defined as the implementation of digital technologies to transform knowledge for learners as well as educators. Digital technology has made a phenomenal entrance into Sri Lankan higher education during the Covid-19 pandemic since the Sri Lankan government followed the social distancing step to limit the spread of the syndrome. This study will elaborate on answers to the issue; to what extent the steps taken by the government and private sectors have been sustainable in facilitating e-learning during the Covid-19 outbreak. Therefore, the study is crucial in determining whether the steps taken to make online learning feasible in Sri Lanka with the real-world challenges that Sri Lankan university students encounter. Taking a quantitative research approach; a questionnaire, the paper observed the usage of digital platforms before and after the pandemic situation, some issues faced by the university students with the digital transformation, some steps taken by authorities and to what extent, they have been sustainable in the higher education in both academics and economics. Furthermore, there are some recommendations for how to resolve the problems and improve the sustainability of the digital transformation in the future. In terms of the conclusion, it can be stated that Sri Lanka's digital transformation was at a sustainable level during the pandemic, and even after the outbreak, and it has a beneficial impact on education in the country's higher education system.

Keywords: *Digital transformation, Sri Lankan higher education, Covid-19 pandemic, Digitalization, Sustainability*

Impact of Bank Finance, Government Support and Psychological Factors on Start-up Decision Making in Sri Lanka: Special Reference to Homagama Division

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Abstract

This research aims to test the impact of bank finance and government support on initiating entrepreneurial ventures and start-ups. This study used a quantitative approach. Data were collected through a survey method using a questionnaire. The study's respondents were 203 entrepreneurs and businessmen in Homagama Divisional Secretariat Division in Colombo District, Western Province, Sri Lanka. Exploratory factor analysis and confirmatory factor analysis were performed to identify the impact of bank finance and government support on the initiation of entrepreneurial ventures and start-ups and test the convergent and discriminant validity. Cronbach's alpha analysis was carried out to test the reliability of the dimensions. In addition, criterion-based validity and the stability of the impact of bank finance and government support on the initiation of entrepreneurial ventures and start-ups were also tested. All tests were conducted using the SPSS software with the extension PROCESS 4.0 to test the entrepreneur's moderator; i.e. age. The study has been proven to have good validity, reliability, and stability for measuring the impact of bank finance and government support on initiating entrepreneurial ventures and start-ups in the Homagama Divisional Secretariat Division in Colombo District, Western Province, Sri Lanka. This research was carried out in a single developing country, Sri Lanka. Hence, the stability of the model needs to be tested in different cultures. Government and Bank Financing authorities can use this study to monitor, measure, and improve the service quality of their services towards start-up ventures and entrepreneurial firms. Hence it is proved that even though people have enough motivation and locus of control, support from external authorised parties is the factor that determines successful start-up decision-making.

Keywords: *Bank finance, Government support, Psychological factor, Start-up firm*

Study on How Technological Development and Digital Transformation are Applied in Social Organizations in Transforming Themselves to Gain Efficiency and Leadership Competency

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Abstract

The application of technological advancement and digital transformation in social organizations is explored in this study, with a particular emphasis on their transformative potential in achieving efficiency and leadership competency. The study looks into how social organizations can improve their operations, decision-making, and overall effectiveness by utilizing technological advancements. This study aimed to shed light on the strategies, difficulties, and results associated with implementing technology-driven transformations in social organizations through a thorough analysis of existing literature and primary data that were collected through structured interviews from a non-random sample of 38 participants. The study's main goal is to investigate how technological advancement and digital transformation are used in social organizations to improve their productivity and develop leadership skills. The findings offer insightful information about the complex nature of digital transformation.

Keywords: *Digital transformation, Social organizations, Leadership competency, Technology-driven transformations, Organizational change*

Landslide for Education; A Case Study from the Mitigated Landslide at Kahagalla, Haputhale

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Abstract

Sri Lanka is a well-known country experiencing landslide disasters which are most common. Hence, awareness or education in landslide hazards and disasters must be well established in the country. The importance of education is not only about book learning, but also fieldwork to give students valuable real-world experience. This study focuses on the Kahagalla landslide mitigated site, an exemplary landslide mitigation and management project. The purpose of this study is to provide valuable insights and lessons learnt from the Kahagalla landslide mitigated site, which can be utilized for educational purposes in the field of Geography, Geology, Civil Engineering, and Disaster Management. This is a qualitative case study that used field observation as the primary data collection method and relevant documents as the secondary data collection method. Data were analyzed using the thematic analysis method. The case study analyzes the background of the landslide, the measures taken for landslide mitigation, and the overall success of the project in terms of landslide education. Results reveal that the Kahagalla landslide site can give proper knowledge on landslide education. Further, the site is rich in different landslide mitigation methods and is accessible. Thus, the recommendation is to use these kinds of available sites in Sri Lanka for enhancing the practical knowledge of education.

Keywords: *Landslide, Education, Mitigation site, Countermeasures*

A Clustering Method to Identify Mental Health Patient Groups with Similar Treatment Outcomes

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Abstract

A person's complete emotional, psychological, and social well-being is referred to as their mental health. It has an impact on how people feel, think, and act, as well as how they act and react to obstacles in life. Maintaining positive relationships, accomplishing goals, and living a satisfying life depend on having good mental health. No matter what one's age, gender, race, or financial situation may be, mental health concerns can present themselves in a variety of ways and can affect everyone. Anxiety disorders, sadness, bipolar disorder, and schizophrenia are typical mental health issues. An individual's capacity to work, study, and sustain relationships can all be significantly impacted by mental health issues. Thankfully, there are a variety of treatments available, including counselling, medications, and dietary adjustments. Prioritizing mental health and getting treatment when needed are crucial. In the present study the treatments such as home treatments, early intervention and assertive outreach which were done focusing patients of United Kingdom (UK) are analysed. For this purpose, K-means clustering technique was used to cluster the patients with similar disorders to categorize for their treatments. The findings underscore a significant prevalence of mental health concerns among a substantial segment of the general population within UK, emphasizing the escalating significance of addressing mental health matters. Consequently, this study holds substantial potential in enabling timely interventions and the reduction of mental health disorders.

Keywords: *Mental health treatment, K-means clustering*

Detailed Study Based on the Effect of the Official Language Policy of Sri Lanka towards English Language usage in the Land and District Registry; Nuwara-Eliya District

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Abstract

Language planning in general is considered a large-scale phenomenon. In fact, national planning is always undertaken by governments and aims to influence or change ways of speaking or literacy practices within a particular society. In Sri Lankan context, the incident where the postcolonial language policy that consecrated Sinhala as the only official language of the country in 1956, proves that declining legitimate minority-language rights leads to language-based conflicts. However, with the adoption of the 13th amendment to the 1978 Constitution granting both Sinhala and Tamil the status of official language can be highlighted as a unified approach that led to many transformations in the government administrative sector. Accordingly, the present study uncovers the effect of the official language policy of Sri Lanka towards English Language usage in the Land and District Registry in Nuwara Eliya District. In fact, through a mixed approach, it examines how the official languages are being used for administrative purposes and what shortcomings that they highlight when in function. This foregrounds that further implementations should be taken to equally function the official language policy for all ethnicities and that English language should be given more attention in the government administrative sector.

Keywords: *Language policy, Language planning, Government administrative sector*

Exploring the Role of Anonymous Social Media Posts in Empowering Women Affected by Deception and Infidelity: A Qualitative Study

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Abstract

Women affected by domestic threats, deception, infidelity, and the subsequent mental health consequences often face barriers in seeking support and sharing their experiences openly due to fear of judgment, stigma, and reprisal. However, with the rise of anonymous social media platforms, women may now have a safe space to share their experiences, reach out for help, and boost one another's confidence without fear of reprisal. Examining the effects on women's well-being, access to resources, and sense of community, this qualitative study seeks to investigate the function of anonymous social media posts in empowering women facing these issues. Women who have experienced domestic violence, deception, infidelity, or mental health implications were interviewed in-depth as a part of the qualitative study. Participants were sought out through women-focused online communities and offline groups. Initial research indicates that women who have experienced domestic violence, deception, infidelity, or other negative effects on their mental health can find strength in sharing their experiences anonymously on social media. In addition, women were able to learn about their legal rights, mental health support services, and coping skills through anonymous social media posts. This study's findings highlight the significance of anonymous social media posts in aiding women who have experienced domestic violence, deception, adultery, or negative mental health outcomes. These online platforms allow women to speak out, get help, and learn from each other's experiences.

Keywords: *Social media, Anonymous posts, Domestic threats, Mental health consequences, Deception*

A Comparative Study on the Opportunities and Challenges of Blockchain Implementation in Logistics and Supply Chain Operations in Sri Lanka

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Abstract

The world is evolving and moving forward with Industrial 4.0 and its implications such as blockchain technology. However, its application in Sri Lanka is still at an infant stage. The study aims to compare the blockchain implementation in logistics and supply chain operations in order to find out the opportunities, challenges, similarities, and contradictions. Most importantly, the study identifies the opinions, suggestions, and estimations from relevant industry professionals. In-depth interviews were conducted with seven industry professionals in logistics and supply chain management using the simple random sampling method. Discourse analysis is used to find out the similarities, contradictions and special points which were pinpointed by the industry professionals. The study suggests the opportunities for new business models, creating leading solutions for end customers, generating solutions that are hard to imitate by a third party, decreased cost through the interconnected system, ability to increase quality and traceability and reduction of documentations and administration in an organization. As challenges, the study highlights the capital requirement in implementation, negativities of standardization, losing the direct value creation of the end customer and losing the organization's flexibility. In conclusion, the study compares the opportunities and challenges of implementing blockchain using the input of logistics and supply chain management professionals.

Keywords: *Blockchain technology, Logistics, Supply chain management*

A Quantity Estimated Method to Measure Flow of Nodes in a Freight Transport Network

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Abstract

This study focuses on estimating flows of nodes in a courier transportation network. Literature has quantified the exiting flow of nodes by analysing real data for quantities transported and travel time. Due to difficulties in accessing real data, a method for estimating data especially on the quantity transported among nodes is required. The purpose of this study is to develop a quantity estimated method for measuring the exiting flows of nodes in a freight transport network. The level of significance of each node in the network is estimated through a proposed 'criticality factor'. Nodes are equally categorized as high, medium, and low based on the descending order of the criticality factor. A weighting scale is developed for these three categories and Google maps are used to derive the travel time. The exiting flow of nodes is derived as the ratio between the quantity exited and time taken. This method is applied to peak, off peak, highway, and expressway operations. The study recommends using a proper amount of equipment at nodes, consolidation of vehicles, and relocation of warehouses. This study contributes to the domain of cost reduction in freight network by estimating the exiting flows of all the nodes in a freight network.

Keywords: *Exiting flow, Freight network flow, Criticality factor, Maximum vehicle capacity*

Adaptation of Blockchain Technology in the Banking Sector in Sri Lanka: Opportunities and Challenges

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Abstract

Blockchain Technology is one of the main components in Industry 4.0 implications which enables organizations to trace transactions, create new business models to solve customer problems, increase the quality and productivity etc. Blockchain technology is used in various industries such as supply chain industry, banking industry, healthcare industry, construction industry and many more. However, in Sri Lanka, there is a gap in the implementation of blockchain technology in the banking sector despite the number of on-going and completed projects. The primary goal of this study is to identify the challenges and opportunities in blockchain adaptation and identify how the banking sector should be facilitated in the future to implement blockchain-based banking systems. Cluster sampling and intensity sampling techniques were used to identify the sample. In-depth interviews were used for data collection, and the data were analysed using the thematic analysis. Technological, Organizational and Environmental framework was used for developing the questionnaire and to support the data analysis. The study shows that implementing blockchain-based banking systems would improve the transactions' transparency, give managers access to real-time data, improve the transactions' auditability, and save consumers time and effort. Additionally, the key reasons that challenge the implementation of blockchain technology are lack of technological understanding and accessibility, organizational hurdles, and environmental barriers.

Keywords: *Blockchain technology, Banking, Thematic analysis*

Teaching of Idiomatic Expression in Teaching English as a Second Language in Sri Lanka

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Abstract

Idioms are one vital component every language around the world owns which entails an intended meaning behind them. Idioms and idiomaticity enable one to develop figurative competency, a component of communicative competency, which ultimately enables one to master overall language competency. Since there are different varieties of the English language, there are idioms from such varieties that can be used to identify the culture of the language and any hidden meanings. When teaching English as a Second Language, it is essential to expose the second language (L2) learners to such idioms from varieties of English. A corpus-based textbook analysis was done using the English grade 10 and 11 textbooks from the local syllabus in Sri Lanka to determine to what extent second language acquisition through idioms is supported by these texts. The findings indicate that idiom usage is very confined in English textbooks for grades 10 and 11, and that all those idioms that are included are of one specific variety-British English-and are not from different varieties. The study's findings unambiguously support the Sri Lankan L2 learners' minimal exposure to idiomaticity. This talk will highlight these findings and propose improvements that can be made to the syllabus to increase learner understanding of idioms.

Keywords: *English as a Second Language, Idioms, Varieties of English, Communicative competence*

Factors to Consider: Promoting Speaking Competence of National Languages of Sri Lanka

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Abstract

The language factor is known to be a critical aspect in ethnocentric conflicts. Therefore, language barrier is a national-level problem in Sri Lanka regarding intercultural communication and understanding. The purpose and objective of this research is to identify the barriers to verbal communication between two national languages of Sri Lanka, Sinhala and Tamil. This study determines to find suggestions to improve harmonious co-existence among ethnicities and to increase the intercultural understanding for peaceful reconciliation in Sri Lanka. The interviewee of the study are 10 intellectuals representing prestigious government institutes, which are the Ministry of Education, Sri Lanka Police and Sri Lanka Army and Non-Governmental organizations, such as Turkish Red Crescent Society. The sample was collected from four districts, which included the representation of the highest density of the multi-ethnic community in Sri Lanka in which urban, rural and estate representation was considered. The findings of the study were elaborated through educational, political, cultural and career aspects based on interviewee responses. The main suggestions derived through the findings are conducting mandatory language competencies following the implementation of Trilingual policy of Sri Lanka for primary and secondary education to build intercultural communication. Finally, to strengthen the Sinhala and Tamil language learning as ability to gain promotion, adding salary bonuses and incentives, considering national language skills for promotions and offering special recognitions towards the employees who are competent in both national languages are identified as motivative factors for employees to improve their second national language speaking competency and other objectives.

Keywords: *Speaking competency, National languages, Education, Harmonious coexistence, Reconciliation in Sri Lanka*

Investigating the Features of Academic Writing in Research among Undergraduates

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Abstract

In academic settings, academic writing is a specialized style of writing that adheres to specific rules and guidelines. It is characterized by a formal and unbiased tone, precise terminology, and adherence to established norms. This study aims to explore two aspects of academic writing: the use of hedging and the frequency of personal pronouns. To facilitate future research, a mini-corpus called the “Academic Writing in Research Corpus” is introduced. This corpus will serve as a valuable resource for investigating the patterns and tendencies related to hedging and the use of personal pronouns in academic writing. By exploring these aspects, the study aims to contribute to a deeper understanding of the linguistic characteristics of academic writing, providing insights into the ways in which authors employ hedging strategies and the role of personal pronouns in scholarly discourse. The findings will contribute to future research endeavours in this area. The study focuses on undergraduates from the Faculty of Law at General Sir John Kotelawala Defense University. The research design involves collecting proposal writings from this group as representative samples. The collected data will be processed and analyzed to quantify the frequency of hedging and personal pronoun usage. A comparative analysis will be conducted to compare these usage patterns across different proposals. Statistical techniques may be used to determine the significance of any observed differences. This research design will provide valuable insights into the frequency and patterns of hedging and personal pronouns in research writing by undergraduate students.

Keywords: *Academic Writing, Research, Academic Writing in Research Corpus*

The Importance of Social Work as a Practising Profession to Enhance Gender Mainstreaming in Sustainable Development in Sri Lanka

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Abstract

This research paper delves into the applicability of gender mainstreaming in the context of Sri Lanka and its crucial role in sustainable development, particularly within the field of social work. Employing content analysis, the study examines secondary data to shed light on this topic. Gender mainstreaming, which seeks to incorporate gender perspectives and foster equality in decision-making and development initiatives, is explored through the lens of the UNESCO's guiding principles, including recognition, diversity, equality, empowerment, participation, partnership, and social justice. The paper highlights the necessity for gender mainstreaming within the Grand Challenges for Social Work initiative and assesses the existing policies in Sri Lanka. Although existing policies acknowledge the significance of gender perspectives, the paper underscores the need for heightened awareness and sensitivity in development programmes to prevent the perpetuation of gender disparities. Despite high literacy rates, various challenges, such as social norms and limited economic participation, may impede the effective implementation of gender mainstreaming in sustainable development. The study emphasises the pivotal role of social work in addressing gender-based issues aligned with the Sustainable Development Goals and advocating for inclusivity and empowerment. Additionally, the research addresses the challenges encountered by local social workers, such as non-indigenous education, limited agency support, the self-determination of service users, and the influence of cultural and religious factors. Recognising and addressing these challenges necessitates greater acknowledgment and support for the social work profession and ethical decision-making. Ultimately, the paper concludes by underscoring the significance of gender mainstreaming in social work as a means to achieve inclusivity, equality, and empowerment. It calls for the integration of gender perspectives in policies, programmes, and practises to advance social justice and ensure a more equitable society.

Keywords: *Social Work, Sustainable development, Gender mainstreaming, Gender inclusivity*

A Literature Survey on Facebook Intrusion: Predictors and Effects

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Abstract

Facebook has emerged as a leading social media platform globally, with billions of users engaging in social interaction, information dissemination, and community building. This research paper aims to explore the impact of Facebook on personal privacy and emotional well-being, with a focus on Sri Lanka as a case study. Despite its popularity, Facebook raises concerns regarding invasion of personal space and privacy, cyberbullying, exposure to harmful content, and social comparison, which can contribute to negative psychological outcomes such as depressive symptoms, psychological distress, and anxiety. This study adopts a literature survey methodology, conducting a comprehensive search using predefined search terms on Google Scholar. The findings reveal that Facebook intrusion, characterized by excessive involvement and disruptive behaviours, is associated with addictive symptoms and emotional attachment. Various factors, including fear of missing out, narcissism, self-esteem, satisfaction with life, moral norms, and depression, have been identified as predictors of Facebook intrusion. Negative effects of Facebook intrusion include sleep problems, social isolation, reduced goal-oriented behaviour, and impaired emotional functioning. However, the relationship between Facebook intrusion and mental well-being is complex, with some studies reporting positive associations with life satisfaction. Additionally, Facebook intrusion has implications for interpersonal relationships, contributing to relationship dissatisfaction and jealousy. The study advances the deeper understanding of the advantages and drawbacks inherent in social media platforms like Facebook, thereby supporting endeavours aimed at optimizing user interactions while mitigating potential negative effects.

Keywords: *Facebook intrusion, Perceived personal space, Disruptive behaviour*

Hyperousiology of Nāgārjunian Philosophy: A Hermeneutical Reading

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Abstract

Nāgārjuna (ca. 150-250 CE) was a Buddhist philosopher and the founder of the Mādhyamaka school of Mahāyāna Buddhism. His philosophy is based on the Buddhist theory of ‘dependent origination’ (pratitya-samutpada) and its stance is that whatever exists, exists as being dependent on its causes and conditions. Nāgārjuna in his doctrine, negates all positive claims. The main research problem addressed in this study is whether Nāgārjunian negation establishes hyperousious. The research methodology employed in this paper is Hermeneutics. Particularly, Gadamerian Hermeneutics is used in this study, and reading in an open and inclusive character is protected. The understanding is taken as historical and a fusion of past and present horizons. When reading the Śūnyatā philosophy of Nāgārjuna, the notions of tradition and prejudice have also been considered in a Gadamerian sense. Negating propositional, linguistic or logical claims on the ultimate reality, Nirvāṇa, the Absolute, Paramartha, the Supreme reality, Nāgārjuna says in the Mula-Madhyamika-karika in Atma Pariksha that independently realized peaceful, un-obsessed Nirvāṇa is Aparapratyayam: the experience which cannot be imparted to any one by another. It has to be realized by everyone for themselves. It is shantam; it is an attitude unaffected by the empirical mind. Nāgārjuna reaches this teleological stance of Nirvāṇa through ultimate negation (sarva drishti prahanaya yah saddharmam adeshayet). When analyzing claims in Nāgārjuna’s Nirvāṇa, it is something ultimately negated and cannot be hypostasized, but it is affirmed as hyperousious. The conclusion is that Nāgārjuna’s philosophy is an attempt at establishing a “superessentiality”. This can also be identified as *causa sui* within the horizon of beings and remain as a ‘beyond’ being, a nonbeing (non-thing).

Keywords: *Nagarjuna, Hyperousious Nirvana, Madhyamaka, Sunyata*

Development of an Intelligent Software Solution for Artificial Intelligence Enabled Stethoscope: Accurate Coronary Artery Disease Diagnosis and Real-time Feedback System

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Abstract

Although the classic stethoscope has long been a crucial diagnostic tool for cardiac conditions, it has an elementary level of accuracy in its diagnosis capability. Mainly, the diagnostic capability of a traditional stethoscope relies on the listener's experience and expertise. The proportion of cardiac patients is increasing day by day due to the low accuracy rate of the traditional stethoscope. In addition, it has very limited capability to provide real-time feedback during auscultation. This study aims to develop a software prototype for a tube-free intelligent stethoscope that not only diagnoses heart diseases but also provides real-time feedback and guidance during heart auscultation. This uses modern machine learning algorithms and real-time signal processing to diagnose heart problems accurately and immediately while providing real-time feedback to assist physicians during heart auscultations. The study was mainly based on Coronary Artery Disease (CAD). It captured audio signals from the patient's heart using sensors, and thereby the collected audio signals are pre-processed and converted into spectrograms using a Short-time Fourier Transform for frequency domain analysis. Then the trained Convolutional Neural Network model achieves a high accuracy rate in differentiating between normal and abnormal heart sounds, enabling accurate CAD diagnosis. Finally, the study received an accuracy rate of 65%. This research has significant implications for cardiology and healthcare, revolutionizing heart disease diagnosis by enabling faster, more accurate, effective, and early diagnosis. The integration of real-time feedback and guidance during auscultation provides valuable insights for effective diagnosis and future enhancements in clinical settings.

Keywords: *Tube-free Intelligent Stethoscope, Coronary Artery Disease, Convolutional Neural Network, Cardiology, Real-time heart sound analysis*

Towards the Conceptualization and the Operationalization of the Construct of Occupational Stress

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Abstract

Occupational stress is a prominent risk factor amongst adversely affecting job inter-related factors among employees of diverse global industrial contexts. The purpose of this study is to afford a comprehensive conceptualization and operationalization of the construct of occupational stress while developing a complete measuring instrument. The archival method was adopted in this research. The systematic review, together with critical review processes, has encircled published research articles between 1872 and 2020 in the arenas of Human Resource Management, Psychology, and organizational behaviour. Accordingly, 126 articles were initially scrutinized, and 96 were systematically reviewed. Thus, “Occupational Stress” can be defined as the employee’s responsiveness to personal dysfunction as a result of perceived workplace conditions and harmful physiological, psychological, and emotional responses caused by these uncomfortable workplace conditions. Accordingly, six main dimensions, namely, “Responsibility Pressure”, “Quality Concern”, “Role Conflict”, “Job Vs Non-Job Conflict”, “Workload” and “Employee Dysfunction Responses” have been recognized for the construct of “Occupational Stress”. Along with, the explored dimensions, elements, and question items could be utilized to develop a comprehensive instrument to measure the construct of “Occupational Stress”. This study is limited to instrument development; nevertheless, there is enormous scope for utilizing the instrument to empirically measure occupational stress linked to diverse global industrial contexts in future studies.

Keywords: *Conceptualization, Instrument, Occupational stress, Operationalization, Stress*

Influence on E-Service Quality of E-Tailors on E-Satisfaction and E-Repurchase Intention on Consumer Electronics Purchase Behaviour: Examining the Moderate Impact of E-Word-of-Mouth in Sri Lanka

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Abstract

The main goal of this study is to investigate the effects of e- service quality provided by e-tailors on consumer electronics on e- repurchase intention in Sri Lanka, with e- customer satisfaction acting as a mediator and e-word-of-mouth as a moderator. The E-S-Qual and E-RecS-Qual models were employed in the research study to evaluate the quality of e-services. The seven factors are efficiency, fulfilment, system availability, privacy, compensation, responsiveness, and contact. A self-administered questionnaire that garnered a total of 300 valid responses out of 384 was utilized to collect data for an empirical study employing purposeful sampling. The data are examined using structural equation modelling with Smart PLS 4.0 and SPSS 23.0 to look at the model and test the hypothesis. The findings show that three e-service quality factors-efficiency, fulfillment, and responsiveness have statistically significant influence on e-repurchase intention. On the other hand, the results demonstrated that e-service quality is related to e-repurchase intentions both directly and through the mediator of customer satisfaction. The findings have important implications for marketers and academics. The results of this study suggest that e-customer satisfaction plays a partly mediation function between e-service quality and e-repurchase intention. However, there is no moderating relationship between e-repurchase intention and e-customer satisfaction. E-tailors should put efficiency, fulfillment, and response as their top priorities. The e-tailor must interact with the customer, fulfill orders, and resolve problems.

Keywords: *E-Service quality, E-Customer satisfaction, E-Repurchase intention, E-Word-of-mouth*

Effectiveness of Progressive Muscle Relaxation in Managing Adjustment Disorder Among Apparel Sector Employees in Sri Lanka

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Abstract

The apparel sector takes its place among the largest industries in Sri Lanka, occupying 15% of the country's labour force. The target-oriented nature of the apparel sector often requires employees to work under pressure for extensive hours. Hence, work-related stress is highly prevalent among apparel sector employees, hindering their mental well-being. Adjustment Disorder (AjD) is one such health problem faced by employees in work settings where higher efficiency and productivity are expected within limited time frames. Progressive Muscle Relaxation (PMR) is a widely used technique to effectively manage stress-related disorders, including AjD. However, no studies have been conducted on using PMR to manage AjD in the Sri Lankan context. This study aimed at exploring the effectiveness of PMR in managing AjD among apparel sector employees in Sri Lanka. A quasi-experimental design was employed, with 91 participants being allocated to the experimental (n=49) and control group (n=46). The intervention consisted of PMR exercises conducted over an 8-week period. Both PMR and control groups completed the Adjustment Disorder-New Module 20 (ADNM-20) questionnaire at baseline and following the intervention period. Wilcoxon signed-rank tests revealed that the PMR group elicited a statistically significant decrease in mean ADNM-20 scores from pre-intervention to post-intervention ($p=0.03$), while the control group elicited a significant increase in mean scores ($p<0.001$). The significant reduction in ADNM-20 scores following the intervention in the experimental group demonstrates the efficacy of PMR in managing AjD. Further, extensive research is required to assess the practicality of using PMR as the gold standard for treating AjD.

Keywords: *Adjustment Disorder, Adjustment Disorder-New Module 20, Apparel sector, Progressive Muscle Relaxation*

POSTER PRESENTATIONS

Motivational Factors that Lead to Nature Based Adventure Activities with Sustainability and Technological Approaches

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Abstract

Tourism is one of the principal economic forms. Nature-based adventure parks become a sustainable source of economic, social and environmental development linked through tourism. The present study aimed to identify the motivational factors that support improving foreign tourist attraction in sustainable tourism development with the technology effect. The foreign tourists were interviewed through the questionnaire and observed data of sociodemographic and motivational factors of 82 participants on the location of the adventure parks in Sri Lanka. Most Males (76%), followed by females (24%) with visitors were between the ages of 25-30yrs (43%), 15-20yrs (19%), 20-25yrs (28%), and above 30yrs (11%). Foreign visitors were engaged in activities with 62% of their friends, 39% of their families, 15% of alone, and 14% of other individuals who were specifically visiting for tourism. The data were analyzed through Microsoft Excel and SPSS Software. From the study, it is revealed that most tourists are attracted due to the fun/adventure experience (9%), thrill (8%) and stress buster (8%). These factors were major tourist attraction factors. But improved technology has reduced risk and received the lowest average (4%). That was a negative part of the Sri Lanka adventure park availability. According to these findings, tourists seek fun/adventure, thrill, and stress release through their journey. But due to lack of technology, using reduce their motivation to attract again. So, it is better that adventure park owners/managers should consider increasing the fun/adventure, thrill, and stress buster by improving the technology for sustainable nature tourist development.

Keywords: *Adventure activities, Motivation, Sustainability, Technology, Tourism*

Internet of Things Security Assessment and Mitigation Strategies for Resilient Military Operations

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Abstract

Military operations are increasingly reliant on Internet of Things (IoT) technology, demonstrating a combination of benefits and security risks. In order to comprehend the impact of operational resilience on IoT security risks and vulnerabilities specific to military operations, this research identifies and evaluates these issues. The study aims to highlight weaknesses in the existing frameworks and methods for military assessment while also suggesting improved and resilient frameworks. It also focuses on proactive security measures, reactive incident response skills, as well as effective mitigation techniques to address IoT security problems in military operations. This research seeks to investigate and assess the security threats and weaknesses unique to IoT technologies in military operations. It attempts to uncover shortcomings in present assessment processes, comprehend how operational resilience affects IoT security, and suggest improved frameworks for resilient military operations. To gather and analyse qualitative and quantitative data from research papers, data reports, and articles, the study employs a thorough methodology. By analysing qualitative and quantitative data, this study aims to emphasise the importance of enhancing IoT security to safeguard military activities' integrity and effectiveness. Additionally, it seeks to incorporate insights from interviews with military personnel and security experts to enrich the analysis. The findings and discussions of the study will provide insights into identified IoT security concerns, current evaluation process boundaries, and recommended mitigation strategies. To ensure the integrity and effectiveness of military activities, the research emphasises the significance of improving IoT security in military operations.

Keywords: *IoT security, Military operations, Operational resilience, Mitigation strategies*

Work From Home Culture of Private Service Sector in the Western Province of Sri Lanka: Effectiveness through Women's Experiences

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Abstract

This study addresses the research problem of investigating the effectiveness of Work From Home (WFH) culture in the private service sector of the Western Province, Sri Lanka, focusing on women's experiences. Using a qualitative research method, twelve female top-level and middle-level industry professionals were interviewed using convenience and snowball sampling methods. The findings indicate that work-life balance, employees' well-being, and work experience have a notable influence on the effectiveness of WFH culture in private service sector companies. It is suggested that firms give these considerations top priority when putting work from home rules into place. In order to deal with future uncertainty, a hybrid strategy that combines working from home with conventional office-based work is recommended. Future studies might broaden the study's focus to incorporate workers from other levels and industries and investigate additional variables that affect WFH efficacy.

Keywords: *Work From Home culture, Work-life balance, Women employees, Sri Lanka*

Examining Patient Contentment with the Quality of Nursing Care in the Public Healthcare Sector

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Abstract

Patient satisfaction has grown in popularity as a vital component of determining the quality of care. A crucial aspect of quality improvement involves comprehending the viewpoints of patients, as this approach is fully human-centric. The degree of patient satisfaction with nursing care is a crucial indicator of the calibre of hospital treatment. A happy patient is more likely to recommend the hospital to others for treatment. For the purpose of ensuring proper levels of service improvement, it is vital to understand the factors that affect patient satisfaction with nursing care. This study aims to explore how happy patients are with the quality of nursing care provided in hospitals. Many Sri Lankans, especially those who work as nurses or midwives, strongly believe that providing care alone is inadequate and believe nursing as a unique service rather than a career. This sensitive concern among nursing professionals underscores the significance they place on nursing care. In terms of research methodology, this study follows the qualitative approach, and the necessary data for the study were gathered through structured interviews with around 100 patients residing in the Ratmalana area. The primary focus of the sampling was patients who visit the hospitals outpatient clinics monthly. The study deployed thematic analysis. The result of the study revealed that nurses have demonstrated effective management of both personal hygiene and cleanliness in their work environment. Additionally, nurses have exhibited competence in their professional roles as well. However, development is needed in cultivating qualities.

Keywords: *Quality of nursing care, Patients satisfaction, Medical sector*