

9th International Conference on Multidisciplinary and Current Educational Research **ICMCER-2026**

23rd-24th October, 2026 | Tokyo, Japan



Organized by : IFERP Academy



9th International Conference on Multidisciplinary and Current Educational Research
(ICMCER-2026)

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Conference Theme

**Multidisciplinary
Innovations in
Education:
Pathways to
Equity, Quality and
Sustainability**



Preface

We cordially invite you to attend the 9th International Conference on Multidisciplinary and Current Educational Research (ICMCER-2026) on 23rd-24th October, 2026. The main objective of ICMCER-2026 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 Multidisciplinary and Current Educational Research. 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 there view process, and to the authors for contributing their research result to the conference.

We would like to extend our appreciation to all participants in the conference for their great contribution to the success of ICMCER-2026. 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 to organizing committee for their hard work.

About ICMCER - 2026

The **9th International Conference on Multidisciplinary and Current Educational Research (ICMCER 2026)** is a premier global academic gathering that will convene leading **researchers, educators, policymakers and industry experts** to explore the evolving landscape of education and multidisciplinary research.

With the theme “**Multidisciplinary Innovations in Education: Pathways to Equity, Quality and Sustainability**”, the conference emphasizes the importance of **collaboration across disciplines** to address contemporary challenges in teaching, learning and institutional development. It provides a vibrant platform for presenting **cutting-edge research, innovative practices and transformative ideas** that shape the future of education in a rapidly changing world.

ICMCER 2026 will highlight the **integration of technology, social sciences, management and humanities** into educational research, ensuring that participants gain insights into both **current trends and future directions**. The conference also underscores the alignment of educational research with the **United Nations Sustainable Development Goals (SDGs)**, particularly SDG 4 (Quality Education), SDG 10 (Reduced Inequalities) and SDG 17 (Partnerships for the Goals).

Theme: "Multidisciplinary Innovations in Education: Pathways to Equity, Quality and Sustainability".

Purpose of ICMCER-2026

The purpose of the 9th International Conference on Multidisciplinary and Current Educational Research (ICMCER) is to create a global platform where educators, researchers, practitioners, and policymakers converge to explore innovative and transformative approaches in multidisciplinary education. Aligned with the theme “Empowering Future Generations through Multidisciplinary Education for Sustainable Societies,” the conference seeks to:

- **Advance Educational Innovation** showcase cutting-edge research, pedagogical models, and emerging trends shaping the future of education across disciplines.
- **Foster Multidisciplinary Collaboration** connect scholars, educators, and professionals from diverse fields to encourage interdisciplinary dialogue and collaborative research.
- **Promote Sustainable Education** align educational research and practices with global sustainability goals, social responsibility, and inclusive development.
- **Empower Future Educators and Researchers** provide opportunities for early-career researchers, educators, and students to present their work, learn, and network with global experts.
- **Bridge Theory and Practice** translate academic research into effective educational strategies, policies, and real-world applications.
- **Enhance Global Academic Engagement** strengthen international partnerships and position participants and institutions within the global educational research community.

Conference Objectives

- **Advancing Multidisciplinary Educational Research:** To promote high-quality research and scholarly discussions across diverse disciplines that contribute to innovative and effective educational practices.
- **Addressing Contemporary Challenges in Education:** To examine current issues, trends, and challenges in global education systems and identify sustainable solutions through research and collaboration.

- **Empowering Future Generations:** To foster educational strategies that enhance critical thinking, creativity, leadership, and lifelong learning skills among learners.
- **Promoting Sustainable Societies through Education:** To highlight the role of education in achieving social equity, environmental responsibility, and sustainable development goals.
- **Encouraging Interdisciplinary Collaboration:** To facilitate collaboration among educators, researchers, policymakers, and industry professionals for holistic educational development.
- **Strengthening Global Academic Networks:** To build international partnerships and knowledge-sharing platforms that support continuous advancement in educational research.

About IFERP

The IFERP Academy is a committed professional organization that advances engineering, science, and technology. IFERP anticipates a global scientific community brought together by digital innovation. This organization puts a great emphasis on promoting research activities, communicating the newest insights, and driving industrial trends.

IFERP has built strong networks throughout Asia, the Middle East, Europe, and countries such as Iraq, Malaysia, Australia, and more. They have incorporated networking, research support, publications, and worked in other scientific areas.

IFERP excels in organizing International Conferences that connect researchers worldwide. It holds important international webinars, publishes journals and publications that are indexed by Web of Science and SCOPUS, and provides thorough research assistance and guidance. Engaging in Youth Empowerment projects and encouraging Industry-Institute Interaction are key components of IFERP's goal. The organization is committed to enabling professionals through faculty advancement, skill development, and persistent research and publication initiatives.

- **Global Community Building:** IFERP exerts a lot of effort in building new communities all over the world. As community organizers, we control the conversations & inculcate passion for innovation amongst diverse groups.
- **Promoting Innovation Schemes:** IFERP has several schemes for students, professionals, researchers & organizations to being distinct innovators across all technology streams & sub disciplines.
- **Publicizing Research Publication:** Publication of research is the crucial aspect of IFERP's activities. IFERP also serves as a support center for early - career researchers aspiring to publish world-class research papers.
- **Our Origin:** Established by the Technoarete Research & Development Association (TRADA), IFERP was meant to serve as an accelerant for technological innovation worldwide.
- **Access To Critical Funding & Resources:** IFERP has dedicated itself to fund for various efficient projects & activities to make it achieve successful outcomes beyond just meeting expectations.
- **Facilitating Multi-Disciplinary Collaborations:** IFERP encourages networking & collaborative partnerships on all fronts to result in a diverse collaborative atmosphere to gain abundance knowledge.

What IFERP Does

IFERP is committed to improving the professional experience by providing a world-class platform to professionals. Their dedication extends to the following activities:

- **Academic Resource Accessibility :** They make academic resources and support available to aspiring scholars in both rural and urban locations.
- **Diverse Educational Program :** They organize a wide range of educational events such as workshops, conferences, webinars, seminars, guest lectures, short-term training programs, and faculty development programs.
- **Drive Innovation:** They work hard to foster curiosity and creativity, and stay up to date on the newest trends and advancements in the dynamic field of Engineering, Science, and Technology.
- **Knowledge Sharing and Collaboration:** They believe in the strength of the exchange of knowledge and actively collaborate with institutions, organizations, and associations to contribute to our shared objective of a better future.
- **Publication & Recognition:** They also provide opportunities for research articles to be published in reputable journals and actively promote and encourage transdisciplinary research activities.

IFERP Mission & Vision

IFERP's Mission: Upskilling the knowledge hub through technological innovation & excellence for the benefit of humanity.

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

IFERP's Value: IFERP values the restoration of high level technological research, learning, collaboration, resource sharing & community-building traditions.

IFERP's Goal: To serve as the foundation for all technological progress and advancement activities around the world.

Managing Director, 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 9th International Conference on Multidisciplinary and Current Educational Research (ICMCER-2026) 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 Multidisciplinary and Current Educational Research. ICMCER-2026 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.

ICMCER-2026 will explore the new horizons of innovations from distinguished researchers, scientists and eminent authors in academia and industry working for the advancements in Multidisciplinary and Current Educational Research from all over the world. ICMCER-2026 hopes to set the perfect platform for participants to establish careers as successful and globally renowned specialists in various fields of Academics.



Chief Executive Officer, IFERP



Dr. Rudra Bhanu Satpathy

Chief Executive Officer & Founder, IFERP
Technoarete Group, India

Message:

IFERP is hosting the 9th International Conference on Multidisciplinary and Current Educational Research (ICMCER-2026) this year in month of October. The main objective of ICMCER-2026 is to grant the amazing opportunity to learn about groundbreaking developments in modern industry, talk through difficult workplace scenarios with peers who experience the same pain points, and experience enormous growth and development as a professional. There will be no shortage of continuous networking opportunities and informational sessions. The sessions serve as an excellent opportunity to soak up information from widely respected experts. Connecting with fellow professionals and sharing the success stories of your firm is an excellent way to build relations and become known as a thought leader.

I express my hearty gratitude to all my Colleagues, Staffs, Professors, Reviewers and Members of organizing committee for their hearty and dedicated support to make this conference successful. I am also thankful to all our delegates for their pain staking effort to make this conference successful.

Invited Keynote Speaker



Mrs. Sarada BS

Former Technical Scientist
Decentralized BigData Team
RIKEN, Japan

Biography:

Sarada BS is an AI researcher and technology professional with over 12 years of experience spanning artificial intelligence, software engineering, higher education, and international research collaboration. She began her research career as a Research Fellow and Java Developer at Vikram Sarabhai Space Centre (VSSC/ISRO), contributing to software development activities associated with India's Chandrayaan Moon Mission.

Her research career includes eight years as a Technical Scientist in the Decentralized Big Data Team at RIKEN Center for Advanced Intelligence Project (AIP), Japan. Her work encompasses AI-enabled applications, semantic technologies, knowledge graphs, collaborative knowledge systems, and Large Language Model (LLM) integration.

She is currently engaged in research in association with Prof. Koiti Hasida, with a focus on emerging AI applications and LLM-based educational research. She has contributed to India-Japan research collaboration initiatives and has participated as an invited panelist in Kerala State Higher Education Council (KSHEC) academic initiatives.

Her research interests include Generative AI, AI for education, knowledge management, and international research collaboration, with an emphasis on translating emerging technologies into practical research and educational applications.

Keynote Speaker



Mr. Ericson Dimaunahan

Assistant Vice President
Digital Education, Learning Technologies, and
Analytics, Mapua University, Philippines

Biography:

With over a decade of experience in the education sector, Engr. Ericson D. Dimaunahan is a dedicated educator and a recognized thought leader in educational technology, micro-credentialing, and instructional design. As the Assistant Vice President for Digital Education, Learning Technologies, and Analytics of Mapua University, he oversees the strategic implementation and integration of inclusive and accessible learning technologies and analytics systems to modernize educational environments and ensure equitable access for both students and faculty. Ericson's expertise lies in leveraging technology to optimize teaching methodologies and elevate the student learning experience. His responsibilities encompass the strategic oversight of digital content development and instructional design, driven by a steadfast commitment to preparing learners for success in the digital age.

Keynote Speaker



Prof. Ts. Dr. Norli Ismail

School of Industrial Technology
Universiti Sains Malaysia (USM)
Malaysia

Biography:

Prof. Norli binti Ismail is a distinguished environmental technologist and senior academic at the School of Industrial Technology, Universiti Sains Malaysia (USM), where she serves as Professor in Environmental Technology and Chemical Process. With over two decades of academic and research experience, she is recognized for her pioneering contributions to solid waste management, wastewater treatment, renewable energy, waste valorisation, and biogas purification technologies. She began her career as a Research Officer at Pembinaan Jayabumi Sarawak Sdn. Bhd. (1995–1996) before joining USM in 2003. Rising through the academic ranks, she has played a central role in curriculum development, postgraduate supervision, and departmental leadership. She holds a B.Sc. in Environmental Science (1995), an M.Sc. in Chemical Process Technology (1999), and a Ph.D. in Environmental Technology (2003) from USM. Prof. Norli has authored over 100 publications, achieving a Scopus h-index of 36 with more than 3,600 citations. Her research spans membrane separation, sludge treatment, microplastics analysis, and biochar applications, with publications in leading journals such as Journal of Hazardous Materials. Her achievements have earned her international fellowships in Japan and Germany, visiting professorships in Asia and Europe, and recognition for advancing sustainable environmental solutions aligned with ESG and SDGs.

Keynote Speaker



Assoc. Prof. Dr. Danish

Associate Professor
Taylor's University, Malaysia

Biography:

Dr. Danish is an Associate Professor at Taylor's University, Malaysia, and previously served at Guangdong University of Foreign Studies, China. He holds a PhD in Business Administration (Energy Economics) from Beijing Institute of Technology. His research focuses on energy transition, environmental economics, and sustainable development, with over 14500 citations and an H-index of 73. Dr. Danish has been recognized as a Global Highly Cited Scientist (Clarivate, 2021-2022) and listed among Stanford University's Top 2% Scientists in Economics (2020-2025). He serves on editorial boards of leading SSCI and Scopus-indexed journals and has received multiple awards for excellence in research and teaching.

Keynote Speaker



Prof. Dr. Rong Zhang

Professor

Nishinippon Institute of Technology, Japan

Biography:

Rong Zhang is currently working as a full professor at Nishinippon Institute of Technology, Japan. She obtained her master's degree in Second Language Education from Fukuoka Educational University and her Ph.D from the Graduate School of Information, Production and Systems, Waseda University, Japan. Dr. Rong Zhang has been teaching both English and Chinese for more than 25 years at seven universities in Japan. She has chaired over 20 international conferences and served as the editor-in-chief of the Journal of Management and Training for more than 13 years. She also delivered keynote speeches on globalization in higher education in Japan and other social issues.

Keynote Speaker



Dr. Reymar C. Tao-Ing

Northwestern University
Philippines

Biography:

Dr. Reymar C. Tao-Ing, MBA, MSHM, PhD (International Hospitality & Tourism Management) is a Filipino academic leader and hospitality professional with over 20 years of experience in higher education, tourism, and hospitality management. He currently serves as the Dean of Lyceum of Zambales and is the Owner/President of JNR Hospitality Tourism Trainings and Tours. Dr. Tao-Ing has held multiple dean positions across Philippine institutions and has served as a Commission on Higher Education (CHED) Regional Quality Assessment Team Assessor, contributing to academic quality assurance and curriculum development. He is also President of the Tourism Educators and Movers of the Philippines (TEAM Philippines – Northern Luzon) and an active trainer and assessor in hospitality education. His expertise includes hospitality and tourism management, academic leadership, quality assurance, culinary and food service education, and international hospitality training.

Session Speaker



Assoc. Prof. Dr. Azli Bin Yahya, PEng., CEng.

Associate Professor

University of Technology Malaysia, Malaysia

Biography:

Azli Yahya is an Associate Professor at Universiti Teknologi Malaysia since 2015. He is also a Chartered (CEng) and Professional Engineer (PEng). He holds a Degree in Electro - Mechanical Power System and Masters Degree in Electronic Production from Glamorgan University, UK. He is a doctorate of Loughborough University, UK specializing in Power Electronic System. His areas of researches are Analog/Digital Circuit Design, Power Supply, Electrical Discharge Machining and Biomedical Instrumentation. He has authored or co - authored more than 100 papers published in international/national journals and conferences. At national level, he serves SIRIM as technical committees for Active Medical Devices And Low- Voltage Equipment/System For Healthcare Facilities (SIRIM TC10) and Anaesthetic/Respiratory and Electromechanical Devices (SIRIM TC3)

Session Speaker



Assoc. Prof. Dr. Pooja Batra Nagpal

Associate Professor
IILM University, India

Biography:

Dr. Pooja Nagpal is an accomplished academician and researcher with over 20 years of combined experience in academia and industry. She holds a Ph.D. in Computer Science & Engineering, an M.Tech. in CSE from NIT Kurukshetra, a B.Tech. in CSE from Kurukshetra University, and an MBA in IT & Systems from IMT Ghaziabad. Currently serving as an Associate Professor in the Department of Computer Science at IILM University, Gurugram, Haryana, her research interests include DevOps, Agile Methodologies, Artificial Intelligence, Machine Learning, Cloud Computing, and Data Science. She has published over 40 research papers in reputed indexed journals, authored books, secured patents, and presented at international conferences. A recipient of several prestigious honors, including the Women Scientist Award, she is also a distinguished keynote speaker at academic and professional forums worldwide.

Session Speaker



Ms. Piyush Yadav



Founder

Elite Wang Academy, India

Biography:

Founder of Elite Wang Academy, leading a globally accredited training institute in Corporate Training Recognized by NIST & ICIA for high training standards. Over 9 years of experience in training, talent development, Placement Manager corporate Relationship Certified Master Trainer, Train the Trainer Expert & Posh Trainer specializing in Soft Skills. Award-Winning Educator, recognized with the Global Apex Award 2025 (RSNN) & International Inspiring Woman Award 2025 (IIU). National Laureate Director Award 2026, Editor & Co-Author, acknowledged by Bhabad International – World Record Team, Shiksha Yatra. & Speakthon 4.0 Corporate Training & Coaching Expert, specializing in leadership, public speaking, Time Management, Emotional Intelligence Talent Acquisition & Placement Specialist, helping bridge skill gaps and create job opportunities. Invited as Guest speaker in universities & colleges, ujjain Incubation center 2025, IASTEM international conference 2026 singapore & Tokyo publication Global Impact, training students and professionals across India and internationally. 100+ webinar & Podcast series LinkedIn Live Visionary Leader, committed to shaping future trainers and professionals through innovative training methodologies.

Session Speaker



Assoc. Prof. Dr. Ravneet Kaur

Associate Professor
CGC University Mohali, India

Biography:

Dr. Kaur is an accomplished academician and researcher with over 14+ years of global teaching and research experience in Computer Science and Information Technology. She is currently a Postdoctoral Researcher at Kyungpook National University in South Korea, and also serves as an Associate Professor and IQAC Lead at the Chandigarh Group of Colleges, Jhanjeri. A pioneer in her field, Dr. Kaur was selected as one of the top 10 candidates in India for the prestigious Deakin India Research Initiative Scholarship, leading to her Higher Degree by Research from Deakin University, Australia. She holds a Master's degree in Computer Science, and graduated as a Gold Medalist during her Bachelor's studies. Dr. Kaur is an active innovator with 8 patents to her credit, including a granted design patent in healthcare technology. Her cutting-edge research in the Internet of Vehicles, Intelligent Transportation Systems, and Explainable AI has been widely published in leading Q1 and Q2 international journals, including Computer Science Review and IEEE Access. She is also a Certified CompTIA Security+ Trainer and an active IEEE member.

Session Speaker



Assoc. Prof. Kakimzhanova Margarita Kabdulayevna

Associate Professor
Saken Seifullin Kazakh Agrotechnical Research
University, Kazakhstan

Biography:

Assoc. Prof. Margarita Kakimzhanova is an accomplished scholar and educator in the field of philosophy at the Kazakh Agro-Technical Research University. She holds the degree of Candidate of Philosophical Sciences and currently serves as the Head of the Department of Philosophy. With more than two decades of academic experience, she has made significant contributions to social philosophy, cultural studies, and the philosophy of education. She has published over 60 scientific works, including articles in Scopus-indexed journals, and has authored several textbooks and educational resources. Prof. Kakimzhanova is also a recipient of the prestigious international "Bolashak" scholarship and completed a research internship at the University of Reading, focusing on educational management and pedagogical innovation. Her research emphasizes inclusive education, social transformation, and interdisciplinary humanities studies.

Session Speaker



Dr. William D. Magday, Jr.

.....
Associate Professor IV
Dean, College of Teacher Education
Nueva Vizcaya State University (NVSU), Philippines

Biography:

Dr. William D. Magday, Jr. is an Associate Professor IV and Dean of the College of Teacher Education at Nueva Vizcaya State University (NVSU) in the Philippines. He holds a Ph.D. from Suranaree University of Technology (SUT), Thailand, supported by the PhD Scholarship Program for ASEAN 2016 (Phase II). He is an active paper reviewer for international conferences and Scopus-indexed journals, and has published articles in scholarly journals. He also delivered keynote speeches at various international conferences across Southeast Asia. Recently, he completed the Executive Certificate Program in Leadership and Management from The Wharton School, University of Pennsylvania, USA, under the CHED-HUSAY Scholarship. His research interests include teacher education, discourse analysis, AI in ELT, and educational technology.

Conference Convenor



Prof. Dr. G. P. Ramesh

Conference Convenor
India

Biography:

Dr. G. P. Ramesh is a distinguished academician, visionary technologist and ambitious researcher with over 26 years of multifaceted experience spanning higher education, advanced research and industry leadership. His career reflects a seamless integration of academic excellence and technological innovation, positioning him as a transformative force in engineering education and applied research. A dynamic leader and passionate educator, Dr.G.P.Ramesh has served as Professor and Head of Electronics and Communication Engineering at prestigious institutions across India and abroad. He has mentored undergraduate, postgraduate and doctoral scholars, successfully guiding Twenty-Two Ph.D. candidates and nurturing a culture of inquiry and excellence. His academic expertise encompasses artificial intelligence, machine learning, embedded systems, VLSI design and antenna technologies. With more than 125 publications in Scopus-indexed journals, his scholarly influence is evidenced by an H-index of 32 and an i10-index of 70, marking him as a prominent contributor to global research discourse. He has also organized Twelve International and Six National conferences, publishing proceedings with Springer and ensuring global visibility through Scopus and Web of Science. A pioneer in Outcome-Based Education and a strategic advisor for NAAC, NBA and Autonomous frameworks, Dr.G.P.Ramesh continues to shape future-ready engineers and scalable, tech-driven solutions for India and beyond.

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Examining the Effectiveness of the Himay-Himay Approach in Developing Verbal Reasoning Skills among Civil Service Examination and NAPOLCOM Reviewees

Mickaella Rane A. Torres

College Instructor, Master of Arts in Teaching English, Proponent

Abstract

This proposed study aims to examine the effectiveness of the Himay-Himay Approach in developing the verbal reasoning skills of Civil Service Examination and NAPOLCOM reviewees. The Himay-Himay Approach is a researcher-developed instructional framework that integrates three complementary instructional strategies: Context Clue Analysis, Sign Method (Distractor Analysis), and Explicit Vocabulary Discussion. These strategies are organized into a structured sequence that guides learners in inferring word meanings from context, systematically evaluating answer choices through semantic analysis, and reinforcing vocabulary knowledge through explicit discussion.

This study will employ a pre-experimental research design, specifically the one-group pretest-posttest design, to determine the effectiveness of the Himay-Himay Approach. Prior to its implementation, the instructional approach will be systematically described, subjected to expert validation in terms of clarity, relevance, organization, and applicability, and refined based on the recommendations of the expert validators. The effectiveness of the finalized approach will then be evaluated by comparing the pretest and posttest verbal reasoning scores of Civil Service Examination and NAPOLCOM reviewees using a researcher-developed assessment.

The study is anchored on the principles of Constructivist Learning Theory, Schema Theory, and the Depth of Processing Framework, all of which emphasize active meaning construction, contextual learning, and deeper cognitive processing as foundations of meaningful learning. Likewise, existing literature supports the individual effectiveness of contextual clue strategies, distractor analysis, explicit vocabulary instruction, and integrated instructional approaches. The findings of this study are expected to contribute to instructional innovation in review programs by providing a validated, systematic, and research-informed approach to improving verbal reasoning skills among future examinees.

Keywords

Civil Service Examination, contextual clues, distractor analysis, Himay-Himay Approach, instructional framework, NAPOLCOM, verbal reasoning, vocabulary instruction.

An Instructional Tool for the Integration of HOTS

Ablin Davadason Peter

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Universiti Malaya, Kuala Lumpur, Malaysia

Abstract

This Design and Development Research explored the integration of synthesising and Ethical Decision-Making (EDM) skills in science education to address socio-scientific issues. Synthesising skills help students combine knowledge across disciplines, fostering a comprehensive understanding of complex issues. EDM skills enable students to navigate the ethical dimensions of these issues, promoting morally sound choices. Both synthesising and EDM skills are considered higher-order thinking skills (HOTS). This approach is in line with the ESD (Education for Sustainable Development), focusing on educational goals, emphasising scientific literacy, ethical awareness, and active citizenship, which supports pillar 6 of the new Malaysian Education Plan 2026-2035 for a holistic education system, ultimately preparing students to address real-world challenges effectively and ethically. The instructional tool SEDSA, (Synthesising-Ethical Decision-making Scientific Assistance) was developed using the ADDIE Model as a procedural guide to address the gap in the current education system to facilitate lower secondary students in integrating synthesising and EDM skills to make informed decisions. The participants of the research included a science teacher and 29 lower secondary students (Grades 9-10) in Malaysia. These students were from the Dual Language Program (DLP) class, where science and mathematics were taught in English. The teacher selected for participation in the present study was a volunteer science teacher. The results showed that the SEDSA was able to scaffold students' progressive integration of synthesising and EDM skills. It also engages students in higher-level thinking processes to make informed ethical decisions.

The Role of Financial Resources in Strengthening Private Hospital Resilience in Mindanao, Philippines

John Yrick Corales Era

Instructor, Notre Dame of Marbel University, Koronadal, Philippines

Jennifer Seridon Era

Professor, Notre Dame of Marbel University, Koronadal, Philippines

Abstract

Financial resilience is a critical determinant of private hospital sustainability, particularly during crises that disrupt healthcare delivery. This study examines the role of financial resources in strengthening hospital resilience across Regions 10, 11, and 12 in the Philippines, where private institutions serve as essential frontline providers yet face persistent financial vulnerabilities. Using a descriptive-correlational design, data were collected from 100 randomly selected private hospitals through surveys of administrators and finance officers. Findings reveal that financial stability and liquidity most strongly predict resilience, followed closely by investment capacity, collectively accounting for nearly two-thirds of the variance in resilience outcomes. Financially strong hospitals demonstrated substantially higher resilience across operational continuity, adaptive capacity, and recovery compared to resource-constrained counterparts. Recurring challenges—including delayed reimbursements, elevated supply costs, and persistent cash flow shortages—continue to widen the distance between financial capacity and service demands. The study offers evidence-based pathways for strengthening private hospital resilience through strategic liquidity management, digital transformation, revenue diversification, and targeted policy interventions. By bridging financial fragility and operational continuity, the findings contribute to building more adaptive and sustainable healthcare systems capable of withstanding future disruptions.

Keywords

Financial resources, hospital resilience, private hospitals, Mindanao, Philippines, financial stability.

Strengthening Thailand's Food Raw-Material Supply Chain: Evidence from Food Processing Firms

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Abstract

Thailand's food processing sector depends on agricultural raw materials that are perishable, seasonal, heterogeneous, and frequently sourced through fragmented upstream networks. This qualitative study examines how Thai food processing firms procure raw materials, identifies constraints that weaken the position of local producers, and develops supply-chain improvement models. Semi-structured interviews were conducted with 42 top- and middle-level managers from 22 food processing factories in Bangkok, Greater Bangkok, the Western region, and the Eastern Economic Corridor. Content and frame analysis were used to identify recurrent themes and relate them to the resource-based view and community development perspectives. The findings reveal five connected challenges: distinctive raw material characteristics, diverse and fragmented sources, product and customer heterogeneity, certification and quality requirements, and procurement-related cost and reliability pressures. Competitiveness is strengthened by proprietary formulations, processing flexibility, quality systems, supplier networks, and financial capacity; however, these capabilities are constrained when upstream producers cannot supply consistent volume, quality, and traceability. The study contributes a relational view of competitive advantage by showing how factory performance is co-produced through multi-tier supplier relationships. Three development models are proposed: industrial-farmer and knowledge-center development, factory supply-chain operational efficiency, and market-opportunity development. The findings offer actionable guidance for firms, farmer groups, and public agencies seeking to improve inclusion, resilience, and export readiness in Thailand's agri-food supply chain.

Keywords

Agri-Food Logistics, Community Development, Food Processing, Procurement, Supply Chain Competitiveness.

Instructional Leadership of O.P. - Siena Schools in SOCCSKSARGEN: A Multiple Case Study

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Abstract

The case studies examined the school heads/principals' instructional leadership experiences and practices of OP Siena Basic Education Schools in SOCCSKSARGEN. The emerging themes were generated from the data gathered from the interview, focus group discussion and documentary review. Cross case analysis generated the following themes: defining the School Mission focused on encouraging input and feedback and relationship building; managing Instructional Program emphasized purposes of evaluating Instruction, impact of school heads' lesson delivery supervision and professional development activities for teachers; creating positive school climate inspired visible leaders on different activities, building rapport in developing relationships and communication about teaching and learning concerns; managing Human Resources called for recruitment requirements and practices, learning and development activities support teachers' needs and need to have succession plan; managing material resources suggested collaboration for facilities management, need for maintenance of material resource and technology and the school curriculum; managing curriculum resources was all about collaborating with teachers for curriculum reform implementation, curriculum leadership for regular review of curriculum materials and orchestrating professional learning opportunities for teachers to work in teams; providing Professional Development. Identified coaching the teachers, designing teachers' professional development and nurturing change; and finding implied research on the utilization of instructional leadership strategies and expanding the reach of this research.

Keywords

Instructional leadership, leadership program, school heads, principals, governance and leadership.

Influence of Psychological Capital on Maritime Safety and Well-being of Seafarers in the Maritime Industry

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Abstract

The maritime industry is a cornerstone of global trade, yet seafarers routinely face demanding and isolating work conditions that place significant strain on their psychological health and safety performance. This study investigates the influence of psychological capital – comprising self-efficacy, optimism, hope, and resilience – on maritime safety and the well-being of seafarers. Drawing on positive organizational behaviour theory, the research examines job satisfaction and social support as mediating variables, and training and development programmes as a moderating variable, within a conceptual framework linking psychological resources to safety and well-being outcomes.

A quantitative, cross-sectional research design will be employed, utilising a structured questionnaire distributed to ship crew members across various ranks and vessel types. Data will be analysed using descriptive statistics, correlation, and regression analysis to test the proposed hypotheses regarding the direct, mediating, and moderating relationships among psychological capital, job satisfaction, social support, training effectiveness, and maritime safety and well-being outcomes.

The study is expected to demonstrate that higher psychological capital is positively associated with improved safety practices and well-being, with job satisfaction and social support acting as significant mediators, and training programmes strengthening this relationship. Findings will offer evidence-based insights for maritime organisations, policymakers, and stakeholders seeking to design targeted interventions – including resilience-building initiatives, mental health support systems, and enhanced training frameworks – to foster a safer, healthier, and more supportive working environment for seafarers, ultimately contributing to improved retention, performance, and organisational effectiveness across the maritime sector.

Keywords

Psychological capital, maritime safety, seafarer well-being, job satisfaction, social support.

The Sustainability of Net Zero Emissions Practices in the Malaysian Maritime Sector

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Abstract

The maritime sector is indispensable to global trade, yet it remains a significant contributor to greenhouse gas (GHG) emissions, presenting a critical challenge as the International Maritime Organization (IMO) pursues net zero emissions by around 2050. Malaysia, ranked among the largest maritime nations in Southeast Asia, faces particular pressure to align its shipping and port operations with these global decarbonization targets. This study investigates the sustainability of net zero emissions practices within the Malaysian maritime sector, examining the extent to which current initiatives are effective, scalable, and supported by the necessary technological, regulatory, and stakeholder conditions. Grounded in Ecological Modernization Theory, Stakeholder Theory, the Technology Acceptance Model, and Diffusion of Innovations Theory, the research proposes a conceptual framework in which the adoption of cleaner fuels and net zero practices influences maritime sector sustainability, mediated by technological innovation and moderated by the policy and regulatory framework. A quantitative, positivist research design is employed, using stratified random sampling and structured questionnaires distributed to stakeholders across shipping companies, port authorities, regulators, and industry associations, with data analyzed through descriptive statistics, correlation, and regression techniques. Preliminary findings indicate that while awareness of net zero emissions practices is growing, adoption remains at an early stage, constrained by limited funding, insufficient organizational readiness, and gaps in technological infrastructure, particularly when benchmarked against regional counterparts such as Singapore. The study aims to identify the key drivers and barriers shaping sustainability outcomes and to offer practical recommendations for policymakers, industry stakeholders, and researchers. Its findings are expected to contribute to the broader discourse on decarbonizing developing maritime economies and to support Malaysia's ambition of becoming a globally competitive and sustainable maritime hub. Keywords: net zero emissions, maritime sustainability, Malaysia, greenhouse gas emissions, technological innovation, stakeholder collaboration.

State-of-the -Art Techniques for Detection of Polycystic Ovary Syndrome: A Short Review

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Abstract

PCOS (Polycystic Ovary Syndrome) is a disorder that affects 10 to 13% of women of reproductive age globally as reported by World Health Organization. It is characterised by increased levels of androgen i.e. male hormone in a woman's body. Recently, the term 'PCOS' has been updated to 'PMOS' (Polyendocrine Metabolic Ovarian Syndrome) by a consensus of international experts as new understanding emerges that PCOS is not just an ovary syndrome rather it affects metabolic and reproductive systems too. Hence, detection of PCOS (later known as PMOS) is highly important for early detection to ensure timely treatment and management. This paper presents a short review of state-of-the-art techniques for detection of PCOS.

IoT Smart Conference Hall

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Abstract

With the rapid expansion of the Internet of Things (IoT) and edge computing paradigms, modern shared-space automation systems require scalable, low-latency, and energy-efficient control architectures. Legacy conference hall automation systems frequently rely on centralized management models that are susceptible to network bottlenecks, excessive human intervention, and rigid control policies incapable of handling volatile occupancy profiles. This paper presents the design, implementation, and empirical evaluation of a distributed, multi-modal IoT automation framework deployed across an ESP32 edge-computing node network. Each localized edge node incorporates an array of environmental and operational sensors—including passive infrared (PIR) occupancy detectors, ultrasonic distance trackers, DHT22 climate sensors, BH1750 ambient light meters, and PZEM-004T power monitoring modules.

The system implements a versatile three-tier operational framework comprising Manual Control (direct GPIO relay overrides), Remote Control (QoS-1 guaranteed MQTT routing via a Node-RED dashboard), and Automatic Control (sensor-driven adaptive algorithms). To overcome the primary failure mode of traditional single-sensor motion automation—namely, false-negative shutdowns during stationary human occupancy—a dual-sensor fusion algorithm is proposed. Experimental validation conducted over a continuous 72-hour trial in a multi-zone conference hall demonstrated that the proposed dual-sensor fusion achieved a human occupancy detection accuracy of 96.8%, reducing false-positive load triggers to 3.2% compared to 8.7% for standalone PIR units.

System telemetry collected via an open-source Mosquitto MQTT broker showed a highly stable mean end-to-end control decision latency of 140 ms for local automatic actuation and 185 ms for remote cloud commands, maintaining a 99.7% message delivery success rate. Comparative energy analysis revealed that the proposed automated control model yielded a total energy consumption of 2.89 kWh compared to a 4.28 kWh baseline—representing a 32.4% net reduction in power usage without sacrificing occupant comfort.

Beyond Complaint Hotspots: Decision-Focused Abandoned-Bicycle Collection and Circular Recovery

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Abstract

Citizen-generated complaints provide scalable evidence about abandoned bicycles, but they measure reported service demand rather than the complete distribution of abandonment. This study proposes a Latent Abandonment Observation-Recovery (LAOR) framework integrating selective-observation correction, false-discovery-rate controlled hotspot analysis, rolling count forecasting, and collection routing. Two complementary evaluations were used. First, a retrospective NYC 311 benchmark analysed 13,376 derelict-bicycle requests from 2010–2019, of which 13,059 had usable date and coordinate information. In the 2019 rolling holdout, Poisson regression achieved RMSE 0.845, Poisson deviance 1.074, and 30.8% top-decile capture; the seasonal-mean baseline retained the lowest MAE (0.436). Second, a two-repetition simulation pilot examined whether patrol-supported detection adjustment could recover a selectively observed latent process. Across the four model-repetition comparisons, LAOR adjustment reduced RMSE by 10.1% and Poisson deviance by 33.1% and increased top-10% capture by 7.7%, although MAE increased by 1.2%. A pre-specified 2×2 routing ablation separated forecast input (complaint-only versus LAOR adjusted) from routing prize (unit versus circular value). With unit prizes, LAOR reduced distance by 21.8% and increased the mean realized objective by 6.2%. Circular-value prizes did not add benefit in this pilot: C-V matched C-U in realized circular value, whereas L-V produced a lower objective than L-U and travelled farther. The NYC analysis therefore validates complaint forecasting and operational illustration, while the simulation provides preliminary evidence for observation correction but not for value-aware routing. Prospective patrol, legal-eligibility, condition, road-network, and disposition data—and a substantially larger simulation run—remain necessary for full validation.

Keywords

Computer Science and Software Engineering, Operations Research, Selective-observation correction, Spatial hotspot analysis, Circular economy.

Gender, Inclusive Leadership in Academia: The Case of Kalinga State University

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Abstract

This study examined gender-related challenges, inclusive leadership practices, and gender equality outcomes within the organizational culture of Kalinga State University (KSU). Using a quantitative descriptive-correlational design, data were collected from 27 women leaders occupying academic and administrative positions across the university's three campuses through a researcher-made 36-item questionnaire. Reliability coefficients (Cronbach's alpha) ranged from .61 to .87. Descriptive statistics and Spearman's rho correlation analysis were employed to analyze the data. Findings showed that women leaders moderately experienced gender-related challenges, with work-life balance identified as the most prominent concern. Inclusive leadership practices and gender equality outcomes were both rated to a very high extent. A very strong positive relationship was found between inclusive leadership practices and gender equality outcomes ($\rho = .927, p < .001$). The findings underscore the importance of inclusive leadership in fostering gender-responsive organizational cultures and advancing gender equality in higher education institutions.

Keywords

Inclusive Leadership, Gender Equality Outcomes, Academic Leadership, Organizational Culture Transformation, Gender-Responsive Governance.

Determinants of Muslim Consumers' Attitudes and Purchase Intentions Toward Imported Halal Products

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Abstract

This study examines the relationships between halal awareness and halal knowledge as antecedents of attitudes toward imported halal products. It further investigates how subjective norms, perceived behavioral control, and religiosity influence Muslim consumers' attitudes and purchase intentions. Additionally, the study explores the moderating role of Country of Origin in these relationships. Quantitative data were collected via an online questionnaire from 245 Muslim consumers. The proposed hypotheses were tested using Smart PLS-SEM. The results indicate that halal knowledge has a positive and significant effect on consumers' attitudes toward imported halal products. Attitude, subjective norms, and perceived behavioral control significantly influence purchase intentions, whereas halal awareness and religiosity do not exhibit significant direct effects. COO was found not to strengthen the relationships between attitude, subjective norms, religiosity, and purchase intentions. The findings offer guidance for scholars, policymakers, and businesses engaging with Muslim consumers of imported halal products. This study contributes to the literature by integrating COO as a moderating variable within the framework in the context of imported halal products.

Keywords

Halal awareness, Halal knowledge, Religiosity, Country of origin, Attitudes, Purchase intention towards imported halal products.

The Impact of Advanced Automation on Seafarers: A Study of Malaysian Seafarers' Awareness, Readiness, and Institutional Support

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Abstract

Maritime Autonomous Surface Ships (MASS) are moving from trials to commercial operation, and the International Maritime Organization adopted its first MASS Code in 2026. Malaysia has no domestic MASS deployment or public national roadmap, and Malaysian seafarers are absent from major global assessments such as the World Maritime University's Transport 2040 study. This study examines how aware, ready and supported Malaysian seafarers feel in the face of automation. A quantitative, cross-sectional survey of 127 Malaysian seafarers was analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) with bootstrapping. The model tested Automation Awareness as a predictor of Career Outlook, with Perceived Readiness as a mediator and Government/Regulatory Support and Employer/Industry Support as moderators. Awareness predicted readiness ($\beta = 0.333$, $p < 0.001$), and both awareness ($\beta = 0.205$, $p = 0.041$) and readiness ($\beta = 0.215$, $p = 0.030$) predicted career outlook. Government support ($\beta = 0.281$, $p = 0.003$) and employer support ($\beta = 0.209$, $p = 0.023$) each strengthened the link between awareness and outlook, and the model explained 24.1% of the variance in career outlook. Readiness was the highest-scoring concept and employer support the lowest, and trust in government and in employers were negatively related. Malaysian seafarers appear ready for automation, but the institutional support around them is not yet visible to them. The findings point to the need for a national automation roadmap, clear government direction and employer-led training. As the design is cross-sectional, the results show associations, not causation.

Keywords

Seafarers, maritime automation, MASS, readiness, institutional support, PLS SEM, Malaysia.

Skill-Aware Online Course and Learning Companions Recommendation

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Abstract

Online learning platforms have expanded rapidly due to advances in information technology and remote education demands. Massive Open Online Courses (MOOCs) offer diverse curricula. However, learners frequently encounter information overload. Users possess varied knowledge backgrounds and career motivations. Existing recommendation systems rarely assess individual skill deficiencies or personal goals. In addition, independent learning without peer support leads to low course completion rates. This paper presents a social recommendation framework for online courses and learning companions. The mechanism extracts learner skills, educational backgrounds, and target career domains from social profiles. It maps syllabus prerequisites using a hierarchical skill category tree. It evaluates instructor authority and social sentiment trends on discussion platforms. It applies the Analytic Hierarchy Process (AHP) to score and rank candidate courses. Furthermore, the system forms cohesive learner cliques to provide collaborative peer support and reduce dropout rates. Empirical evaluations on real-world datasets demonstrate that the integrated engine achieves superior recall and platform visibility compared to baseline methods.

Keywords

Sharing Economy, Covid-19, SDGS, Online learning, Skill-Aware, Sentiment Analysis, Social Analysis, Machine learning.

Adverse Effects of Beta-2 Agonists in Asthma Therapy: A Systematic Review

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Abstract

Background: Despite their essential role in asthma management, beta-2 adrenergic agonists can lead to adverse effects, particularly tremor and cardiovascular complications.

Objective: This systematic review aims to evaluate the incidence, severity, and clinical significance of tremor and cardiovascular side effects associated with beta-2 agonists, emphasizing the impact of dosage and route of administration.

Methods: A comprehensive literature search yielded 26 peer-reviewed studies that met predefined inclusion criteria. Data were extracted regarding sample sizes, patient demographics, medication types, dosages, routes of administration, and the incidence of adverse effects.

Results: The analysis revealed a dose-dependent relationship for the incidence and severity of adverse effects. Tremor was most frequently reported among patients using high-dose oral beta-2 agonists, with incidences as high as 46% in some cases. Cardiovascular side effects, such as tachycardia and hypokalemia, occurred more commonly with oral or intravenous administration than inhaled forms. Inhaled beta-2 agonists showed a generally favorable safety profile. Notably, older adults and those with cardiovascular comorbidities were more susceptible to these adverse effects.

Conclusion: The findings underscore the importance of careful dosing and patient monitoring in the administration of beta-2 adrenergic agonists for asthma management. Clinicians should prefer inhaled routes at the lowest effective doses to minimize adverse effects, especially in vulnerable populations. Further research is warranted to explore long-term outcomes and the development of more selective beta-2 agonists to reduce off-target effects.

