

**PROCEEDING OF
INTERNATIONAL CONFERENCE 2024**

HYBRID EVENT

**INTERNATIONAL CONFERENCE 2024
02nd – 03rd December 2024**

Organized By



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**RESEARCH
FOUNDATION**



WORLD ACADEMICS

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Editorial

We are delighted to extend a warm welcome to all participants attending the International Conference 2024 on 02nd – 03rd December 2024. This conference provides a vital platform for researchers, students, academicians, and industry professionals from all over the world to share their latest research results and development activities in multidisciplinary fields. It offers delegates an opportunity to exchange new ideas and experiences, establish business or research relationships, and explore global collaborations.

The proceedings for International Conference 2024 contain the most up-to-date, comprehensive, and globally relevant knowledge across various disciplines. All submitted papers underwent rigorous peer-reviewing by 2-4 expert referees, and the papers included in these proceedings were selected for their quality and relevance to the conference. We are confident that these proceedings will not only provide readers with a broad overview of the latest research results but also serve as a valuable summary and reference for further studies.

We are grateful for the support of many universities and research institutes, whose contributions were vital to the success of this conference. We extend our sincerest gratitude and highest respect to the professors who played an important role in the review process, providing valuable feedback and suggestions to authors to improve their work. We also appreciate the efforts of the technical program committee, reviewers, and authors for their dedication.

Since September 2024, the Organizing Committee has received more than 65 manuscript papers, covering various aspects of multidisciplinary research. After review, approximately 44 papers were selected for inclusion in the proceedings of International Conference 2024.

We thank all participants for their significant contribution to the success of the conference. Our gratitude extends to the keynote speakers, individual speakers, technical program committee, reviewers, and the organizing committee for their efforts in making this conference a reality.

Acknowledgement

The International Conference 2024, was successfully held in 02nd – 03rd December 2024. We extend our heartfelt gratitude to our colleagues, staff, professors, reviewers, and members of the organizing committee for their unwavering support in making this conference a success.

We would also like to thank all the participants who traveled far and wide to attend this conference and those who attended the event virtually, making it a truly global event. This conference provided a platform for students, professionals, researchers, and scientists to share their latest research and developments in various disciplines.

The aim of the conference was to promote research and development activities and to encourage scientific information exchange between researchers, developers, professionals, students, and practitioners from all around the world. Once again, we thank everyone who contributed to making this conference a resounding success.



Sukumar Sen

Program Manager
Research Plus (RP)

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Language Use by Internally Displaced Persons and National Integration (Cameroon)

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Abstract:

This work seeks to investigate the impact of language use by internally displaced persons and national integration in Cameroon. The involuntary displacement of the internally displaced persons is a call for concern because their new environment appear to them as a shock (culture shock). The issue of interaction between the internally displaced persons and their host communities has been the main hold back of a successful integration for the internally displaced persons within the French speaking cities. In regards to this study, the following research questions serves as a guide; Can language use between the IDPs and their host communities lead to national integration?, What language does the IDPs and their host communities prefer to use? How does these host communities and internally displaced persons see each other's language?

Shuman's theory of Acculturation supports this work by emphasizing on second language learners to integrate themselves psychologically into the target language. Howard Giles on his part talk about accommodation which encourages people from different cultural backgrounds to adjust communication during social encounters in order to limit the differences faced when it comes to interaction. In carrying out this research the researcher piloted the study with a target population of 80 participants from some selected host communities in Cameroon. Data was carried out quantitatively and qualitatively as questionnaires were administered to both the IDPs and their said host communities (Douala, Yaounde, Kribi and Bertoua).An Interview was carried out in order to get the participants more explicitly on the difficulties they face in their daily encounters. Lastly, a secret participant observation was carried out. This was done by observing the participants without their knowledge to get more vital results. Results shows that the internally displaced persons strive more to create a balance by learning to speak French which is the communities' main language of communication, Whereas the host communities make little or no efforts towards the balance as they show little or no efforts in learning English language. It is sad to say that attempts made as per the national standard for both English and French to be spoken by every Cameroonian have not been successful perhaps because French speakers shun away from English speakers in regards to their differences in lifestyle, culture and values. The crisis that seemed devastating created a common ground for acceptance, accommodation and integration.

Keywords:

IDPs, Host Communities, Integration, Acculturation, Accommodation.

Voice-Activated Health Interventions: Exploring the Benefits of Amazon Alexa for Physical Activity and Weight Management in Older Adults

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Abstract:

Background: Regular physical activity improves fitness, physical and cognitive function, and overall well-being, especially in older adults. Digital health applications, particularly those integrated with voice-activated assistants like Amazon Alexa, present new opportunities for promoting healthier lifestyles by facilitating access to health information and on-demand exercises. This study evaluates the impact of using the EngAGE Amazon Alexa Skill on weight loss and physical activity among older adults.

Objective: The study aimed to assess whether the EngAGE Amazon Alexa Skill could increase physical activity and promote weight loss in older adults by providing on-demand health programs.

Methods: This 4-month study involved 22 patients with obesity, prediabetes, and type 2 diabetes, with 12 participants downloading and using the EngAGE Amazon Alexa Skill. Data collected included participant demographics (age, gender, weight), engagement metrics (minutes spent in on-demand classes), and qualitative feedback. Statistical analysis was performed using SPSS to evaluate differences in physical activity and weight loss between Skill users and non-Skill users.

Results: Participants using the Amazon Alexa Skill recorded significantly more active minutes (85.92 minutes/day) than non-Skill users (50.86 minutes/day), representing a 68.9% increase in activity. Skill users also exhibited more significant average weight loss (-3.9 lbs) than non-Skill users (-2.3 lbs). Most Skill users provided positive feedback, with 75% reporting ease of use and 84.6% recommending the Skill to others.

Findings: The study suggests that integrating voice-activated health apps like EngAGE can enhance physical activity and support weight loss in older adults. The findings indicate that voice assistants provide an accessible, engaging platform for promoting healthier lifestyles. However, future research should explore the broader application of such tools and assess the long-term effects on health outcomes.

The Role of AI in Healthcare Data Warehousing: From ETL Testing to Deployment

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Abstract:

ETL testing is an important step in data analytics, especially in the healthcare sector. However, extensive research has shown that manual ETL testing is usually time-consuming and leads to errors and inaccuracies in the data loaded into a data warehouse. There is a consistent emphasis on the importance of data quality in healthcare data for effective treatment outcomes. As a solution, the paper proposes an emerging technology, and artificial intelligence (AI) to help address these challenges. This article answers three major questions i) How has AI been applied in data warehousing in the healthcare sector, ii) what are the applications of AI in healthcare, and iii) what are the benefits of AI in healthcare? AI offers significant promise to revolutionize data analysis and offer real-time updates and insights into various healthcare needs.

Keywords:

Machine learning, fraud detection healthcare data warehouses, anomaly detection, patient safety, operational efficiency.

Navigating Data Security and Privacy Challenges in AI Adoption for Long-Term Care Facilities

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Abstract:

As long-term care facilities increasingly integrate artificial intelligence (AI) technologies to improve resident care and operational efficiency, they encounter significant data security and privacy challenges. This white paper examines these challenges, explores regulatory frameworks, and offers actionable strategies for ensuring data protection and privacy compliance during AI adoption.

Quantifying the Impact of Climate Change on Agritourism: The Transformative Role of Solar Energy in Enhancing Growth and Resilience in Eritrea

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Abstract:

Agritourism in Eritrea is increasingly threatened by climate change, manifesting through rising temperatures, shifting rainfall patterns, and resource scarcity. This study employs quantitative methods to assess the economic and environmental impacts of climate change on agritourism, utilising metrics such as annual income fluctuations, changes in visitor numbers, and energy consumption patterns.

The methodology relies on secondary data sourced from the World Bank, government reports, and academic publications to analyse the economic viability of integrating solar energy into agritourism operations. Key variables include the Benefits from Renewable Energy (BRE), encompassing cost savings from reduced energy expenses and the monetised value of avoided greenhouse gas emissions. Using a net present value (NPV) framework, the research compares the impact of solar energy against traditional fossil fuel sources by evaluating the Value of Reduced Greenhouse Gas Emissions (CO₂) and the Value of Health-Related Costs (VHRC) due to air pollution.

The preliminary findings of this research are of utmost importance. They indicate that the adoption of solar energy can enhance energy independence by up to 40%, reduce operational costs by 25%, and stabilize agritourism activities in climate-sensitive regions. This research aims to provide actionable insights for policymakers and stakeholders, supporting the sustainable development of agritourism in Eritrea and contributing to broader climate adaptation strategies. By employing a comprehensive cost-benefit analysis, the study highlights the economic advantages and environmental benefits of transitioning to renewable energy in the face of climate change.

Keywords:

Agritourism, Climate Change, Renewable Energy, Cost Benefit Analysis, Resilience, Cost-benefit analysis.

Predictive Analytics using AI in Healthcare

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Abstract:

Advancements in Artificial Intelligence have grown leaps and bounds in the past decade or so. These innovations now open new possibilities for data analytics, specifically in the field of healthcare. Predictive analytics using AI involves leveraging machine learning (ML) and advanced statistical techniques to analyze current and historical data, predicting future outcomes and trends. This paper examines the application of AI in such analytical use cases like disease outbreak predictions, identification of high risk patients, personalizing treatment plans, etc. We will explore the various possible applications of AI in analytics, the nuances of collection and processing such data and challenges with such usage.

Study of the Gender Roles in Modern Spanish from a Gender Perspective

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Abstract:

Research on teaching materials of ELE for Chinese speakers often ignores gender aspects. This study focuses on analyzing the representation of the roles of women and men in the 105 texts in Modern Spanish, with the aim to find out whether the teaching materials have a gender perspective. This work studies identities and relationships/qualities to clarify the path of study. Using the 105 texts collected and the content analysis, we verified that the Modern Spanish collection barely obtains a gender perspective. The inequality is aggravated due to the following aspects: (1) the lack of female characters; (2) women's professional and family identities are ignored and disparaged; (3) the feminine character is stigmatized in the way of word expression. Therefore, we conclude that, the roles of women are discriminated against, stereotyped, and subordinate. It's essential to train teachers and students in the area of ELE with a gender perspective, to effectively capture and remove the androcentrism from didacticism and learning. Thus, an inclusive language environment will be built that will improve the incorporation of equality into today's society.

Keywords:

Gender roles, gender perspective, sex discrimination, didactic manual for ELE, inclusive language.

Thematic Analysis of Barriers to the Assessment and Treatment of Post-Stroke Fatigue among Physiotherapists in Saudi Arabia

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Abstract:

Post-Stroke Fatigue (PSF) affects 30% to 70% of stroke survivors, significantly impairing their quality of life and rehabilitation outcomes. Despite its prevalence, the assessment and treatment of PSF in Saudi Arabia face significant barriers, including a lack of awareness among healthcare providers, cultural challenges, and limitations in diagnostic tools and treatment protocols. This study aims to explore these barriers as experienced by physiotherapists in Saudi Arabia, contributing to a deeper understanding of the challenges in providing effective stroke rehabilitation. A qualitative survey was conducted among 160 physiotherapists across the country, with responses analyzed through thematic analysis. The study identified key barriers: (1) widespread lack of knowledge about PSF, (2) absence of standardized assessment and treatment protocols, (3) resource limitations, (4) focus on functional outcomes over fatigue management, (5) infrequent encounters with PSF, and (6) misconceptions and underestimation of PSF's importance. Addressing these barriers requires comprehensive educational programs, development of standardized protocols, and strategic resource allocation. Future research should focus on developing culturally appropriate assessment tools and exploring patient and family perspectives on PSF to improve the rehabilitation outcomes for stroke survivors in Saudi Arabia.

Keywords:

Post-Stroke Fatigue, Stroke Rehabilitation, Physiotherapy, Saudi Arabia, Barriers to Treatment.

Even Medical Human Right in Rural Areas: From Medical Care and Medical Education

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Abstract:

Protecting medical human rights is crucial to ensuring that every individual receives adequate and equitable healthcare. This encompasses the right to access the care cascade including medical treatment without discrimination, maintain patient confidentiality, and provide informed consent for medical procedures. Governments, healthcare professionals, and global organizations must collaborate to combat barriers such as discrimination, inadequate resources, and political interference. The residents living in remote villages such as the Indigenous people in Taiwan need special care for the difficulty in accessing medical care, due to not only the travel barriers but also the shortage of medical resources. The National Health Insurance in Taiwan covers more than 99% of the people, however, many obstacles to receiving medical care exist in Taiwanese aboriginal people. The Government has offered some projects such as the Intergraded Delivery System (IDS) to send specialists to the Public Health Center in the villages to provide health care for the residents. Also the adjustment of the reimbursement regulations to provide testing and treatment makes the greatest possibility for local management such as the Hepatitis C Micro-elimination Program has successfully been set up in Taiwan. In the School of Medicine of Kaohsiung Medical University, the students have received lectures and "hands-on courses" designed for active participation, where learners engage directly through practical activities in the aboriginal villages and the University Hospital. Strong legal and educational frameworks and continuous advocacy are essential for upholding human rights, ensuring that all people, regardless of background, can attain the highest possible standard of physical and mental health.

Keywords:

Medical Care, Human Right, Education.

Diagnosis of Acute Coronary Syndrome with CNN and LSTM Based Deep Learning Model

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Abstract:

Early and accurate diagnosis of acute coronary syndrome (ACS) and its subtypes is essential for patient health. The aim of this study is to develop a deep learning approach utilizing electrocardiography (ECG) signals to classify ACS and its different types. The model was constructed using a combination of convolutional neural network and long short-term memory structures to categorize ECG signals representing acute myocardial infarction with ST-elevation (STEMI), myocardial infarction without ST-elevation (NSTEMI), and healthy individuals. The dataset comprises 12-lead ECG signals collected from patients who presented with chest pain at the Erciyes University Hospital Emergency Department. ECG data were processed to remove noise using notch, low-pass, and high-pass filters, and then standardized using z-score normalization. Model performance was assessed through k-fold cross-validation, calculating metrics such as accuracy, sensitivity, specificity, precision, F1 score, and classification rate. With 5-fold cross-validation, classification accuracy was observed to be 0.928 ± 0.0172 for the ACS-Normal group, 0.891 ± 0.0083 for the NSTEMI-Normal group, and 0.886 ± 0.02275 for the STEMI-Normal group. These findings suggest that the proposed deep learning model is effective in distinguishing ACS and its subtypes, showing promise for future integration into clinical applications.

Keywords:

Acute Coronary Syndrome, Deep Learning, ECG, Classification.

Analysis of 12 Lead ECG Signal for Diagnosis of Myocardial Infarction: Empirical Mode Decomposition and Machine Learning Application

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Abstract:

The characteristic changes in ECG signals can be complex and difficult to monitor. If these changes are recognized early, heart diseases such as myocardial infarction (MI) can be prevented. The development of artificial intelligence-based systems can provide early diagnosis of these diseases and help cardiologists in diagnosis. This paper presents an empirical mode decomposition (EMD)-machine learning-based approach for the early diagnosis and classification of STEMI and NSTEMI. The 12-lead ECG signals obtained from two different datasets with similar characteristics are analyzed and the signals are decomposed into their principal components using the EMD method. Features are extracted from the decomposed signals and the ones that are significant for the performance of the classifier model are determined by Least Absolute Shrinkage and Selection Operator (LASSO). Healthy controls (HC), NSTEMI, and STEMI groups were classified using SVM and ANN algorithms. The most successful results in the classification process were obtained with the SVM algorithm. The classification of the HC-NSTEMI group was 99.84%, the HC-STEMI group was 99.90%, and the HC-STEMI-NSTEMI group was 99.70% Area Under Curve (AUC). The findings obtained in the study may contribute to the development of systems to support the early diagnosis of cardiac abnormalities such as MI and may give cardiologists the opportunity for early intervention in heart diseases.

Keywords:

Electrocardiogram signal, Empirical mode decomposition, Machine learning, Myocardial infarction.

The Parachuted Hybrid CATE Estimator with Bootstrap Methods for Inference

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Abstract:

In the current study, we introduce an innovative estimator for the Conditional Average Treatment Effect (CATE), hereafter referred to as the CATE estimator. This estimator is distinguished by its double robustness property, a characteristic ensuring consistency of the estimator provided that either the model for the propensity score or the model for the conditioned expected outcome is accurately specified. Notably, our estimator retains its consistency under the failure of both conditions, albeit exhibiting a reduced rate of convergence akin to that observed with non-parametric estimators. This attribute has led us to term our proposed estimator as the "parachuted" estimator, signifying its enhanced reliability and consistency even in scenarios where traditional assumptions regarding propensity scores or conditioned outcomes are not met. Furthermore, when compared to non-parametric estimators, our model demonstrates superior efficiency, offering a potentially higher rate of convergence under parametric conditions.

To formulate this estimator, we employed a methodology that amalgamates a parametric approach based on Augmented Direct Learning (Meng and Qiao, 2022) with a non-parametric strategy utilizing kernel estimation (Abrevaya, Hsu, and Lieli, 2015). The integration technique, as proposed by Lee and Soleymani (2015), is instrumental in ensuring that our estimator not only achieves optimal convergence rates but also maintains consistency across evaluations.

A pivotal achievement of this research is the derivation of the asymptotic distribution for this hybrid estimator. This distribution is characterized by having its mean aligned with the estimated target—the true CATE—and its variance describable through a closed-form expression. Moreover, our investigation extends into the statistical inference concerning our parachuted estimator for CATE via established bootstrap techniques. Through rigorous theoretical analysis grounded in the work of Chatterjee and Bose (2005), we provide substantive proof affirming that these bootstrap methods yield consistent estimations within our specified framework, subject to certain regular constraints.

This advancement not only underscores the feasibility of integrating bootstrap methodologies into causal inference analyses specifically tailored for estimating CATE but also establishes a foundational theoretical basis for such applications. Consequently, our findings contribute significantly to the statistical literature by offering a novel approach for estimating CATE with enhanced robustness and efficiency, thereby extending the methodological toolkit available for causal inference research.

The Green Land of Africa as a Wealth of Tourism the Case of Burundi

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Abstract:

Africa is the continent of tourism and occupying many touristic reserves, this study focuses on analyzing how green land could be a main cause of promoting tourism in Burundi. Burundi is among east African countries with a big green location that could be applied in promoting tourism and developing touristic businesses. This research will demonstrate some key points that could be used to develop tourism sectors in Burundi, illustrates some procedures that could be applied in order to motivate people to visit the country, and upgrades the rank of the country in global standard on touristic businesses. This research will be used through quantitative inquiry to assess different statutes for tending tourism sector in Burundi. This study will follow the theory of Thomas Cooks by explaining the tourism management. According to the analyses from collected data, the research illustrated that Burundi need to develop more tourism sector and establish qualified guiders, moreover facilitate local organizations working in tourism sectors and flourish tourist safety in the region.

Keywords:

Burundi, Green lands, Tourism sectors, Tourism management, Tourist safety.

Anxiety of ESL Students in Business Classes and their Coping Strategies: An Empirical Study in Cambodia

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Abstract:

This study sought to examine different dimensions regarding anxiety expressed by English as a Second Language (ESL) students undertaking business courses in English. An inferential sample was drawn from the undergraduate business program of an institution of higher education in Phnom Penh, Cambodia. An anonymous, self-administered questionnaire was utilized to test the variables of gender, location where respondents were raised, their years of studying English, self-assessment of English proficiency, and self-category of academic grade. The study also examined any correlation between self-assessment of difficulty (and consequential anxiety) by course subject and self-assessment of the mathematical highness of each of the course subjects. Finally, it explored potential coping strategies that students considered when studying business.

Eleven of the thirteen hypotheses examined received at least partial support. A key finding was that when the respondents ranked business course subjects in order of difficulty, the order of that ranking matched exactly the ranking of heaviness of mathematical content that the course subject was perceived to contain. While findings were mixed for most of the hypotheses, the strongest findings indicated no statistical mean differences regarding gender and full support of significant mean differences in the rating of difficulty for the four English modes based on self-assessment/identification of English proficiency. As to coping strategies, students preferred Preparation, followed by Asking for Help, Positive Thinking, Resignation, and Relaxing (in that order).

This was a pioneering effort regarding most of the tested hypotheses and a pioneering effort regarding ESL students in business classes in Cambodia. However, respondents were derived from an undergraduate program of one institution of higher education. Future research should expand to other academic venues for replication as well as other inquiries regarding anxiety among ESL business students to provide further assistance regarding pedagogical considerations.

Lifestyle Interventions in the Management of Adults with Irritable Bowel Syndrome – 2024 Consensus Statements from the Indian Working Group

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Abstract:

Introduction: Lately, the management of irritable bowel syndrome (IBS) has received great attention; however, the focus is mainly on the pharmacological aspect, while the lifestyle modifications have not received sufficient attention. Thus, we aimed to review the evidence and reach a consensus on lifestyle interventions for IBS management.

Methods: The working group included 18 experienced gastroenterologists practicing across India. Based on the available literature, six statements were developed, discussed, rated, and subsequently recommendations were recorded. The group members were requested to rate the statements using a 5-point Likert's scale, score of 1 and 5 being "Strongly Disagree" and "Strongly Agree", respectively. The proportion of members with a score for each statement were calculated, and consensus was graded as strong, moderate, and weak, if the consensus reached $\geq 80\%$, 50-79%, and $\leq 49\%$, respectively.

Results: The consensus was strongly in favor of: (i) the dietary fibers are first-line therapy in IBS-constipation (92.31%), (ii) gut-directed psychotherapies (92.31%), and (iii) the exercise therapy (100%) are helpful in the management of IBS. The consensus moderately favored the view that dietary FODMAP restriction is beneficial for patients with IBS (61.54%). Finally, the consensus was divided, with members neither agreeing nor disagreeing on: (i) the potential benefits of probiotics (53.85%) and (ii) the efficacy of peppermint oil (84.62%) in the management of IBS.

Conclusion: For all the statements, the strength of consensus was moderate to strong. However, further high-quality research, with respect to Indian patients, is required to formulate more inclusive statements in this evolving management of IBS.

Pattern of PRN Use of Medication to Manage Disturbed Behaviour in a CAMHS Inpatient Unit: A Twelve-Month Quantitative Analysis

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Leicestershire Partnership NHS Trust

Sewanu Awhangansi

Leicestershire Partnership NHS Trust

Abstract:

The CAMHS inpatient unit caters for young people between 12 – 17 years of age with severe mental health problems and who pose a significant level of risk that cannot be managed in the community. Due to the complex nature of these patients' presentations, staff are required to use prn medication (pro re nata, Latin abbreviation for 'when required') to manage agitation and disturbed behaviour when all other non-pharmacological de-escalation measures fail.

While there are evidence-based benefits to using prn medication (Oral or intramuscular - IM) to alleviate acute distress, there are also risks and potentially harmful side effects which clinicians must bear in mind before their administration in young people. It is therefore important to assess the pattern of use of prn medication to ensure that clinicians are adhering to established service protocols and that medication is only used when absolutely necessary and appropriate. Furthermore, assessing the pattern of prn medication use is essential for informing quality improvement initiatives within the service.

Energy Poverty and Climate Change Impact on Health Outcome: Autoregressive Distributed Lag Model (ARDL) Approach

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Abstract:

The study examines the impacts of energy poverty and climate change on health outcome. The health outcome focuses on life expectancy at birth while the energy poverty indexes were Access to electricity and the Renewable energy consumption. The Autoregressive Distributed Lag model (ARDL) econometric technique was employed to estimate the model. Findings reveal that Access to electricity has a positive and significant impact on health outcome. Climate change has negative and not statistically significant effects on health outcome. Renewable energy consumption has negative and not statistically significant effects on health outcome. Therefore, the study recommended that policymakers should prioritize initiatives to expand and improve electrical infrastructure, especially in areas with limited access and to continue supporting climate mitigation and adaptation strategies for desirable health outcome.

Keywords:

Energy poverty, climate change, Health outcome, Access to electricity, Renewable energy consumption, Autoregressive Distributed Lag (ARDL) model.

JEL Codes: I15, Q40, Q54, C32, O13.

Appropriate Use of Vancomycin in a Cardiac Surgical Unit

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Abstract:

Antibiotic resistance is a rapidly growing problem. Methicillin-resistant *staphylococcus aureus* (MRSA) and vancomycin-resistant enterococci (VRE) are major worries, particularly in developing nations where cost-effectiveness is essential. Use of vancomycin must be restricted to prevent resistant to it. Examining the appropriateness rate of vancomycin use in light of the recommendations of the Infectious Disease Society of America (IDSA) in the cardiac surgery ward was the aim of this study.

Methodology: This study was a retrospective analysis of the medical records of patients who received vancomycin over the previous year, from January 2023 to December 2023. The collected patient data included demographics, indications for vancomycin use, culture and sensitivity test results, concurrent antibiotic medications, vancomycin serum levels, and diagnoses. The appropriateness of vancomycin use was classified according to the recommendations of the Infectious Diseases Society of America (IDSA).

This study was a retrospective analysis of the medical records of patients who received vancomycin over the previous year, from January 2023 to December 2023. The collected patient data included demographics, indications for vancomycin use, culture and sensitivity test results, concurrent antibiotic medications, vancomycin serum levels, and diagnoses. The appropriateness of vancomycin use was classified according to the recommendations of the Infectious Diseases Society of America (IDSA).

Results: A total of 294 patients received vancomycin. The appropriate use of vancomycin was significantly higher than its inappropriate use ($p = 0.001$). Approximately 41% ($n = 120$) of patients were administered vancomycin for treatment purposes, while the remainder received it empirically, but not as surgical prophylaxis. Appropriate use of vancomycin was observed in 89.1% ($n = 262$) of patients. However, there remained a notable rate of inappropriate vancomycin use ($n = 32$, 10.9%). The most common reason for inappropriate use was the continuation of vancomycin beyond 72 hours without further evidence of a Gram-positive infection ($n = 21$, accounting for 65.6% of all inappropriate use).

Conclusions: The current study demonstrated that 89.1% of vancomycin use was appropriate, while approximately 10% was inappropriate, potentially contributing to vancomycin resistance. The majority of inappropriate use stems from frequent empirical prescribing, which requires further review and monitoring.

Keywords:

Antibiotic, antimicrobial, β -lactam, Gram-positive, MRSA, Resistance, VRE.

An Analysis the Demand and Supply for Elderly Care in Thailand

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Abstract:

The research intends to review and analyze the demand and supply for elderly care in Thailand during 2000-2024 for 25 years. The study finds Thailand's elderly care sector is facing significant challenges as the country rapidly transitions into an aging society. Accordingly the demand side, the rise in the elderly people, shrinking family sizes, urbanization, and increasing incidence of chronic illnesses are driving the need for both formal and informal care services. Traditional family-based care is declining due to societal changes, while the growing elderly population requires more specialized healthcare and long-term care solutions. On the supply side, Thailand is experiencing a shortage of formal care institutions and trained caregivers, particularly in rural areas. Although the private sector and government initiatives are expanding care services, they remain insufficient to meet the rising demand. The lack of affordable care options further exacerbates the issue, as many elderly individuals lack the financial resources to access quality services. Addressing this imbalance will require greater investment in care infrastructure, expanded training for geriatric care workers, and the development of affordable, scalable care models. Public-private partnerships and technological innovations could also play a key role in enhancing elderly care services across the country.

Keywords:

Long-term care, Healthcare, Caregiver, Sustainable, Eldery people.

Influences on Academic Success: Evaluating Factors Affecting Educational Outcomes in Thailand's Local Administrative Organization Schools

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Abstract:

This study investigates the factors influencing academic achievement among students in Local Administrative Organization (LAO) schools in Thailand, utilizing the Ordinary National Educational Test (ONET) scores for Grade 9 students as the primary measure of educational outcomes. Data from the 2019 academic year was analyzed, a year when participation in the ONET was mandatory for all students. The findings reveal that while the overall average scores of LAO schools were lower than the national average, significant regional variations existed, with schools in the northern region performing notably better. Additionally, the analysis indicated that educational expenditure from LAOs positively impacted academic achievement; however, this relationship was moderated by the type of LAO and the number of teachers in each school. Schools under city municipalities achieved the highest scores, suggesting that factors such as teacher quality and community engagement play critical roles in enhancing educational outcomes. These findings underscore the necessity for tailored educational policies that prioritize funding, teacher development, and community involvement to improve student performance across diverse local contexts.

Keywords:

Educational Outcomes, ONET, LAOs, Educational Expenditure.

Five-Year Review of Patients with Central Venous Access Receiving Home Parenteral Nutrition (HPN) Who Underwent Endoscopies with Antibiotic Prophylaxis at Our Centre

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Abstract:

Objective and Study: There are no established guidelines for antibiotic prophylaxis in children with central venous catheters (CVCs) on home parenteral nutrition (HPN), leading to varying practices across UK Centres. We hypothesize that children with intestinal failure are at increased risk for bacteraemia due to altered anatomy, dysmotility, inflammation, biofilm formation in long-term CVCs, and the use of central lines during procedures. Given the bacteraemia rates of up to 8% in upper and 25% in lower endoscopy for adults without central lines, we argue that prophylactic antibiotics are reasonable, given the increased risks faced by this high-risk group of children.

Methods: We conducted a five-year review of patients with central venous access receiving home parenteral nutrition (HPN) who underwent endoscopies with antibiotic prophylaxis at our center (tertiary). We documented and analyzed post-procedure infections and their associated risk factors.

Results: A total of 15 patients on HPN underwent 29 endoscopic procedures, including 4 upper, 9 combined upper and lower, and 16 combined upper, lower, and ileoscopy. Confirmed infection rates remained at 0% up to 28 days post-procedure. The agreed-upon prophylaxis regimen was implemented, with ciprofloxacin and metronidazole administered as the primary antibiotics. Notably, only 51.7% of patients received a peripheral cannula despite recommendations to avoid central line use during anesthesia, and 20.6% had small intestinal bacterial overgrowth.

Conclusions: This study is the first to investigate post-endoscopy infection rates in pediatric patients on HPN. Despite a small sample size, we observed a 0% infection rate, significantly lower than reported rates in adults. These findings suggest that further research is warranted to explore the implications of antibiotic prophylaxis in this unique patient cohort and to establish guidelines that may enhance patient safety during endoscopic procedures.

An Analysis of Internal Migration in Thailand: 2014-2023

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Abstract:

The present paper aims at analyzing the internal migration phenomenon in Thailand from quantitative perspective to provide a comprehensive image of the phenomenon that can represent an adequate frame for further research on the subject. This was accomplished by using the “National Migration Survey between 2014 and 2023, provided by the National Statistical Office. Findings – the socio-economic characteristics of migrants reveal that migrants from Central area are highest migrants, men tend to migrate at a higher rates than women, most migrants moved from non-municipal area at a higher rates than municipal area, men tend to migrate at a higher rates than women at age 0-14 and age 25-59, most migrants educate at a junior high school, high school, and primary school, both married and never-married migrants have the same percentage of migration, and migrants are employed as service workers and supplier, agricultural and fishery workers craftsman, worker associated, factory operator and machinery and elementary occupations. The most causes of migration are following family, seeking work, move residence, return home, and job assignment and the most streams of migration are urban to urban migration, urban to rural migration, and rural to rural migration.

Keywords:

Internal migration, the socio-economic characteristics, the causes of migration and the pattern of migration.

A Study on the Effective Leadership Quality for Education Leaders in Educational Management

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Abstract:

This essay aims to elucidate the role of a leader and establish its significance in the field of educational management. The significance of a leader in educational management cannot be overstated, as they play a crucial role in ensuring that educational institutions deliver education of exceptional quality to students, establish an efficient management system, and inspire staff members to strive towards certain objectives (Eacott, 2015). In the realm of education, leadership has a significant role in shaping the process, ultimately culminating in the attainment of the intended objectives. An effective leader should cultivate a forward-thinking perspective toward the values of their educational institutions, both in terms of personal and professional aspects. A proficient leader cultivates a sense of job satisfaction and unwavering commitment among the staff, hence fostering success. Educational leadership can be defined as a dynamic process in which a leader proactively assumes the responsibility of creating the necessary circumstances to effectively implement transformative changes in the realm of teaching and learning (Surya, 2011). The individual occupying the role of educational leadership bears the responsibility of establishing the vision and mission of the educational institution. This framework functions as a fundamental principle that directs all parties involved, encompassing students, teachers, and staff members. Furthermore, it is imperative for the leader to guarantee that the educational institution's setting is favorable for learning, encompassing the establishment of a secure and courteous atmosphere for both pupils and professors.

Keywords:

Educational Management, Educational, leadership, dynamic process, students, teachers.

Ceramic Capacitors Multi-Layered

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Abstract:

Multilayer Ceramic Capacitors: The multilayer ceramic capacitors (MLCC's) are passive components which are largely used in modern electronics, for examples in computers or cellular phones. The paper briefly presents the MLCC's, how they are done and what are the constitutive materials. Then, the paper explains how the MLCC's succeeded in being in the general evolution of the electronics: continuous price decrease and miniaturization while being more and more performant. Finally, it is shown how the use of ceramic dielectrics with grains of a few hundreds of nanometers gave an elegant solution to this complex problem.

Keywords:

Multilayer ceramic capacitors, dielectric, electronics, nanomaterials.

Perceptions on Inclusion and Exclusion in Turkey

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Abstract:

The collected dataset aimed to study the increasing presence of immigrants through a comprehensive survey, targeting a diverse group. The exploratory research was conducted through International Relations Offices throughout 210 universities in Turkey. The data analysed immigrant perceptions and their socio-political experiences in identifying challenges the target group experiences throughout society. The findings suggest that academic quality, cultural familiarity, and financial aid opportunities are primary motivators. Additionally, this survey demonstrated the experiences related to cultural integration and social connections, as well as challenges such as language barriers and the complexities of navigating visa and residency procedures. The survey also assessed academic and social experiences of the immigrants within their habitats spread across the country. The results indicated a generally positive reception of the educational standards and services offered, including counselling and academic support. However, immigrant students also reported varying levels of success in integrating into the university community, particularly in building relationships with Turkish peers and engaging in campus activities. The diversity of academic staff and opportunities for international exchange are recognized as strengths, though the availability of Turkish language support is inconsistent across institutions. The survey indicates continued efforts to create a supportive academic environment that enhances the academic and social integration of immigrants making these insights critical for policymakers and educational institutions aiming to further the internationalization of higher education in Turkey and better support the migrant student population.

Keywords:

Internationalization, Immigration, Integration, Higher Education, Discrimination, Inclusion, Exclusion.

Centralized Fusion Filtering Estimation for Multiple Sensor Systems with Packet Dropouts under \mathbb{C}^n -Properness Conditions

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Abstract:

The centralized fusion linear estimation problem in quaternion state-space systems with multi-sensor observations impacted by packet dropouts is analyzed under conditions of \mathbb{C}^n -properness. The multiple packet dropouts are described by independent Bernoulli distributed quaternion random variables. This problem is approached within the quaternion domain under \mathbb{C}^n -properness conditions, which supposes a reduction in the dimension of the problem and, as a result, computational savings that cannot be achieved through a real formalism. The proposed methodology to develop an efficient \mathbb{C}^n –proper centralized linear fusion filtering algorithm is based on Kalman filter techniques. Simulation results highlight the effectiveness and benefits of the proposed algorithm that offers computational advantages by reducing the dimension of the processes involved.

Acknowledgement:

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Keywords:

Centralized fusion estimation; multi-sensor systems; packet dropouts; quaternion signal processing; \mathbb{C}^n -properness.

The Invisible Regulatory Hand: Teaching Autonomy and Constructive Competitiveness as Predictors of Teachers' Innovation, Feedback Orientation, and Reflective Practice

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Abstract:

This study explores the concept of the "invisible hand," inspired by Adam Smith, within an educational context, focusing on how granting autonomy to teachers alongside fostering constructive competitiveness can influence key factors that enhance classroom success. Conducted on a sample of 275 English language teachers at the BayaneBartar Institute in Tehran, this research examines the impact of autonomy on constructive competitiveness and, subsequently, its effect on three additional constructs: teachers' feedback orientation, innovative work behavior, and reflective practice. Both survey data and interviews reveal a positive correlation between autonomy and constructive competitiveness, which significantly impacts teachers' feedback orientation and innovative work behavior, ultimately enhancing reflective teaching practices and elevating satisfaction levels within classrooms. These findings underscore the potential of autonomy and constructive competition in fostering teaching improvement and advancing educational quality.

Sampling Methods of Biosolids-Recycling Derived Fertilizers

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Abstract:

Biosolids are highly treated solid fractions produced as a central component of wastewater treatment, commonly applied to land as a soil amendment or fertilizing material. In the context of the circular economy, the recycling of biosolids is beneficial as it provides nutrients and organic matter to agricultural and forest soils and degraded mine sites. However, it may also transfer contaminants into these environments. Therefore, monitoring biosolid quality is critical to ensure the safe application per regulatory standards and criteria. This paper reviews the sampling methods and guidelines adopted in different countries for biosolid sampling regarding the number of samples to collect a representative sample, sampling tools, size reduction, packaging, transportation, and storage before analysis. We also review the quality control and quality assurance for microplastic samplings in biosolids with respect to the negative controls, positive controls, replicates, and materials used in the sampling process to minimize background contamination. In addition, we propose a general sampling strategy for biosolids intended for land application following critical limits of regulated contaminants. The results showed that analyzed contaminants are heterogeneously distributed with high relative standard deviations in the sampled biosolids; thus, more investigations are needed to decipher the sources of variation in biosolids over time to obtain representative samples accurately.

Keywords:

Subsampling, Biosolid, Precision, Representativity, Analysis, Microplastics.

Geography of Ecological Transitions of Industrial Zones in Morocco: Towards Resilient Urban Planning in the Face of Climate Challenges Casablanca as Example using GIS

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Abstract:

In this research, we focus on the spatial and territorial dynamics of ecological transformation in industrial areas of the city of Casablanca, Morocco, in the context of climate change, using GIS. The aim is to understand how these productive spaces in Casablanca articulate processes of urban planning, economic development, and adaptation to ecological challenges, the spatial analysis of the distribution and development of industrial areas in Casablanca, as well as the assessment of their geographical vulnerability to climate change, will be the focus of this study using GIS. The study will also investigate the geographical distribution of green transformation initiatives undertaken in these industrial areas by mapping the dynamics of infrastructure adaptation and climate risk management practices with GIS. The identification of a new geographical model of ecological, resilient and environmentally integrated industrial zones in Casablanca allows the analysis of the interactions between urban planning, economic development and climate change adaptation in this metropolis. Finally, this work develops geographical recommendations for sustainable urban and industrial planning, taking into account the issue of resilience to climate challenges and adapted to the context of the city of Casablanca. Thus, this study will contribute to a better understanding of the spatial and territorial changes taking place in Casablanca's industrial zones, in order to promote more sustainable economic development models.

Keywords:

Industrial areas, Clim change, Urban planning, GIS.

Revitalizing Traditional Indian Knowledge Systems in Modern Education

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Abstract:

Education is universally recognized as the fundamental basis of a nation, exerting a crucial influence on shaping the course of a country's future. Given the rapidly changing global environment, it is crucial to regularly update the education system to match current trends and meet the requirements of the current situation. Within the Indian setting, despite several alterations made to the education system throughout the years, there remains an ongoing difficulty in providing education of exceptional quality to all individuals. The Indian education system is a multifaceted and heterogeneous system that has undergone significant transformations over history, including many influences from multiple civilizations, religions, and cultures. The Indian education system has demonstrated notable advancements in terms of enhancing educational accessibility and elevating educational standards. However, it continues to encounter many obstacles. The objective of this study is to examine the possibility of rejuvenating the Indian education system by incorporating indigenous Indian knowledge systems. This research aims to conduct an in-depth examination of traditional knowledge systems, with a focus on their potential integration within the current educational framework. Furthermore, this study will examine the necessary modifications in the curriculum to incorporate these components and evaluate the potential benefits that might be obtained from their integration.

Keywords:

Indian education system. Traditional knowledge system, curriculum, potential benefits.

The Impact of Social Intelligence on Academic Achievement among School Children

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Abstract:

The objective of this research study was to observe the influence of social intelligence with that of the performance of students in Indian schools. The investigator employed a descriptive survey methodology. Around 250 students were selected from both government and private higher secondary schools to participate in the sample study. The students who were chosen participated in the administration of a social intelligence examination. The current investigation provides clarification that social intelligence is dependent on multiple factors, such as social interactions and social comprehension. The results of the study suggest that the mean scores for academic achievement, social interaction, and social comprehension above the established standard. A significant difference in social intelligence and academic performance was observed between students in private schools and government schools. There is no statistically significant correlation between parental education and social interactions. Numerous studies have demonstrated that the educational attainment of parents significantly influences the formation of social comprehension. The link between social interactions and social understanding exhibits an extensive positive correlation.

Keywords:

Social Intelligence, social interaction, attainment, positive correlation.

Assessing Quality Factors for Achieving Excellence in Management Education

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Abstract:

The development of human resources at universities is a vital component that contributes to the formation of an inventive and expanding society. Hence, it is imperative to consistently oversee and enhance the elements of the quality assessment procedure in management education. Hence, the objective of this study is to ascertain the determinants of educational quality that influence students' inclination to participate in classes and courses. Data were gathered using a questionnaire administered to students at a business university. The results were evaluated using two-dimensional statistical methods. In total, a sample size of 1,607 students was surveyed. The results demonstrate a correlation between students' aptitude for lessons and courses and the calibre of human resource development. The study identified four key characteristics that influence the quality of human development: the presence of practical-oriented classes, the presence of open and engaging professors, the extent and difficulty of the subject matter, and the inclusion of newcomers. The study's shortcomings are evident in the reliance on self-reports from students as the sole source of data collection, which introduces the potential for common-method bias. In order to mitigate this constraint, the survey provided students with the assurance that there was no definitive or incorrect response, and their efforts towards achieving higher quality were greatly valued.

Keywords:

Quality Assessment, management education, human resource management, data collection.

The Impact of Inherited Educational Beliefs on Raising Modern Era Children in Saudi Society

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Abstract:

This study aims to know the impact of inherited educational beliefs and methods of raising children, old and current, and to measure the extent to which some of these beliefs and methods have changed and what has not changed and adhered to them, and what are the reasons that make educators stick to them, with reference to previous studies showing the proportions of each study, the questionnaire was used As a data collection tool, which is a questionnaire for fathers and mothers from the Kingdom of Saudi Arabia who have children to answer the questions of the study, this study followed the descriptive analytical approach.

The results indicated that mutual respect among family members is one of the best ways to address parenting errors. This was the result of the parents' point of view with a percentage of (94.4%). The method of preaching is one of the most widely inherited modern educational methods, and the point of view of mothers is (63.0%). Encouraging children to take responsibility is one of the most important methods proposed to address the errors of upbringing inherited between the families, this was the result of the parents' point of view with a percentage of (93,6%).

The study reached a number of recommendations, the most prominent of which are: focusing on cultural and social conditions and variables in education in order to raise children properly and providing courses for parents on how to raise their children properly, in addition to joining the efforts of all educational institutions in the community to help parents to have educational values and practice them with their children.

Keywords:

Inherited, Educational beliefs, Era children, Raising, Saudi society.

Effect of Silicon Sulphate and Silicic Acid Rates on Yield and Quality of Wheat (*Triticum aestivum* L.)

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Abstract:

The utilization of silicon (Si) sources is a crucial agricultural tool that requires optimization to promote sustainable practices. The application of Si provides the implementation of biological mechanisms of plant nutrition, growth promotion, and protection. The objectives of this experiment were to investigate the relative efficacy of Si sources and levels on the growth and yield of wheat. The study examined the effects of silicon sulphate and silicic acid levels on growth, spike characteristics, yield parameters, and macro- and micronutrient concentrations of wheat during the 2-season. The entire above-indicated parameters were significantly ($p < 0.05$) increased with increasing levels of silicon sulphate and silicic acid compared to the control. Foliar applications of silicon sulphate 150 ppm and silicic acid 60 ppm statistically ($p < 0.05$) enhanced grain N concentration and the grain yield by 136.14 and 77.85%, 43.49 and 34.52% in the 1st season, and by 78.62 and 54.40%, 43.53 and 33.18% in the 2nd season, respectively, as compared with control. Overall, foliar applications of silicon sulphate at 150 ppm and silicic acid at 60 ppm were greatly efficient amongst all Si levels and sources in improving growth and spike characters, increasing yield parameters, and elevating grain nutrients. Finally, the treatment of silicon sulfate at 150 ppm was more effective than the treatment of silicic acid at 60 ppm in increasing growth, grain nutrients, and productivity of wheat and attaining agricultural sustainability under experiment conditions.

Keywords:

Wheat, Silicon sulphate, Silicic acid, Grain nutrients.

The Relevance of Behavioral Engineering Model for Productivity Optimization in a Fast-Growing Private Learning Institutions

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Abstract:

Optimising performance in the workplace is increasingly becoming a strategic agenda in companies. This interest is fuelled not only by economic and competitive pressures, but also by a growing awareness of the need to improve the prospects of individuals or employees. This article provides an overview of the contributions of the Behavioural Engineering Model (BEM) to optimising the performance of work systems. Proper organisational performance management usually contributes to the long-term benefit of both the organisation and the individual. This model comprises two main elements: the environment and the individual. The employee opinion survey regarding their views on the organisation (satisfaction) was conducted according to the BEM model to illustrate how employee behaviour, performance and performance are related.

Keywords:

Behavioral Engineering Model, Human performance technology, Organizational performance, People competence.

Distance Education: A Review of the Research – An Update

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Abstract:

Scholarly journals often are the best resource to determine the status of and trends occurring in any academic field. The Quarterly Review of Distance Education (QRDE) is in its 25th year of publication. Its editor and editorial team periodically summarize the trends in the field of distance education. This presentation will accomplish three objectives-

1. Establishing the status of the field of distance education in 1999
2. Identifying the major trends in the field of distance education since 1999
3. Offering of projections for the future of the field based emerging trends, with an emphasis of Generative Artificial Intelligence as a contributing factor to the success of the distance education.

Employee Expectation for Sustainability of Human Resources Management among Gen Z in Vietnam

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Abstract:

In recent times, the Gen Z cohort has emerged as a significant force in the workforce in Vietnam. With their bold thinking and action-oriented approach, they present unique challenges for employers. Hence, the objective of this study is to explore the expectations of Gen Z, and then assist organizations in formulating effective strategies regarding Sustainable Human Resource Management (SHRM). The research follows a two-stage structure: the first stage involves qualitative research, while the second stage focuses on quantitative research. Initially, four mini-focus groups are conducted, comprising three individuals in each group (Undergraduates: no working experience, interns; Graduates: full-time, employment gap). Subsequently, a questionnaire-based survey is developed based on the insights gathered from the initial stage. The survey collects data from 305 variables, which are then analyzed using SPSS 26. The findings indicate that depending on the scale of the organization and occupation field, Gen Z employees show different levels of expectation. Generally, they exhibit a heightened awareness of workplaces aligning with their values and recognition in organizations for future development. These insights provide valuable guidance for businesses seeking to create a work environment that appeals to and retains Gen Z employees.

Keywords:

Employee expectations, Gen Z, Sustainability of Human Resources Management (SHRM), Vietnam.

Application of the Theory of “Military Campaign Success” Based on the Genetic Algorithm of “The Art of War” to the War between Israel and Iran

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Abstract:

This paper discusses the development of dynamics in the Israel-Iran conflict, with a forecast for 2024, using military wisdom inspired by Sun Tzu's Art of War in combination with genetic algorithms and complexity theory. The research points out how a variety of strategies undertaken result in combat resource consumption, morale, changes in international politics, and the creation of a multisegmented simulation in war between Israel and Iran. The research methodology includes a genetic algorithm that optimizes strategies, a nonlinear interaction analysis of complexity theory, and a calculus model that simulates resource depletion and morale changes. The results indicate that the rapid strike strategy of Israel participates in short-term superiority and deteriorates logistically and in morale as the duration of the war lengthens. On the contrary, Iran can flexibly adapt to a long war of attrition by using guerrilla warfare and asymmetric warfare. The result of the study indicates that Israel's capability for combat and supply lines would be weakened by the long war strategy, and asymmetric tactics by Iran hold an even higher advantage in this type of conflict; it must serve as a reference for strategic decision-making of nations in the future when confronting similar conflicts.

Keywords:

Sun Tzu's Art of War, Genetic Algorithm, Complexity Theory, Asymmetric Warfare.

Numerical Analysis of C18400 Copper Alloy / AlSi10Mg Aluminum Alloy Powder Beds Deposited with Bi-Directional Multi-Track Selective Laser Melting

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Abstract:

With the increased use to Additive Manufacturing (AM) in industry, the Selective Laser Melting (SLM) method has been widely used to fabricate parts with complex geometries. Despite this, the majority of attention in industry has been paid to the use of a single material for each printed component. This material may not have superior thermal and mechanical properties at one time. There is some evidence of work undertaken using two metals in AM together to print a part with excellent properties, so called bimetallic structures. These composites such as C18400 Copper alloy/AlSi10Mg Aluminum alloy combine the higher conductivity from one material and the corrosion resistance and light weight from the other material in one AM part. To investigate this, 3D Finite Element Models, using ANSYS codes, have been developed to study the thermal evolution during micro-manufacturing for multi layers of C18400 and AlSi10Mg deposited on powder beds. To strengthen the metallurgical bond between layers, SLM process was simulated by altering the direction of the laser beam at 90° orientations from one layer to the next top layer. Furthermore, the laser beam moves over the layers through axial and transverse multi tracks to melt the powder.

Keywords:

Additive manufacturing; Selective laser melting; Multi-material; Powder bed; Finite element models.

Skills for the Future: Critical Thinking and Media Literacy in the Digital Age – Findings from the CTIS Project

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Abstract:

In an increasingly digital world, the ability to critically evaluate and interact with media has become a fundamental skill set. The CTIS project, under the Erasmus+ program, investigates how critical thinking and media literacy can be cultivated to meet the challenges posed by the information-rich environment. The project focuses on developing practical tools and educational strategies to enhance individuals' abilities to navigate the digital landscape with discernment. By promoting critical analysis of information sources, the project aims to equip individuals—particularly students and educators—with the skills necessary to identify bias, recognize misinformation, and make informed decisions. Through the collaboration of research teams and institutions, the CTIS project has generated important insights into the current state of media literacy and critical thinking education across Europe. The findings highlight the need for more structured approaches in teaching these skills, as well as the importance of integrating them into formal education systems. As we face growing challenges like "fake news" and digital manipulation, the project's results underscore the urgency of empowering people with the tools to critically engage with media and information. These competencies are vital for the future, ensuring that individuals can participate meaningfully and responsibly in the evolving digital society.

Keywords:

Critical thinking, media literacy, digital age, misinformation, Erasmus+ project, CTIS, information society, digital skills, education strategies, media analysis, future skills, fake news, digital manipulation, media education.

The COVID-19 Pandemic Has Had a Significant Impact on Primary Education in Pakistan, Presenting Both Challenges and Opportunities. Here is a Critical Analysis of Primary Education in Pakistan after COVID-19

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Abstract:

1. **Disruption of Learning:** The pandemic led to the closure of schools, resulting in a disruption of learning for millions of primary school students. The sudden shift to remote learning highlighted the digital divide in Pakistan, with many students lacking access to devices, internet connectivity, and online learning resources. This unequal access to remote education widened educational disparities, particularly for marginalized communities.
2. **Learning Loss:** The prolonged closure of schools and the shift to remote learning resulted in learning loss for students. The lack of face-to-face instruction, limited interaction with teachers and peers, and challenges in adapting to online platforms contributed to a decline in academic progress and skills development. The impact of learning loss is likely to be more significant among students from low-income backgrounds who may have faced additional challenges during the pandemic.
3. **Inequities Exacerbated:** The pandemic exacerbated existing inequities in the education system. Children from disadvantaged backgrounds faced greater difficulties in accessing remote learning opportunities, further widening the gap between privileged and marginalized students. The lack of digital infrastructure and limited teacher capacity in remote areas posed additional challenges, leaving many students behind.
4. **Mental Health and Well-being:** The pandemic had a significant impact on the mental health and well-being of students. The stress, anxiety, and uncertainty caused by the pandemic, coupled with the isolation resulting from prolonged school closures, affected students' emotional wellbeing. Many students faced increased psychological distress, which could hinder their ability to learn and thrive in the long term.
5. **Adaptation to Online Learning:** The pandemic forced a rapid transition to online learning, which presented both opportunities and challenges. While online platforms provided a means to continue education remotely, the effectiveness of online learning varied depending on factors such as access to technology, internet connectivity, and digital literacy. The lack of teacher training and support for online instruction further hindered the effectiveness of remote learning.
6. **Addressing Learning Gaps:** As schools gradually reopened, addressing the learning gaps caused by the pandemic became a significant challenge. Catch-up programs, remedial classes, and targeted support for students who fell behind became necessary to mitigate the impact of learning loss. However, resource constraints and limited capacity hindered the implementation of such interventions.
7. **Future Preparedness:** The pandemic highlighted the need for a more resilient and adaptable education system. It emphasized the importance of investing in digital infrastructure, teacher

training in online instruction, and strategies to bridge the digital divide. Lessons from the pandemic can inform the development of more robust distance learning plans and blended learning approaches that can be implemented during crises or emergencies.

In conclusion, the COVID-19 pandemic has significantly impacted primary education in Pakistan, exacerbating existing challenges and disparities. It has highlighted the urgent need for investment in digital infrastructure, teacher capacity building, and addressing the socio-economic barriers that hinder access to distance education.

The Topp-Leone Exponentiated Inverted Kumaraswamy Distribution and Its Application on Environmental Data

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Abstract:

This study introduces a new statistical distribution, the Topp-Leone Exponentiated Inverted Kumaraswamy (TLEIK) distribution, designed for analyzing environmental data. The TLEIK distribution generalizes the Topp-Leone Exponentiated-G (TLE-G) family by incorporating an additional shape parameter from the inverted Kumaraswamy distribution. The methodology involves defining the new probability density function, deriving its structural properties, and estimating model parameters using Maximum Likelihood Estimation (MLE). Simulation studies with sample sizes from 20 to 300 demonstrate that the TLEIK distribution's parameter estimates are consistent, as evidenced by decreasing biases and Root Mean Square Errors (RMSE) with increasing sample sizes. Comparisons of the TLEIK distribution's performance with the inverse Kumaraswamy and Kumaraswamy distributions on environmental dataset, such as flood level data, indicate superior fitting capabilities. The model's flexibility is showcased through its ability to accommodate various shapes, including symmetric, skewed, and different hazard function profiles. Results suggest that the TLEIK distribution is highly adaptable for environmental data modeling, as it consistently achieved lower AIC and BIC values compared to baseline distributions. The study concludes that the TLEIK distribution provides a robust framework for environmental research and contributes to statistical modeling by extending the inverted Kumaraswamy distribution offering a versatile tool for real-world data analysis.

Keywords:

Topp-Leone Exponentiated Inverted Kumaraswamy, Environmental, Maximum Likelihood Estimation, Simulation.

Transition from Education to Adulthood for Young People with Disabilities: Falling off a Cliff?

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Abstract:

It is well-accepted in research that the transition from education to adulthood for young persons with disabilities is not direct. However, it remains uncertain how much time and in what way transition programs include for embedding functional and academic instruction that has real-life implications for promoting quality of life and positive post-school outcomes.

This paper will focus on what are the factors and approaches that facilitate a successful transition for young people with disabilities as perceived by them, their parents, educators and other professionals responsible for planning support. Primarily the thematic analysis of focus groups with teachers, parents, and young people themselves combined with life course analysis of interviews were employed in the study to identify successful strategies and approaches, gaps in knowledge, and practice.

The study's findings illustrate that early cross-agency cooperation and technologies for distance learning are particularly helpful for ensuring positive transition outcomes for young people with or without disabilities.

It is recommended to identify models of the early and systematic engagement of young people in transition collaborative planning and their functionality across employment, independent living, and community participation.

Keywords:

Transition; Intellectual Disability; Cross-agency co-operation; Adulthood.

Project Dedication: Czech Science Foundation, project ID 22-26896S.

A Study on the Effective Leadership Quality for Education Leaders in Educational Management

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Abstract:

This essay aims to elucidate the role of a leader and establish its significance in the field of educational management. The significance of a leader in educational management cannot be overstated, as they play a crucial role in ensuring that educational institutions deliver education of exceptional quality to students, establish an efficient management system, and inspire staff members to strive towards certain objectives (Eacott, 2015). In the realm of education, leadership has a significant role in shaping the process, ultimately culminating in the attainment of the intended objectives. An effective leader should cultivate a forward-thinking perspective toward the values of their educational institutions, both in terms of personal and professional aspects. A proficient leader cultivates a sense of job satisfaction and unwavering commitment among the staff, hence fostering success. Educational leadership can be defined as a dynamic process in which a leader proactively assumes the responsibility of creating the necessary circumstances to effectively implement transformative changes in the realm of teaching and learning (Surya, 2011). The individual occupying the role of educational leadership bears the responsibility of establishing the vision and mission of the educational institution. This framework functions as a fundamental principle that directs all parties involved, encompassing students, teachers, and staff members. Furthermore, it is imperative for the leader to guarantee that the educational institution's setting is favorable for learning, encompassing the establishment of a secure and courteous atmosphere for both pupils and professors.

Keywords:

Educational Management, Educational, leadership, dynamic process, students, teachers.

