



2024

WCMRI 2024

3rd World Conference on
Multidisciplinary Research
& Innovation

29th-30th June, 2024 | Singapore

HYBRID CONFERENCE



Organized by
Institute For Educational Research and Publication (IFERP)



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Conference Theme

“Transforming Ideas into Impact: WCMRI Visionary Summit”

PREFACE

We are delighted to extend a warm welcome to all participants attending World Conference on Multidisciplinary Research & Innovation (WCMRI-2024) organized by Institute For Educational Research and Publication (IFERP) on June 29th-30th, 2024 at Furama RiverFront, Singapore. 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 the field of Multidisciplinary Research & Innovation. It offers delegates an opportunity to exchange new ideas and experiences, establish business or research relationships, and explore global collaborations.

The proceedings for WCMRI-2024 contain the most up-to-date, comprehensive, and globally relevant knowledge in the field of Multidisciplinary Research & Innovation. All submitted papers were subject to rigorous peerreviewing by 2-4 expert referees, and the papers included in these proceedings have been 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 in Multidisciplinary Research & Innovation but also serve as a valuable summary and reference for further research in this field.

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 many professors who played an important role in the review process, providing valuable feedback and suggestions to authors to improve their work. We also extend our appreciation to the external reviewers for providing additional support in the review process and to the authors for contributing their research results to the WCMRI-2024.

Since January 2024, the Organizing Committees have received more than 200+ manuscript papers, covering all aspects of WCMRI-2024. After review, approximately 50+ papers were selected for inclusion in the proceedings of WCMRI-2024. We would like to thank all participants at the conference for their significant contribution to its success.

We express our gratitude to the keynote and individual speakers and all participating authors for their dedication and hard work. We also sincerely appreciate the efforts of the technical program committee and all reviewers, whose contributions made this conference possible. Finally, we extend our thanks to all the referees for their constructive comments on all papers, and we express our deepest gratitude to the organizing committee for their tireless work in making this conference a reality.

ABOUT

3RD WCMRI-2024

One of the primary motives of the World Conference on Multidisciplinary Research & Innovation (WCMRI-2024) to be held in Singapore on the 29th & 30th of June 2024 is to spur unique discoveries in terms of countering conventional challenges faced in everyday engineering activities and technologies. Technology is progressing at a very fast pace, which currently is weighing heavily on the earth's bounty of natural resources and causing serious damage to the environment. The price for this large-scale and mass expansion in all forms of daily life is being paid for in the form of climate change.

Today, dangerous pollution levels and global environmental degradation endanger the very existence of life on our planet. Now, more than ever, there is an urgent need for professionals from all sectors of engineering and science to come together and work together to find sustainable solutions to sustain economic growth without harming the environment in any way whatsoever.

Multidisciplinary Confluence

WCMRI-2024 stands as a melting pot of ideas, where the boundaries between engineering disciplines blur, giving rise to innovative solutions that address global challenges. The conference embraces the multidisciplinary nature of contemporary research, recognizing that true breakthroughs often occur at the intersections of different fields.

This theme encapsulates the conference's focus on fostering innovation and collaboration across diverse disciplines within engineering and technology. It encourages participants to explore and present cutting-edge solutions that contribute to the sustainable development of industries, addressing challenges and advancing knowledge for a better future. The multidisciplinary perspective highlights the interconnectedness of various fields in creating holistic and impactful solutions.



Benefits of Conference

1. Currently, multidisciplinary research has become the most viable and efficient way to solve the problem. In this era of rapidly changing society, many kinds of socio-economic problems, related to other disciplines such as politics, anthropology, psychology, have arisen which require a holistic approach to find their solution.
2. When we speak of a multidisciplinary, transdisciplinary or interdisciplinary research team, we imply collaboration between people from different disciplines. Thus, the concept of a multidisciplinary research team can be considered as a subset of the concept of collaborative research.

Scope of the Conference

WCMRI transcends traditional boundaries, providing a platform for comprehensive exploration across a multitude of disciplines. The conference encompasses a wide scope that includes, but is not limited to:

1. **Environmental Sustainability:** Explore the impact of technological advancements on climate change and contribute to finding the balance between economic growth and environmental conservation.
2. **Technological Advancements:** The conference covers a spectrum of technological advancements, from artificial intelligence to biotechnology. Gain insights into the future of technology and its implications for various industries.
3. **Social Sciences:** Discuss and analyze the societal impacts of technological and environmental changes, contributing to a holistic understanding of the challenges we face.
4. **Global Perspectives:** Benefit from diverse viewpoints and experiences shared by participants from different countries and cultural backgrounds. The global scope of the conference ensures a rich and inclusive exchange of ideas.

Objective of the Conference

The primary objective of the World Conference on Multidisciplinary Research & Innovation is to foster a collaborative environment where innovation, research, and knowledge converge. Key objectives include:

1. **Collaboration and Knowledge Sharing:** WCMRI is a platform for cross-disciplinary knowledge sharing, encouraging participants to contribute their expertise to the collective pool of global knowledge.
2. **Innovation Promotion:** WCMRI aims to inspire and promote a culture of innovation that can address contemporary challenges and contribute to the advancement of technology and society.
3. **Networking and Community Building:** The conference serves as a nexus for networking, creating lasting connections that extend beyond the event. WCMRI aims to foster a global community dedicated to the pursuit of multidisciplinary research and innovation.



ABOUT **IFERP**



The Institute for Educational Research and Publication (IFERP) stands at the forefront of promoting innovation, collaboration, and knowledge dissemination in the fields of engineering, science, technology and more. As a professional association, IFERP is dedicated to advancing the academic and industrial landscape through various initiatives.

At its core, IFERP drives change and progress through various initiatives designed to foster cross-disciplinary exchange, empower researchers and professionals, and thus contribute significantly to the evolution of these fields. Through strategic partnerships, conferences, workshops, and publications, IFERP continues to shape a future where cutting-edge ideas, collaborative endeavors, and insightful knowledge flourish.

Mission & Vision

Mission: "Upskilling the knowledge hub through technological innovation and excellence for the benefit of humanity"

Vision: "A Digitally equipped robust, dynamic & swift professional community integrating academics & industry for upgraded technical knowledge implementation."



What We Do?

- IFERP believes that there is always a better way to treat the professionals by providing them a world class stage by organizing conferences. We are committed to doing the following activities:-
- We encourage convenient access to academic resources and support for all the aspirants and research scholars in urban and rural areas.
- IFERP organizes public education programmes, Workshops, Conferences, Webinars, Seminars, Guest Lectures, Short Term Training Programme, Faculty Development programme in the field of Engineering, Science & Technology.
- IFERP is dedicated to inquisitiveness, innovations and recent trends and developments in the field of Engineering & Technology.
- IFERP believes in knowledge sharing by collaborating with other Universities, organizations/Associations, to bring a better tomorrow.

MESSAGE FROM MANAGING DIRECTOR, IFERP



Mr. A. Siddh Kumar Chhajer

Managing Director & Founder,
IFERP, India

On behalf of IFERP & the organizing Committee, I express my hearty gratitude to the Participants, Keynote Speakers, Delegates, Reviewers and Researchers.

The goal of the World Conference on Multidisciplinary Research & Innovation (WCMRI-2024) is to provide knowledge enrichment and innovative technical exchange between international researchers or scholars and practitioners from the academia and industries in the field of Multidisciplinary Research & Innovation.

This conference creates solutions in different ways and to share innovative ideas in the field of Research Studies and Education. WCMRI-2024 provides a world class stage to the Researchers, Professionals, Scientists, Academicians and Students to engage in very challenging conversations, assess the current body of research and determine knowledge and capability gaps.

World Conference on Multidisciplinary Research & Innovation (WCMRI-2024) will explore the new horizons of innovations from distinguished Researchers, Scientists and Eminent Authors in academia and industry working for the advancements in Science and Engineering from all over the world.

WCMRI-2024 hopes to set the perfect platform for participants to establish careers as successful and globally renowned specialists in the field of Multidisciplinary Research & Innovation.

MESSAGE FROM CEO, IFERP



Mr. Rudra Bhanu Satpathy

CEO & Founder,
IFERP, India

IFERP is hosting the World Conference on Multidisciplinary Research & Innovation (WCMRI-2024) this year in month of June, 2024. The main objective of WCMRI-2024 is to grant the amazing opportunity to learn about groundbreaking developments in modern industry, talk through difficult workplace scenarios with peers who experience the same pain points and experience enormous growth and development as a professional. There will be no shortage of continuous networking opportunities and informational sessions.

The sessions serve as an excellent opportunity to soak up information from widely respected experts. Connecting with fellow professionals and sharing the success stories of your firm is an excellent way to build relations and become known as a thought leader. I express my hearty gratitude to all my Colleagues, Staffs, Professors, Reviewers and Members of Organizing Committee for their hearty and dedicated support to make this conference successful. I am also thankful to all our delegates for their pain staking effort to make this conference successful.

ABOUT EXCLUSIVE SPEAKER



Dr. Thelma Domingo Palaoag

Professor, College of Information Technology and Computer Science, University of the Cordilleras, Philippines

Title

“Bridging Disciplines: Enhancing Research, Innovation and Publication Across Fields”

Dr. Thelma D. Palaoag is a visionary leader, accomplished researcher, and trailblazer in the field of Information Technology (IT). With an unwavering commitment to advancing technological frontiers, she has dedicated her career to pushing the boundaries of IT research and fostering innovation within academic institutions. As a young scholar, Dr. Palaoag demonstrated exceptional prowess in the realm of IT, earning her Bachelor's degree in Information and Computer Science with top honor from University of the Cordilleras. Driven by profound curiosity for exploring the transformative potential of technology, she went on to pursue a Master's degree in Computer Science and eventually Doctorate in Information Technology.

Her doctoral research delved into cutting-edge areas such as artificial intelligence, intelligent systems, eLearning and data analytics, propelling her into the forefront of IT innovation. Throughout her academic journey, Dr. Palaoag distinguished herself as a passionate and diligent researcher. Her groundbreaking research contributions have been published in renowned SCOPUS indexed journals and presented at international conferences, garnering recognition from peers and experts in the field alike.

ABOUT WORKSHOP SPEAKER



Prof. Daisy Mae R. Bongtiwon

Faculty of Mathematics & Physics,
Eulogio "Amang" Rodriguez Institute of Science
and Technology, Philippines

Prof. Daisy Mae Bongtiwon is an accomplished educator with extensive experience in teaching Mathematics and Physics at various educational levels. Her expertise spans Trigonometry, Algebra, Differential Calculus, Mechanics, Thermodynamics, Waves and Optics, Electricity and Magnetism, General Mathematics, Pre-calculus, and college-level Physics. She has taught at prestigious institutions in the Philippines. Currently, she teaches at Eulogio Amang Rodriguez Institute of Science & Technology.

Prof. Bongtiwon's academic achievements include a BS in Physics for Teachers (Cum Laude) from Philippine Normal University and an ongoing Master of Science in Teaching-Physics at De La Salle University. She has actively participated in numerous research presentations and conferences, such as the International Higher Education Research Forum, the 11th Research Colloquium at EARIST, and the Annual National Physics Seminar-Workshop. Notably, she participated in the NSTA Conference in Denver, Colorado, contributing to her international exposure and expertise. Her publications include "Thermodynamics: A Simplified Approach," "Mechanics & Heat: A Simplified Approach," and "Inorganic Chemistry: A Simplified Approach." She has been recognized as an Outstanding Researcher by EARIST-Manila in 2023.

As a resource speaker and trainer, Prof. Bongtiwon has contributed to various seminars and conferences, including the Virtual International Multi-Disciplinary Conference (VIMC-2023) and the International Conference on Exploring Colossal Technological Advances of the 21st Century.

ABOUT PANEL SPEAKERS



Dr. Alan Lim Teik Cheng

Head, PhD (Engineering) and Master of
Engineering Programmes
School of Science & Technology
Singapore University of Social sciences
Singapore



Prof. Daisy Mae R. Bongtiwon

Faculty of Mathematics & Physics
Eulogio "Amang" Rodriguez Institute of
Science and Technology, Philippines



Dr. Siva Mahendran

Managing Director
Uniphimatrix Educational and
Counselling Services
Singapore



Dr. Xavier Gopi

Chief Scientist
Technology Research Company
Center for Technological Advancement
and Discovery (CTAD), Singapore

ABOUT KEYNOTE SPEAKER



Dr. Anand Nayyar, Ph.D., is a distinguished Professor, Scientist, and Vice-Chairman (Research) at Duy Tan University, Da Nang, Vietnam. With a background in Computer Science, he specializes in Wireless Sensor Networks, Swarm Intelligence, and Network Simulation. An accomplished professional, Dr. Nayyar holds over 125 certifications from reputable organizations like CISCO, Microsoft, and Amazon. He has authored/co-authored numerous research papers, book chapters, and books, and holds multiple international patents in areas such as Wireless Communications, Artificial Intelligence, and IoT. Recognized globally, he has received over 46 awards for his outstanding contributions to teaching and research, including the DTU Best Professor and Researcher Award. Dr. Nayyar's expertise extends to editorial roles in esteemed journals and conferences, and he has reviewed thousands of articles in his field. Currently, his research focuses on various cutting-edge technologies including IoT, Cloud Computing, and Cyber Security.

Dr. Anand Nayyar

Professor, Scientist, Vice Chairman-Research & Director
IoT and Intelligent Systems Lab,
School of Computer Science,
Duy Tan University (DTU), Da Nang
Vietnam.

ABOUT KEYNOTE SPEAKER



**Dr. Subhas Chandra
Mukhopadhyay, FIEEE, FIEE, FIETE**

Director of International Engagement,
School of Engineering,
Professor of Mechanical/Electronics Engineering,
Macquarie University, Australia.

Dr. Subhas Mukhopadhyay holds a B.E.E. (gold medalist), M.E.E., Ph.D. (India) and Doctor of Engineering (Japan). He has over 34 years of teaching, industrial and research experience. Currently he is working as a Professor of Mechanical/Electronics Engineering, Macquarie University, Australia and is the Discipline Leader of the Mechatronics Engineering Degree Programme. His fields of interest include Smart Sensors and sensing technology, instrumentation techniques, wireless sensors and network (WSN), Internet of Things (IoT), Mechatronics etc. He has supervised over 55 postgraduate students and over 150 Honours students. He has examined over 80 postgraduate theses. He has been co-inventor of 12 patents. He has published over 500 papers in different international journals and conference proceedings, written ten books and sixty two book chapters and edited eighteen conference proceedings. He has also edited thirty five books with Springer-Verlag and thirty two journal special issues. He has organized over 20 international conferences as either General Chairs/co-chairs or Technical Programme Chair. He has delivered 440 presentations including keynote, invited, tutorial and special lectures. He has been cited 22000+ times and an h-index of 74. He is a Fellow of IEEE (USA), a Fellow of IET (UK), a Fellow of IETE (India). He is a Topical Editor of IEEE Sensors journal. He is also an associate editor of IEEE Transactions on Instrumentation and Measurements and IEEE Reviews in Biomedical Engineering (RBME). He was a Distinguished Lecturer of the IEEE Sensors Council from 2017 to 2022. He chairs the IEEE Instrumentation and Measurements Society NSW chapter.

ABOUT KEYNOTE SPEAKER



**Dr. Mohd Nasir Mohd Desa PhD
(Medical Microbiology), P.Tech.
(Biotechnology)**

Head of the Department,
Department of Biomedical Sciences,
Faculty of Medicine & Health Sciences,
Universiti Putra Malaysia,
Malaysia

Professor Ts. Dr Mohd Nasir Mohd Desa obtained his first degree in Microbiology from the University of Arizona, USA. He completed his postgraduate studies at Faculty of Medicine, Universiti Malaya and was awarded with Master of Medical Science and Doctor of Philosophy in Medical Microbiology. He is currently the Head of the department, Department of Biomedical Science, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia (UPM). His postgraduate research mainly focused on the molecular epidemiology and functional genomics of clinical isolates of *Streptococcus pneumoniae*. He is currently expanding the research interest in various aspects of Biomedical Science, particularly in the areas of microbial evolution, antimicrobial resistance and species authentication. Being acquainted with molecular biology techniques, he has also embarked on halal research specializing in DNA based-meat speciation. He had served as the head for Laboratory of Halal Science Research, Halal Products Research Institute (HPRI), UPM from 2015 till 2018, and is still active as the halal research associate. Currently he is the director for HPRI/UPM since 2020, and a registered Professional Technologist (Ts.) in Biotechnology at Malaysia Board of Technologists (MBOT).

ABOUT KEYNOTE SPEAKER



Associate Professor Dr. Alan Lim Teik Cheng won a Faculty of Engineering Annual Book Prize for his undergraduate studies at the National University of Singapore (NUS) and was subsequently awarded full scholarship to pursue his PhD in the same university. Upon completion of his doctorate, he worked in NUS for a few years before joining SIM University (UniSIM), which was later renamed the Singapore University of Social Sciences (SUSS). T.C. Lim is currently Associate Professor and Head of Industrial PhD Programme at SUSS.

Dr. Alan Lim Teik Cheng

Head, PhD (Engineering) and Master of Engineering Programmes,
School of Science & Technology,
Singapore University of Social Sciences,
Singapore

ABOUT KEYNOTE SPEAKER



Mr. Fred Gomez This IT leader from Singapore boasts over 20 years of experience, with a significant portion dedicated to the aerospace sector. Certified in TOGAF, they specialize in driving digital transformations and leveraging industry standards like ITIL, SixSigma, and NIST, along with methodologies such as Agile and Design Thinking. Proficient in cloud, AI, Blockchain, IoT, and cybersecurity, they have a track record of aligning IT strategies with business objectives. Their technical expertise spans enterprise transformations, cloud computing, microservices architectures, and AI technologies. A seasoned leader, they've built and led high-performance teams across various regions, demonstrating strong decision-making and mentoring skills. With a Master's degree in Business, they've also been actively involved in professional communities, serving in leadership roles for ASUG Development Technology and ASUG Enterprise Architecture Community Special Interest Groups.

Mr. Fred Gomez

Director,
Gemological Institute of America,
Singapore.

ABOUT KEYNOTE SPEAKER



Dr. Rajiv Aserkar is the Professor and Head, Logistics and Supply Chain Management at SP Jain School of Global Management. He is currently based in Singapore, prior to which he has spent several years in Dubai. He has many years of academic and industry experience in India, South East Asia and the Middle East. His research work has been presented in International Conferences and published in peer review journals. He has authored books and is a regular speaker at various logistics and supply chain management forums.

Dr. Rajiv Aserkar

Head Logistics & Supply Chain Management,
S P Jain School of Global Management,
Singapore.

ABOUT SESSION SPEAKER



Goh is an Associate Professor at INTI International University, Malaysia. He obtained his Ph.D. in Swarm Intelligence from University Technical Malaysia Melaka in 2019. He is a dedicated academician with more than 12 years of teaching experience in higher education and possesses more than 15 years of research experience. He is actively involved in various research areas such as Swarm Intelligence, Mathematical Modelling, Fintech, Pharmaceutical Information Technology, Healthcare Data Analysis, and Precision Farming Optimization. He obtained 2 FRGS grants as principal investigator in 2016 and 2019 which focused on Computational Analysis on Protein Structure Prediction and Islamic Finance Portfolio Optimization respectively.

Dr. Khang Wen Goh

Pro Vice Chancellor Global Engagement
INTI International University
Malaysia.

ABOUT SESSION SPEAKER



Dr. Deshinta Arrova Dewi

Managing Editor Journal of Data Science,
INTI International University & Colleges,
Malaysia.

Assoc. Prof. Dr. Deshinta Arrova Dewi is a distinguished academic with a Ph.D. in Computer Science from the National University of Malaysia (UKM). She holds an M.Sc. in Software Engineering from the Institute Technology Bandung (ITB), Indonesia, and a B.Sc. in Informatics from Sekolah Tinggi Teknologi at ITB. Dr. Deshinta has been a lecturer in Malaysia since 2003, currently serving as a Senior Lecturer at INTI International University, Nilai. Her research interests span Artificial Intelligence, Internet of Things, Data Science, Machine Learning, and Software Engineering.

Dr. Deshinta is the Research Cluster Leader for AI and IoT at INTI, Managing Editor of the Journal of Data Science, and on the Editorial Board for the INTI Journal. She has a notable patent, PI 2018003069, for the Nusantara Civilization History Map. Her accolades include awards from international competitions such as the IEEE Innovation Competition and various innovation challenges in Malaysia. Dr. Deshinta is actively supervising Ph.D., Master's, and Undergraduate research projects, focusing on Smart Agriculture and Smart Homecare Systems.

ABOUT SESSION SPEAKER



Dr. Affendy Abu Hassim As a Senior Academician and technopreneur with extensive experience spanning over three decades in industry and academia, I bring a unique blend of expertise in Global Business Management, Information Technology, and Data Analytics. Leveraging my academic background and entrepreneurial acumen, I've spearheaded successful tech startups, driving innovation and business growth. Through professional training programs, I've instilled an entrepreneurial mindset among employees, resulting in significant improvements in engagement and productivity. My certifications and affiliations underscore my commitment to continuous learning and professional development, further enhancing my ability to drive success in both academic and industrial domains.

Dr. Affendy Abu Hassim

Associate Professor of International Business
Universiti Kuala Lumpur
Malaysia

ABOUT SESSION SPEAKER



Assoc. Professor Dr. Nurul Asma Abdullah (PhD) is currently an Associate Professor and the Head of the Biomedicine Program at the School of Health Sciences, University Science Malaysia. She has more than ten years of academic teaching experience in molecular biology, immunology, microbiology and stem cell and regenerative medicine. She has served as the internal and external examiners for the MSc and PhD theses. She has been engaged in multidisciplinary research groups in the fields of biomedicine, biomaterials, and pre-clinical research, and interested in the aspects of cell and tissue engineering and regenerative medicine, and inflammation. Her main current research interests include understanding the effects of immunomodulation on the molecular mechanism of bone regeneration, development of biomaterials for hard-tissue engineering (dental, bone and cartilage), and cell-based and cell free therapy for regenerative medicine as well as development of alternatives for the management of airway inflammation. She is also an active reviewer for various international journals, as well as a reviewer for university and national grants. I have published over 60 full peer-reviewed papers in the related fields and authored or co-authored several book chapters. In professional bodies, she is an active member in various national and international societies. She is currently serving as an executive committee member of the Tissue Engineering and Regenerative Medicine Society Malaysia and the Malaysia Biomaterial Society.

Dr. Nurul Asma Abdullah (PhD)

Senior Lecturer & Principal Investigator,
Head of Biomedicine Program,
School of Health Sciences,
Universiti Sains Malaysia, Malaysia.

ABOUT SESSION SPEAKER



Dr. Oliver Massmann

Director,
Duane Morris LLP,
Vietnam.

Dr. Oliver Massmann is an International Attorney at Law and a certified Financial Accountant and Auditor with over 20 years of experience as a commercial lawyer in Vietnam. He holds a Ph.D. in International Business Law and is fluent in Vietnamese. Dr. Massmann specializes in corporate international taxation, power/water projects, oil and gas, telecoms, privatization, mergers and acquisitions, and general commercial matters for multinational clients. He has been recognized as a “Leading Lawyer” in Mergers and Acquisitions in Vietnam by Legal 500.

Dr. Massmann leads a team advising the European Commission and the EU Trade Delegation on implementing the EU-Vietnam Free Trade Agreement (EVFTA), one of Vietnam’s most significant trade agreements. He has presented to the National Assembly of Vietnam in Vietnamese, a unique accomplishment for a foreign lawyer. Additionally, Dr. Massmann is a registered arbitrator with the Vietnam International Arbitration Centre and teaches International Law in Vietnamese at the Ministry of Justice in Hanoi. He holds a Judge Degree from Germany, an LLM in International Taxation from St. Thomas University, and is admitted to the Bar Association in Berlin and licensed as a foreign lawyer in Vietnam.

ABOUT SESSION SPEAKER



Dr. Sangeeta Singh

Senior Lecturer,
Perdana University Graduate School of Medicine,
Malaysia.

Sangeeta has been involved in development work over the last 12 years and has coordinated national and regional projects. At a national level, she provided technical guidance to government and civil societies who were managing national programmes that contributed towards achieving the Millennium Development Goals.

Her proficiencies are mainly on advocacy, research and guiding interventions in the public health domain, such experience may entail a large scale of scope reviewing strategic information on twenty-six countries or management of a programme that reached out to the marginalized population at the national level.

In reference to monitoring and evaluations related activities, she has managed projects such as a) Research grant on Human papillomavirus applying quantitative and qualitative; b) Coordinate

regional research project and reporting on prevalence rate and co-infections of Hepatitis C,

Tuberculosis and HIV among people who inject drugs within five countries (India, Indonesia, Nepal, Malaysia and Thailand); c) Managing care and treatment observational database on People Living with HIV and AIDS; and d) Evaluating health interventions programme in Cambodia, India, Timor Leste and Vietnam.

Sangeeta has also supported various activities on assessing and building the capacity of national partners such as government stakeholders and members of civil society organization. Her knowledge and experience in this regard are reflected in her consulting assignments with strategic partners such as Alliance group, AusAID, USAID, UNICEF, ANPUD, Primary and Sub Recipient of Global Fund Grant, Bill and Melinda Gates Foundation.

ABOUT SESSION SPEAKER



Ms. Najiah Babar

Managing Director,
Kelab Anak Muda WSA,
Universiti Utara Malaysia, Malaysia.

Najiah Babar is a dynamic youth empowerment advocate in Malaysia, actively engaging in discussions on political issues and international relations, with a focus on women's involvement in politics. She holds a Bachelor's degree in International Affairs Management from Universiti Utara Malaysia, specializing in International Law and Diplomacy. Najiah serves as the Managing Director of Kelab Anak Muda WSA, an NGO dedicated to youth and community development, particularly in rural areas. She is also the Co-Director of Global Affairs Minds, promoting research and dialogue in international affairs and geopolitics.

As the former President of the Political Science Association at Universiti Utara Malaysia, Najiah organized events to empower young people through critical thinking and political engagement. She is an alumna of the Parliament Academy by the National Democratic Institute Malaysia and serves as Vice President II of Mahasiswa United Malaysia, facilitating youth empowerment discussions with Southeast Asian leaders. Her accolades include the Best Position Paper Award at the Modern Youth International Model United Nations Conference and the SERASI Female Icon Award. Najiah's research interests include nuclear proliferation and the Israel-Palestine conflict.

ABOUT SESSION CHAIRS



Mr. Fred Gomez

Director,
Gemological Institute of America,
Singapore.



Dr. Eleonor T. Salvador

Faculty, Science Education Department
Eulogio Amang Rodriguez Institute of
Science and Technology, Philippines



Prof. Benjamin G. Haboc

Faculty of Science Education,
Eulogio Amang Rodriguez Institute of
Science and Technology,
Philippines

ORGANIZING COMMITTEE MEMBERS

The Organizing Committee Members of WCMRI hail from diverse backgrounds, representing a tapestry of countries, experiences, and professional designations. This dynamic mix ensures a rich array of perspectives, fostering a vibrant intellectual environment. Their collective contributions extend beyond logistical prowess; they serve as the backbone of the conference, offering invaluable insights, influential networks, and mentorship. The synergy derived from their varied expertise plays a pivotal role in shaping the conference's success.

Scientific Committee

Evangeline H. Castro

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Dr. Huong Dao Thi Lan

Lecturer, Department of Business Administration, undefined Greenwich, FPT University

Francis Alterado

Instructor, College of Arts and Science - Information Technology Department, Western Philippine University Aborlan, Philippines

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Trends of Cultural Research in the Indonesian Education Sector on the Scopus Database: Analysis with Bibliometrics (2010-2023)

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Abstract:

This research aims to explore publication trends in the field of Culture in Education in Indonesia using the Scopus database. Data analysis was carried out using RStudio and Vosviewer, producing 323 related documents. The number of research publications in this field experienced a significant jump, almost sevenfold from 2017 to 2023, with the highest peak occurring in 2019, reaching 61 publications or around 18.89% of the total publications. Universitas Indonesia contributed the highest number of publications with 42 articles, indicating a significant contribution to related research. The most dominant scientific journal is "Journal of Physics: Conference Series" with 34 articles. Mora Claramita from Universitas Gajah Mada has an h-index of 3 with a total of 147 citations from 6 publications, indicating her significant contribution to related scientific literature. Article by Claramita et al. (2013) discusses communication between doctors and patients in Southeast Asia, highlighting cultural diversity in medical practice, and is the most cited document. There are four cultural clusters in education in Indonesia: Organizational Learning Culture (green), Local Learning Content (red), Technical Learning Culture in Higher Education (yellow), and Adult Education Culture in Indonesia (blue). Prominent trends in the use of keywords such as Leadership, Human Experimentation, Patient Safety, and Safety Culture indicate a new direction in research in the field of Culture in Education in Indonesia.

Index Terms:

Culture in Education, Indonesia, Scopus database

Professional Learning Community based on TPACK: Strategies and Patterns for Teacher Professional Development in STEM for Sustainable Development

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Abstract:

The focus of this study was to investigate professional learning community (PLC) program and strategies for increasing teacher professionalism, especially in STEM learning for sustainable development. Based on the theoretical framework of the current study, as part of professional development (PD) approach, we have implemented a key PLC program. Over the past two years, four representative teachers from one school participated in the STEM community. With regard to their technological, pedagogical, and subject knowledge, the teachers not only produced the pedagogy but also observed and collaborated in the schools. How a professional learning community (PLC) based on TPACK may help teachers develop creativity in STEM for Sustainable Development Education? is the main study topic. We used a qualitative analysis of PLC affiliated schools. Our analysis reveals key elements of PLC program are: setting goals, learning individually, learning collaboratively, lesson study, and evaluating. PLC program as addressing their own interests and concerns, and that they were consistently and intensely involved in the important things that were on the schedule for each session. The conclusions highlight the significance of strong school leadership in creating PLC practices.

Index Terms:

Professional learning community, TPACK, Teacher Professional Development, and STEM for Sustainable Development

Formation of Global Diverse Character in Students Through Arts Learning Based on The Tri-Kon Principal Perspective

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Abstract:

Changes that occur in students due to globalization can cause students to not be able to respect each other, bullied, not accept differences and not reflect the noble cultural values of the nation. Global diversity is a character that aims to form students who increase their sense of appreciation for national diversity and are open to other cultures. The application of arts learning is a strategy that can be used to implement the dimensions of global diversity. The aim of this research is to describe art learning in forming a character with global diversity based on the perspective of the tricon concept including continuity, concentricity and convergence. The method used in this research is a qualitative approach by conducting a literature review of journal articles adapted to the topic of discussion using data analysis techniques using thematic analysis. The results of this research include that art education can shape character based on the perspective of the tricon principle through continuity, convergence and concentricity. The tricon principle will form character that can form character of global diversity, including recognizing and appreciating cultural differences, being able to communicate interculturality and interact with others, reflecting and taking responsibility for the experience of diversity.

Index Terms:

Arts Education, Global Diverse, Trikon Prespective

The Paradigm of Progressivism in Art Education: Encouraging Direct Experience, Creativity, and Individual Uniqueness

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Abstract:

This article explores the development of art in education, illustrates people's views on the role of art, and highlights the importance of art in the development of emotional, spiritual, and creativity intelligence. The discussion also includes the role of art education in shaping the character of students and its relation to the principles of progressivism. The articulation of this concept opens up insight into how a progressive approach can enhance students' art learning experiences, stimulate creativity, and form the foundation for critical thinking through artistic expression. Art education in schools now focusses not only on developing artistic skills, but also emphasises the development of 21st century skills needed to face future challenges. The integration of technology in art learning provides a new dimension and opens up wider creative exploration opportunities. The need for multicultural art education reflects the awareness of the importance of understanding and respecting cultural diversity in art. Accessibility of art education becomes a focus, with efforts to ensure that every student has the opportunity to access and experience the beauty of art.

Index Terms:

Art, Art Education, Art Learning Experience

Approaching the Japanese Language Education for Technical Intern Trainees - Multiple Case Studies Towards Building A Multicultural Coexistence Society

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Abstract:

The environment surrounding small and medium-sized enterprises has dramatically changed in Japan due to the declining birth rate and aging population. Many industries with simple or manual labor can only survive with foreign workers. However, the government is pessimistic about immigration policy and advocates the importance of multicultural coexistence. Recently, foreign workers' Japanese language communication in the workplace has been drawing attention. This study focuses on Japanese language education through the case studies of three companies in the Tohoku region of Japan. It examines what interactions occur in the field and what language and communication problems arise. The author obtains data from questionnaires, interviews, natural conversation recordings, and follow-up interviews. Through the analysis, this study aims to recommend how companies should provide guidance, including Japanese language education, to foreign workers.

Index Terms:

Japanese Language, Technical Intern Trainees, Japan

The Effect of Combination Biscuits of Red Algae (*Eucheuma denticulatum* (Burman) Collins et Harvey) Extract and Tempeh on Apolipoprotein B in Dyslipidemic Rats

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Abstract:

Research has been conducted entitled "The Effect of Combination Biscuits of Red Algae (*Eucheuma denticulatum* (Burman) Collins et Harvey) Extract and Tempeh on Apolipoprotein B in Dyslipidemic Rats". Red algae is a plant that has a lot of nutritional content for example fiber, vitamin, proteins, antioxidants, minerals, fats, has secondary metabolic content, etc., As well as tempeh which is a typical Indonesian food made through fermentation using the mold microorganism *Rhizopus* sp. This study aims to determine how much influence red algae and tempeh have when combined on apolipoprotein B in dyslipidemic mice. This research uses laboratory experimental methods with a quantitative approach. This study used nine mice that had undergone metabolic syndrome feeding intervention for five months so that the mice became dyslipidemic. The results obtained between the conditions before and after treatment were significantly different. Giving concentrated red algae extract and tempeh can reduce apolipoprotein B in the blood of mice.

Index Terms:

Red Algae, Tempeh, Apolipoprotein B

Analyzing the Student Factors that Affect Attention of Engineering Students During Face-to-Face Classes Using Structural Equation Modelling

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Abstract:

As we entered the post-pandemic era, wherein people - especially students, gradually went back to face-to-face interactions and set-ups, numerous effects have been brought onto the educational system. In this research, the group focused on the student factors that influence the attention of students from University of Santo Tomas- Faculty of Engineering during face-to-face interactions. Key factors that were focused on this research are the following. First, the student factors, namely: academic, psychological, personal, physical, including the characteristics under these categories. Next, the discussion on cognitive skills and how the researchers narrowed it down to a specific target which the attention. Lastly, how these factors impact the cognitive skill that the researchers determined, the attention of students. The research conducted a survey in the form of a rating scale questionnaire to determine the urgency of the students' factors mentioned. This was analyzed through structural equation modelling (SEM) which used a visual software called AMOS or statistical analysis. Upon running the gathered data, the researchers found that 3 factors namely, Academic, Personal, and Psychological, have a significant effect to the attention of UST Engineering student. After the data has been analyzed, the research was able to determine that the physical factor had no significant effect on the attention of the respondents. Hence, this study will be a pivotal step in making out viable recommendations that students can use in focusing better and improving their routines and performances in and out of the academe. Different procedures and data gathering methods are key areas for further study. Moreover, the number of respondents or sample size can also be increased to further gather a bigger consensus.

Index Terms:

Attention, Face-to-Face Classes, Structural Equation Modelling (SEM)

Stimulation of Batik Jumptan and Ecoprint in Early Childhood Art Development and Content

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Abstract:

Early childhood art development and content stimulation are crucial. However, some schools may not be aware of this, which can hinder children's art development. Introducing batik activities, such as jumputan batik and ecoprint batik, can be an effective stimulation. Unfortunately, in many schools, art learning is limited to drawing, coloring, and painting. This research utilized a descriptive qualitative method. Data was collected through observation, interviews, and documentation. The data analysis followed an interactive model that included data collection, data condensation, data presentation, and conclusion drawing. The purpose of this research is to analyze the stimulation of jumputan batik and ecoprint batik in the development and art content in early childhood. The study's findings suggest that jumputan batik and ecoprint batik can enhance the development of art content in early childhood through batik activities. Batik can be used to encourage children's creativity and teach them about colour mixing, shapes, and creating beautiful batik motifs using simple materials and the surrounding environment. This can be a meaningful way to learn. Notable trends in the use of keywords such as 'batik jumputan', 'ecoprint batik', and 'art development' indicate new directions in research in the field of early childhood education in Indonesia.

Index Terms:

Batik Jumptan, Ecoprint, Early Childhood Art, Childhood Education, Indonesia

Strategies for Enhancing Future Thinking Skills in Secondary Education: A Literature Review

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Abstract:

This study aims to review the literature on effective strategies in improving future thinking skills in secondary education. The research method used is Systematic Literature Review (SLR), which involves the analysis of various studies from the SCOPUS and Web of Science (WoS) databases. The research sample consisted of 213 articles that were filtered to 28 relevant articles. Data analysis was carried out by identifying and categorizing teaching strategies found in the literature and evaluating the effectiveness, obstacles, and role of teachers and the curriculum in their implementation.

The findings of the study show that strategies such as future episodic thinking, the use of information and communication technology (ICT), and positive future thinking are effective in developing students' future thinking skills. The main obstacles identified included limited technological resources, lack of understanding and support from teachers and school administration, and cultural and social challenges. The discussion suggests that the integration of future thinking skills in the curriculum, the use of interdisciplinary approaches, and adequate teacher training can overcome these barriers. This research provides recommendations to improve the implementation of teaching strategies that can prepare students for a future full of challenges and uncertainties.

Index Terms:

Future Thinking Skills, Secondary Education, Teaching Strategies, Systematic Literature Review

The Abstraction Task Design of Pre-Service Teachers to Constructing Relationships among Quadrilaterals

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Abstract:

Abstraction is an essential aspect of mathematical thinking for students because, through abstraction, students will construct their knowledge to make learning more meaningful. This research aims to generate abstraction tasks in constructing relationships among quadrilaterals, which can create a construction in constructing them. The research method used in this study is the instrument development method adapted from Cohen et al. [1], [2]. The stages of task development by [1], [2] contain five stages: test conceptualisation, test construction, test tryout, item analysis, and test revision. The subject-taking technique was purposive sampling. The subject of this study was a pre-service teacher of the mathematics education study program who had taken a geometry course in IKIP PGRI Pontianak West Kalimantan Indonesia. Data collection tools used were tasks, interviews, and video recordings. At the test construction stage, the researchers had three task drafts, and the third draft was a proper draft to proceed to the test tryout stage. The results of the tryout test were analysed, and it was found that the pre-service teacher could construct relationships among quadrilaterals.

Index Terms:

Abstraction, Constructing, Instrument Development, Relationships among Quadrilaterals

Study of an *in silico* Compound Containing Ajwa Dates (*Phoenix dactylifera L*) As Anti-Mullerian Hormone Therapy: Molecular Docking Approach

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Abstract:

The Ajwa Dates (*Phoenix dactylifera L*) is one of the foods that can be consumed daily and has bioactive compounds that serve as fertilizers and other functions as therapies for various diseases and ajwa dates have compounds that are beneficial to human health. The purpose of this research is to do molecular docking of the ajwa dates compounds that are supposed to have affinities for anti-mullerian hormones. There are 15 Ajwa dates compounds that will do molecular docking with anti-mullerian receptors. Initial preparation of ligands and receptors by removing water molecules and other unnecessary residues will affect the docking outcome using Autodocktools and the Discovery Studio Visualizer. The docking results show that the caffeic acid compound is predicted to have the best affinity and activity for the receptor.

Index Terms:

Phoenix dactylifera L, Anti-Mullerian Hormones, Caffeic acid, Docking

Determining the Impact of Public Transportation Quality on the Social Self-efficacy of Persons with Disabilities (PWDs)

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Abstract:

Public Transportation in the Philippines is found to have lots of areas for further improvement. The significance of Public Transportation can be found in the everyday usage of the majority, including Persons with Disabilities (PWDs). The present study determined the impact of the quality of public transportation on the social self-efficacy of PWDs. Additionally, the study aimed to identify significant factors that affect the social self-efficacy of PWDs. In gathering the necessary data, an online survey questionnaire was disseminated among one hundred seventy (170) PWD respondents in the National Capital Region (NCR), comprising questions on variables such as Physical Barriers, Social Barriers, Accessibility, Transportation Service, Public Information, and Costs, each in the questionnaire section. The data gathered was analyzed using Statistical Equation Modeling (SEM) with further interpretations. The study's findings indicated that the Accessibility variable has the most significant effect on the social self-efficacy of PWDs when using public transportation, followed by the Social Barriers being the second variable to have a significant effect, and the rest of the variables were found insignificant. This suggests the necessity of improving the accessibility of public transportation to better accommodate PWDs and improve their social self-efficacy for better inclusion and service.

Index Terms:

Persons with disabilities (PWDs), Public Transportation, Social self-efficacy

A Comparative Analysis on the Perception of Filipino Consumers Regarding Traditional Online Shopping and Livestream Shopping

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Abstract:

The restrictions imposed in the early onset of the COVID-19 pandemic led to the rapid growth of the e-commerce industry, evolving online shopping from using particular online shopping websites and applications to utilizing even social media platforms. Such is one of the current trends in the Philippines. This study aimed to determine the advantages and disadvantages that significantly affected Filipino consumers' perceptions on Traditional Online Shopping and Livestream Shopping and then compare these. All the relevant factors were measured using a survey questionnaire that was made using Google Forms and was distributed to three hundred-seven (307) respondents who make online purchases at least once every three months. The data gathered was analyzed through Structural Equation Modeling (SEM) using IBM SPSS Statistics and SPSS AMOS. Seven hypotheses were constructed for the Traditional Online Shopping model and eight for the Livestream Shopping Model. Two factors were found to be significant for Traditional Online Shopping: Availability of Product Information and Delivery Issues. Four factors were significant for Livestream Shopping: Convenience, Product Variety, Time Element, and Delivery Issues. The findings of this study contribute additional knowledge that can help maximize the potential of the two e-commerce platforms. The findings may also be beneficial to the welfare of businesses, consumers, and the Philippine economy as a whole. Thus, it is recommended that further studies be conducted in line with this topic and implement the knowledge gained on the significant factors for the betterment of the overall shopping experience of Traditional Online Shopping and Livestream Shopping.

Index Terms:

e-Commerce, Traditional Online Shopping, Livestream Shopping, Structural Equation Modeling (SEM)

Analysis of the Factors Affecting the Perceived Safety of Mall Goers in Selected Malls in Metro Manila using Ordinal Logistic Regression

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Abstract:

In order to maintain a great shopping experience and draw customers, mall goers' safety must be ensured. This study intends to identify and investigate the factors that affect mall goers' perceptions of safety in selected malls within Metro Manila. The study utilizes an ordinal logistic regression model to examine the relationship between several variables and mall goers' perceived safety levels. The analysis considers variables like the duration and frequency of mall visits, the age and gender of security guards, the time of day, seasonal events, and the availability of security equipment. Surveys are used to gather information from a representative sample of mall visitors who rate their perceived safety on an ordinal scale. The results of this study offer insightful information about the key factors influencing perceived safety and help in the creation of realistic safety measures for malls in Metro Manila. These findings can be used by mall management and policymakers to strengthen security measures, set investment priorities, and enhance the shopping experience, creating a safer environment for mall visitors. The findings of the study will also be valuable to mall goers, mall owners, mall security management, the government, and future researchers.

Index Terms:

Mall goers, Perceived, Safety, Shopping

College of Industrial Technology Towards Gendered Curricula

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Abstract:

This study is devoted to determining the status of the Industrial Technology (IT) curricula concerning gender-sensitive issues. The impact has not been felt despite the series of curricular revisions leading to gendered curricula. So, the researchers sought to determine the status of the curricular reforms. Also, on the question, why are few women enrolled in the CIT programs? What should be the role of the University in balancing the curricular offerings? The root causes were determined. Recommendations were established to provide an even playing field for both genders. Furthermore, a unique strategy is designed to increase the women's population in the CIT programs. Providing exact support ensures quality workers in the male-dominated world of work.

Index Terms:

Bachelor In Industrial Technology Curricula, Gender And Gendered Curricula, Gender-Bias Curriculum, Graduateness, Higher Education Institution, Student Internship Program, On-The-Job Training Program

Isolation, Characterization, and Screening of Hair Growth Potential Fraction from *Sphaeranthus indicus*: *In vivo* and *in silico* study

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Abstract:

Aim & Objective: The current study concentrated on separating the active fraction from *Sphaeranthus indicus* extract in order to evaluate its efficacy as a hair growth promoter, identify the phytoconstituent(s) responsible for hair growth activity, and determine its likely mode of action.

Methods: In this research, we present a useful chromatographic methodology for isolating the active fraction from *Sphaeranthus indicus* extract. With the use of the mobile phase, Chloroform: Benzene (7:3), fraction A was separated. *In vivo* and *in silico* approaches were employed to examine hair growth activities. Additionally, for a few proteins, including 2FGF, 3B6H, and 4U7P, the docked conformations of the isolated phytoconstituent *Sphaeranthus indicus* were compared to Minoxidil. The Protein Data Bank was used to retrieve the PDB identifications 2FGF (Three-dimensional structure of human basic fibroblast growth factor, a structural homolog of interleukin 1Beta), 3B6H (Crystal structure of human prostacyclin synthase in complex with inhibitor minoxidil) and 4K7A (Crystal structure of the androgen receptor ligand binding domain in complex with minoxidil).

Results: The results of the investigation showed that *Sphaeranthus indicus* alcoholic extracts had pronounced hair growth activity, and it was shown that Cryptomeridiol, a phytoconstituent isolated from *Sphaeranthus indicus* alcoholic extract, had a role in this.

Index Terms:

Hair Growth, *Sphaeranthus indicus*, Minoxidil

A Quantitative Study to Explore the Factors Affecting Beijing, China Adults' E-Hailing Services Satisfaction

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Abstract:

While E-hailing services have gained widespread popularity among urban citizens in China, the fulfilment of customers' satisfaction with E-hailing services become very crucial. The past E-hailing research studies have not studied the factors affecting Beijing, China citizens' satisfaction with E-hailing services. This research conducted a quantitative study to determine whether the factors of price, safety, accessibility, and comfort affect Beijing, China adults' E-hailing service satisfaction with an online questionnaire survey that involved 500 adults in Beijing, China. The Estimation of Customer Satisfaction Index (CSAT) is computed to identify the level of Beijing, Adult's satisfaction, in different aspects of the factors under investigation. Several statistical analysis methods were adopted to explore the factors that have positive and significant relationships with the satisfaction of using E-hailing services, as well as the relationship between adults' satisfaction and intention to continuously use E-hailing services in the city. The analysis result indicated that price, safety, and accessibility had a higher impact on Beijing, China adults' E-hailing service satisfaction. The adult's satisfaction also have moderately strong influenced their intention to continuously use the E-hailing services. The findings of this research offer valuable insights for Beijing, China's E-hailing service providers to better understand their customers.

Index Terms:

Beijing adults, Customer Satisfaction, CSAT; E-hailing service, Service Adoption

Management of Unified Control and Automated System for Smart Hydroponics

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Abstract:

The formulated concept was to answer the problem encountered in traditional farming which is too manual and labor-intensive. This problem was addressed by introducing a smart way of monitoring and controlling essential water parameters in growing lettuce in a Nutrient Film Technique (NFT) hydroponics. The concept was initiated by: (1) designing and developing a management system; (2) developing hardware and firmware components to control and monitor the NFT hydroponics using the Internet of things (IoT); and (3) evaluating the performance and the reliability of the developed system. The management system developed was embedded with the Internet of Things (IoT) for controlling and monitoring specific actuators for driving the DC and AC pumps, the chiller for desired water temperature, dosing, and fertigation pumps to maintain the pH and EC values for optimum plant growth. All these features were made possible through the use of the Android application, a component of the developed system can automatically collect the huge amount of data generated for the management of hydroponic systems, which are hardly achieved by manual testing as practiced. The management system not only provides sufficient data for decision making but also ease the monitoring and control of essential water parameters that are critical in the growth of plants.

Index Terms:

Automation, Hydroponics, Internet of Things, Greenhouse, Lettuce, Smart Farming

Collaborative Organizational Culture Models Which Promotes Co-Creation with Employees for Well-Being and Development

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Abstract:

This article presents a theoretical proposal to achieve employee's collaboration in order to co-create well-being and development. It integrates organizational culture models, personal auto determination to participate and develop community, creativity and innovation aspects, and capabilities development to achieve instrumentality. It presents a review of the Competing Values Framework (CVF), Denison Organizational Culture Assessment (DOCS), Modern Ontological Personalism (POM), capabilities development approach and human flourishing. The scope of the research corresponds to pre-eliminar theoretical, conceptual and methodological results to be continued in a wider research about organizational culture.

Index Terms:

Organizational Culture Models, Co-Creation, Employees, Well-Being and Development, Competing Values Framework (CVF), Denison Organizational Culture Assessment (DOCS), Modern Ontological Personalism (POM)

SIRepS: Siargao Island Protected Landscapes and Seascapes (SIPLAS) Information and Reporting System

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Abstract:

The purpose of this research was to design and implement an information and reporting system for Siargao Island Protected Landscapes and Seascapes (SIPLAS) that can provide a data center on species diversity of flora and fauna, existing research in the SIPLAS area, and approved Protected Area Management Board (PAMB) resolutions and their implementation status. The Rapid Application Development (RAD) Model was employed in the system's planning, design, implementation, and evaluation. Using the Model-View Controller (MVC) design pattern and MySQL as the database, the Laravel Framework was utilized to manage data. In the system evaluation, ISO 9126 standards were employed. The system has a high rate of usefulness, efficiency, usability, reliability, maintainability, and portability using the model and assessment technique used. Thus, the system contributes significantly to the productivity of the DENR-SIPLAS, giving timely feedback and data-driven decision making to the Protected Area Management Board.

Index Terms:

Protected Landscapes, Seascapes, Information and Reporting System

Machine Translation

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Abstract:

Machine Translation, an area of research focused on automating the translation process for text or speech without human involvement, has garnered considerable interest. Over time, diverse methodologies such as rule-based, statistical, and example-based machine translation have been devised and explored. Among these approaches, neural networks have emerged as a transformative force, revolutionizing the landscape of machine translation. This paper delves into designing and implementing a deep neural network within an end-to-end translation framework. The envisioned pipeline aims to process English-language inputs and generate corresponding translations seamlessly. Through this comprehensive approach, the paper aims to contribute to the ongoing advancement of machine translation technology.

Index Terms:

Machine translation, SMT, PB-SMT, Seq2Seq, RNNs, LSTMs, GRUs, UNMT, NLP

Enhancing Thermal Efficiency in Spiral Coil Heat Exchanger: Computational Fluid Dynamics Analysis and Design Optimization

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Abstract:

The passage dives deeper into the world of spiral heat exchangers, those compact champions at transferring heat (already explained earlier). Here's a breakdown of the additional details in easy-to-understand terms:

- **Optimizing the Design:** Scientists are still figuring out how to make these spiral heat exchangers even better. They use powerful computers to simulate how different shapes and sizes of the coils affect how well they transfer heat.
- **Testing Different Options:** They compared two designs: with and without a central core inside, both using copper coils.
- **Looking at the Effects:** They examined how these changes influence factors like water temperature, water flow speed, and a value called the "Reynolds number" (a way to measure flow). They even considered using aluminum instead of copper to see if it makes a difference.
- **Big Benefit Confirmed:** This research confirms that the spiral design can improve heat transfer efficiency by 11% compared to straight-tube exchangers. This means they can cool things down more effectively!
- **Why It Matters:** Heat exchangers are crucial in many industries, like power plants and air conditioning, because they help save energy. So, improvements in their design can lead to more efficient processes overall.

Index Terms:

Heat Transfer, CFD Analysis, Reynolds Number Nusselt Number, Helical Coil Heat Exchanger

The Effect on Climate by Blue Carbon in Mangrove Study Case Puntondo, Takalar, South Sulawesi

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Abstract:

This research aim to examine potential blue carbon on mangrove production and also calculate the impact on climate change by the mangrove production. Based on the data we obtained, the blue carbon potential of 4 points of *Rhizophora Mucronata* mangrove species is 150.25 MgC/ha, 144.57 MgC/ha, 143.43 MgC/ha, and 136.62 MgC/ha. While based on sediment from this mangrove species has a total of 133.2300529 Mg/ha. Blue Carbon has a significant relationship with rainfall with a significant value of 0,049, while blue carbon with salinity and temperature does not have a significant relationship with values of 0,421 and 0,562. It can be conclude that the climate variable that has the most significant relationship with blue carbon is rainfall with a correlation value of 0,880 and a significant relationship value of 0,049.

Index Terms:

Mangrove Ecosystem, Climate Change, Blue Carbon, Salinity, Conclusion, Takalar

Integrating IoT and Civic Education: SKILIKET System as an Approach to Environmental Monitoring and Awareness

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Abstract:

The integration of Internet of Things (IoT) technologies in addressing environmental sustainability has highlighted the need for innovative approaches to data collection and community involvement. At the same time, the citizen science movement continues to foster the participation of volunteers to democratise science. However, access to robust kits for training and large-scale deployment remains limited. Here we propose the SKILIKET system, a flexible training tech-kit which aims at real-time monitoring of environmental variables using IoT capabilities, following a citizen science approach. The initiative seeks to foster technical and civic competencies among participants by using the system to help them understand socio-ecological phenomena. Drawing on Design-Based Research methodology, the authors outline co-creation activities that will be further conducted with higher education student teams to envision the ideal use of the system. This first stage of experimental design outlines the expected system interactions in a controlled environment, where students would be encouraged to actively participate in collecting data from their immediate environment. This engagement is intended to nurture a deeper understanding of socio-environmental issues, enhance public awareness, and support data-driven decision-making and public policy development. By incorporating educational objectives, SKILIKET also serves as a tool for promoting civic skills, data literacy, and community-oriented problem solving. This paper discusses the initial design, implementation strategies, and the expected educational and societal impacts of SKILIKET, highlighting its dual role in environmental monitoring and educational enhancement to address the sustainable development goals (SDGs).

Index Terms:

Internet of Things, Citizen Science, Educational Innovation, Higher Education

Analysis of the Concept of National-Spiritual Security of Youth

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Abstract:

The concept of "national security" is used in political-philosophical literature and dictionaries, and many fundamental scientific works devoted to its essence, purpose, and tasks have been published. However, the concept of "national spiritual security" is not found in dictionaries, special works devoted to its essence are just appearing. True, in some sense it has been considered a component of the concept of "national security". Today, ensuring "national-spiritual security" has become so important that it has even become the main factor in ensuring the security of the nation, people, state, and society. Today, we are witnessing the impoverishment of humanity on the ground of all the conflicts, violence, and death of innocent people that have taken place in the world. As long as it is not prevented, the accumulation of the world will continue to deepen. That is why today, it is correct to say that the issue of ensuring "national-spiritual security" has become an urgent task, and it has entered scientific consumption. That is, the introduction of this concept into scientific use and real life is related to the situation in the world and national development.

Index Terms:

Security, Nation, Spirituality, Youth, Information

Socioeconomic Determinants of Diabetes-Related Disability: Unveiling the Intersections through Quantitative Analysis and Integrating Technology for Sustainable Health Solutions

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Abstract:

The prevalence of diabetes, a leading global public health challenge, is profoundly influenced by an interplay of socioeconomic factors (Median_Income), obesity (obesity_crudeprev), and geographic disparities. This research provides a comprehensive quantitative analysis exploring these determinants, focusing particularly on diabetes (diabetes_crudeprev) and disabilities (disability_crudeprev). Utilizing data from the PLACES dataset, our study employed advanced statistical methodologies to dissect the impact of SES_Index and Obesity_Rate on disability outcomes within diabetic populations across varied geographic regions (Zip_Code).

The novelty of our approach lies in the application of innovative data analytics techniques that enhance the accuracy and depth of our findings. For instance, machine learning algorithms were employed to identify patterns and predict high-risk zones for diabetes-related disabilities, facilitating targeted interventions. Furthermore, Geographic Information Systems (GIS) technology was used to visualize and analyze the impact of geographic disparities on health outcomes, providing a clear, actionable insight into how place influences health.

Findings from the study indicate that lower socioeconomic status (Median_Income), higher obesity rates (obesity_crudeprev), and higher diabetes rates (diabetes_crudeprev) significantly correlate with an increased incidence of disabilities. This correlation not only underscores the need for comprehensive public health strategies that address economic and lifestyle factors but also highlights the potential of technology in transforming public health responses. This research aligns with the WCMRI-2024 theme of "Transforming Ideas into Impact" by demonstrating how multidisciplinary approaches, particularly the integration of socioeconomic analysis with cutting-edge technology, can lead to sustainable health solutions. It advocates for the incorporation of these technological advancements into policy-making and health strategy development to effectively tackle the complex challenge of diabetes management.

By proposing a model that merges socioeconomic data with technological innovations, this study not only contributes to the academic discourse but also serves as a catalyst for policy changes and improved public health strategies aimed at reducing the burden of diabetes-related disabilities globally.

Index Terms:

Diabetes, Disability, Socioeconomic Status (SES_Index), Obesity (Obesity_Rate), Geographic Disparities (Zip_Code), Public Health Interventions, Quality of Life, Health Outcomes, Machine Learning, GIS

Indonesia Local Instant Messaging: Shall We Develop It?

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Abstract:

Instant messaging (IM) applications are ubiquitous tools for communication and information exchange. However, research examining user acceptance of locally developed IM applications using the UTAUT model remains limited. This study addresses this gap by investigating the factors influencing the acceptance of a locally developed IM application in Indonesia, similar to China's WeChat. Employing a survey methodology, the study surveyed 315 respondents to explore the relationships between performance expectancy, effort expectancy, attitude toward using technology (ATUT), social influence, anxiety, facilitating conditions, and behavioral intention to use the proposed IM application. The findings revealed that ATUT, effort expectancy, social influence, and facilitating conditions significantly impacted behavioral intention. However, relationships between anxiety, performance expectancy, and behavioral intention were not statistically supported. This research provides valuable insights for the development of local IM applications in Indonesia and contributes to the advancement of research in this area.

Index Terms:

Instant Messaging, User Acceptance, Application, UTAUT, Behavioral Intention

Legal Text, Context, Documents and Discourse Analysis – A Study in the Light of Qualitative Researches in Humanities

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Abstract:

Qualitative data analysis is one of the significant facets of empirical studies in Humanities. The scope of studies in humanities are dimensional in nature. Beside the number of methods for collection of data, the researchers are always using the authoritative data for the purpose of research. However, while using the data either primary or secondary, the researchers are always at liberty to rely the data based on the authenticity of text and context. The discourse analysis is one of the significant methods to analysis of such legal text, context, documents including debates and speeches given by the Member of Parliament. The present paper deals with the use legal text, case laws, documents such as parliamentary history, law commission reports, special committee reports in legal researches. This major object of the paper is to understand the extent of use of abovementioned factors in legal researches. The present paper covers number of research questions such as to understand the idea of discourse analysis and its use in anthropological or studies in Humanities, the present paper will also cover the scope and extent of discourse analysis by understanding the limitations of discourse analysis. Similarly, the paper also covers, documents like, parliamentary history, committee or commission Reports, debates on the bill in the process of passing, Statement of objects and Reasons accompanied with legislative bill, historical facts and surrounding circumstances, social, political and economic development , and interpretation of public policy etc. This exposure helps to those researchers who are carrying their studies under Humanities in the faculty of law especially in India and Great Britain.

Index Terms:

Legal Text, Context, Documents, Discourse Analysis

Smart Irrigation Ssystem using Internet of Things and Fuzzy Logic Controller

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Abstract:

Traditional farming has played a crucial role in global progress throughout the centuries. However, with the rapid growth of the world's population and increasing demands, farmers are now confronted with the challenge of securing sufficient water for irrigation to meet these escalating needs. To overcome this issue, farmers must explore innovative methods such as smart irrigation system, harnessing technologies like the Internet of Things (IOT), Artificial Intelligence (AI), and Machine Learning (ML). These advanced tools empower farmers to collect and analyze agricultural data more precisely, enabling them to make well-informed decisions. The integration of fuzzy logic controller and the Internet of Things (IOT) into smart agriculture practices can significantly enhance efficiency and effectiveness, by incorporating fuzzy logic algorithms, the irrigation system becomes smarter and more optimized for the agricultural sector. By integrating fuzzy logic control and IOT technologies, the smart irrigation system ensures an efficient allocation of resources, preventing disorder and addressing water scarcity challenges. This combination provides a strong framework for improving decision-making in agriculture, contributing to sustainable development in farming.

Index Terms:

Traditional Farming, Population Growth, Water Scarcity, Smart Irrigation System, Internet of Things

Comparison between Manual Data Collection and the Dose Management System to Establish Local Diagnostic Reference Levels for Common Adult CT Examinations at Zayed Military Hospital

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Abstract:

Computed tomography (CT) significantly impacts population radiation exposure due to its high radiation dose. Diagnostic Reference Levels (DRLs) are used to optimize clinical practice and minimize unnecessary radiation doses. This study compares the conventional manual data collection method and Dose Monitor System to establish local diagnostic reference levels (LDRLs) for common adult CT examinations at Zayed Military Hospital. LDRLs serve as benchmarks for optimizing patient radiation doses in CT imaging. The conventional manual data collection involves gathering radiation dose information from CT scanners and patient data from the DICOM header. Retrospective data were collected between March 2023 and March 2024, comprising 80 patient records for manual data and 479 records from the software. The study focused on three common CT exams: Brain, localized chest, and Kidney Urinary Bladder (KUB). A prospective analysis was conducted for the Dose Length Product (DLP) and the volume CT dose index (CTDIvol) for both manual and Automatic methods. In contrast, the Dose Monitor System automatically records and collects radiation dose data during CT examinations. Statistical analysis compared LDRLs obtained through manual data collection and the Dose Monitor System. The results will provide insights into the Dose Monitor System's accuracy, efficiency, and reliability compared to the traditional manual data collection method for establishing LDRLs. These findings will inform decision-making regarding adopting more efficient and accurate techniques for monitoring and optimizing patient radiation doses in CT imaging.

Index Terms:

Computed tomography; Diagnostic Reference Levels (DRLs); Dose Length Product; CT dose index-volume; Dose Monitor System

School Roof Top Farming as a Sustainable Food Security Measure in Malaysia: A Conceptual Framework

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Abstract:

Rooftop farming presents a sustainable and innovative approach to enhance food security in Malaysia by promoting urban agriculture, fostering community resilience, and reducing reliance on imported food. Utilising empty rooftops to implement green roofs for food production can be a solution to the challenges faced by urban agriculture, such as unavailability of land, no proper sunlight or unsuitable soil apart from inaccessibility and unaffordability to food. School roof tops should be utilized. However, effective implementation requires collaborative efforts from government ministries, private sectors, academia, and local communities to provide necessary support, infrastructure, and policies conducive to school rooftop farming initiatives. Through concerted action, school rooftop farming can contribute significantly in building a more resilient and food-secure future in Malaysia because children can be educated and nurtured on urban farming as a sustainable development measure. Furthermore, school food aid programmes can utilize the produce from the roof top farming in preparing the school meals. Other countries around the world are cultivating urban agriculture via roof top with proper regulatory measures in place to regulate urban farming. Adopting a systematic literature review qualitative method, comparative analysis, this article conceptualizes that Malaysia should embark on 'roof top farming' as a self-sustainable measure to overcome food insecurity. It discourses the potential challenges such as limited access to resources, technical knowledge, and policy support, and proposes strategies to overcome these barriers benchmarking the best practices of other countries.

Index Terms:

Self Sustainable, Urban Farming, Rooftop, and Food Security

Automated Identification and Diagnosis of Silkworm Illnesses using Deep Learning Techniques

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Abstract:

The silkworm, or *Bombyx mori*, is an essential component of the global silk production chain. Nevertheless, the susceptibility of silkworms to many diseases results in notable financial losses and obstacles to the process of producing silk. In order to automate the identification and diagnosis of silkworm diseases, this research aims to harness the potential of deep learning. In particular, we use CNN, VGG16, and AlexNet—three cutting-edge deep learning architectures—to create reliable models for the identification of silkworm sickness. As part of the suggested methodology, a comprehensive dataset containing photos of both healthy and diseased silkworms will be gathered. To improve feature extraction and reduce noise, these photos undergo preprocessing. Using the knowledge from pre-trained models on large-scale picture datasets gathered, we then use transfer learning to train and optimise CNN, VGG16, and AlexNet models on this dataset and achieved an accuracy of 91% on VGG16 and 77% on AlexNet respectively.

Index Terms:

Silkworm Illnesses, Silkworm, *Bombyx mori*, Silk production, AlexNet, CNN, VGG16

AI Tools in Journalism: Enhancing Efficiency in Reporting and its Impact on Journalistic Practices in Jammu & Kashmir

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Abstract:

This research paper investigates the evolving role of artificial intelligence (AI) tools in the field of journalism, with a specific focus on Jammu & Kashmir. In an era marked by technological advancements, the integration of AI in journalistic practices has become increasingly prevalent, promising enhanced efficiency in reporting. This study aims to analyze the implications of AI tools on journalistic practices in the unique socio-political context of Jammu & Kashmir, considering the region's distinct challenges and opportunities.

The research will explore the adoption of AI technologies in newsrooms, evaluating their impact on the speed, accuracy, and overall quality of reporting. Additionally, ethical considerations surrounding AI in journalism will be scrutinized, taking into account the cultural and political sensitivities of the region. Case studies and interviews with local journalists will be employed to provide real-world insights into the experiences and perspectives of those on the frontline of news reporting.

By examining the specific dynamics of Jammu & Kashmir, this paper seeks to contribute to the broader understanding of how AI tools are reshaping journalistic practices. The findings aim to inform discussions on the responsible integration of AI in media, ensuring that advancements align with ethical standards and contribute positively to the evolving landscape of journalism.

Index Terms:

AI Tools, Journalism, Journalistic Practices, Jammu & Kashmir, Artificial Intelligence (AI)

Green Behavior and Sustainability in Organizations: A Comprehensive Review and Analysis

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Abstract:

As the global awareness of environmental issues and sustainability continues to grow, organizations are increasingly recognizing the importance of adopting green behavior and sustainable practices. This research article presents a comprehensive review and analysis of the literature surrounding green behavior and sustainability in organizations. The article explores the factors influencing the adoption of green behavior, the benefits and challenges of implementing sustainability practices, and the strategies organizations can employ to promote a culture of sustainability. By synthesizing existing research, this article aims to provide insights into the current state of knowledge in this field and suggest avenues for future research and practical application.

Environment sustainability has become a strategic and ethical concern for organizations. Majority of employees are encouraged, interested, or instructed to act in various sustainable manners. Eventually, organizational scholars have increasingly studied pro-environmental or employee green behavior (EGB) and the individual-level antecedents of employee. In this article it is been discussed that how EGB, as a profound performance area, is associated with antecedents and consequences at multiple levels (i.e., individual, team, work context, organization, society). It is also investigated how the existing body of literature is directing towards effective interventions. Accordingly, we pursue three interrelated objectives with some quantitative analysis as well, for this analysis. First, a basic and existing comprehensive review of research on EGB is presented, it includes definitions, theoretical frameworks, methodologies, and finally, findings. Then a integrative conceptual model of EGB is developed as a crucial part of organizational environmental and behavioral sustainability. Third, it is concluded with multiple recommendations for future theory development and methodological improvements, as well as practical implications for leaders, employees, and human resource management.

Index Terms:

Employee Green Behaviour, Sustainability, Sustainable Organization, Green Leadership

Ethical and Data Security Concerns in the Use of Natural Language Processing for Early Detection and Risk Assessment in Mental Health

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Abstract:

This study examines the ethical and data security issues related to utilizing Natural Language Processing (NLP) for the early identification and evaluation of mental health risks. Conventional techniques, such as clinical observations and standardized interviews, have historically been the established norm in mental health evaluation. Nevertheless, the emergence of NLP and machine learning presents fresh opportunities for examining textual data in terms of sentiment, emotion detection, and mental health monitoring. Notwithstanding these progressions, notable ethical concerns emerge, encompassing possible prejudices, violations of privacy, and the necessity for informed consent. The aim of this study is to assess and contrast the ethical and data security issues associated with traditional methods and NLP-based methods. The study employs a qualitative systematic review methodology to amalgamate findings from multiple peer-reviewed journal articles. The findings suggest that although NLP offers the advantages of scalability and efficiency, it also presents potential dangers associated with algorithmic bias and data security. Conventional approaches, despite being slower and requiring more resources, guarantee greater transparency and compliance with ethical standards. The study suggests that in order to maximize the benefits of natural language processing (NLP) in mental health, it is essential to incorporate machine learning models that prioritize privacy, enforce stringent controls on data access, and improve the transparency of algorithms. To tackle these ethical and data security challenges, it is crucial to engage in interdisciplinary collaboration and continue conducting research. This will guarantee the responsible and effective use of NLP in mental health assessment.

Index Terms:

Data Security, Early Detection, Ethical Concerns, Natural Language Processing, Risk Assessment

Review of Innovations in Data Offloading Strategies for Enhancing Network Efficiency and User Experience

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Abstract:

In contemporary communication networks, real-time Data offloading solutions have become essential tools for maximizing network efficiency and improving user experience due to the constant increase in data and the growing needs for uninterrupted access. When a consumer interacts with a product or service, their entire pleasure and impression are taken into account. This includes factors like emotional involvement, dependability, efficiency, and simplicity of use. It significantly affects user retention, loyalty, and brand perception, which in turn determines the success and uptake of digital goods and services. This thorough analysis explores the latest developments in these tactics, carefully going over a variety of novelties in detection, dynamic decision-making algorithms, and sophisticated offloading techniques. Through a critical examination of theoretical models and real-world applications, this study assesses how well these improvements operate to reduce congestion, maximize resource use, and improve network performance as a whole. Moreover, it explores the significant influence of these novel approaches on improving metrics related to user experience, such as seamless connectivity, latency reduction, and service dependability. By carefully examining KPIs and user-focused measures, this evaluation clarifies the concrete advantages that result from using state-of-the-art Data offloading techniques, highlighting their critical function in promoting user contentment and involvement. It also outlines the common obstacles and constraints related to the implementation of novel Data offloading strategies, such as interoperability problems, scalability issues, and security issues. In order to chart a path toward the creation of more robust, effective, and user-centric communication infrastructures in the digital age, this review provides insights and suggestions for resolving these issues and improving the efficacy of Data offloading mechanisms.

Index Terms:

Real-time data offloading, Network efficiency, User experience, Congestion management, Quality of Service, Security

Research Writing Skills and Challenges Experienced by Teachers in the Schools Division of Camarines Norte

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Abstract:

This study was conducted to determine the research writing skills and the challenges and problems experienced by the teachers in SDO Camarines Norte. It made use of descriptive design and 662 conveniently chosen respondents.

The findings revealed that many respondents are female and are in their middle adulthood. The teachers were new in their positions and had only been teaching for 1-5 years. They have no experience doing action research but have written or conducted other sorts of study. They are knowledgeable but have encountered challenges. The overall productivity profile is average. They are no longer beginners in research, but rather practice the conventional or common components of it. The respondents had no experience writing action research. They struggled to write its different sections because they lacked formal writing practice.

The researcher proposes that these teachers, as well as those who have not been taught, receive capacity building training. The researcher further recommends the use of the BUSIKLAT research handbook, which can help in writing and conducting action and basic research. In terms of research management, teachers can freely submit titles, proposals, and completed research through the EDUSALIKSIK website. They are also encouraged to be open, willing, and patient to write and perform research that will benefit not just the school and other teachers, but also their students

Index Terms:

Research skills, Challenges, SDO Camarines Norte, BUSIKLAT Research Handbook, EDUSALIKSIK

Exploring the Experiences of Men as Early Childhood Educators

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Abstract:

This study explored the experiences of male teachers of kindergarten in the public school, province of Tarlac, Philippines focusing on four areas such as classroom management, teaching strategies, colleagues' relationship, and parental involvement. The participants' crucial experiences served as essential inputs to the pre-service early childhood teacher education program. Using qualitative approach, it attempted to recognize male involvement in the field of early childhood education (ECE) as a journey toward gender equality and setting value on male nurturing behavior. The participants tried to break the stigma or male stereotypes by providing young learners with the sense of warmth and emotional security. They displayed positive coping strategies such as commitment, partnership or collaboration with parents, and altruism. They also believed that the task of laying the first foundation of learning is a source of fulfilment, and it is seen as an opportunity more than a responsibility.

Index Terms:

Early Childhood Education, Experiences, Male Teacher, Pre-Service Program, Teacher Education

Contributions of the Government and NGOs to Eliminate Hardcore Poverty

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Abstract:

Poverty is among the significant issues that Pakistan has been facing for the past few years and if this issue will remain unattended, the future of Pakistan is in danger. Microfinance is a very powerful tool to alleviate poverty and empower women and impoverished populations. In Pakistan, there are numerous Non-Governmental Organizations (NGOs), Microfinance Institutions (MFIs), Microfinance Banks (MFBs), and other welfare trusts that working on poverty alleviation and aspiring to achieve their aims and targets. The State Bank of Pakistan (SBP), Pakistan Microfinance Network (PMN), Pakistan Poverty Alleviation Fund (PPAF), and other organizations are also striving to attain the United Nations' Millennium Development Goals (MDG) and thereby contribute to the economic development of the nation. The present study aims to identify the contribution of the government and NGOs in eliminating poverty considering the case study of Punjab, Pakistan. The questionnaire survey was used for conducting this analysis where certain statements have been used to measure each variable on the Likert Scale. After the identification of its reliability and validity, the questionnaire was used for the final data collection, which has been further used for the analysis. The findings have revealed that the growth rate of borrowers and training significantly influences poverty. Furthermore, NGOs have been found to have a significant moderating role between microbusiness and poverty.

Index Terms:

Microbusiness, NGOs, Government Sector, Poverty

The Effectiveness of Wearing Body Worn Video (BWV) Camera in Police Operation in Cabanatuan City, Nueva Ecija

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Abstract:

This study investigates the effectiveness of body-worn video (BWV) cameras in police operations at Cabanatuan City Police Station, Nueva Ecija, employing a descriptive research design. Descriptive research, the most commonly used research method, enables systematic investigation into one or more variables, aiming to accurately describe a population, situation, or phenomenon. Utilizing the survey method within descriptive research, this study employs non-probability purposive sampling to select twenty police officers from the Operation Section. The research instrument comprises two parts: Socio-demographic profile and the level of effectiveness of wearing BWV cameras, measured on a modified four-point Likert scale. Prior to data collection, the survey questionnaire undergoes rigorous validation and a pilot test among 4th-year college criminology students. Data gathering involves obtaining necessary permits and administering questionnaires to the respondents, ensuring anonymity and privacy. Statistical treatment of data involves frequency and percentage distribution to describe the demographic profile of respondents, weighted mean to interpret the effectiveness of BWV cameras, and Pearson r to determine relationships between demographic profiles and perceived effectiveness of BWV cameras. Findings reveal that BWV cameras are perceived as highly effective in adhering to procedures, reducing complaints, and false claims of police misconduct. However, there is room for improvement in decision-making and officer safety. Demographic factors such as age, gender, rank, and years in service show no significant correlation with perceived effectiveness. Based on the conclusions drawn, recommendations include maintaining the use of BWV cameras in police operations, a standardized training program for all officers is seen as sufficient due to the positive impact across demographics. Future research should include a wider range of officers and explore public perception alongside officer perspectives for a more comprehensive understanding of BWV Camera use. This study contributes to understanding the efficacy of BWV cameras in law enforcement and provides actionable recommendations for their continued utilization and improvement in police operations.

Index Terms:

Effectiveness, Body Worn Video (BWV) Camera, Police Operation, Transparency

The Praxis of Organizational Citizenship Behavior by Teachers

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Abstract:

Emphasizing the importance of using theory into practice, and to create change by reflecting on what or whose interests are served by the current theory and research is often exhibited by praxis. As praxis is “the practical application of a theory”, concepts of Organizational Citizenship Behavior (OCB), Job Satisfaction (JS), and Organizational Commitment (OC) would only be evident if put into practice. Praxis in research is defined as the practical application or implementation of theoretical knowledge or concepts in real-world settings. In this study, the practice of OCB was the apt concept to describe the kind of behavior of teachers where they voluntary performed beyond duties set for them. It was the extra-role behavior exhibited that was not directly or clearly recognized by the formal reward system with positive effect on the organization, and could not be enforced by the employment contract. Understanding how the factors of Job Satisfaction and Organizational Commitment mediated on bringing out the OCB of teachers provided valuable insights on the mechanisms that drove teachers’ voluntary behavior, and on how these factors influenced teachers to practice the culture of OCB in the workplace which were essential facets in better and efficient performance of teachers. Using descriptive method as research design, the respondents were the private school teachers in Cabanatuan City where the level of OCB, JS, and OC were assessed and correlated. The results showed that in the area of Job Satisfaction, most of the faculty were dissatisfied with their salary, advancement and recognition, while in Organizational Commitment, job evaluation and affective domain got the lowest mean. Being dissatisfied with these factors affected the OCB of teachers. Through this study, an action plan was proposed to enhance the job satisfaction and organizational commitment of teachers to promote the culture of OCB in the workplace.

Index Terms:

Job Satisfaction, Organizational Citizenship Behavior, Organizational Commitment, Praxis

Exploring Teaching Methodologies and Business Management Education's Impact on Entrepreneurial Success

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Abstract:

Emphasizing the importance of using theory into practice, and to create change by reflecting on what or whose interests are served by the current theory and research is often exhibited by praxis. As praxis is "the practical application of a theory", concepts of Organizational Citizenship Behavior (OCB), Job Satisfaction (JS), and Organizational Commitment (OC) would only be evident if put into practice. Praxis in research is defined as the practical application or implementation of theoretical knowledge or concepts in real-world settings. In this study, the practice of OCB was the apt concept to describe the kind of behavior of teachers where they voluntarily performed beyond duties set for them. It was the extra-role behavior exhibited that was not directly or clearly recognized by the formal reward system with positive effect on the organization, and could not be enforced by the employment contract. Understanding how the factors of Job Satisfaction and Organizational Commitment mediated on bringing out the OCB of teachers provided valuable insights on the mechanisms that drove teachers' voluntary behavior, and on how these factors influenced teachers to practice the culture of OCB in the workplace which were essential facets in better and efficient performance of teachers. Using descriptive method as research design, the respondents were the private school teachers in Cabanatuan City where the level of OCB, JS, and OC were assessed and correlated. The results showed that in the area of Job Satisfaction, most of the faculty were dissatisfied with their salary, advancement and recognition, while in Organizational Commitment, job evaluation and affective domain got the lowest mean. Being dissatisfied with these factors affected the OCB of teachers. Through this study, an action plan was proposed to enhance the job satisfaction and organizational commitment of teachers to promote the culture of OCB in the workplace.

Index Terms:

Job Satisfaction, Organizational Citizenship Behavior, Organizational Commitment, Praxis

Assessing the Channel Design of the Eco-Friendly 'Falaj' Water System in Meeting the Optimal Water Demand: A Case Study of Falaj Al-Khatmain, Sultanate of Oman

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Abstract:

The Falaj system, derived from natural water sources, is a man-made canal system designed to supply communities of farmers with water for domestic and agricultural purposes. For thousands of years, Falaj has served communities by harnessing the force of gravity, it persists as a vital water management system in numerous regions across the Sultanate of Oman. Remarkably, predates the establishment of many fundamental hydraulic principles used today. Al-Khatmain Falaj, with its accessibility and historical significance spanning over 2000 years, was chosen as the focal point of this study. The research aimed to investigate the efficiency of Al-Khatmain Falaj in meeting specific water demands. HEC-RAS model was utilized to visualize water flow dynamics within the Falaj channels, accompanied by graphical representations of pertinent variables. The application of HEC-RAS helped to measure different water flow scenarios within the channel, enabling a clear comparison with the demand area. The cultivated land of Al-Khatmain is 723,124 m² and consists of 16,873 palm trees representing 91% of the total area and the remaining 9% is mixed types of trees counted 3,920 trees. The study revealed a total daily demand of 3532.85 m³ is required to irrigate the cultivated land. Through rigorous analysis, the study has proven that the Falaj system in Al-Khatmain operates with high efficiency as the average annual water supply is 9676.8 m³/day. Additionally, the channel designed at 0.6m width x 0.3m height, efficiently holds the optimal water supply, with an average flow depth of 0.21m. Also, the system includes an overflow drainage channel to mitigate floods and prevent crop damage based on the seasonal requirements. This research holds promise for examining diverse hydrological conditions and devising effective strategies to manage scenarios of both high and low flow rates in Falaj Systems.

Index Terms:

Falaj Al-Khatmain, Sustainability, HEC-RAS, Water Management System

Mapping Voice of Customer (VOC) into Functional Requirements Using Quality Function Deployment (QFD)

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Abstract:

This paper presents a comprehensive framework for employing QFD in the early stage of design to transform voice of customer (VOC) into functional requirements (FRs), emphasizing the importance of customer-centric design principles in fostering innovation and competitiveness in any industry. Case study of design project for small hand-launched UAV and practical examples illustrate the effectiveness of the proposed methodology in capturing customer insights and translating them into tangible product features, thereby enabling the creation of product that not only meet but exceed customer expectations. The methodology begins with the identification and prioritization of customer attributes through qualitative and quantitative methods. These customer attributes are linked to technical characteristics and features essential for hand-launched UAV functionality through QFD matrices and cross-functional analyses. When relationships between customer attributes and functional requirements are demonstrated, more informed decisions can be made during the design phase.

Index Terms:

Axiomatic Design, Design for Six Sigma, Quality Function Deployment, Voice of Customer

Effective Moduli, Superior RNS: The Strategic Use of Conjugate Sets

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Abstract:

The System which uses Residue Number System need to deliberately select moduli set, so that it is more useful in forward conversion and reverse conversion for the better Performance. In this paper, Conjugate moduli set $\{2^{n_1}-1, 2^{n_1}+1, 2^{n_2}-1, 2^{n_2}+1, 2^{n_3}-1, 2^{n_3}+1, \dots, 2^{n_L}-1, 2^{n_L}+1\}$ proposed to use in forward conversion and reverse conversion methods to obtain optimized area and delay values. For verifying the results, the software tool used is Xilinx 14.7 ISE with Virtex-7 FPGA kit and the targeted device xc7vx330t-3ffg1157. The proposed Conjugate moduli set based Forward Conversion and Reverse Conversion compared with the different moduli sets available in the literature and corresponding codes written in Verilog HDL code, compiled, simulated with the help of ISIM Simulator. After this, it is Synthesized for utilization summary. From the performance comparison, Proposed moduli set in forward conversion contributed area 26.32% increased and delay 19.19% decreased and on the other side i.e. in reverse conversion methods, CRT had the improvement in area 62.03% and in delay 30.73%, MRC had the improvement in area 13.41% and in delay worse performance by -24.02%, New CRT-I had the improvement in area 23.52% and in delay 22.73%, New CRT-II had the improvement in area 18.71% and in delay 27.23%. These obtained results can be useful in applications like DSP Signal processing applications, Radar Signal processing applications.

Index Terms:

Moduli, Superior RNS, Conjugate Sets

Enhancing Maritime Security and Archaeological Research: The Need for a Maritime Forensic Laboratory in India for the Indian Ocean Region

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Abstract:

Maritime security in the Indian Ocean region is critical for the economic and strategic stability of South Asian countries. This paper explores the establishment of a Maritime Forensic Laboratory in India, emphasizing its significance for maritime archaeology and regional security. With rising incidents of maritime crimes and the need for comprehensive investigation capabilities, the proposed laboratory aims to enhance forensic analysis and evidence collection, thus bolstering maritime law enforcement.

The study delves into the potential benefits of such a facility, highlighting its role in preserving underwater cultural heritage and supporting archaeological research. By analyzing case studies and current challenges in maritime security, the paper underscores the necessity of specialized forensic infrastructure to address issues like smuggling, piracy, and illegal fishing.

Furthermore, the research emphasizes the regional benefits, including improved collaboration among South Asian countries in combating maritime threats and preserving shared maritime heritage. The paper concludes that establishing a Maritime Forensic Laboratory in India will not only enhance national security but also promote regional stability and cooperation, positioning India as a leader in maritime security and archaeological research in the Indian Ocean region.

Index Terms:

Maritime Security, Maritime Forensic Laboratory, Maritime Archaeology, Indian Ocean, South Asian Countries, Underwater Cultural Heritage

Integrating IoT and Civic Education: SKILIKET System as an Approach to Environmental Monitoring and Awareness

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Abstract:

The integration of Internet of Things (IoT) technologies in addressing environmental sustainability has highlighted the need for innovative approaches to data collection and community involvement. At the same time, the citizen science movement continues to foster the participation of volunteers to democratise science. However, access to robust kits for training and large-scale deployment remains limited. Here we propose the SKILIKET system, a flexible training tech-kit which aims at real-time monitoring of environmental variables using IoT capabilities, following a citizen science approach. The initiative seeks to foster technical and civic competencies among participants by using the system to help them understand socio-ecological phenomena. Drawing on Design-Based Research methodology, the authors outline co-creation activities that will be further conducted with higher education student teams to envision the ideal use of the system. This first stage of experimental design outlines the expected system interactions in a controlled environment, where students would be encouraged to actively participate in collecting data from their immediate environment. This engagement is intended to nurture a deeper understanding of socio-environmental issues, enhance public awareness, and support data-driven decision-making and public policy development. By incorporating educational objectives, SKILIKET also serves as a tool for promoting civic skills, data literacy, and community-oriented problem solving. This paper discusses the initial design, implementation strategies, and the expected educational and societal impacts of SKILIKET, highlighting its dual role in environmental monitoring and educational enhancement to address the sustainable development goals (SDGs).

Index Terms:

Internet of Things, Citizen Science, Educational Innovation, Higher Education

Development of an Integrated Arduino Sensors in a Nutrient Film Technique Crop Production

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Abstract:

The primary motivation for this paper stems from the pressing need to optimize and modernize agricultural practices, specifically in hydroponics, with a particular focus on Nutrient Film Technique (NFT) crop production. This study aims to develop an integrated Arduino sensor for an NFT system to aid in maintenance and resource utilization by enabling real-time data monitoring and precise control of environmental parameters. The researcher's hypothesis revolves around the premise that the incorporation of these sensors will not only foster resource efficiency but also improve crop yields and quality. To achieve this, extensive data collection will be carried out through an array of Arduino sensors, encompassing measurements related to pH levels, total dissolved solids, temperature, reservoir water level, and reservoir water temperature. The results will yield the potential benefits of this innovative approach, shedding light on the impact of sensor-based precision agriculture in NFT systems. In conclusion, this research promises to revolutionize modern agriculture by providing valuable insights and practical applications for farmers and agricultural experts. Developing integrated Arduino sensors in NFT crop production can pave the way for more sustainable, resource-efficient, and high-yield agricultural practices, contributing to the global effort to meet food demand while conserving resources and mitigating environmental impacts.

Index Terms:

Hydroponics, Arduino, Nutrient Film Technique, Urban Farming

Beyond Boundaries: Elevating Child-Centric Paradigms through the Meta-Analysis of Multidisciplinary Evaluations

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Abstract:

Lesotho, a mountainous nation, faces unique socio-economic challenges that disproportionately affect its children and youth. The country contends with one of the world's highest HIV/AIDS rates, exacerbating vulnerabilities among children and impacting their health, education, and overall well-being. Additionally, Lesotho's economic structure, heavily reliant on agriculture and textile industries, faces fluctuations and uncertainties, further stressing the social safety nets crucial for child development. Coupled with limited access to quality education and healthcare services, these factors underscore the pressing need for effective, child-centric development strategies.

This meta-analysis evaluates the impact and strategic relevance of child-centric approaches within Lesotho's developmental context from 2019 to 2023, drawing upon a diverse array of sectoral evaluations. These approaches are scrutinized through a systematic review of four comprehensive evaluation reports, selected for their focus on children and youth, and their implications for policy and practice. The analysis adopted qualitative approach, integrating a thorough thematic analysis for qualitative insights to understand the underlying factors affecting their success. This methodological rigor allowed for a holistic assessment of the approaches' effectiveness in addressing the nuanced challenges faced by Lesotho's children and youth.

The meta-analysis revealed that child-centric approaches significantly contribute to mitigating the adverse effects of Lesotho's multidimensional challenges on children and youth. Specifically, educational initiatives have shown promise in enhancing learning outcomes, even as the nation grapples with systemic educational limitations. In healthcare, targeted child-centric interventions have been crucial in improving health outcomes amidst the prevailing HIV/AIDS crisis. Moreover, the strengthening of social protection mechanisms has emerged as a vital component in safeguarding the welfare of vulnerable children, providing a buffer against economic instabilities. Furthermore, the evaluations underline the imperative of an integrated, multi-sectoral strategy in amplifying the efficacy of child-centric approaches. They advocate for the harmonization of efforts across government, civil society, and international agencies to ensure a concerted and sustainable impact on child development.

In conclusion, the findings from this meta-analysis reinforce the indispensable role of child-centric approaches in driving forward Lesotho's developmental agenda, ensuring that interventions not only address immediate needs but also foster long-term resilience and growth for children and youth. The ongoing commitment to these approaches, underpinned by robust research and collaborative policymaking, is essential for realizing the potential of Lesotho's young population and nurturing a foundation for sustainable national development.

Index Terms:

Child-Centric Paradigms, Meta-Analysis, Multidisciplinary Evaluations, Children and Youth, HIV/AIDS

Utilization of Media Communication Tools and Popular Culture in Efforts to Reduce Poverty by Community Development Department (JAPEM) and Their Challenges

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Abstract:

Poverty, like all need, is defined in terms of the society where it takes severe problems. The communication media tools significant impact on our daily lives. The purpose of this research was intended upon intention living in such a poor life not always easy for people and poverty is surely one of the most severe problems in today. Huge efforts and reducing poverty provide remarkable implication towards people especially in raising positive impacts our society's welfare and living standards. The country efforts provide good impact in helping to get jobs for aid recipients and dependents. Communication and access to information should be vital keys that any kind of organization and it should be accessible all the time. The study expects to provide preliminary findings of welfare impacts. This thesis is vital study in Brunei Darussalam and particularly the welfare of the poor and needy beneficiaries. The researcher interested to carry out this study when the writer learned about the existence of underprivileged in the country. The study conducted in Brunei. The aim of the study is to articulate and evaluate the effectiveness of welfare assistance while in full, in which study more refers to the case study. With mass media such as radio broadcast and newspapers, data collection can well be treated as the force that binds the organization recipient together. Brunei Welfare Aids cannot expect effective management without communication. Therefore, research on the welfare beneficiaries is also gradually peeling the existing problems and subsequently forward the proposals that are reasonable for the purpose of the improvement in the country's efforts to help the group of needy and welfare recipients. The following transcripts will be analyzed using Kathy Charmaz's Analysis method. Ethnic approval will be obtained from the respective Ethnic committees in University Teknologi Brunei (UTB) and the Community Development Department (JAPEM).

Index Terms:

Welfare, Communication, Poverty, Social Benefits, Recipients, Effective Management

E-Entrepreneurship Effectiveness in Bangladesh: A Case representing Rural Communities Participation in this new paradigm of Business

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Abstract:

E-entrepreneurship, also known as digital entrepreneurship, is a rapidly growing form of business that leverages digital technologies and the Internet for conducting commercial activities. This innovative approach is increasingly becoming popular among entrepreneurs as a means to kick-start their ventures due to its low initial costs, enhanced access to resources, and the potential for global market reach. Women entrepreneurs often encounter various barriers in traditional business ventures, including limited access to capital, difficulties in accessing resources, and gender-based discrimination. E-entrepreneurship, however, presents an opportunity to overcome these challenges by offering a lower barrier to entry, increased access to resources and professional networks, and the potential to engage with a global customer base. The impact of e-entrepreneurship in empowering women is evidenced by the success stories of female entrepreneurs who have established thriving businesses online. By providing an avenue to enter the business world with lower initial investment requirements and improved access to resources, e-entrepreneurship has the potential to pave the way for economic and social empowerment for women. This has considerable implications for business policymakers, academics, and associated industries, particularly in a country like Bangladesh where e-entrepreneurship is still relatively new, especially in terms of connecting with rural communities.

Index Terms:

E-Entrepreneurship, Bangladesh, Rural Communities, Digital entrepreneurship, Women entrepreneurs

Planning for Emergency Response via Inland Water Transportation – A Case of Kuttanad

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Abstract:

Emergency response planning can benefit from water transportation, especially in flood prone regions or in places with underdeveloped land routes. This paper aims to identify important parameters that needs to be consider for planning emergency response via inland water transportation, focusing on the case of Kerala, India, with a detailed study of Kuttanad taluk. A literature review and expert survey were conducted to identify key parameters. Out of an initial list of 30, key parameters with strong spatial attributes were selected, including: Risk to Disaster, Time to Travel, Access to Infrastructure Facilities, Intermodal Connectivity, Access to Medical Services, Accessibility to Navigable Waterways, Topography & Climate, Population Density & Distribution, and Social Vulnerability. These parameters provide a robust toolkit for gauging the possible utility and effectiveness of waterways for emergency response. The final discussion, after having been localized in Kuttanad, suggests that the Pullinkunnu, Kainakary, and Kavalam areas in Kuttanad could benefit significantly from inland water transportation options, particularly in terms of routine flooding. The identified parameters were validated with case study of Kuttanad. This is a starting point, and this or similar findings can be applied to other parts of the world, hence opening the door to further exploration of inland waterways in emergency response planning.

Index Terms:

Inland Waterways, Emergency Response, Medical Emergency, Inland Water Transportation

Written Discourse Analysis and Its Application in Business Writing

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Abstract:

Cohesion, Coherence, clause relations and text patterns are important concepts in written discourse analysis. Increased intercultural exchanges have taught business communicators to use communication strategies from different cultures. This paper selects one case of business correspondence as the research subject to demonstrate how Economics major Vietnamese students apply the cohesion and coherence principles to business English discourse for international business communication.

Index Terms:

Written Discourse, Cohesion and Coherence Principles, Communication Strategies, Business Correspondence

Planning for Transportation of Hazardous Materials: Identifying Criteria for Spatial Planning Assessment in Urban Areas

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Abstract:

This research focuses on enhancing safety in the transportation of hazardous materials in urban areas by developing a specialized spatial assessment framework. Objectives include a thorough examination of hazardous materials, their classification, transport modes, challenges, and regulatory guidelines. The study also aims to identify appropriate tools and methods for spatial assessment, establish selection criteria, and define key parameters essential for evaluating hazardous material transportation in urban settings. Through meticulous analysis and a comparative study, the research endeavors to contribute to the creation of a robust spatial assessment framework, considering factors such as accident probability, accident fatalities, emergency response capabilities, population at risk, equity in risk distribution, property risk, environmental sensitivity, transportation network characteristics, distance travelled, traffic intensity, vulnerable center count and potential exposed areas. The anticipated outcomes encompass advancements in risk management, improved emergency preparedness, and an overall enhancement in safety for hazardous material transportation within the urban areas.

Index Terms:

Hazardous Material Transport, Transportation Risk Planning

Financial Well-Being in the Covid-19 Period: How Better than Average Bias Shape the Perception Future Economic Conditions

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Abstract:

This study aims to discover how individual perceptions or views of future economic conditions at the household, national, and economic levels globally during the COVID-19 pandemic. We also tested the relationship between variable financial ignorance, financial literacy, and financial well-being during the pandemic. Broadly speaking, the findings of this study show that individuals have an overview of future economic conditions during the pandemic. What makes this interesting is that it turns out that individual expectations of future economic conditions during the pandemic will be different at the household, national, and global levels. The test results concluded that individual optimism about future economic conditions is stronger if the talk is about the economy at the private or household level. In contrast, this optimism will fade if individuals are asked to assess the future economic prospects during the pandemic at the national and global levels, where they are relatively more pessimistic. This finding once again confirms the existence of better-than-average behavior in which individuals will evaluate themselves better than when they evaluate other entities. Better-than-average behavior is quite like optimism bias that if not managed properly, can cause toxic positivity that arises due to an irrational sense of optimism.

Index Terms:

Financial Well-Being, Covid-19, Future Economic Conditions

How Does Reflection Improve Learning for DP Students: An Analysis using Kolb's Experiential Learning Model?

Bhawana Singh

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Abstract:

American philosopher, psychologist, and educational reformer John Dewey described reflective thought as an *“active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends”* (Dewey, 1933, p. 9). Correspondingly, he believed that its function was *“to transform a situation in which there is experienced obscurity, doubt, conflict, disturbance of some sort, into a situation that is clear, coherent, settled, harmonious”* (Dewey, 1933, pp. 100–101).

Acknowledging that the role of reflection in the field of education is significant, researchers have discussed this from various perspectives. For instance, reflection, in Kolb's experiential learning model (Kolb, 1984), is the means for students to convert tangible experience into intangible concepts. Donald Schön (1987), conversely, makes a distinction between the ideas of reflection “on” and “in” action. Additionally, reflection has also been widely put into practice in different ways such as, journals, reports, and portfolios (Helyer, 2015; Helyer & Kay, 2015).

As a professional development trainer for International Baccalaureate Diploma Programme (IBDP) facilitators and a life-skill mentor for IBDP students, I believe that the IBDP's focus on reflection contributes to enhancing the overall learning, both from school experience and life skills perspectives, of students. This can be seen in the inclusion of *reflective* as one of the Learner Profile attributes of the IBDP (IBO, 2022c; Stillisano et al., 2015) which is described from the students' perspective as follows: *“We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses in order to support our learning and personal development”* (IBO, 2013).

Reflective thinking, however, may be understood by different IB schools and teachers in different ways, and the manner in which the reflective attribute is interpreted will influence how it is supported in the schools. In addition, there may be different approaches to integrating it into teaching and activities, and how it is evaluated (Stillisano et al., 2015). Moreover, there are various models of experiential learning that may be utilised in implementing reflective thinking in the IBDP programme. The most renowned model is David Kolb's Experiential Learning model where he proposed that knowledge is the outcome of the amalgamation of grasping and then transforming an experience (Hedin, 2010). This essay will attempt to emphasise the implications of using Kolb's experiential learning in creating reflective learners in the context of the IBDP programme and analyse the limitations and factors affecting its successful implementation in building the reflective attribute of IBDP students.

This essay will begin by describing the IBDP programme and its provision for reflective thinking. Kolb's experiential learning model is then described, including the core elements of the model, the characteristics of an experiential learning strategy, and the model's strengths and weaknesses in the classroom context. The pedagogies used in IBDP to implement this model will then be discussed followed by an assessment on the effectiveness of the DP programme in building reflective learners.

Index Terms:

Learning, DP students, Kolb's experiential learning model

Female Genital Mutilation under Islamic Jurisprudence and Shariat Law

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Abstract:

Female Genital Mutilation has been a routine practice in many parts of the world and has been a fuming issue since 2006, after 2015 it has been added as Goal 5 indicators, a part of 17 Sustainable Development Goals to focus on eliminating the practice by 2030. But the problem arises with community negotiations when it creates a strong fear among the people from abandoning the practice. Islamic Jurisprudence narrates a list of hadiths, qiyas and many ambiguous versions of Quran, showing different narratives from Islamic scholars, Jurists and Maulavi's, who consider practice of Female Genital Mutilation as a mandatory obligation for the women of the community. The most interesting part of Shariat law is that the Jurisprudence of this practice only permeates within one section of the Muslim community, it is only practiced by Shia Muslim and not by the Sunni sect, even though Shia clan is a network of small group of Dawoodi Bohras who foster the procedure kin-to-kin, but factional differences between the community has opened doors for optional negotiations over the continuance of the practice among the female networks. Today, when the world is progressing towards constitutional advancements and trends in fundamental rights are showing a different ray of hope for other genders of the society, Dawoodi Bohra women in Gujarat, Maharashtra and other states also believe in the magical change of the hour this decade.

Index Terms:

Islamic law, Jurisprudence of Islam, Shariat law, Hadith, Quran, Female Genital Mutilation, Human Rights

Students' Critical Thinking Ability in View of Cognitive Style

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Abstract:

The purpose of the study was to describe students critical thinking skills in terms of cognitive style. This research used a descriptive qualitative method with the subject of 4 students consisting of 2 Field Dependent (FD) students of high and low mathematical ability, 2 Field Independent (FI) students of high and low mathematical ability obtained through Mathematical Ability Tests and Group Embedded Figures Test to determine students' Learning Style. Data collection was done through essay questions, interviews, and documentation. The data were analyzed with the stages of data reduction, data presentation, and conclusion drawing and using triangulation techniques to ensure data validity. The results showed that the Critical Thinking Level (CTL) of low FD students fell into CTL 1, and high FD students fell into CTL 2. Furthermore, the critical thinking ability of low FI students fell into CTL 1 and high FI students fell into CTL 2. Low-ability FD students needed help determining the facts in the second problem given, so students were not able to make essential clarifications on the question. FI and FD students need help further clarifying and making conjectures and integration in the stages of critical thinking. The limitation of this study is that the data is only in class VIII students and needs to illustrate the direct relationship statistically between critical thinking skills and cognitive style.

Index Terms:

Critical Thinking, Cognitive Style, Field Dependent, Field Independent

Mentoring Program on Shipboard Training, Navigation and Seamanship: PMMA'S Supplementary Learning Support Amid Learning Crisis Due to Covid-19

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Abstract:

The onset of the COVID-19 pandemic disrupts not only the delivery and implementation of the maritime curriculum but also training preparations before apprenticeships of higher education institution students. While the Philippine Merchant Marine Academy adapts the Alternative Learning Delivery mode during the quarantine and restriction period, the College of Marine Transportation led the implementation of two supplementary learning support (SLS) programs to utilize time and availability and therefore maximize the learning of in-house scholars. The implementation of the Peer Mentoring Program in preparation for the Shipboard Training Program (STP) and Collaborative Learning in Navigation and Seamanship subjects urged this program evaluation research. Using the Context, Input, Process, and Product (CIPP) model for the implementation of SLS, the study shows that both mentoring and collaborative learning programs intensify the knowledge, understanding, and know-how skills of the beneficiaries in terms of shipboard training, navigation, and seamanship by providing the simplest approach to learning. The programs promoted camaraderie and established interactive-academic relationships between the senior and junior cadets/cadettes. Through the SLS programs, senior mentors and peers increased the awareness, readiness, and confidence of the mentees or the juniors despite the academic interruption brought by the pandemic. However, the study identifies a gap in the curriculum particularly in the shipboard training program. The results of this program evaluation research shall be considered before the institutionalization of these SLSs.

Index Terms:

Peer Teaching, Mentoring, Maritime Curriculum, Learning Support, Program Evaluation, Educational Crisis

Growth in Mathematical Understanding of a Junior High School Student on the Topic of System of Linear Equations in Two Variables (SPLDV)

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Abstract:

Understanding is crucial for junior high school students to excel in mathematics. However, there's a significant gap in research regarding how a student growth this understanding. One solution lies in leveraging the Pirie-Kieren theory to foster mathematical understanding. This study aims to describe the growth of a student's mathematical understanding of the material on systems of linear equations in two variables (SPLDV). This descriptive-exploratory research examines the growth of a junior high school student's mathematical understanding. The subjects selected were student with a high ability to complete SPLDV assignments. Next, the subject was interviewed based on the SPLDV task. The research results showed that the student could complete tasks up to the seventh layer in the Pirie-Kieren theory, namely at the structuring layer. However, in several layers, the student did fold back. When the MT subject is at the image-making layer, MT folds back to the primitive knowing layer to strengthen the understanding of linear equation in two variables (PLDV) and connect it to SPLDV. Furthermore, when MT is in the image-making layer, MT cannot create a different mathematical model, but after MT folds back to the image-making layer, MT can create a different mathematical model by multiplying the variable coefficients, and the results following the properties of SPLDV which states that two PLDVs can be congruent. Furthermore, when MT is at the property noticing layer, MT folds back to the image-making layer; MT states that the problem can be solved by utilizing the congruence property of the two equations so that the two equations can be solved by elimination and then substitution. The subject achieves growth in the mathematical understanding of layer structuring by Interpret information in mathematical problems, describe concepts, create topic-specific reports/models, identify similarities and differences in various topic definitions, conceptualize mathematical abstractions, and relate mathematical ideas to problems. This research suggests that its results can help students grow their mathematical understanding.

Index Terms:

Growth in Mathematical Understanding; Spldv; Folding Back; Layer Structuring; Concept

