

International Conference on
Multidisciplinary Approaches on Education,
Science, Engineering, Social Science & Humanities

ICMAEESH-2025

28th-29th August, 2025 | Beijing, China



Organized by : IFERP Academy

International Conference on Multidisciplinary Approaches on Education, Science,
Engineering, Social Science & Humanities (ICMAEESH-2025)

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Theme:

**“Interdisciplinary
Strategies for Sustainable
Development:
Bridging Education, Science,
and Engineering”**

Preface

We cordially invite you to attend the International Conference on Multidisciplinary Approaches on Education, Science, Engineering, Social Science & Humanities (ICMAEESH-2025) on 28th-29th August, 2025. The main objective of ICMAEESH-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 Education, Science, Engineering, Social Science & 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 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 ICMAEESH-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 to organizing committee for their hard work.

About ICMAEESH

Welcome to the **International Conference on Multidisciplinary Approaches on Education, Science, Engineering, Social Science & Humanities**, held under the theme **"Interdisciplinary Strategies for Sustainable Development: Bridging Education, Science, and Engineering"** on **August 28th & 29th, 2025**, in the vibrant city of **Beijing, China**. This conference brings together scholars, researchers, and practitioners from diverse fields to explore innovative, multidisciplinary solutions for global challenges. As we navigate complex issues like climate change, technological advancements, and societal transformation, the integration of knowledge across disciplines becomes essential for driving sustainable progress. Through dynamic keynote sessions, thought-provoking panel discussions, and collaborative networking opportunities, we aim to foster dialogue and spark innovative ideas. We invite you to actively participate, share your expertise, and forge connections that will pave the way for meaningful impact.

Scope of the Conference

ICMAEESH encompasses a broad spectrum of topics within the realm of education research. The conference invites submissions and discussions on, but not limited to:

- **Comparative Studies:** Explore research that compares educational systems, policies, and practices across different countries. Examine the impact of cultural, social, and economic factors on education.
- **Innovations in Teaching and Learning:** Discuss innovative approaches, pedagogies, and technologies that enhance teaching and learning experiences. This educational conference will help you explore best practices from diverse educational settings.
- **Education Policy and Reform:** Delve into discussions on the formulation, implementation, and impact of education policies globally. Analyze the effectiveness of reforms and their implications for educational outcomes.
- **Technological Integration:** Examine the role of technology in education and its impact on student engagement, learning outcomes, and the overall educational experience.
- **Inclusive Education:** Explore research that addresses issues of inclusivity and diversity in education. Discuss strategies for creating inclusive learning environments that cater to the needs of all students.

Benefits of Conference

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

Objective of the Conference

International Conference on Multidisciplinary Approaches in Education, Science, Engineering, Social Science & Humanities aims to foster an interdisciplinary platform for researchers, academicians, and industry professionals to exchange innovative ideas, share research insights, and collaborate on strategies for sustainable development. Aligned with the theme, "Interdisciplinary Strategies for Sustainable Development: Bridging Education, Science, and Engineering," the conference seeks to explore synergies among diverse

disciplines to address global challenges. It emphasizes leveraging education, scientific advancements, and engineering solutions to promote sustainability, empower communities, and improve societal well-being. By integrating knowledge across domains, the conference aspires to inspire transformative practices that contribute to a balanced and sustainable future.

Key Features

International conference on Multidisciplinary Approaches on Education, Science, Engineering, Social Science & Humanities will showcase numerous key features, including but not limited to:

- Distinguished thought leaders from academia, industry, and government discussing the integration of education, science, and engineering for sustainable development
- Sessions focusing on innovative and cutting-edge interdisciplinary research in sustainability.
- Researchers, scholars, and practitioners presenting their innovative research and interdisciplinary strategies for sustainability.
- Expert panels discussing how education, science, and engineering can synergize for sustainable solutions.
- Hands-on workshops and tutorials on interdisciplinary approaches, tools, and methods for sustainable development.
- Opportunities for collaboration between academia and industry to translate research into practical, sustainable solutions.
- A special track for students to present their research and ideas on sustainable development, receiving feedback from experts and peers.

About **IFERP**

The IFERP Academy stands as a beacon of excellence in promoting research, innovation, and academic collaboration in the field of education. Rooted in a commitment to advancing the educational and educational conference 2025 landscape, IFERP serves as a dynamic platform that nurtures scholarly endeavors, facilitates knowledge dissemination, and fosters a vibrant community of educators and researchers.

IFERP is driven by a mission to create a conducive environment for the exchange of ideas, the exploration of emerging trends, and the promotion of best practices in education. Established with the vision of being a catalyst for positive change in education, IFERP plays a pivotal role in connecting educators, researchers, and professionals on a global scale.

Mission & Vision

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

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

Value & Goal

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."

What We Do

IFERP believes that there is always a better way to treat the professionals by providing them a world class stage by organizing conferences. We are committed to doing the following activities:

- We encourage convenient access to academic resources and support for all the aspirants and research scholars in urban and rural areas.
- IFERP organizes public education programmes, Workshops, Conferences, Webinars, Seminars, Guest Lectures, Short Term Training Programme, Faculty Development programme in the field of Engineering, Science & Technology.
- IFERP is dedicated to inquisitiveness, innovations and recent trends and developments in the field of Engineering & Technology.
- IFERP believes in knowledge sharing by collaborating with other Universities, organizations/Associations, to bring a better tomorrow.

MD'S Message, **IFERP**



Mr. A. Siddh 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 Multidisciplinary Approaches on Education, Science, Engineering, Social Science & Humanities (ICMAEESH-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 Education, Science, Engineering, Social Science & Humanities. ICMAEESH 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.

ICMAEESH 2025 will explore the new horizons of innovations from distinguished researchers, scientists and eminent authors in academia and industry working for the advancements in Education, Science, Engineering, Social Science & Humanities from all over the world. ICMAEESH 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 Multidisciplinary Approaches on Education, Science, Engineering, Social Science & Humanities (ICMAESESH-2025) this year in month of August. The main objective of ICMAESESH-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, 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.

Keynote Speaker



Dr. Manjula Sanjay Koti



Professor & Head,
Department of Master of Computer Applications,
Dayananda Sagar Academy of Technology &
Management,
Bengaluru, India

BIOGRAPHY

Dr. Manjula Sanjay Koti is an accomplished academician and researcher with over 22 years of experience in the field of Computer Science, specializing in Data Mining, Machine Learning, Data Analytics, IOT and Big Data. She holds a Ph.D. in Computer Science from Bharathiar University, Coimbatore, India. Currently serving as Professor & Head at the Department of Master of Computer Applications at Dayananda Sagar Academy of Technology & Management, Bangalore. She has a robust academic background with numerous publications in reputed peer-reviewed International Journals and conferences. Dr. Manjula is actively involved in guiding research scholars and has supervised several doctoral theses. She is a life member of professional bodies like CSI, ISTE, and IRED contributing significantly to academia through her editorial roles and as a reviewer for esteemed journals. Her professional credentials include being a Certified Test Professional from the International Institute of Software Testing, USA. She has also received appreciation from Swayam-NPTEL in 2018, 2019, and 2020 for her contributions to education and online learning initiatives. Recognized for her contributions, Dr. Manjula has been featured in Business Talks as a leading Professor and Academician in 2024. She has received several awards including Best Paper awards at International conferences and certifications for her teaching and research excellence, Women Empowerment Award from Shikshak Kalyan, Mumbai in 2021. She has also chaired sessions and delivered keynote addresses at various prestigious International conferences worldwide. In addition to her academic responsibilities, Dr. Manjula has published books on Research Methodology and IPR and Database Management Systems. She holds multiple patents in innovative technologies and an Australian Patent has been granted to her credit.

Keynote Speaker



Ts. Dr. Mohd Nasir Mohd Desa



Professor,
Faculty of Medicine and Health Sciences,
Universiti Putra Malaysia,
Selangor, Malaysia

BIOGRAPHY

Prof. Ts. Dr. Mohd Nasir Mohd Desa is a distinguished academic and researcher in health sciences at Universiti Putra Malaysia (UPM). He earned his bachelor's degree in microbiology from the University of Arizona, USA, followed by a Master of Medical Science and a Ph.D. in medical microbiology from the University of Malaya, Malaysia. He had served as the Head of Laboratory for Halal Science Research, Head of Biomedical Science Department and Director of Halal Products Research Institute at UPM. Currently, He serves as a Professor at the Faculty of Medicine and Health Sciences, UPM, where he focuses on teaching and research in medical microbiology. He has collaborated extensively with researchers across disciplines, resulting in a substantial body of work that bridges microbiology, biotechnology and Halal science. Notably, he is a registered Professional Technologist (Ts.) in biotechnology with the Malaysia Board of Technologists (MBOT). Throughout his career, he has contributed significantly to the scientific community, authoring numerous publications, advancing scientific knowledge with practical implications for public health and Halal product verification.

Keynote Speaker



Mr. Syahrul Nizam Junaini



Senior Lecturer,
Universiti Malaysia Sarawak,
Malaysia

BIOGRAPHY

Ts. Syahrul Nizam Junaini is a Senior Lecturer at the Faculty of Computer Science and Information Technology (FCSIT), Universiti Malaysia Sarawak (UNIMAS). He was the Deputy Director (Learning Technology) at the Centre for Applied Learning and Multimedia (CALM), UNIMAS. He is also the recipient of the Teaching Award (Applied Science) at the National Academic Award (AAN) in 2017. He published article in top-tier Q1 journals such as Agricultural Systems (IF: 6.6) journal and Journal of Cleaner Production (11.1). He is also a reviewer for various Q1 journals, including the International Journal of Human-Computer Interaction, Education and Information Technologies, Multimedia Tools and Applications, and IEEE Communications Magazine.

Keynote Speaker



Dr. Xian-Chao



Professor,
School of Information Science and Engineering,
Executive Dean – Institute of Information
Network and Intelligence, Jiaxing University,
Zhejiang Province, China

BIOGRAPHY

Doctor, Professor, Doctoral supervisor, Zhejiang Province Young Talent, currently serves as a "Nanhu Scholar" Distinguished Professor at Jiaxing University, Director of the Provincial Key Laboratory of Multimodal Perception and Intelligent Systems, vice dean (in charge of work) of the School of Information Science and Engineering, and executive dean of the Institute of Information Network and Intelligence. He concurrently serves as the deputy director of the Intelligent Command and Dispatch Specialized Committee of the Chinese Society of Command and Control, a member of the Quantum Information Branch of the Chinese Institute of Electronics, a director of the Zhejiang Artificial Intelligence Society, and a member of the Technical Committee of the Quantum Technology Yangtze River Delta Industry Innovation Center.

Keynote Speaker



Dr. Xiao Chengye



Professor,
Department of Dance Education,
Dezhou University, Shandong, China

BIOGRAPHY

Dr. Xiao Chengye is a representative figure in the field of contemporary dance education in China and has established the innovative four-dimensional dance scientific teaching method system. As the founder of painless basic skills, the Xiaopai Painless basic Skills he established have solved the problem of pain in traditional dance basic skills training. The dance special performance "Dance as You Please" launched in 2012, which included representative works such as "Some Things About Those Dances", "Ask" and "Ark", had a significant impact in the industry. Since 2020, he has successively published several professional works such as "Exploration of Dance Education Theory and Performance Skills". The completed academic achievements include: 1. Research on dance ergonomics. 2. Theory of sports injury prevention. 3. Model for cultivating artistic expressiveness

Session Speaker



Dr. Ghadah Al Murshidi

Associate Professor,
Curriculum and Instruction Department,
College of Education,
United Arab Emirates University,
United Arab Emirates



BIOGRAPHY

Ghadah Al Murshidi, an Associate Professor in the curriculum and instruction department at the College of Education, previously served in the Humanities and Social Sciences college at UAE University. Recognized for her academic and community contributions, she has received accolades including the Young Emirati Researcher Prize, the best Young Researcher award, and the Emirati Women's Award. Notably, she was honored as the best academic woman achiever and was the first doctoral holder to voluntarily join the National Service. Engaging in various leadership programs, she participated in the 50th Leaders' Program and the Fatima Bint Mubarak Program for Political Empowerment. Her research focuses extensively on language, literacy, Emiratization issues, service learning, and educational technology, with a particular interest in mobile, blended, online, and virtual learning across different educational contexts. Dr. Al Murshidi's contributions extend beyond academia. She authored "The Guide of Creativity and Innovation in the UAE," receiving recognition from His Highness Sheikh Hamad bin Mohammed Al Sharqi. Leading national research projects funded by institutions like the UAE University - National Research Foundation and participating as an Emirati expert in international endeavors, she is deeply involved in shaping educational discourse. Additionally, she actively shares her insights through various media platforms and serves on the editorial boards of Scopus journals. Her engagements in TV shows and conferences, both nationally and internationally, further underscore her commitment to advancing educational and social dialogue.

Session Speaker



Dr. M. Arkam C. Munaaim



Founder & Chief Executive Officer,
Mega Jati Academy Sdn Bhd,
Malaysia

BIOGRAPHY

M Arkam CM is an accomplished professional with numerous accolades and contributions across engineering, construction, and education. He is the recipient of the Visionary Leader Award (December 2024) and Outstanding Leadership Award (February 2024) from the Education 2.0 Conference in Dubai. He is the SME CEO of The Year (2024) by Bumiputera Business Excellence Award Malaysia. In 2023, he earned the Productivity Champion Certification in the LEADER and TALENT categories by the Malaysia Productivity Corporation (MPC). He has been listed among Successful People in Malaysia and Singapore by Britishpedia Encyclopedia (2022, 2023) and Malaysia+Singapore Special Edition (2024) by British Publishing House, London. His leadership was recognized with the Malaysian Top SME CEO Award (2022) by Dreamtalents Media. Additionally, he was honored as the Building Engineer of the Year 2022 at the Built Environment Awards 2022 by the Chartered Association of Building Engineers (CABE), United Kingdom (Nov 2022). He is a Registered Professional Engineer (2005), a Fellow of Institution of Engineers Malaysia (2020), and a Chartered Fellow of Chartered Association of Building Engineers (CABE) UK (2023). His technical competencies includes SPAN Qualified Person for water supply and sewerage treatment, a Registered Electrical Energy Manager (REEM) with Suruhanjaya Tenaga Malaysia, and a Certified Construction Project Manager (CCPM) under the Construction Industry Development Board Malaysia (CIDB). He is a Registered National Industrial Expert with the Ministry of Human Resources Malaysia (2015). Additionally, he contributes as an Industrial Advisory Panel member for universities. In 2022, he was appointed as Professor of Engineering (Building Technology) by Jesselton University College, Sabah and Adjunct Professor of Universiti Malaysia Sarawak (UniMAS) 2023-2024. Dr. Arkam obtained his PhD in Energy Conservation from Universiti Sains Malaysia (USM) in 2014, following a Master of Science in Building Technology from USM (2010) and a Bachelor of Engineering (Hons) in Electrical Engineering from Universiti Teknologi Malaysia (UTM) in 2000.

Session Speaker



Dr. Norma Alias



Associate Professor,
Department of Mathematical Sciences,
Faculty of Science,
Universiti Teknologi Malaysia (UTM),
Johor, Malaysia

BIOGRAPHY

Associate Professor Dr. Norma Alias received her Ph.D. in Industrial Computing (Supercomputer) at Universiti Kebangsaan Malaysia. She is the Committee of Synthetics Biology RG and Future Ready Educator 4.0. Handling 30 webinars per year at the local and international levels. She is among 40 UTM research excellence in the year 2006, Venus Distinguished Women Award and a mentor for SUNSHINE++ program. She is chair for 4 international conferences, MSMK Chief Editor and Associate Editorial Board for 38 international journals. Her research encompasses big data analytics on high-performance computing, validation of complex mathematical model, solving grand- challenge applications in nanotechnology, IoT, AI-smart digital towards Industry 5.0.

Session Speaker



Dr. Maribel S. Tizo



Professor & Dean,
College of Engineering and Technology,
University of Science and Technology of
Southern Philippines,
Philippines

BIOGRAPHY

Dr. Maribel S. Tizo, obtained her PhD in Science Education-Chemistry at Mindanao University of Science and Technology last 2013, Master of Science in Teaching Physical Science at Mindanao Polytechnic State College and Bachelor of Science in Chemical Engineering at the University of San Carlos, Cebu City. As registered Chemical Engineer, she had 3 years of extensive experience in a sugar company as Crusher Juice Analyst. Her proclivity to teach and vigor towards the conduct of research made her shift to the academe in 1996. Her published research on "Efficiency of calcium carbonate from eggshells as an adsorbent for cadmium removal in aqueous solution", "Optimization and characterization of bio-oil produced from Ricinus communis seeds via ultrasonic-assisted solvent extraction through response surface methodology" as well as " Academic Performance of Chemistry Majors in Selected Chemistry Courses: Input For The Licensure Examination Preparation" has been cited in Google Scholar. Currently, she is Professor 3 at the University of Science and Technology of Southern Philippines (USTP), Claveria Campus serving as either Adviser or Panel to various thesis conducted and designated as the Dean of the College of Engineering and Technology (CET).

Session **Speaker**



Dr. Zarinah Arshat



Associate Professor,
Department of Human Development and Family
Studies, Faculty of Human Ecology,
Universiti Putra Malaysia,
Selangor, Malaysia

BIOGRAPHY

Zarinah Arshat received a B.Sc. (Human Development), M.Sc. (Family Ecology), and Ph.D. (Family Ecology) from Universiti Putra Malaysia. She is currently an Associate Professor in the Department of Human Development and Family Studies, Faculty of Human Ecology, Universiti Putra Malaysia. Zarinah's work has principally focused on the field of family and child studies, particularly focusing on the strengths and the stressors that are available in the various types of families, such as commuter families, divorce families, and low-income families. She also analyzed how these strengths and stressors may influence the development of each family member, especially in children.

Session Speaker



Dr. Putu Anom Mahadwartha

Dean,
Faculty of Business and Economics,
University of Surabaya, Indonesia

BIOGRAPHY

Prof. Dr. Putu Anom Mahadwartha, CSA., CIB., CRP., was born on December 23, 1973, in Gianyar, Bali. He is married and the father of two daughters. Prof. Anom completed his doctoral degree in 2004 with a specialization in corporate finance and investment, and he holds professional certifications including Certified Securities Analyst (CSA). Since 2005, Prof. Anom has developed his academic career at the University of Surabaya (UBAYA), where he has served in various leadership roles, including Head of Finance Studies, Head of the Master of Management Program, and currently as Dean of the Faculty of Business and Economics. His expertise encompasses corporate finance, investment, corporate governance, risk management, valuation modelling, and financial reengineering. Prof. Anom is an active lecturer and researcher, having published numerous papers in both national and international journals. He is also a reviewer for several academic journals and national research grants. Beyond academia, he is a professional business trainer and consultant, assisting multinational and national companies, both public and private, in mergers, acquisitions, business and investment decisions, and business development.

Session Speaker



Dr. Hasanuzzaman Tushar



Associate Professor,
College of Business Administration,
International University of Business Agriculture
and Technology (IUBAT),
Dhaka, Bangladesh

BIOGRAPHY

Dr. Hasanuzzaman Tushar is an Associate Professor and the BBA program Coordinator at the College of Business Administration, IUBAT. He earned his Ph.D. from NIDA, Thailand, specializing in Human Resource and Organizational Development. With an MBA in International Business Management from STIU, Thailand, he received the Dean's award for his exceptional CGPA. He has also served as a visiting professor roles at Chandigarh University, India. With over 37 peer-reviewed papers in prestigious journals and conference proceedings, he actively contributes to academia, serving as a reviewer for reputable journals and holding various roles in conferences. In 2018, he was awarded an Associate Fellowship by the Australian Academy of Business Leadership. His research interests include HRM, HRD, Career Development, and Gender Studies, fostering collaborations across Asia.

Session Speaker



Dr. Li Jie

Director & Software Development,
Supervisor,
Meta Universe Sdn Bhd, China



BIOGRAPHY

Dr. Li Jie has contributed to both industry and academia over the past decade of years. From 2012 to 2017, he participated in Safe City and Smart City project in Ningxia, China. He obtained his doctoral degree from Taylor's University. During his continuous further studies, his research fields include the Internet of Things, artificial intelligence (AI), and quantum computing. His research achievements have won the silver award at the Malaysia Technology Exhibition twice. During doctoral studies, he designed and optimized an AI detection and classification model for colon cancer image processing and improved its accuracy to 99.9999%. At the same time, he combined quantum computing with artificial intelligence models and optimized the performance of artificial intelligence models in clinical low sample sizes by using distribution statistics in the sampling method of color block matrices. As a young scholar, he actively participated in peer review and served as an Associate Editorial Board Member (AEBM) for the journal Current Healthcare Research. Now he is a lab researcher at Taylor's University and also serves as an industry judge for the alumni association.

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A Critical Review of the Challenges and Opportunities in Integrating Digital Technology into English Language Teaching in Vocational High Schools

Rahmaniar

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Abstract

The integration of digital technology in vocational high schools has significantly transformed English language teaching, especially as graduates are expected to enter the workforce equipped with strong English and digital skills. This study examines the challenges and opportunities that educators and students face in this evolving landscape. It specifically looks at the obstacles English teachers encounter when implementing digital tools, such as inadequate infrastructure, internet connectivity issues, and varying levels of digital literacy among students.

The participants in this study included five English teachers from vocational high schools in West Sulawesi, Indonesia. Data were collected through qualitative interviews and analyzed using ATLAS.ti 24 software. The results revealed key challenges, including a lack of technical support for teachers and limited access to technology for students in the classroom. However, the findings also highlighted promising opportunities for improving English instruction, such as adopting holistic learning approaches and leveraging online platforms to engage students more effectively.

The study underscores the importance of ongoing professional development for teachers and equitable access to resources for all students. It calls for a comprehensive strategy that addresses both infrastructural needs and the enhancement of digital competencies to harness the potential of technology in vocational education fully. Future research is encouraged to explore the long-term impacts of digital integration on student outcomes, particularly in diverse educational settings.

Keywords

Digital technology, Vocational high schools, English Teaching.

International Developments of Simulation Education in Pharmacy: A Bibliometric and Integrated Analysis

Yinfen Wang

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Abstract

Objectives: To analyze the current state of research in international pharmacy simulation education and support the future advancement of pharmacy practice education.

Methods: A search of the Web of Science core collection was conducted for literature related to pharmacy simulation education, published between 2010 and 2023. Bibliometric methods were employed to visualize and analyze the number of publications, countries, institutions, journals, and keywords.

Results: In total, 546 papers were included in this study. The countries, institutions, and journals with the highest number of publications were the United States (n=305), University of Sydney (n=20), and *American Journal of Pharmaceutical Education* (n=127). The research focuses primarily on the reconstruction of simulation-based content and the evaluation of teaching and learning quality.

Conclusions: Pharmacy simulation education in the future should enhance detailed and realistic experience in the curriculum and develop an objectivized system of course evaluation. More cooperation should be established among countries to jointly contribute to the development of global pharmacy services.

Keywords

Pharmacy Services, Simulation Teaching, Clinical Pharmacist, Pharmacy Practice, Bibliometrics.

The Effect of using Contextual Authentic Materials for Teaching Reading Comprehension to Junior High School Students

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Abstract

The objectives of this research are to describe: whether or not the use of contextual authentic materials is effective for teaching reading. This research is quasi-experimental research with non-equivalent pretest and posttest design and it employed cluster random sampling technique. The researcher randomly selected two classes of the ninth grade of the first semester of 2021/2022 academic year of UPT SPF SMP Negeri 2 Makassar. The 36 students from each class were as experimental group and control group. The data were collected by using reading test. The data of the students' learning achievement on English reading were collected by using English reading test. Those data were then analyzed descriptively and inferentially.

The results of data analysis indicate that: the learning achievement on English reading of the ninth-grade year students of UPT SPF SMP Negeri 2 Makassar taught by using Contextual Authentic Materials significantly increased, after the treatment Contextual Authentic Materials is effective in improving English reading achievement of the students better than conventional activity as indicated by the t-test value 3.064 and the p-value (2 tailed) .003 which is not greater than .05 level of significance. It can be concluded that the effect of using contextual authentic materials for teaching reading comprehension is effective.

Keywords

Contextual Authentic Materials, Reading Comprehension

The Effectiveness of the Steam Learning Approach in Elementary Schools: A Systematic Literature Review

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Abstract

In practice, STEAM emphasizes project-based learning that enables students to explore real-world challenges through hands-on and problem-based approaches. This study aims to explicitly address three research questions: (1) How effective is the STEAM learning approach in improving elementary students' learning outcomes? (2) What benefits and challenges are identified in STEAM implementation at the elementary level? (3) What strategies can optimize STEAM application to support cross-disciplinary learning and 21st-century skills? Using a Systematic Literature Review (SLR) method, the study synthesizes findings from previous research. The main keywords—'STEAM learning', 'elementary school', primary education and 'school'—were applied with Boolean operators in Publish Or Perish databases, chosen for their academic credibility and comprehensive coverage of peer-reviewed studies. The results show that STEAM learning is both innovative and relevant to 21st-century educational demands, enhancing learning outcomes while equipping students with adaptive, critical, and creative skills essential for a rapidly changing world.

Keywords

STEAM Learning, Elementary School, Cross-Disciplinary Learning, 21st-Century Skills

Distinguishing AI Generated and Human Crafted Phishing Emails: A Multi-Modal Machine Learning Approach with Adversarial Robustness Assessment

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Abstract

AI-generated phishing emails pose a significant and evolving cybersecurity threat, rendering conventional detection techniques increasingly insufficient. This challenge reveals a critical research gap, the absence of a comprehensive model capable of accurately identifying sophisticated, AI-powered deceptive tactics. This study proposes a novel multi-modal machine learning framework to classify phishing emails, distinguishing between AI and human origins. A careful integration of diverse features, including textual patterns, content elements like HTML and embedded links, and vital metadata such as sender authentication. The researchers assembled a balanced dataset comprising 2780 human-generated emails from the Nazario corpus and an equivalent number of GPT-4 AI-generated emails. Results demonstrate the high effectiveness of all three feature modalities. Multi-modal models achieved impressive classification performance, with accuracy soaring to 100%. Metadata alone proved exceptionally powerful, yielding near-perfect detection with only ten features. Distinctions were clearly observed where AI-generated emails tended to have more punctuation and simpler HTML, whereas human-crafted ones contained longer URLs and more interactive components. However, even with excellent typical performance, some models like Logistic Regression were highly susceptible to adversarial evasion attacks, with accuracy plummeting from 100% to 6% at $\epsilon=0.5$. This research offers vital empirical insights, highlighting the critical need for advanced, multi-layered cybersecurity defenses to proactively counter the rising tide of AI-driven threats.

Incident Management System Based on ITIL 4: Applied to the Financial Sector

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Abstract

Inefficient incident management in the financial sector frequently leads to operational delays, financial losses, and a significant decline in customer trust. To address this challenge, this study presents the design and validation of an incident management system based on the ITIL 4 framework, aimed at improving the responsiveness and traceability of IT services within a Peruvian digital foreign exchange company. The system was developed as a web application using ASP.NET and MySQL, featuring a modular architecture with role-based access control and an integrated chatbot for first-level user support. During a 15-day controlled trial, five internal users handled 49 real incidents through the platform. The results showed a 48.21% reduction in average resolution time, from 204 minutes to 98.34 minutes. Furthermore, 87.5% of incidents were resolved within SLA-defined timeframes, and the first-level resolution rate increased by 30.62%. User satisfaction reached 90.5%, with the chatbot receiving a 4.9 out of 5 rating. The system achieved 100% success in functional validation and was rated 96% by IT experts, highlighting its usability and operational stability. Compared to related approaches, the proposed solution delivered superior performance across key metrics. Its modular architecture, integrated support features, and strong adherence to ITIL 4 principles offer a scalable, efficient, and user-centered approach to incident management. These findings confirm its operational viability and potential to drive continuous improvement in high-demand sectors such as finance.

Keywords

Incident management, ITIL 4, Financial sector, Optimization, Response times.

Web Application using NLP to Integrate the Management of Legal Regulations in The Peruvian Mining Sector

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Abstract

Regulatory management in the mining sector is increasingly challenged by a complex and dynamic legal environment, heightening the risk of non-compliance. To address this issue, we developed a web application that integrates artificial intelligence (GPT-4), natural language processing (NLP), and a conversational assistant within an intuitive interface to support the search, filtering, analysis, and updating of legal regulations. The tool enables legal teams to access information in an agile and traceable manner. The solution features a module for uploading regulatory documents, which are processed and visually displayed as color-coded blocks according to their priority, facilitating review and comprehension. Legal texts were vectorized to enable semantic searches and generate context-aware responses within the Peruvian legal framework. For system validation, 45 PDF documents comprising 160 regulations were manually labeled as either "relevant" or "not relevant" by three legal experts. The user experience was assessed through a Likert-type questionnaire (scale 1–5) measuring functionality, performance, compatibility, usability, and security. The system achieved a precision of 91.2%, recall of 93%, and an F1-score of 0.92. Additionally, it reduced the average time for specific searches to 12 seconds and the detailed analysis time from 35 minutes to just 5 minutes. User experience scores ranged from 4.33 to 5.0. These results demonstrate that the proposed solution significantly enhances regulatory management and shows strong potential for scalability to other regulated sectors.

Translation and Validation of a Scale for Examining Job-Seeking Behavior in the Chinese Cultural Context

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Abstract

Aim: This study aimed to validate a cross-cultural measurement tool designed to assess job-seeking behavior among Chinese vocational college students.

Design: A quantitative, cross-sectional design was employed to examine the tool's linguistic adaptation, structural validity, and psychometric reliability.

Methods: The study surveyed 512 graduating students from three vocational colleges in Guangxi using the Wenjuanxing online questionnaire platform. The scale was developed based on SDT and TPB and included three core dimensions: psychological needs, social cognitive variables, and job-seeking behaviors. Content validity was evaluated through expert review and pilot studying. Reliability was assessed using Cronbach's α and Composite Reliability (CR). Structural validity was examined via KMO and Bartlett's tests, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Average Variance Extracted (AVE).

Results: The overall Cronbach's α was 0.874, with all subscales exceeding 0.80. KMO was 0.948, and Bartlett's test was statistically significant. EFA identified 11 factors, explaining 72.335% of the total variance. CFA demonstrated good model fit (CMIN/DF = 1.229, GFI = 0.960, RMSEA = 0.021), and both CR and AVE met accepted thresholds.

Keywords

Job-seeking behavior, vocational college students, reliability, validity, cross-cultural measurement.

Human Rights Education and Culture of Peace in Educational Rural Communities in the City of Ambato - Ecuador

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Abstract

This article examines the impact of human rights and culture of peace training on adolescents in educational and rural communities in the city of Ambato. Its main objective is to evaluate how the training intervention, implemented by the Law Department of Indoamérica University in collaboration with the Corporation of Associations of Cotopaxi and Tungurahua (CACTU), influences students' conceptual understanding and attitudes toward gender equality, peaceful conflict resolution, and the effective exercise of their rights. To this end, a mixed methodological design was adopted, combining structured Likert-type surveys applied in the diagnostic and post-test phases with qualitative observations and records of participatory dynamics in the communities of Santa Rosa Alta, Santa Rosa Baja, Unamuncho, and in the educational institutions Atahualpa and Mushuc Ñan de Apatug. The results show a substantial improvement: while 92% of participants began the process with low or very low levels of knowledge, after the workshop 90% achieved high or very high levels of understanding and perception of human rights and a culture of peace. These findings validate the effectiveness of the intervention and underscore the importance of coordinating academic and community efforts to promote active citizenship, equity, and peaceful coexistence in vulnerable contexts.

Assessment of the Alignment of the FOGAPRYD Project with Human Rights Principles and its Impact on the Prevention of Child Malnutrition in Ecuador

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Abstract

This study assesses the FOGAPRYD Project's alignment with human rights and its impact on preventing child malnutrition in Ecuador. Using a mixed-methods case study, data was collected through interviews, focus groups, and document analysis. The project aims to ensure sustainable, accessible, and equitable sanitation and drinking water services. Findings show improved access, reduced malnutrition, and enhanced child health, with strengths in infrastructure quality and community participation. However, challenges remain in accountability and monitoring. In conclusion, while the project has had a positive impact, long-term sustainability requires stronger management and evaluation to ensure lasting.

Keywords

Accessibility, FOGAPRYD, Human Rights, Malnutrition, Sustainability.

Comparative Analysis of CNN Models for Lettuce Leaf Disease Detection in Hydroponic Farming

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Abstract

Hydroponic farming is rapidly growing in the Philippines as a sustainable solution for small-scale farmers especially in regions like Nueva Ecija. Although hydroponically grown lettuce has several advantages, it is highly susceptible to diseases that affects quality and productivity. Thus, prompt and accurate detection of disease is essential in reducing losses and ensuring sustainable production. This study presents a comparative analysis of three commonly use Convolutional Neural Network (CNN) models, namely EfficientNet, InceptionV3, and ResNet50 to identify the best CNN model which detect lettuce leaf diseases in hydroponic systems. A diverse dataset collected from online sources and local hydroponic farms in Nueva Ecija, subsequently augmented, generating a total of 1,056 images. Transfer learning was used to train each CNN model and evaluated across three test scenarios including the distinction of lettuce from non-lettuce, classification of diseased versus non-lettuce, and identification of specific disease utilizing classification accuracy. The results show that EfficientNet achieved the highest overall mean accuracy of 92.31%, outperforming the other models in every test scenarios. On the other hand, InceptionV3 and ResNet50 revealed difficulties in classifying non-disease and healthy leaves. These findings indicate that EfficientNet could be an instrumental component for developing automated diagnostic applications to monitor diseases on hydroponic farms. The study recommends the dataset should be expanded, and that agricultural stakeholders should collaborate to develop CNN-based detection applications that are more practical and useful in real-life settings. This would help hydroponic farming in the Philippines become more sustainable and profitable.

Revitalizing Indigenous Knowledge and Local Languages to Achieve the Sustainable Development Goals

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Abstract

The United Nations Sustainable Development Goals (SDGs) provide a comprehensive framework for global sustainability. However, the implementation of these goals often overlooks the rich knowledge embedded in indigenous cultures and local languages. Indigenous knowledge systems, developed over generations, are crucial in addressing key SDG challenges, particularly climate action (SDG 13), biodiversity (SDG 15), and sustainable communities (SDG 11). Despite their value, these knowledge systems are frequently marginalized in modern development policies and strategies. There exists a significant research gap in understanding how indigenous knowledge can be more effectively integrated into global sustainability frameworks. While much emphasis is placed on technological solutions, indigenous wisdom remains underutilized, especially in the context of youth engagement. This paper aims to fill this gap by exploring how the integration of indigenous knowledge and local languages can provide culturally relevant, effective, and sustainable solutions to global challenges.

This study proposes that empowering youth leadership to revive and promote indigenous systems can accelerate progress toward the SDGs. By combining traditional knowledge with modern practices, youth-led initiatives can play a central role in SDG implementation, ensuring that local communities contribute meaningfully to global sustainability efforts. To explore this, a qualitative analysis of case studies will be conducted, focusing on regions where indigenous knowledge has been successfully incorporated into SDG-related initiatives. Semi-structured interviews with indigenous leaders and youth activists will provide additional insights, and thematic analysis will identify recurring patterns in the integration of traditional knowledge into contemporary sustainability practices. The paper expects to demonstrate that indigenous knowledge is an indispensable asset for achieving the SDGs, particularly in areas such as climate resilience and biodiversity conservation. By highlighting youth-led initiatives and cultural inclusion, the study anticipates showing how these traditional practices can enhance the relevance and effectiveness of sustainability efforts.

Preliminary results suggest that youth-led movements that integrate indigenous knowledge lead to more inclusive, innovative, and scalable solutions for both environmental and social challenges. Case studies show how these communities have advanced resource management, agricultural sustainability, and climate adaptation through cross-generational collaboration. In conclusion, this paper advocates for a paradigm shift in SDG implementation, recognizing indigenous knowledge and youth participation as central to building a resilient and inclusive future.

A Review on the Challenges Faced by Generative AI: Data Hunger and Pollution

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Abstract

The rapid ascent of Generative AI hinges on an ever-growing appetite for data, yet its own synthetic outputs are now seeping back into the corpora on which subsequent models train, a feedback loop that threatens the integrity of the long-term model and cultural diversity. This review undertakes a PRISMA-guided meta-analysis of 126 peer-reviewed studies published from 2020-2024 across text, code, and image modalities to clarify the scale, mechanics, and mitigation of this "data hunger - data pollution" dilemma of Generative AI. The escalating demand for training data in generative AI is driven by established scaling laws, the rise of multimodal architectures, and intensifying commercial competition—forces that increasingly compel reliance on lower-quality sources and thereby limit future performance ceilings. When AI-generated material is re-introduced into subsequent corpora, it precipitates measurable degradation: lexical breadth contracts, visual concepts lose definitional clarity, and coding errors propagate, collectively undermining model robustness. Although technical measures such as watermarking and policy instruments like the EU AI Act's labeling mandates demonstrate that effective mitigation is achievable, the absence of unified detection benchmarks, the high cost of decentralized training, and inadequately developed compensation mechanisms for human data creators reveal critical shortcomings that must be addressed to safeguard the long-term sustainability of generative-AI systems.

Keywords

Data Hunger, Data Pollution, Data Scarcity, Generative AI, Training Data Degradation, Model Collapse

A Systematic Review on Information Search as a Mediator of Investment Attitudes and Purchase Decision on Agricultural-Related Exchange-Traded Funds (ETFs)

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Abstract

The present paper discusses the existing literature on behavioral drivers of purchase decisions in agricultural-related Exchange-Traded Funds (ETFs) and provides a particular focus on the Henan Province of China. Although the ETF market is expanding internationally, the use of the agriculture ETF is poorly studied in the developing world. As a result, this review paper specifically examines the influence of attitude toward investment, perceived return, risk, trust in financial institutions, herding behavior, and financial literacy on investment behavior, with a particular focus on how information search mediates the relationship between investment attitude and purchase decision. This paper also pinpoints literature gaps, suggests recommendation and provides implications on the future empirical research and investment in developing economies, especially in agricultural countries.

Keywords

Information Search, Investment Attitude, Purchase Decision, Behavioral Finance, Agricultural ETF, Financial Literacy

Long-Term Survival After Liver Tumour Resection

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Abstract

Liver tumour resection remains a cornerstone in the treatment of both primary and metastatic liver malignancies. Advances in surgical techniques, perioperative care, and adjuvant therapies have significantly improved long-term survival outcomes. This paper reviews the factors influencing survival after liver resection, including tumour characteristics, surgical margins, underlying liver disease, and adjuvant treatments. We also discuss emerging trends such as minimally invasive surgery and the role of immunotherapy in improving prognosis. Data from recent studies suggest that 5-year survival rates range from 30% to 70%, depending on tumour type and stage. Continued improvements in patient selection, surgical precision, and multimodal therapies are essential for further enhancing long-term survival.

