ICEESSH
24 & 25 July 2025 | Seoul, South Korea

International Conference on **Cross-Disciplinary Insights: Engineering, Higher Education, Social Science, and Humanities**

ICEESSH-2025

24th-25th July, 2025 | Seoul, South Korea

Organized by:

University of Rizal System, Philippines and IFERP Academy

International Conference on Cross-Disciplinary Insights: Engineering, Higher Education, Social Science, and Humanities (ICEESSH-2025)

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Conference Theme

"Innovative Solutions for Sustainable Infrastructure Development: Integrating Engineering, Education and Social Sciences"

Preface

We cordially invite you to attend the International Conference on Cross-Disciplinary Insights: Engineering, Higher Education, Social Science, and Humanities (ICEESSH-2025) on 24th-25th July, 2025. The main objective of ICEESSH-2025 is to provide a platform for researchers, students, academicians as well as industrial professionals from all over the world to present their research results and development activities in relevant fields of Engineering, Higher Education, Social Science, and Humanities. This conference will provide opportunities for the delegates to exchange new ideas and experience face to face, to establish business or research relationship and to find global partners for future collaboration.

These proceedings collect the up-to-date, comprehensive and worldwide state-of-art knowledge on cutting edge development of academia as well as industries. All accepted papers were subjected to strict peer-reviewing by a panel of expert referees. The papers have been selected for these proceedings because of their quality and the relevance to the conference. We hope these proceedings will not only provide the readers a broad overview of the latest research results but also will provide the readers a valuable summary and reference in these fields.

The conference is supported by many universities, research institutes and colleges. Many professors played an important role in the successful holding of the conference, so we would like to take this opportunity to express our sincere gratitude and highest respects to them. They have worked very hard in reviewing papers and making valuable suggestions for the authors to improve their work. We also would like to express our gratitude to the external reviewers, for providing extra help in the review process, and to the authors for contributing their research result to the conference.

Since May 2025, the Organizing Committees have received more than 150+ manuscript papers, and the papers cover all the aspects in Engineering, Higher Education, Social Science, and Humanities. Finally, after review, about 45+ papers were included to the proceedings of ICEESSH-2025.

We would like to extend our appreciation to all participants in the conference for their great contribution to the success of ICEESSH-2025. We would like to thank the keynote and individual speakers and all participating authors for their hard work and time. We also sincerely appreciate the work by the technical program committee and all reviewers, whose contributions made this conference possible. We would like to extend our thanks to all the referees for their constructive comments on all papers; especially, we would like to thank the organizing committee for their hard work.

About ICEESSH

The International Conference on **"Cross-Disciplinary Insights: Engineering, Higher Education, Social Science, and Humanities" (ICEESSH)** aims to bring together researchers, scholars, educators, and industry professionals from diverse fields to foster collaborative discussions and share insights on integrating engineering, education, and social sciences for sustainable infrastructure development. Scheduled to be held on the 24th and 25th of July 2025 in Seoul, South Korea, and organized by Philippine University of Rizal System and the IFERP Academy, this conference will serve as a platform for exchanging innovative ideas and exploring interdisciplinary approaches that address global challenges. With the theme "Innovative Solutions for Sustainable Infrastructure Development: Integrating Engineering, Education, and Social Sciences," ICEESSH 2025 will focus on leveraging research and technological advancements to promote sustainability, enhance educational practices, and strengthen the societal impact of engineering solutions.

This event is The theme of the ICEESSH - 2025, “Innovative Strategies for Sustainable Growth in a Digital Era”, reflects the urgent need to harness digital technologies and innovative business models to drive sustainable development. As businesses and educational institutions navigate the challenges of globalization, technological disruption, and environmental sustainability, this theme emphasizes the role of innovation as a catalyst for positive change.

Sustainable Growth through Innovation:

The digital era brings unprecedented opportunities to innovate in ways that support sustainable growth. From AI-driven business solutions to green technologies, innovation is key to addressing global challenges, driving economic growth, and reducing environmental impact.

Business Transformation in the Digital Age:

Organizations must adapt their business models, operations, and management practices to remain competitive and sustainable in a rapidly digitizing world. This includes integrating cutting-edge technologies like AI, IoT, and big data to enhance operational efficiency, customer experience, and corporate responsibility.

Educational Strategies for Future-Ready Learning:

The digital era is transforming the way we learn and teach. Educational institutions must evolve by adopting new teaching methods, embracing digital learning platforms, and preparing students with the skills needed to thrive in a rapidly changing world. These strategies must align with global efforts to promote inclusive, equitable, and quality education (SDG 4).

Achieving Sustainability Goals:

The conference theme aligns with key SDGs, particularly SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation, and Infrastructure), and SDG 17 (Partnerships for the Goals). Discussions will focus on how businesses, governments, and educational institutions can collaborate to meet global sustainability targets while leveraging digital advancements.

Technological Integration for Social and Environmental Impact:

The integration of technology in business and education is essential for addressing social and environmental challenges. This theme underscores the need for ethical and sustainable technological integration to drive positive societal impact and long-term environmental sustainability.

Scope of the Conference:

In an environment that is constantly evolving, it is more important than ever to acknowledge and implement new technologies in education. Our theme for ICEESSH 2025 is "Driving Educational Excellence through Digital Transformation," and we will be examining the critical role that digital transformation plays in driving excellence in education and its application in addressing complex issues.

Objective of the Conference:

The key objectives of ICEESSH - 2025 are:

1. Promote Sustainable Business Practices: To examine and showcase innovative business strategies that ensure long-term sustainability and align with SDG 8 (Decent Work and Economic Growth) and SDG 9 (Industry, Innovation, and Infrastructure).
2. Foster Educational Innovation: To explore educational strategies and technologies that transform learning environments, with a focus on SDG 4 (Quality Education), ensuring inclusive and equitable quality education for all.
3. Enhance Technological Integration: To discuss the role of technological advancements in fostering sustainable growth, emphasizing how digital tools and innovations can be leveraged to meet business and educational goals.
4. Facilitate Global Collaboration: To provide a platform for multidisciplinary collaboration among researchers, educators, and practitioners from around the world, aligning with SDG 17 (Partnerships for the Goals) to build strong partnerships that enhance knowledge and foster sustainable development.
5. Address Global Challenges: To contribute to the global discourse on sustainable development by addressing key challenges in business, education, and technology, offering insights and practical solutions that can be implemented across industries and regions.

To contribute to the global discourse on sustainable development by addressing key challenges in business, education, and technology, offering insights and practical solutions that can be implemented across industries and regions.

Key Conference Benefits:

Exposure to Expertise: Interact with experts to increase your understanding and obtain insightful knowledge.

Out-of-the-Box Thinking: Take part in conversations that inspire original and creative approaches to problem-solving.

Presenting and Publishing Opportunity: Present your research findings in front of experts and also get a chance to get your paper published in renowned journals.

Networking Opportunities: Establish meaningful connections with industry professionals, fostering new partnerships and prospects.

Knowledge & Skill Development: Expand your knowledge, learn fresh skills, and get a variety of viewpoints to help you advance both personally and professionally.

Increased Visibility of Work : Present your findings to a larger audience to get recognition and visibility in your field.

About IFERP

IFERP Academy is a well-known organization that focuses on engineering, science, and technology. IFERP envisions a global scientific community united by innovation in digital technology. The organization prioritizes advancing industrial trends, disseminating the most recent findings, and encouraging research endeavours that will shape the future of humanity.

With a team of experts, IFERP has established itself across Europe, the Middle East, Asia, and several other countries, including Iraq, Malaysia, Australia, and more. They have offered publication, networking, research support, and other work in various fields of science.

IFERP is an expert at putting together international conferences that bring together scientists, researchers, academics, students, and professionals from all over the world to collaborate. They also publish articles and publications that are indexed by Web of Science and SCOPUS. Important webinars are organized by IFERP and they also offer comprehensive research aid and guidance. Key elements of IFERP's objective include promoting Industry-Institute Interaction and taking part in Youth Empowerment projects. Through faculty growth, skill development, and ongoing research and publication projects, the organization is dedicated to helping professionals.

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 is dedicated to enhancing the professional experience by giving professionals access to a top-notch platform. They are committed to the following pursuits:

- **Academic Resource Accessibility:** They provide aspirant scholars in both rural and urban areas with academic resources and support.
- **Diverse Educational Programs:** Planning a broad array of learning activities, including conferences, webinars, seminars, guest lectures, short-term training courses, and faculty development initiatives.
- **Drive Innovation:** They put a lot of effort into encouraging creativity and curiosity, and they keep current on the most recent developments in the ever-evolving fields of engineering, science, and technology.
- **Knowledge Sharing and Collaboration:** They actively work with institutions, organizations, and associations to advance the common goal of a brighter future.
- **Publication & Recognition:** They also offer chances for research papers to be actively published in respectable journals.

MD's Message, IFERP

Mr. A. Siddth Kumar Chhajer

Managing Director & Founder, IFERP
Technoarete Group, India

MESSAGE

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 International Conference on Cross-Disciplinary Insights: Engineering, Higher Education, Social Science, and Humanities (ICEESSH-2025) is to provide knowledge enrichment and innovative technical exchange between international researchers or scholars and practitioners from the academia and industries in various fields of academics. This conference creates solutions in different ways and to share innovative ideas in the field of Engineering, Higher Education, Social Science, and Humanities. ICEESSH 2025 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.

ICEESSH 2025 will explore the new horizons of innovations from distinguished researchers, scientists and eminent authors in academia and industry working for the advancements in Engineering, Higher Education, Social Science, and Humanities from all over the world. ICEESSH 2025 hopes to set the perfect platform for participants to establish careers as successful and globally renowned specialists in various fields of Academics.

CEO's Message, IFERP

Mr. Rudra Bhanu Satpathy

Chief Executive Officer & Founder, IFERP
Technoarete Group, India

MESSAGE

IFERP is hosting the International Conference on Cross-Disciplinary Insights: Engineering, Higher Education, Social Science, and Humanities (ICEESSH-2025) in month of July. The main objective of ICEESSH-2025 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, Staff, 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 painstaking effort to make this conference successful.

VP's Message

Dr. Marites Manalo Rio

Vice-President
Research Development, Extension and Production
University of Rizal System, Philippines

WELCOME MESSAGE

Warm greetings to everyone from across the globe who save the grace of their presence today and so with all the researchers who inspire breakthroughs through the sharing of the findings of their researches, welcome to the 2025 International Conference on Cross-Disciplinary Insights: Engineering, Higher Education, Social Science, and Humanities (ICEESSH)

I always believe that the choices we make help us shape our future and so let me congratulate everyone at this early for the choice of being a significant character in today's event of scholarly minds.

Your presence is a manifestation of your desire to break barriers and open doors of opportunity for people, environment and institutions to thrive the challenges of the changing ecosystem in the name of innovation and sustainability.

As we come together as human garden of flowers, let us continue to draw inspiration from each other and fuel a brighter future with an innovative landscape and sense of purpose that contextually defines success towards better days, better people, better workplaces and a better world!

Together, let us forge a dynamic future where innovation fuels progress for the people, society and the nation at large.

Once again, welcome to ICEESSH 2025 !

Keynote Speaker

Dr. Tushar Hrishikesh Jaware

Dean, Research and Development
R. C. Patel Institute of Technology
Shirpur, Maharashtra
India

BIOGRAPHY

Dr. Tushar H. Jaware has a bachelor's degree in Electronics and Telecommunication Engineering from North Maharashtra University, Jalgaon, a master's in Digital Electronics, and a Ph.D. in Medical Image Processing from Sant Gadge Baba Amravati University, Amravati. He is currently the Dean of Research and Development at R.C. Patel Institute of Technology, Shirpur, Maharashtra, and has over 19 years of teaching experience. Dr. Jaware is a recognized Ph.D. Supervisor at North Maharashtra University, Jalgaon, and Dr. Babasaheb Ambedkar Technological University, Lonere. He has also served as a Member of the Board of Studies for Electronics and Telecommunication Engineering at North Maharashtra University. Dr. Jaware holds three patents, two industrial designs, and 15 copyrights. He has published over 100 research papers in reputed international journals and conferences. Known for his expertise, he has been invited as a Plenary Speaker at various prestigious events. He has received numerous awards, including the Loksatta Tarun Tejankit Award (2019), GIS Young Innovator and Researchers Award (2018), and Bright Researcher Award (2017). He has been honored with 12 additional awards for his academic and research contributions and has secured research grants under AICTE's SPICES scheme and the Unnat Bharat Abhiyaan initiative.

Keynote Speaker

Dr. Dragan Randjelovic

Full Professor
University Union Nikola Tesla
Belgrade, Serbia

BIOGRAPHY

Prof. Dr. Dragan Ranđelović is a full professor at the Faculty of Diplomacy and Security, University Union Nikola Tesla in Belgrade. Born in 1953 in Niš, he graduated in 1977 from the Faculty of Electronics in Niš, finishing first in his class. He earned his master's degree in 1984 and a Ph.D. in 1999 from the University of Pristina. Dr. Ranđelović has had a distinguished career in academia and industry, with over 45 years of research experience. He worked as a high school teacher and then at the Institute of Electronic Industry in Niš from 1980 to 1991, where he held various roles, including development engineer and laboratory manager. From 1991 to 1997, he was the director of several companies, including Elektronska Industrija Niš and Ei Komerc. In 1997, he transitioned to higher education, starting as an assistant at the Faculty of Agriculture, University of Pristina, before rising through the ranks to full professor. He has also taught at the University of Belgrade, the University of Novi Sad, and the University of Pristina. Since 2008, Dr. Ranđelović has been active at the Criminalistics and Police Academy in Belgrade, where he served as head of the Department of Informatics and a member of the University Senate. In 2020, he became a full professor at the Faculty of Diplomacy and Security, University Union Nikola Tesla. He currently leads the Department of Software Engineering and IT at the faculty. Prof. Ranđelović has authored over 15 university textbooks, published more than 300 references, and has an h-index and i-index of over 10. He has mentored over 50 master's, specialist, and doctoral candidates. He has participated in numerous national and international research projects, including ones funded by the Serbian Ministry of Science. He also serves on the editorial boards of several international journals. Dr. Ranđelović is the author of several national monographs, co-editor of two international books, and in 2024, he will serve as guest editor for a special issue of the Symmetry journal.

Keynote Speaker

Dr. Palanirajan Vijayaraj Kumar

UCSI University
Kuala Lumpur, Malaysia

BIOGRAPHY

Professor Dr. Palanirajan Vijayaraj Kumar is a well-known professor at UCSI University who specializes in pharmacy and pharmaceutical research. He holds two patents and has authored over 81 peer-reviewed publications in Scopus-indexed journals. He has an H index of 18 and 1600 citations in WOS-indexed journals. He has supervised 12 PhDs in Pharmaceutical Sciences and 7 MScs in Pharmaceutical Technology and 6 M. Pharm in Pharmaceutics as their main supervisor. His research interests include organic-inorganic hybrid nanomaterials and metal-organic frameworks (MOFs), as well as in silico analysis of active pharmaceutical ingredients for human health and wellness applications. He has successfully completed two fundamental research grant scheme projects from the Ministry of Higher Education and four Research Excellence and Innovation Grants and two industry consultation projects. His achievements in the academic field include the development and implementation of the Doctor of Philosophy in Pharmaceutical Sciences, master's programs in pharmaceutical technology and sciences, a Bachelor of Formulation Sciences (Honours), and a Diploma in Cosmetic Sciences for our UCSI University. Furthermore, for his continuous contribution to research, he received the Promising Researcher Award from UCSI University in 2016, Malaysia. In 2018, he received an InnoCentive Award from the USA for developing novel cardiac-specific ligands for targeted drug delivery sponsored by SERVIER International, an independent pharmaceutical company governed by a nonprofit foundation from France.

Keynote Speaker

Mr. Ericson Dimaunahan

Director for Operations, Technology and Analytics
Institute for Digital Learning
Mapua University, Manila, Philippines

BIOGRAPHY

Engr. Ericson D. Dimaunahan, a licensed Electronics Engineer, has been a dedicated educator since 2007, leveraging his expertise in technology to revolutionize educational environments. As the Director for Operations, Technology, and Analytics at Mapúa University, he ensures that the institution's digital learning resources are modern, accessible, and impactful for students and faculty alike. Recognized as one of Mapúa University's thought leaders in educational technology, micro- credentialing, and instructional design, he plays a pivotal role in advancing innovative approaches to learning and development. He spearheaded the launch of the Cisco Digital Classrooms, the first of its kind in the Philippines, redefining collaborative and connected learning experiences. His expertise spans the integration of cutting-edge tools, including Learning Management Systems (LMS), AR/VR technologies, generative AI, adaptive learning systems, and digital solutions, to create dynamic and engaging educational experiences. By leveraging these tools, he refines teaching methodologies and enhances learning outcomes through the strategic use of data-driven insights and digital platforms. Engr. Dimaunahan also leads the development and implementation of instructional technology frameworks, comprehensive learning analytics, and an adaptive learning culture that prepares learners for success in a rapidly evolving digital world. Additionally, he collaborates with the HR Department to design and execute training programs that enhance the digital skills of teaching and non-teaching staff. With a strong focus on emerging technologies such as AI, these initiatives improve proficiency, confidence, and collaboration across departments while aligning with organizational goals. Through his strategic leadership, a passion for innovation, and a commitment to academic excellence, Engr. Dimaunahan continues to push the boundaries of educational technology and methodology, shaping the future of teaching and learning at Mapúa University.

Keynote Speaker

Dr. Marites M. Rio

Vice-President for Research Development
Extension and Production
University of Rizal System, Rizal, Philippines

BIOGRAPHY

Dr. Marites Manalo Rio A Community Development Advocate PROFILE IN capsule Dr. Marites Manalo Rio holds a faculty rank of Professor VI and is presently the VicePresident for Research Development, Extension and Production of the University of Rizal System in the Province of Rizal., Philippines. “Dr. Tet” as she is fondly called by her family, friends and colleagues is an epitome of knowledge and skills whose thoughts, words, creative works as a writer, researcher, curriculum planner, as an artist, as a community service champion as well as leadership and values have positively and strongly influenced her work environment and community. She earned her Doctor of Philosophy in Technology Management at the Technological University of the Philippines-Manila in 2007. She finished her Master of Arts in Educational Management at the RSC-PNU Consortium in 1993 and graduated Cum Laude with the degree Bachelor of Science in Industrial Education at the then Rizal Technological and Polytechnic Institute, now the University of Rizal System.. In September 27, 2024 at Diliman Quezon City, she was given recognition by the Women’ Federation for World Peace as Global Women Peace Ambassador; in December 2023 , she was awarded as Ambassador of Peace by the Universal Peace Federation at Seda Hotel while it was on ct. 15, 2021 when Ma’am Tet was recognized as the 2021 Outstanding Extension Practitioner by the Philippine Extension Advisory Services Network (PhilEASNet). She was also served a Gawad Parangal by the Local Government Unit of Baras as a 2019 Natatanging Mamamayan sa Larangan ng Edukasyon, 2018 Guronasyon Outstanding College Faculty awardee as well as Outstanding Josephian Alumna and is a recognized award-winning researcher and extension program enthusiast inside and outside the University. Some of her notable awards include: Best Paper in Education and Ethics and Best Presenter Award during the 2021 International Convention of the Philippine Association of Extension Program Implementers Inc., 2nd Best Outstanding Extension Program during the 2019 Philippine Extension Advisory Service Network Symposium and Best Developmental Paper Awardee of the Southern Tagalog Agriculture, Aquatic and Resources Research, Development and Extension Consortium. After her Deanship in the College of Education, Dr. Rio pioneered the institutionalization and regular conduct of the University of Rizal System’s

IMREACH or International Multidisciplinary Research and Extension Advocacy Conference for Champions of Change. And NREACH for National Level Conference, are her brainchild projects that connect minds and hearts of scholars from across regions for knowledge sharing Since 2019 up to present time, she serves as the Internal Vice- President of the Philippine Association of University Women and Board Member of the Philippine Extension Advisory Services Network after having pioneered leadership as President of the URS Morong College Alumni Association from 2017– 2020, President of the Faculty Association of URS- Morong from 2012-2015 and Vice-President of the Faculty Organization of URS from 2014-2017. Ma'am Tet sustains her collaboration and active services both in community and parish being an active member of the Lectors and Commentators Ministry of the St. Joseph Parish. For 36 years, she maintains her lead as a Co-Founding Elder and Coordinator of the Young Mission Apostles music ministry while she continually serves partnership for community development programs with Local Government Units in the Province of Rizal.

Keynote Speaker

Prof. Jeremy R. Aterrado

Campus Research Head,
Morong Campus
University of Rizal System, Rizal, Philippines

BIOGRAPHY

Prof. Jeremy Remolar Aterrado is an Associate Professor I at the University of Rizal System (URS) and a licensed professional teacher with extensive experience in teaching, research, and human resource administration. He completed the academic requirements for the Doctor of Philosophy in Educational Psychology at De La Salle University and earned his Master of Arts in Industrial Psychology from Rizal Technological University. At URS, Prof. Aterrado teaches core and major courses in Psychology at both undergraduate and graduate levels, including Educational Psychology, Industrial Psychology, and Research in Psychology. He previously served as Program Head of the BS Psychology program, where he led curriculum development, program accreditation, and student performance monitoring. He also held the post of Head of Human Resource Procurement, where he managed recruitment, personnel records, and employee development programs. As a faculty researcher, Prof. Aterrado has published in peer-reviewed and has presented studies on academic motivation, resilience, and psychological interventions at international conferences. His ongoing research includes community engagement, disaster resilience, and technology-integrated learning. He is a certified Internal Quality Auditor for ISO 9001:2015 and has participated in numerous national and international seminars and training in psychology, education, and HR management. Prof. Aterrado is also a sports coach and music enthusiast, known for his holistic approach to education and commitment to public service in Rizal Province.

Session Speaker

Dr. Anil Siddhnarayan Dube

Professor & HOD
Department of Mechanical Engineering
Sandip Institute of Engineering and Management
Nashik, Maharashtra, India

BIOGRAPHY

Dr. Anil Dube is Fellow Member of IEI(Institution of Engineers India) as well as life member of ISTE, Member of IFERP and ISHRAE. He is currently working as a Professor and Head of Mechanical Engineering Department, he is in academics since 1998. From Last 25 Years in Teaching with Specialization in Thermal Engineering and Energy Auditing and Renewable energy. He is working as a Research guide in SPPU. He also worked as a college examination office and successfully completed central assessment program of SPPU in past. He is currently serving as an Associate Editor, Editorial Board Member, Technical Advisory Board Member, Potential Peer Reviewer and Journal Referee on at least 20 Journals . He has participated in more than 20 Teacher Training Programs/ STTPs in reputed institutes. He has published around 25 articles in various conferences and journals at International level. He has served as Convener and Co-convener for international conference . He worked as designated Reviewer for more than 20+ International Conferences as well as Recognized & Outstanding Journal Referee for numerous SCI and Scopus Journals.

Session Speaker

Dr. Rudrappa B Gujanatti

Assistant Professor
K. L. E. Technological University
Hubballi, Karnataka, India

BIOGRAPHY

Dr. Rudrappa B. Gujanatti is an accomplished academician and researcher with over 14 years of teaching experience and 1.9 years of industry experience as a Programmer Analyst at Cognizant Technology Solutions. Currently serving as an Assistant Professor at K. L. E. Technological University, Dr. M. S. Sheshgiri Campus, Belagavi, he specializes in Artificial Intelligence, Machine Learning, and Image Processing, with a strong focus on precipitation nowcasting using advanced deep learning techniques. Dr. Gujanatti holds a Ph.D. from Visvesvaraya Technological University, Belgaum, where his research focused on Precipitation Nowcasting Using Machine Learning Techniques. His notable contributions include the development of a Levenberg-Marquardt-Optimized Neural Network (LMAONN) for rainfall forecasting, a hybrid Deep Residual Network-Deep Stacked Autoencoder (DRN-DSA) for precipitation nowcasting, and a Hybrid Deep Kronecker Network-ResNeXt for cloud cover estimation and classification. He has authored numerous papers in high-impact journals and conferences, with publications indexed in SCOPUS and Web of Science. Dr. Gujanatti has applied for multiple patents, including innovations in IoT-based electric vehicle charging and smart laptop adjustment devices. He has also secured research funding of ₹15 lakh for establishing an IoT and Artificial Intelligence Lab under the Vision Group of Science and Technology (VGST). With expertise in programming languages such as C, C++, MATLAB, Python, and technologies like .NET, GNS3, and NS2, Dr. Gujanatti is committed to advancing knowledge in AI and ML. He is an active member of IFERP, IEEE, ISTE, and IAENG, and serves as a reviewer for IEEE Access, IJIRMPS, and various other reputed journals. His dedication to education, research, and technological innovation makes him a valuable asset in the academic and research community.

Session Speaker

Dr. Mardhiah Kamaruddin

Senior Lecturer
Faculty of Entrepreneurship and Business
Universiti Malaysia Kelantan
Kelantan, Malaysia

BIOGRAPHY

Dr. Mardhiah Kamaruddin is a Senior Lecturer at the Faculty of Entrepreneurship and Business, Universiti Malaysia Kelantan (UMK), Malaysia. She completed her Bachelor's degree in Statistics in 2014, followed by a Master of Science in Medical Statistics. In 2022, she earned her Ph.D. in Biostatistics, further solidifying her expertise in statistical methodologies applied to health and medical research. Dr. Mardhiah has demonstrated her leadership in the research field by successfully securing few national grants as the principal investigator. Her research primarily focuses on biostatistics, particularly in developing statistical techniques for analyzing health data to improve public health outcomes. Her work contributes to the broader understanding of medical data analysis, with a focus on precision and accuracy.

Session Speaker

Dr. Kourosh Fathi Vajargah

Professor of Education
Shahid Beheshti University
Tehran, Iran

BIOGRAPHY

Dr. Kourosh Fathi Vajargah, is a professor at SBU and guest professor at Leiden University. His interests include organizational learning , curriculum concerns in workplace and higher education and the use of technologies to support professional development. He has undertaken significant consultancy works in needs assessment, program development and evaluation , learning ecosystem development (coaching, mentoring, IDP , competency based development, GRANT, learning communities, gamification, etc.) in various organizations . He is also chief editor of Journal of Human Resources Training and Development and Journal of Management and Planning in Educational Systems. Prof. Kourosh Fathi Vajargah has published extensively on HRD and curriculum matters in higher education and informal learning (more than 100 books and 300 journal and conference papers).

Session Speaker

Dr. Teoh Kok Ban

Head of School
School of Industrial Management
ViTrox College, Penang, Malaysia

BIOGRAPHY

Dr. Teoh Kok Ban currently serves as the Head of School and Senior Lecturer at ViTrox College in Malaysia, overseeing the School of Industrial Management. He holds a Bachelor's degree in Applied Statistics and a Master's degree in Statistics from the School of Mathematical Sciences at Universiti Sains Malaysia, and furthered his education with a doctorate in organizational behavior and development from the same university's School of Management, along with a second Master's degree in counseling from the School of Educational Studies. In 2020, Dr. Teoh received recognition for his contributions, including the Best Presenter award at the Industry 4.0 Regional Conference, the Editors' Pick at the International Postgraduate Symposium in Tourism and Hospitality, and the Best Poster award at the 6th ASIA International Conference. He is registered as a counselor with the Malaysian Board of Counselors (LKM), accredited as a trainer by the Human Resources Development Fund (HRDF), serves as Deputy Country Director at the Association of International Business and Professional Management (AIBPM), and is recognized as a graduate technologist by the Malaysian Board of Technologists (MBOT). Actively involved in scholarly pursuits, Dr. Teoh holds editorial roles as the Editor-in-Chief for Annals of Human Resource Management Research, a Section Editor for SEISENSE Business Review, and a reviewer for Psychological Reports. Additionally, he is certified in various therapeutic modalities, including Neo-Cognitive Behavioral Therapy, Art Drawing-House Tree Person, Mindfulness Love Therapy, Mental Health Coaching, and Choice Theory Reality Therapy.

Session Speaker

Dr. Kamran Ahmed Soomro

Head of Department-Graduate Programs
Associate Professor,
Faculty of Management Sciences,
Shaheed Zulfikar Ali Bhutto Institute of Science and Technology, University Karachi, Pakistan

BIOGRAPHY

Dr. Kamran Ahmed Soomro He is PhD in Management Sciences from Huazhong University of Science & Technology, HUST, Wuhan, China. He is currently working as the Associate Professor and HoD Graduate Programs in the Faculty of Management Sciences and Managing Editor of Journal of Independent Studies and Research (JISR-MSSE) at SZABIST University Karachi. His research is published in local and international reputed journals, his area of research is management, leadership and sustainability. He teaches at graduate and postgraduate programs with creative teaching methodology. He is also a Sindh HEC certified Trainer for faculty development. Dr. Kamran has leadership skills and he has cofounded Thinkers Tribe, a volunteer based platform to encourage youth engagement for achieving Sustainable Development Goals. Besides, he is expert at teaching and writing case studies.

Session Speaker

Dr. Caleb Chidozie Chinedu

Distinguished Senior Lecturer
Faculty of Technical and Vocational Education
Universiti Tun Hussein Onn Malaysia (UTHM)
Johore, Malaysia

BIOGRAPHY

Dr. Caleb Chidozie Chinedu is a distinguished senior lecturer at the Faculty of Technical and Vocational Education, Universiti Tun Hussein Onn Malaysia (UTHM). With a Ph.D., M.Ed., and a bachelor's degree in Technical and Vocational Education, Dr. Chinedu brings over a decade of teaching, research, and administrative experience in TVET and teacher education research. His extensive research interests encompass a variety of critical areas, including Education for Sustainable Development, green skills, higher-order thinking skills (HOTS), curriculum development and pedagogy, leadership and management in TVE, TVET student enrolment, TVET marketability, lifelong learning, Industrial Revolution 4.0, and the digital transformation of TVET systems. He is also deeply invested in exploring the evolving impact of Generative AI on education, particularly the ethical dilemmas it presents and its use in a TVET context. As a passionate educator with exceptional leadership skills in Technical and Vocational Education, Dr. Chinedu is committed to advancing sustainability education. He currently serves as a Principal Research Fellow at the Malaysian Research Institute for Vocational Education & Training (MyRIVET). In this role, he leads high-quality research projects focused on sustainability education, fosters relationships with key TVET stakeholders, disseminates research findings through publications and presentations, and contributes to research funding proposals and strategy development. Dr. Chinedu also holds several key leadership positions. He is a Managing Editor of the Journal of Technical Education & Training and the chief editor of TVET Prospect, a quarterly publication of MyRIVET.

Session Speaker

Dr. Norberto M. Nataño

Director, Center for LifeLong Learning, URS
Campus Research Head, Antipolo Campus
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BIOGRAPHY

Dr. Norberto M. Nataño is an assistant professor and director for Center for Lifelong Learning at the University of Rizal System in the Province of Rizal, Philippines. He has been one of the proponents of several literacy and livelihood projects targeting the marginalized community in their province, speficifically the indigenous communities. Among the projects he has been involved were AGAP: Academic Growth Assistance Program, DALOY: Delivering Access to Quality Learning Opportunities for the Marginalized Community (Phase 1 and 2), and YAKAP: IP Community Awareness, Knowledge, Attitude, and Practice: Serye ng Talakayang GAD. These projects have been locally and nationally recognized as Best Extension projects in their university and Communication Excellence in Community Service (2022 and 2024) by the Communication Foundation for Asia. He was awarded as an Outstanding College Faculty in their province. He is an accomplished researcher with research presentations and publications, both local and international, in the field of education, media and information literacy, communication, and indigenous studies. More so, he serves as the managing editor of the Philippine Journal of Media and Information Literacy. He is currently serving as the general secretary of three recognized organizations: Heart Start Educators for Lifelong Learners, Inc; Indigenous Peoples Education Advocates in the Philippines. Inc.; and Philippine Association for Media and Information Literacy. Dr. Nataño obtained a degree in Mass Communication major in Journalism, University of Rizal System; Master in Communication- Communication Research, Polytechnic University of the Philippines; and Doctor of Communication, University of the Philippines-Open University. At present, he is completing his dissertation for his post- doctorate in Doctor of Philosophy in Indigenous Studies at the University of the Philippines Baguio.

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Abstract's Index

Post-Disaster Tourism Infrastructure in Indonesia: Sustainable Recovery and Resilience After Tsunami and Earthquake

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Abstract

Indonesia, as a disaster-prone country, has encountered substantial challenges in reconstructing its tourism infrastructure following catastrophic events such as the 2004 Aceh tsunami and the 2018 Lombok earthquake. This study examines lessons learned from post-disaster tourism infrastructure development in these affected regions, focusing on sustainable recovery and community resilience. A Systematic Literature Review (SLR) was conducted, analyzing 8 peer-reviewed articles published between 2010 and 2024, retrieved from Scopus, ScienceDirect, Google Scholar, and JSTOR, along with case studies and policy reports on tsunami and earthquake-affected destinations in Indonesia. The findings suggest that the successful recovery of tourism infrastructure is contingent upon effective collaboration among government bodies, local communities, and the private sector. Key themes identified include disaster-resilient design and active community participation in reconstruction efforts. This study underscores the necessity of integrating engineering principles, social sciences, and sustainable development frameworks to foster long-term resilience in tourism infrastructure. By providing valuable insights for post-disaster recovery strategies, this paper offers recommendations applicable to Indonesia and other disaster-prone regions worldwide. The findings emphasize the critical need to incorporate sustainability, resilience, and community empowerment into infrastructure development, thereby contributing to the tourism sector's global discourse on disaster management.

Keywords

Post-Disaster Tourism, Infrastructure Development, Tsunami, Earthquake, Indonesia, Sustainable Recovery, Community Resilience, Disaster Management, Systematic Literature Review.

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Inclusive Education for Children in Remote Areas: A Case Study in East Nusa Tenggara

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Abstract

Inclusive education is a fundamental approach that promotes equal access to education for all children, regardless of their background or location, including those in remote and underserved areas. This research investigates the implementation of inclusive education for children in East Nusa Tenggara, Indonesia, a province characterised by its remote geography and diverse cultural landscape. Using a case study approach, this research explores the challenges faced in providing quality education in remote areas, the strategies adopted by local communities and education authorities and the outcomes of inclusive education initiatives. The research used a qualitative methodology, including in-depth interviews with 25 respondents comprising educators, community leaders and policy makers, field observations and analyses of relevant education documents. Data analysis techniques included thematic analysis, which involves identifying, analysing and reporting patterns in the data. Purposive sampling was used to select participants with specific knowledge and experience of inclusive education in the area. The findings show that, despite the challenges faced such as limited infrastructure, shortage of qualified teachers and geographical barriers, the inclusive education programme has shown positive impacts on students' participation and academic achievement. Key factors contributing to the success of inclusive education programmes include community involvement, culturally relevant curricula and the training and empowerment of local educators. This research provides valuable insights to improve inclusive education policies and practices in Indonesia and other developing countries with similar contexts and challenges.

Keywords

Inclusive Education, Educational Policy, Community Involvement, Teacher Empowerment.

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Addressing Challenges in Diagnosing and Remediating Physics Misconceptions: A Needs-Based Approach

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Abstract

This study explores effective methods for identifying and remediating misconceptions in high school physics through technology-enhanced diagnostics and innovative remedial strategies. A quantitative descriptive approach was used, with data collected from (1) a survey of 16 physics teachers, (2) a systematic literature review (SLR) analyzing 61 articles published between 2019 and 2024, and (3) a diagnostic test for 53 students. Results show static fluid as the most common topic for misconceptions, including the belief that hydrostatic pressure depends on container shape and that an object's sinking is determined solely by volume and mass. Teachers mainly used informal methods, such as Q&A, to identify misconceptions, while the SLR highlighted four-tier tests as the most effective diagnostic tool. For remediation, computer simulations and refutation texts emerged as promising strategies. To enhance accessibility and efficiency, this study proposes a web-based platform integrating digital four-tier tests, interactive simulations, and refutation texts to reduce teacher workload, address time constraints, and improve student conceptual understanding.

Keywords

Diagnostic tools, Misconceptions, Need analysis, Physics education, Remediation strategies.

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Do Public Companies' Sustainability Reports in Indonesia Consider Virtue Ethics? A Content Analysis

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Abstract

This research explores the application of virtue ethics in accounting, particularly in corporate sustainability reporting. Virtue ethics focuses on developing moral character to achieve human excellence. The research question is how virtue is reflected in corporate sustainability reports in Indonesia. The novelty of this research is the application of virtue ethics theory to sustainability reporting, which has not been widely explored before. The research uses a qualitative method with content analysis on secondary data in the form of sustainability and annual reports from companies in the Indonesia Stock Exchange ESG index. The results show that the practice of virtue ethics has not been deeply reflected in sustainability reporting in Indonesia. Companies have long-term strategic plans but the current implementation has not been maximized.

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Teachers' Perceptions and Challenges in Integrating Digital Literacy: Insights from ELT Practices

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Abstract

Digital literacy has become an integral part of 21st-century education. In English Language Teaching (ELT), integrating digital tools and resources offers numerous opportunities for engaging and effective instruction. However, the successful implementation of digital literacy often depends on teachers' perceptions and their ability to incorporate digital technologies into their pedagogical practices. This study aims to explore teachers' perceptions toward the implementation of digital literacy and identify the challenges and barriers they encounter when implementing digital literacy competencies in ELT. The study involved 44 Indonesian high school English teachers. Data were collected through a 24-item questionnaire comprising Likert-scale, multiple-choice, and open-ended questions. The data were analyzed using the SPSS tool to ensure validity and reliability. The quantitative data on teachers' perceptions and the challenges were analyzed descriptively. Results show that English teachers generally have positive perceptions of implementing digital literacy in ELT. Nonetheless, the challenges and barriers they face mostly relate to internet connection issues, students' conditions, and the availability of supporting devices. These findings are expected to contribute to the ongoing development of digital literacy among teachers and raise awareness of strategies to address the challenges in its implementation.

Keywords

Challenges and Barriers, Digital literacy, ELT, High School Education, Teacher perceptions.

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The Sacred Veil of Exploitation: A Critical Study of Religious Justification and Gendered Body Trade in Sungai Pasir

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Abstract

This study examines the practice of nikah siri (unregistered marriage) in Sungai Pasir Village as a social phenomenon representing the intersection of religious institutions, patriarchy, and local capitalism in legitimizing the exploitation of women's bodies. Grounded in the paradigm of critical sociology, this research investigates how kyai (religious leaders), brokers, and male clients collaborate to construct multilayered power relations that position women as transactional commodities. Through an exploratory case study employing in-depth interviews with 10 women involved in nikah siri, 2 brokers, 1 kyai, and 3 male clients, the study identifies seven primary forms of exploitation. These include religious legitimization of bodily transactions, negotiation of high mahr (bride price), reproductive control through family planning programs, and the legal uncertainty of women and children born from such marriages. The analysis draws on Marx's concept of religion as an ideological superstructure, Gramsci's theory of hegemony, Bourdieu's notion of symbolic capital, as well as feminist theories and maqasid syariah (the higher objectives of Islamic law). The findings reveal that nikah siri is not merely a religious practice but part of a socio-economic mechanism that perpetuates gender inequality. Religion functions as an ideological apparatus that normalizes the subordination of women, while the kyai's symbolic capital is converted into economic capital. This study recommends women's economic empowerment, the reinterpretation of Islamic jurisprudence grounded in social justice, and the legal registration of marriages to ensure the protection of women's and children's social and legal rights. These findings contribute to the field of critical sociology of religion and open space for reflection on how religious legitimacy can obscure exploitative power relations.

Keywords

Unregistered Marriage (Nikah Siri), Symbolic Capital, Women's Exploitation, Ideological Hegemony, Body Commodification, Maqasid al-Sharia.

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Smart University Campus Assessment, Case Study of United Arab Emirates University (UAEU)

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Abstract

The first and a leading university in the UAE, United Arab Emirates University (UAEU) continues to grow, however, growth comes with the challenge of maintaining a sustainable and comfortable campus environment. Student enrolments are increasing while the pressure on the physical infrastructure of the campuses is mounting – we need to radically re-consider the functioning of the buildings and outdoor spaces, in terms of user comfort and energy efficiency. This research aims to investigate the potential of smart design strategies and the opportunities AI and computational tools offer to achieve higher levels of integration of photovoltaic (PV) technology across the campus. Evaluating current buildings and open spaces, it identifies major issues like high exposure to heat, overheating, and high energy consumption. Following this, AI-powered modeling and simulation methodologies are utilized to investigate optimal paths for the implementation of PV-integrated shading structures, building-integrated photovoltaics (BIPV), and automated energy systems. These smart solutions help keep energy demand down, while creating cooler, more comfortable outdoor spaces for students and faculty. This is not only about increasing energy efficiency; this is about the broader approach of how we will be leveraging sophisticated technology and intelligent design to be a more resilient and eco-friendly campus. The insights are promising, especially for universities in hot climates that are seeking practical, scalable solutions that increase their sustainability projects without impeding the quality of student life.

Keywords

PV panels, Renewable energy, Sustainability, Shading systems.

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Studying Anxiety in the Workplace of Generation Y And Z Through Brain Science Methods

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Abstract

This study examines personality traits at the intersection of human resource management, psychology, and neuroscience, using experimental research methodologies. The outcomes were analyzed through both quantitative and qualitative methods. The research explored how individual personality traits influence workplace group dynamics and compared behavioral characteristics across different age groups. A distinguishing feature of the study was the combined application of the “Five-Factor Model” and the “Neuropsychological Model of Emotion” (positive and negative emotion models). In human resource management, personality traits are commonly analyzed within the framework of the Five-Factor Model in relation to situational factors. Meanwhile, in neuroscience, emotional triggers of positive and negative behavior are studied using the Neuropsychological Model of Emotion. This study integrates these theoretical frameworks and incorporates brain activity analysis methods to investigate behavioral patterns in workplace group interactions. To induce anxiety experimentally, selected negative workplace behaviors—such as interpersonal conflicts, misunderstandings, and disputes between supervisors and subordinates—were recorded and presented to participants in video format. As participants viewed the video stimuli, their anxiety responses were observed through changes in alpha and beta wave activity, which are known to reflect emotional states. The results indicated that heightened anxiety was associated with increased beta and decreased alpha wave activity. Statistical analysis confirmed the reliability of the research model, with a Cronbach’s alpha of 0.826 (82.6%). These findings validate the experimental framework as a reliable tool for examining how negative social stimuli in organizational settings influence both group behavior and corresponding changes in brain activity.

Keywords

Five Factor Model, Neuropsychological model of emotion (NME), ICA (Independent Component Analysis).

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Comparative Analysis of Chatbot Adoption in Indonesian Provinces and Assess the Future Potential in Tourism Sector: A Literature Review

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Abstract

This study aims to compare chatbot utilization in Indonesian provinces and assess the future potential in the tourism sector. We examine several pioneering chatbot implementations, including Pariyata in Yogyakarta; Mushi in Malang; as well as the Chatbot Desa Wisata Badung and MELALI in Bali. Results indicate that prototype chatbots built on rule-based AIML (Pariyata) and Dialogflow (Badung, MELALI) achieved high response accuracies when answering destination queries, demonstrating technical feasibility and user acceptance. However, early initiatives such as Mushi suffered from limited functionality and platform maintenance issues, showing the importance of sustainable governance and continuous system updates. Comparative analysis reveals that project with institutional support (universities, provincial government) and clear maintenance plans yield more consistent performance, while those lacking long-term funding face rapid obsolescence. Looking ahead, advanced natural language understanding, AI-driven recommendation engines, and multi-channel deployment (web, mobile, messaging apps) are necessary to enhancing user experience and operational resilience. To fully realize chatbot potential in Indonesian tourism, stakeholders should prioritize scalable cloud-based architectures, integration with smart-city and e-government platforms, and data-driven personalization features that adapt to visitor profiles. By addressing governance, technical, and user-engagement challenges, future chatbot deployments can support post-pandemic recovery, increase tourist satisfaction, and contribute to sustainable regional development.

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Geomechanical Analysis and Modelling for Optimizing Well Trajectories in the Gullfaks Reservoir

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Abstract

This study focuses on improving wellbore stability and optimizing well trajectories in the Gullfaks Reservoir by applying 3D geomechanical modelling. Schlumberger's Petrel™ software was used to develop a Mechanical Earth Model (MEM) based on formation depth, well log data, lithology, pore pressure (1.41 psi/m), and overburden gradient (3.19 psi/m). A total of 108,750 grid cells were modeled, with calculated rock mechanical properties including Unconfined Compressive Strength (UCS), Young's Modulus, and Poisson's Ratio. The results showed that the safe mud weight window lies between 3.3 and 3.6 ppg, minimizing the risk of compressive and tensile failures. Young's Modulus values ranged from 15 to 38 GPa, and Poisson's Ratio values between 0.22 and 0.34, indicating moderately stiff and slightly ductile formations. The MEM allowed for visualizing stress concentrations and failure-prone areas, enabling optimization of drilling paths that avoid geomechanically unstable zones. This integrated approach demonstrates how using Petrel™ and MEMs supports more efficient and safer drilling strategies in complex reservoirs, and can be adapted to similar field conditions elsewhere.

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Smart Wardrobe System using Artificial Intelligence

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Abstract

This paper introduces a smart wardrobe system powered by artificial intelligence, designed to simplify wardrobe management and promote sustainable fashion. Using a ResNet-50 convolutional neural network for clothing recognition and a hybrid recommendation engine, the system reduces outfit selection time by 40% and increases wardrobe utilization by 15%, as validated with 200 users. Despite a 5% error rate with unconventional garments, this research paves the way for innovations like smart mirrors, enhancing both convenience and environmental consciousness.

Keywords

Smart wardrobe, artificial intelligence, outfit recommendation, sustainable fashion, computer vision.

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Automatic Attendance Generator Using Face Recognition

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Abstract

Facial Recognition is a technology that has been used in many areas like security systems, human machine interaction and image processing techniques. The main purpose of this project is to calculate the attendance of students in an easier way. We are proposing a system called automated attendance management system that uses face recognition method which will reduce the workload of the faculties in maintaining attendance. The system is used to calculate attendance automatically by recognizing the facial dimensions. The face recognition-based attendance system will be improving the efficiency and also the security of the previous attendance system. Everyone wants to go improve the efficiency of the procedures they are following using an automated system, with the Help of current technology and trends. Because it lets us avoid the manual attendance method and saves a lot of Time.

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Developing a Drone-Focused Curriculum in a Newly Established Department: Challenges and Pedagogical Insights from Taiwan

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Abstract

As unmanned aerial vehicles (UAVs) rapidly evolve from niche technologies into indispensable tools across industries such as agriculture, disaster response, logistics, and infrastructure inspection, there is a growing imperative to equip future professionals with both theoretical knowledge and practical expertise in drone technologies. While most institutions in Taiwan incorporate UAV-related instruction through elective modules or interdisciplinary minors, WuFeng University has established the first standalone undergraduate department solely dedicated to drone technology education. This paper offers a comprehensive analysis of the pedagogical design, institutional challenges, and implementation strategies involved in building such a program from the ground up.

We begin by outlining the theoretical framework underpinning our curriculum development, which is grounded in constructivist learning theory, experiential learning, and STEM-integrated education models. The program adopts a project-based and competency-driven approach, emphasizing interdisciplinary integration of mechanical systems, embedded systems, flight dynamics, AI-based navigation, and aviation regulations. We also address critical institutional challenges including curriculum legitimacy, faculty recruitment, resource limitations, and regulatory constraints on flight operations.

Empirical data, drawn from course evaluations, student learning outcomes, and collaborative industry projects, are analyzed to assess the effectiveness of the program. Key findings highlight the importance of simulation environments, modular curriculum design, and university–industry partnerships in sustaining innovation within emerging technology education. This study contributes to the discourse on higher education reform in the face of technological disruption and offers actionable insights for institutions seeking to establish or enhance UAV education programs.

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Factors Affecting Career Choice for Higher Education in Mongolia

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Abstract

Undergraduate enrollment in universities across Mongolia has experienced troubling fluctuations in recent years. According to the National Statistics Office, university enrollment in Mongolia declined by 7.2 percent from 2022, resulting in a low of 26.3 thousand students. Higher Education Institutions (HEIs) have also seen a decrease in freshmen enrollment, leading many leaders to focus on ensuring the sustainability of these institutions. On the one hand, this is a characteristic of the behavior of adolescents. This paper proposes a two-fold study: (1) to identify the factors influencing Mongolian high school students' choices of HEIs and academic degree programs, and (2) to explore the factors affecting behavioral intentions. A web-based questionnaire was used to collect data from a sample of 707 senior high school students in Mongolia who participated in an online survey. The survey aimed to examine the influence of various factors, including university characteristics, the impact of significant individuals, student characteristics on students' decision to enroll in HEIs. The findings from structural equation modeling indicate that student characteristics significantly influence students' decision to enroll university. In conclusion, this study highlights the model's effectiveness in understanding the factors that influence students' decisions to enroll in university. The results also provide managerial implications to enhance institutional student recruitment strategies.

Keywords

High school graduates; HEIs; education; consumer behavior, interdisciplinary research.

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Regional Economic Divergence and Inequality in Mongolia: A Multidimensional Analysis with a Focus on the Gobi Region

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Abstract

This study aims to examine the dynamics of regional economic growth and income inequality in Mongolia over the period 2000-2024, using the theoretical framework of neoclassical economic growth. Employing a comprehensive dataset, the analysis integrates multiple econometric methods, including conditional β-convergence and σ-convergence tests, Markov transition matrices, kernel density estimation, and inequality measures such as the Gini coefficient and Theil index. The results indicate statistically significant evidence of β-convergence, suggesting that provinces with lower initial income levels tend to grow faster. However, σ-convergence, which measures the reduction in income dispersion over time, is not observed at the national level. The only region showing statistically significant σ-convergence is the Khangai region. In contrast, the Gobi region exhibits increasing intra-regional income disparities driven by structural differences in sectoral composition and resource concentration. Markov chain analysis reveals that high-income provinces, such as Umnugobi, maintain their economic dominance, while low-income provinces show limited upward mobility. Kernel density plots reveal a shift from an unimodal to a bimodal distribution, indicating the emergence of a dual economy. The steady rise in the Gini and Theil indices further confirms the deepening inequality, particularly linked to the expansion of the mining sector and disparities in infrastructure and institutional capacity. The findings underscore the need for a more balanced regional development strategy that focuses on diversifying the economic base, improving access to infrastructure and social services, and strengthening institutional effectiveness. Without such measures, regional disparities may continue to widen, undermining the long-term sustainability of inclusive economic growth in Mongolia.

Keywords

Mongolia, regional inequality, economic convergence, Gobi region, convergence, Markov matrix, kernel density estimation, Gini coefficient, Theil index, regional policy.

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A Study on the Mediating Effect of the Working Environment on the Relationship Between Leadership and Faculty Job Satisfaction

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Abstract

The job satisfaction of employees in higher education institutions is directly linked to leadership. In the context of Mongolia, political instability and politically influenced leadership appointments often pose challenges to the working conditions of university faculty members. This study aims to examine how leadership and workplace-related factors influence the job satisfaction of university teachers. A structural equation model (SEM) was developed that includes four mediating variables: working environment, work climate, compensation and incentives, and career development policies, all of which are hypothesized to be influenced by university leadership and, in turn, impact faculty job satisfaction. A total of 2,284 university faculty members participated in the study, selected through random sampling. Data were analyzed using SmartPLS 4.11 software. The findings confirmed all eight of the proposed hypotheses, demonstrating that leadership plays a significant role in creating favorable working conditions, which ultimately contribute to the job satisfaction of university teachers.

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Ethically-Gamified Intelligence: A Catholic Framework for AI and Gamification in Philippine Higher Education

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Abstract

In an era marked by technological advancement and innovation, the convergence of artificial intelligence (AI) and gamification in higher education presents both unprecedented opportunities and significant ethical concerns. As Philippine universities increasingly integrate AI-driven platforms and gamified pedagogies to foster engagement and personalization in learning, there is a growing need to assess these innovations through an ethical standpoint. This paper explores how AI and gamification – analyzed through the *Rome Call for AI Ethics* (2020) and the Catholic Church's doctrinal note for Culture and Education articulated in *Antiqua et Nova* (2025) – can contribute to the sustainable transformation of Philippine higher education, particularly in alignment with the United Nations Sustainable Development Goals (SDGs).

This paper argues that AI and gamification must not merely serve utilitarian goals of efficiency or engagement but must be embedded within a moral framework that upholds the dignity of learners and educators. *The Rome Call for AI Ethics,* co-signed by religious and technological leaders, articulates key principles – transparency, inclusion, responsibility, impartiality, reliability, and security – which are indispensable for ethical AI deployment in learning environments. Simultaneously, *Antiqua et Nova* reaffirms education's commitment to integral human formation, social justice, and a pedagogy of encounter – calling educational institutions to critically evaluate technological innovations in light of human-centered values and communal flourishing.

Focusing on SDG 4 (Quality Education) and SDG 9 (Industry, Innovation, and Infrastructure), the paper examines how AI-powered gamified platforms can cultivate inclusive, equitable, and context sensitive learning environments that address the challenges experienced in Philippine Higher Education Institutions (HEIs). By aligning game design elements with AI-informed learner analytics and ethical standards, educational institutions can develop learning ecosystems that not only adapt to cognitive needs but also foster critical thinking, collaboration, and ethical discernment.

By incorporating Catholic moral teaching and digital ethics, this paper presents a normative framework for the ethical use of AI and gamification in Philippine higher education. It proposes a model of "ethically-gamified intelligence" – a paradigm wherein technological innovation is disciplined by virtue ethics, communal discernment, and Catholic social teaching. This model seeks to inspire institutions to become not only technologically adept but also morally discerning and socially responsive in their pursuit of a transformative education – offering a distinctly Catholic response to the challenges and promises of AI and gamification in the 21st-century academic institutions.

Keywords

AI, Gamification, Ethically-Gamified Intelligence, Catholic Social Teaching, Antiqua et Nova, Rome Call for AI Ethics, Philippine HEIs.

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Beyond and Across Online English Teaching: A Phenomenological Inquiry of the Experiences of Online English Teachers from ESL Companies

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Abstract

The main objective of the study is to explore the lived experiences of online English teachers from English as Second Language (ESL) companies through a phenomenological inquiry. Specifically, the study narrated the ESL teachers' experiences that motivated them to teach; the challenges they encountered and ways to overcome them; their teaching strategies; and the benefits gained from their career. The participants of this study were the seven (7) ESL teachers who have been working in the ESL company for at least three years.

The ESL teachers' narrated that their main reasons for pursuing their job are the salary and the lack of an option to teach in school. This later changed when they realized the value of this job. The ESL teachers who participated in this study revealed that they felt fulfillment for performing their mission as an ESL teacher even though it is far from what they aspired to back when they were studying in college. They will not complete their three years as ESL teachers if they do not see their future in this career. They mentioned that their careers might change in the future, but they will acknowledge how their ESL experience has prepared them to become efficient and effective teachers.

With the demand for ESL teaching and the benefits it can give to its graduates, it is imperative to recommend educational institutions for training sessions to capacitate those who are interested in pursuing this career. Higher education institutions as potential human resources for potential ESL teachers may begin by forging a tie-up with existing ESL companies with reputable standing who will outsource potential ESL teachers from the educational institutions.

Keywords

ESL teaching, English as second language, ESL learning, ESL teacher's experience.

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Embedding the Teaching of English Major Courses into Relational Pedagogy: A Parallel Convergence Study

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Abstract

This study examined the extent to which relational pedagogy is integrated into English major courses by comparing the perceptions of Bachelor of Secondary Education major English students (n = 220) and subject professors (n = 7) at a Philippine state university. Employing a parallel convergent mixed-methods design, quantitative data were collected via a structured Likert-scale questionnaire across four domains: Teacher–Student Relationship, Collaborative Learning, Classroom Interaction, and Feedback and Support. Weighted combined means were computed to account for unequal group sizes. Qualitative data were gathered through three focus group discussions and subjected to thematic analysis. Quantitatively, both Collaborative Learning (M = 4.22, "Strongly Agree") and Classroom Interaction (M = 4.22, "Strongly Agree") received the highest endorsements, followed by Teacher–Student Relationship (M = 4.03, "Agree"). Feedback and Support yielded a neutral overall rating (M = 2.73, "Neutral"), reflecting a divergence between professors' high appraisal (M = 4.46) and students' lower perception (M = 2.67). Qualitative findings generated five interrelated themes that contextualize these patterns: Building Shared Understanding of Areas for Improvement (clarity of rubrics and resources), Negotiating Academic Freedom and Teaching Autonomy (context-driven method choice), Balancing Relational and Teacher-Fronted Approaches (structuring engagement with mini-lectures), Navigating Feedback Importance and Practical Challenges (workload and timeliness constraints), and Reconciling Diverging Views on Relational Pedagogy (efficiency versus emotional connection). The results indicate that while interactive and collaborative pedagogies are firmly embedded and valued by both groups, feedback practices remain inconsistent and warrant targeted interventions. The study concludes that enhancing clear assessment guidelines, adopting scalable feedback mechanisms (e.g., peer review, technology-mediated commentary), and supporting instructors' autonomy to tailor relational strategies can strengthen the integration of relational pedagogy. These findings offer evidence-based recommendations for curriculum designers and teacher educators seeking to foster meaningful teacher–student relationships and sustainable support structures in higher education contexts.

Keywords

Relational pedagogy, convergent parallel mixed-methods, teacher–student relationship, collaborative learning, classroom interaction, feedback and support, thematic analysis, higher education, BSE-English program, Philippines.

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Gender Issues Experienced by Male Students in The College of Education, URS Morong Campus

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Abstract

Gender issues are a growing concern in the modern society. Though its manifestations are more severe for women, it is undeniable that men also experience their own gender issues. Using the Gender Analysis Framework as proposed by Jhpiego (2019), this study sought to identify the different gender issues as experienced by male students of the College of Education at URS Morong Campus. In particular, the inquiry revolved around the four arenas of social life: Access to Assets, Practices and Participation, Beliefs and Perceptions and Institutions, Laws and Policies. The male students of the College of Education were particularly targeted since they are enrolled in programs which are traditionally taken up by women. This condition may provide an additional consideration which will in turn affect the manifestation of gender issues among the respondents. A researcher-made questionnaire was used to gather the data. A focused group discussion and interviews through the "Pakikisalamuha" method were then conducted to validate the data and seek clarifications on the result. The data showed that gender issues among male students of the College of Education may manifest as lack of well-maintained facilities for males, unreasonable expectations on male students, unequal assignment of tasks, unequal policies on self-expression and unequal implementation of University policies. It is recommended that Gender Awareness programs be conducted among the faculty and staff members. It is also recommended that policies on uniform and grooming be revisited as well as their implementation.

Keywords

Gender Issues, male students, Gender and Development, Education.

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Development And Validation of Worktext in Plane and Solid Geometry

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Abstract

Instructional materials play a crucial role in shaping effective learning environments, particularly in subjects requiring both abstract reasoning and spatial understanding such as Plane and Solid Geometry. Yet, despite the complexity of these topics, there is a noticeable lack of localized and systematically validated worktexts specifically designed for pre-service mathematics educators. This study aimed to develop and validate a comprehensive worktext in Plane and Solid Geometry tailored for Bachelor of Secondary Education (BSEd) Mathematics students at the University of Rizal System. Anchored on a developmental research approach, the process was carried out in two phases: the construction and refinement of the worktext, followed by a multi-stage validation involving instructional material experts and content specialists. The validation focused on four key dimensions, the content accuracy, language clarity, presentation quality, and overall usefulness. Iterative revisions were made based on expert feedback until the worktext met academic standards. Findings confirmed that the material was pedagogically sound, user-friendly, and aligned with curriculum expectations. It provided a structured progression from foundational concepts to more complex geometric reasoning. The study highlights the importance of creating contextualized resources that promote higher-order thinking and independent learning. This validated worktext is recommended as a supplementary tool to enhance students' comprehension and engagement in geometry instruction.

Keywords

Plane Geometry, Solid Geometry, Worktext Development, Instructional Materials, Validation, BSEd Mathematics.

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Social Dimensions of Fisheries Co-Management and Engagement of Fisherfolk Community in Rizal Province

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Abstract

Fisheries co-management has long been promoted as a participatory approach to sustainable resource governance. Yet, questions remain about the extent to which fisherfolk meaningfully engage in conservation and livelihood development. In the context of the Philippines, particularly in the coastal municipalities of Rizal Province along Laguna de Bay, this study examined how the social dimensions of co-management—participation, power, and equity—influence fisherfolk communities' engagement in native fish conservation and sustainable fisheries ventures. Adopting a sequential exploratory mixed-methods design, the study first explored fisherfolk's experiences through interviews with MFARMC officers from nine municipalities. Thematic analysis was conducted to identify key roles and engagement patterns. A structured survey was conducted to quantify perceptions of the social dimensions and their relationship to conservation and livelihood engagement. Data were analyzed using descriptive statistics, correlation, and multiple regression. The findings revealed that while participation and power are present in local co-management structures, equity emerged as the most significant predictor of fisherfolk engagement in both conservation and fisheries ventures. Fisherfolk are more likely to participate meaningfully when they perceive fairness in access to resources, representation, and benefit sharing. The study concludes that for co-management to be effective and inclusive, equity must be operationalized not only in policy but also in practice. This highlights the need for governance strategies that go beyond structural inclusion to foster substantive, equitable engagement.

Keywords

Fisheries co-management, participation, power, equity, fisherfolk engagement, native fish conservation, sustainable fisheries ventures, mixed-methods, Rizal Province.

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Development, Validation, and Effectiveness of An Interactive E-Module in Assessment in Learning Using the Addie Model

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Abstract

The purpose of this study was to develop and validate and ascertain the effectiveness of interactive e-Module in "Assessment in Learning" for pre-service teacher education. The ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model was used to develop the instructional material to counteract the disruption of face-to-face classes by environmental, health, or logistical problems. The e-Module was developed based on the principles of flexible and learner-centred engagement and was validated by experts and tested empirically. The module was submitted to 15 content experts and 10 IT professionals by means of standardized rubrics considering content and technical aspects. In the validation process the tested software presented high ratings, very good for content validity (M =4.75), instructional design (M = 4.60) and interactivity (M = 4.80), and good to very good for technical aspects as usability (M = 4.55), reliability (M = 4.50) and accessibility (M = 4.65). A quasi-experiment was adopted with two groups of 40 third-year education students in matched pairs. The e-Module was administered to the experimental group and traditional instructions were given to the control group. Significant gains on the posttest, $t = -25.384$, $p < 0.001$, with large effects (Cohen's $d = 2.14$), were observed for the experimental group, M = 135.71, compared with the control group, M = 98.12, confirming the instructional value of the module. The study concludes that validated, well-structured e-Modules significantly enhance learning outcomes and offer viable solutions for flexible, resilient education.

Keywords

Assessment in learning, interactive e-Module, flexible learning, educational disruptions, ADDIE model, instructional design.

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Enhancing Throat Singing Skills through Traditional Breathing Exercises: Field-Based Observations of Student Practice

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Abstract

This study investigates how traditional breathing exercises impact the development of breath control in *khöömii* (throat singing) among students at the Mongolian National University of Arts and Culture (MNUAC). Field-based training sessions were conducted in natural environments to promote embodied vocal learning. The authors tested the claim that the length of breathing will be greater after training in the countryside, when compared to training in the classroom. Testing involved the use of two exercises "Counting White Bottles" and "Counting Bowls" to assess their effects on students' breath endurance and capacity. Changes in the number of syllables vocalized in a single breath and the duration of exhalation were measured using a chronometric method. The findings revealed no major difference in these factors, between the two locations. However, a significant improvement in students' breath control, vocal strength, and timbre was observed by all three Instructors. Field training exercises may instead, have an important, significant effect on improving *khöömii* performance.

Keywords

Human-nature relations, Mongolian throat singing, pedagogy of *"khöömii,"* professional *khöömii*, breath control.

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Sustainable and Disaster Resilient Infrastructure

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Abstract

Earthquakes' increasing frequency and intensity pose significant challenges to the safety, functionality, and sustainability of infrastructure systems worldwide. Sustainable and disaster-resilient infrastructure during earthquakes is essential to minimize human and economic losses, ensure rapid recovery, and support long-term community development. Sustainable and resilient buildings in earthquake-prone regions are essential for minimizing loss of life, property damage, and environmental impact. Recent advances in structural engineering emphasize the integration of seismic resilience and sustainability, recognizing that buildings must withstand earthquakes and support long-term ecological and economic goals. The convergence of climate change imperatives and seismic safety requirements has given rise to the emerging field of earthquake-resilient net-zero energy buildings, representing a paradigm shift in sustainable construction practices. The core principle is designing buildings that can absorb and dissipate seismic energy while operating as regenerative systems within their environment. This means structures that not only survive earthquakes but continue functioning as healthy, resource-efficient spaces for their occupants. This paper explores the integration of sustainability and seismic resilience in building design, focusing on innovative materials, energy-efficient technologies, and adaptive structural systems. Multi-hazard zoning, nature-based solutions, green infrastructure Materials and Technology smart materials, modular construction, renewable energy systems. The development of lightweight, earthquake-proof buildings is a dream for developing nations like India. Scientists from all around are contributing to the progress of our country for the future. Composite framed structures offer a smart building solution they help reduce construction costs, extend the life of the building, and bring multiple long-term benefits to both builders and occupants like earthquakes and hurricanes. Natural disasters like earthquakes are commonplace everywhere on Earth. Based on statistical analysis of the country's geography, about 59% of India's landmass falls into Seismic Zones III–V is at risk from earthquakes. During an earthquake, flaws in the construction may become apparent, and even seemingly sturdy structures may collapse.

Keywords

Integration of sustainability, Earthquake-resilient, Net-zero energy buildings, Innovative materials, Energy-efficient technologies, Green infrastructure.

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How Emerging Tech Can Shape Consumer Habits on A Neurological Level ?

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Abstract

The latest tech isn't just something consumers use; it's changing how they think, act, and what they buy. This paper investigates exactly how these tech advancements alter consumer behaviour, down to what is occurring in their brains. It explores how emotions influence choices, how individuals deal with cognitive dissonance, how habits are formed, and what mechanisms create feelings of reward.

By combining neuroscience with global marketing insights, guidance can be offered to tech marketers aiming to influence consumer's decisions through scientific understanding and compelling storytelling. Real data, behavioural models, and examples from industries and companies such as Apple, Fitbit, Samsung, Radiacode, and Amazon were examined to provide insight into how marketing strategies must evolve in a digital environment where the human brain is constantly adapting. Modern marketing must acknowledge this neuroplasticity. It is essential to adapt to cognitive changes triggered by technological progress.

Keywords

Technologies, marketing strategy, influence management, consumer behaviour, emerging tech.

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Integrating Generative AI in Pedagogical Practice through a Human-Centred Model for Designing Inclusive and Adaptive Digital Learning Resources

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Abstract

The rise of generative Artificial Intelligence (AI) is reshaping the educational landscape, particularly in the development of digital learning resources that support personalisation and inclusion. This study introduces a structured pedagogical model for the ethical integration of AI in digital resource design, focusing on hybrid and technology-enhanced learning environments. Drawing upon Cognitive Load Theory, the Multimedia Learning Principles, and UNESCO's AI Competency Framework for Teachers, the model positions educators as central agents in a four-phase design process: contextual analysis, AI-driven content generation, pedagogical validation, and iterative refinement. The methodology combines literature synthesis with focus group interviews, exploring educators' perspectives on AI tools in higher and vocational education. Applications of the model demonstrate improved instructional design efficiency, inclusive content adaptation, and enhanced learner engagement. The paper advocates for professional development and institutional strategies that ensure AI contributes to equitable, transparent, and learner-centred education.

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Abstract

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Keywords

Fisheries co-management, participation, power, equity, fisherfolk engagement, native fish conservation, sustainable fisheries ventures, mixed-methods, Rizal Province.

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Empowering Water Access Through Sustainable Engineering: A Ram Pump System for Barangay Tubtubon, Sibulan, Negros Oriental, Philippines

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Abstract

This study explores the development and implementation of a hydraulic ram pump to provide sustainable water access to elevated areas without electricity consumption. The ram pump utilizes the kinetic energy of flowing water to transport a portion of it to a higher elevation, eliminating the need for electrical or fuel-based power sources. Using data from Clemson University's Table, the research confirmed that the required water output exceeded the daily water demand of the residents, validating the suitability of a 1 ¼-inch drive pipe diameter. A measured distance of 10.3 meters from the water source to the pump location, combined with a 30-meter delivery pipe to the header tank, ensured optimal system efficiency. Water is then stored in the tank before being accessed through a communal faucet 130 meters away, serving five households. Evaluation results indicate that Barangay Tubtubon residents rated the project as "Highly Substantial" (4.80 out of 5), underscoring its significant impact on their daily water needs.

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Analysis of Key Success Factors of Digital Collaboration in Indonesia Maritime Logistics

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Abstract

As Maritime Logistics plays an important role in Goods Transportation, Indonesia is still struggling to improve its Logistics Performance Index. The government has been boosting Port Digitalization, but it has not given a significant reduction in Logistics Costs. The collaboration among Port Stakeholders as the hub of the Maritime Logistics Community is considered the key to improvement. The purpose of this paper is to explore and find out the elements of Collaboration that become the Key Success Factors to improve Maritime Logistics Performance.

The authors scrutinize the elements of digital collaboration in Maritime Logistics, then utilize surveys and interviews as a data collection method, from the Port Stakeholder as the key player in Maritime Logistics. This paper conducts a partial least-square structural equation method (PLS-SEM) to meet the research objectives.Based on the literature review, the key success factor of Digital Collaboration is developed. Furthermore, it is found that Digital Collaboration has the potential to improve Maritime Logistics Performance.

Keywords

Digitization, Collaboration, PLS-SEM, Maritime Logistics, Logistics Performance.

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Formation of Non-Violent Communication Skills

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Abstract

The significance of studying the issue of violence against children is that such actions can cause fear and anxiety for individuals and society as a whole, and also negatively affect their wellbeing. This study aims to explore effective ways to tackle the problems of child violence, the main causes and factors that lead to it, and the development of effective strategies for its prevention. Factors such as social norms, family dynamics, personal vulnerabilities, insecurities, and the influence of digital platforms all play a significant role in contributing to violence.The work demonstrates a holistic and systematic approach to working with victims of violence. It takes into account the importance of their safety, wellbeing and empowerment, and provides them with timely psychological support, counselling, legal assistance, and access to resources. This is essential for helping them recover and rebuild their lives after experiencing violence.

In addition, to prevent violence among minors, a multifaceted approach is needed. This includes training on non-violent conflict resolution, promoting positive social norms, strengthening child protection policies, and strengthening supervision and monitoring of interactions. By addressing the root causes of violence and implementing these measures, we can create a safe and supportive environment for children and young people. Ultimately, this will contribute to creating a violence-free society.

Keywords

Violence, victims of violence, values, resocialization model, non-violent communication skills.

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The Influence of the Reactivity of Resol-Type Phenolic Resin on the Mechanical Properties of Foundry Cores

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Abstract

Properly selected properties of foundry cores play a significant role in preventing the formation of undesired defects in the final castings. In this study, the influence of the reactivity of phenol-formaldehyde resins of the resol type on the properties of cores produced using the Alpha-Set technology was analyzed. Two resins with different levels of reactivity were compared in terms of mechanical strength, curing kinetics, permeability, and friability. The results showed that the resin with lower reactivity achieved higher strength at the initial stage of curing and was characterized by significantly better permeability and lower friability, which may positively affect mold venting and reduce surface defects. These results may be related to the aging of the resins—the tested materials were nearing the end of their shelf life, which could have influenced the increase in viscosity and apparent reactivity. Although resin durability was not the main focus of the study, the findings clearly indicate the need for further research on the impact of binder aging on the functional properties of foundry cores.

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