

2025 16th International Conference on E-Education, E-Business, E-Management and E-Learning (IC4e 2025)

**Tokyo, Japan
26-29 April 2025**



**IEEE Catalog Number: CFP2502J-POD
ISBN: 979-8-3315-1156-2**

**Copyright © 2025 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP2502J-POD
ISBN (Print-On-Demand):	979-8-3315-1156-2
ISBN (Online):	979-8-3315-1155-5

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

2025 16th International Conference on E-Education, E-Business, E-Management and E-Learning

IC4e 2025

Table of Contents

Preface.....xiv

Conference Committee xvi

➤ **E-Learning Innovations and Educational Technologies**

Utilization of Virtual Manipulatives: Effects on Students' Attitudes towards Mathematics..... 1

Chinah Gabrielle N. Marpa, Celina P. Sarmiento

Analyzing the Relationship Between Student Attendance and Academic Performance in Flux Modality: A Quantitative Study..... 6

Engr. Fe G. Dampil, Joel G. Dampil Jr.

E-learning for Licensure Examination Preparation with Predictive Analytics 11

Roben A. Juanatas, Irish C. Juanatas, Marlon G. Bagara, Marwin B. Alejo, Jc Z. Apduhan

Enhance Student Understanding through Visual Programming: Explore the Learning Effects of Arrays, Structures and Linked List..... 16

Chien-Hung Lai

Impact of Learning Modality on Calculus Achievement: Traditional versus Flexible Learning Ubiquitous Experience 21

Engr. Fe G. Dampil, Joel G. Dampil Jr.

Interaction Design for Educational Technologies in Interdisciplinary Studies (IDS)—What is educational technologies' role in cultivating the interdisciplinary studies (IDS) cognitive toolkit online? 26

Sharon Woodill, Yasushi Akiyama

Exploring the Correlation Between User Satisfaction and System Performance in Virtual Laboratories 32

John Ivan C. Maurat

Classroom Engagement through Real-time Student Attention Analysis using YOLO V8 36

Marie Luvett I. Goh, Irish C. Juanatas, Roben A. Juanatas, Joselito Eduard E. Goh, Elizer D. Ponio Jr., Wilfredo M. Romero

Visual WebBits: A Framework for Design-focused Code Snippets for Students of National University..... 41

Renz Kervy D. Gulmatico, Daniela Cassandra A. Dela Cruz, Lee Anne Marscianne L. Parafina, Aljane Guzman, Rogel M. Labanan

Impact of Mobile Learning (ML) on Students' Achievement in Science Topics Textbook at the Intermediate Stage in Jordan 46

Najeh Rajeh Alsalhi

Technology-Enhanced Simulation-Based Learning in Teaching Spontaneous Vaginal Delivery during the Covid-19 Pandemic	52
<i>Alicia Felicisima D. Bautista, Maricar S. Prudente, Socorro E. Aguja</i>	
The Effect of Blended Learning on Arabic Language Skills Development Among Fourth-Grade Students in Jordan	57
<i>Sami Sulieman Alqatawneh, Najeh Rajeh Alsalhi</i>	
Students' views on the strengths, weaknesses, opportunities, and threats (SWOT analysis) when using e-learning platforms	61
<i>Quy Phat Le, Tran Tam Luu, Luan Trong Nguyen</i>	
Research on Smart Learning Environment Architecture of the Open University based on Improved PST Framework	66
<i>Yao Kang, Ran Ren, Ting Liu, Xiaobang Zhang, Shuping Wu</i>	
TechQUEST: A Development Of 3D Gamified Learning Materials in the IT Era Course For National University Manila Philippines	72
<i>John Paul Christian R. Angsioco, Tristan Angelo B. Tenerife, John Joriz Hipolito, Marianne Jovi P. Papina, Eliseo Q. Ramirez</i>	
Development and Evaluation of an Educational Mobile Game for Enhancing Integer Learning Among Grade 7 Students	76
<i>Joana De Guzman Quinto</i>	
Remote Laboratory Design for a Control Systems Course: An example case of DC Motors' Speed Control	81
<i>Noura Khamis Alnagbi, Asma Saif Almazrouei, Aamena Moosa Alali, Lin Ahmad Tayara, Laila Basher Husain Al Shaqfa, Tuanku Badzlin Hashfi, Addy Wahyudie</i>	
The Effect Of Moodle-Based Interactive Media Combined With PBL On Students' Visual Representation Skills.....	87
<i>Nurdiyanti, Supahar, Siti Maryam Ulfa, Febri Tia Aldila, Abidaturrosyidah</i>	
WeLink: A Web-based Tutorial Management System for Small Tutorial Center Businesses.....	92
<i>Danica Anne C. Mamore, Carla Mae B. Gidacan, John Benedict Saludo, Angelique D. Lacasandile, John Clement S. Escobañez, Ellery D. De Leon</i>	
Online Education Data Sharing: Status, Challenges, and Future Directions	97
<i>Lizhe SONG, Chibing ZHAN</i>	
Digital Literacy Competence and Technology Integration of Senior High School Chemistry Teachers.....	102
<i>RAFAEL A. DOMINGO, CHRISTY ANN M. RAHON</i>	
Research on the Design and Practice of a Large-Scale Online Smart Integrated Examination Platform	107
<i>Ting Liu, Yafei Yang, Yao Kang, Xiaobang Zhang, Yuanjing He</i>	
➤ E-Commerce and Consumer Behavior	
Socio-Technical Enablers: do they influence trust formation and purchase decision in livestream shopping commerce?	113
<i>Keith Anne David, Kristallyn Fojas, Anne Michelle Malonzo, Donn Enrique Moreno</i>	
Investigating users' intention behaviour in live streaming e-commerce: How task-technology fit, technological features, and social motivation influence purchase intention.....	118
<i>Rizal Fathoni Aji, Nilamsari Putri Utami, Khansa Khairunisa Putri, M Marandi Millendila Efendi, R Salsabilla Hisyana Zahra, Rani Aprilia Astrianty</i>	

Bitcoin and Market Dynamics: An Event Study on Its Relationship with the S&P 500, US Dollar Index, and WTI Crude Oil	123
<i>Wen-Tsung Huang, Pao-Peng Hsu, Yi-Wen Su, Chia-Hsin Chen, Zhu-Wan You</i>	
From Viewing to Playing: The Influence of Streamer, Content, and Platform Quality in Game Live Streaming.....	128
<i>Widia Resti Fitriani, Ahmad Randey J. Rasyid, Achmad Nizar Hidayanto</i>	
Consumer Response and Behavior on In-game Spending (CRABS) Model: Psychological Lens into Virtual Economies	133
<i>Angel Johanna J. Roxas, Mark Joseph B. Malab, Stephon Elijah R. Galarce, Ramachandra C. Torres</i>	
Research on Sustainable Purchasing Behavior of Organic Agricultural Product Consumers in the E-commerce Environment	138
<i>PingShan Wang, QingMei Chen, Dan Yuan, Xiong Deng</i>	
Do Consumers' Perceptions of Artificial Intelligence Drive Chatbot Adoption in Shopping? The Impact of Perceived Information Quality on Intent to Use.....	143
<i>Trina Enriquez, Donn Enrique Moreno, Hope Mendoza, Angel Jaime Claire Roxas, Kaina Janel Rodriguez, Elyzah Mae Tesoro</i>	
Exploring Purchase Intentions through Smartphone-Based Virtual Supermarket Platforms: A Case Study of Environmentally-Friendly Packaged Products	148
<i>Hong Minh Ngoc Tran</i>	
➤ Digital Transformation and Organizational Strategy	
Empowering Prison Industries through Digital Transformation: Leveraging e-Marketplaces to Expand Inmate Product Sales.....	153
<i>Ejo Imandeka, Achmad Nizar Hidayanto</i>	
Impact of digital innovation adoption on business models and strategic approaches of Australian tourism firms	158
<i>Wanniwat Pansuwong, Victoria Nakku, Allan O'Connor</i>	
Impact Assessment of Automation on Conditions of Employment in the Philippine Banking Industry	163
<i>Ma. Angela Leonor Aguinaldo, Narish Montaño, Noah Christian Quito, Ma. Mikaela Recel, Kelly Anne Mañulit, Jocelyn Cruz</i>	
SwiftReserve: A Web and Mobile-Based Reservation System with Dynamic Pricing and Customer Reward System	167
<i>Irish C. Juanatas, Roben A. Juanatas, Earl John C. Mansalay, Cesar T. Villarta Jr., Marie Luvett I. Goh</i>	
Growth of Internet and Mobile Banking and Its Correlation with the Profitability of Banking Sector of Thailand	172
<i>Supachet Chansarn, Thanyakorn Chansarn</i>	
Digital Transformation in Banking is a threat or opportunity for Employees? The Evaluation of STARA Awareness toward Job Insecurity.....	179
<i>Ryan saputra Alam, Dediek Tri Kurniawan, Dadang Firmansyah, Adelia Shabrina Prameka, Rizky Firmansyah, Augustin Patrick Rafanomezanjanahary</i>	
Business Intelligence Integration and Data Analytics for Enhanced Hospitality Management in Neptune Travel and Tours	185
<i>Cyrus Rj W. Robles, Ronnel D. Palenzuela, Rodolfo C. Raga</i>	
Service Quality Prioritization in E-commerce Last-Mile Delivery: A Case Study in Thailand.....	191
<i>Noppakun Sangkhiew, Choosak Pornsing, Thammawit Prasert, Peerapop Jomtong</i>	

Unleashing AI Capabilities: Driving Sustainable Supply Chain Performance Through Competitive Advantage.....	196
<i>Darjat Sudrajat, Anita Maharani, Dewi Tamara, Taufik Roni Sahroni, Dennis Moeke</i>	
Universities in the E-Learning Era: Surfing the Digital Transition	201
<i>Patricia Caratozzolo, Jose Daniel Azoifeifa, Valentina Rueda-Castro</i>	
Impact of Web-Based Application Design on Corporate Income Tax Planning Knowledge of SMES' Entrepreneurs in Thailand.....	206
<i>Chanyanut Atjanapotjane, Nagul Cooharajanane</i>	
Evaluating Digitalization Capabilities: The Impact of Education, Technology Usage, and Organizational Factors in Turkey's Technology Sector.....	211
<i>Alper Tunaboynu, Ceren Cubukcu Cerasi</i>	
➤ Artificial Intelligence in Education and Analytics	
Knowledge Graphs Combined with ChatGPT in the Field of Acupuncture: A Case Study on the Treatment of Depression	216
<i>Xi Wang, Tian Shen, Xi Chen, Jundong Zhang</i>	
A Development of a Web And Mobile Application for a Faculty Ranking System With Data Analytics at National University Philippines	221
<i>Michael Vinz T. Balisi, Crizena L. De Luna, Kenneth G. Pingol, Mc Stalin D. Villalobos, Eliseo Q. Ramirez</i>	
Generative AI for Students Courses: Evaluating the Impact on Fresh Graduate Performance.....	226
<i>Okky Putra Barus, Jefri Junifer Pangaribuan, Romindo, Pujiyanto Yugopuspito, Achmad Nizar Hidayanto</i>	
Students' Perspectives on the Usage of ChatGPT in Scientific Research.....	231
<i>Uyen Minh Vu, Giang Tien Thi Nguyen, Tran Tam Luu, Luan Trong Nguyen</i>	
AI Enhanced Education: Impacts on Students Engagement and Learning Outcomes in Tourism & Hospitality Education	237
<i>Merle Ruiz, Jeremy Paul E. Gecolea, Lucky Boy M. Alcala, Moresa Joy V. Gregana-Alcaraz, Antonio Niegas Jr</i>	
ECG-DPSHAP: An Approach towards Privacy-preserving SHAP-based Explainable AI for 12-lead ECG Classification Model.....	242
<i>Sirapop Nuannimnoi, Milzam Wafi Azhar, Kai-Hsiang Chang, Angger Baskoro, Jasmine Ariesta Dwi Pratiwi, Ching-Yao Huang</i>	
Bridging Academia and Industry With Generative AI: A Platform for Dynamic Skill Development and Recruitment	249
<i>Pragya Das, Harshan, C Harsha, Himanshu Kumar Suman, Animesh Giri</i>	
Web-Based Clinic Management System with Patient Satisfaction Analysis Using Sentiment Analysis.....	258
<i>Joselito Eduard E. Goh, Marie Luvett I. Goh, Lalaine P. Abad, Ma. Corazon F. Raguro, Tim Jamison S. Awat, Katrina Cyndee Marqueses</i>	
STT Technology for Measuring Chinese Pronunciation Accuracy.....	264
<i>Mei Rianto Chandra, Clara Herlina Karjo, Yi Ying</i>	
➤ Digital Health and Well-being Technologies	
User-Centered Design of Daily Medication Tracker in Foldable Devices for Baby Boomers	270
<i>Cyrus Rj W. Robles, Rodolfo C. Raga</i>	

Enhancing the Oral Health Literacy of Students Through Dental Educational Videos	276
<i>Ryan G. Tiongco, June Grace Casaje-Pacunayen, Edellita A. Dela Cruz, Socorro E. Aguja, Maricar S. Prudente</i>	
User Continuance Intention of Chatbot in Telemedicine Applications: An Integration of IS Success Model and Perceived Justice	281
<i>Nabila Clydea Harahap, Abel Ganindra, Arga Christian Roymansa, Nugraha Aktwovhiday, Sultan Fahrezy Syahdwinata Nugraha, Yosabad Torando Sirait</i>	
Sustainability of mHealth App Use in Indonesia: A Structural Equation Modeling Analysis of Influencing Factors	287
<i>Okky Putra Barus, Achmad Nizar Hidayanto, Kongkiti Phusavat, Andree E. Widjaja</i>	
Barriers to Healthcare Knowledge Management Implementation Based on Doctors' Perspective: Qualitative Study	292
<i>Ibad Rahadian Saladdin, Putu Wuri Handayani</i>	
➤ Trust, Security, and Privacy in Digital Systems	
From Reliance to Satisfaction: Trust in Chatbots as the Mediating Force in Low-Cost Airline Websites	297
<i>Alyssa Ayen Quililan, Charlene A. Cervantes, Danica M. Sayco, Lucky Boy M. Alcala, Jennifer Z. Hernandez, Joel M. Cuadra, Leticia C. Gamad</i>	
Assessment of Security Risk Awareness: A Case Study of Information Systems in Government Agencies.....	302
<i>Sasithorn Mongkolsripattana, Chesada Kaewwit, Chadarat Phipathananunth</i>	
Assessing Security Weaknesses: A Penetration Testing Approach to Quid Pro Quo and Pretexting Tactics.....	308
<i>Joel de Goma, Eric Blancaflor, Luisse L. Caliboso, Jaro Oliver Lucero, Fiona Aeowyn C. Mangabat</i>	
Dishonesty in Online Learning: Tertiary-Level Students' Moral Evaluations.....	313
<i>Ben Oliver D. Tutor, Gladys P. Bustos, Molina G. Rizo, Maryan Joy Lopez-Tutor, Patricia Mae O. Lacanilao</i>	
Enhancing Citizen Stickiness: A Dual Framework of IS Success Model and Trust-Commitment Theory in Indonesian Ministry of Health's Social Media Communication	318
<i>Achmad N. Hidayanto, Hana Fitriani, Azna A. Nurfaiza, Hanifah Rahmajati, Muhammad G. A. Dwitama, Naura K. Priono</i>	
➤ Social Impact and Community Applications	
KATHA: A 2D Game Development for Cultural Preservation for Elementary Students	323
<i>Simon John Peter U. Ducusin, Aaron Austin S. Flores, Kristan Reggae G. Domondon, Justinn Maverick M. Alzona, Ryan Richard H. Guadana</i>	
Social Media for Political Education: How X Account @BijakMemilih Engages Generation Z in Politics	328
<i>Cyriin Haniifah, Ezmieralda Melissa</i>	
Evaluating the Public Safety Education APP's Impact on Emergency Awareness and Competency—A Case study from “Qiang'an” platform in Shenzhen, China	333
<i>Wenhua Zeng, Shikun Hu, Wenhua Tang, Hui Zhang</i>	
BayaniJuan: A Prescriptive Community Engagement and Livelihood Management Application.....	340
<i>Diana S. Antonino, Avyl Mourei S. De Mesa, Jana Andrea J. Fusingan, Khloie Anne R. Rodriguez, Rogel M. Labanan</i>	

Gender-inclusive Public Space Planning through Online Media Planning at Khao San Road Tourist Attraction.....	345
<i>Pastraporn Thipayasothorn, Komol Prompeng, Piyanuch Sonsuphap, Manas Ruamruay, Siriporn Rojanasukanjana, Pornthip Techasomburanakit</i>	
Junglewords: A 2D Gamified Intervention For Filipino Children With Speech Impairments.....	351
<i>Dhafney H. Serrano, Angelica Gloria V. Carino, Julianne Mareeh L. Mendoza, Neal Allen V. Laureano, Ryan Richard H. Guadana, Eliseo Q. Ramirez</i>	
Comparison of Google, Baidu, DeepL Chinese-Indonesian translations in AI Era.....	356
<i>Clara Herlina Karjo, Mei Rianto Chandra</i>	
➤ E-Learning Systems and Platform Design	
e-Prep: Implementing a Web-Based E-learning System for Technical Vocational Livelihood (TVL) Strand Students Focusing on Full Meal Preparations	362
<i>Jermaine Isaiah B., Jose Martin Edward G. Aquino, Carlos Antonio V. Ponce, Elcid A. Serrano, Joel C. De Goma</i>	
Effectiveness of an e-Portfolio to Enhance Self-Regulated Learning	367
<i>Apichaya Khwankaew, Thanin Ratanaolarn, John Morris</i>	
A Usability Evaluation of MOODLE-LMS from the Student Perspective.....	372
<i>Ghassan Ahmed Ali, Manal Al-Mansori, Ammar T. Zahary, Abdullatif Ghallab, Dayang Tiawa Awang Hamid, Abdul Hafidz Hj. Omar, Azeem Khan</i>	
Blended Learning into Database Courses: A Path to Integrating Online and Offline Resources	377
<i>Jianlong Yao, Meiju Li, Bin Yang</i>	
Students' Perspectives on Factors Influencing Attitudes and Behaviors Toward Coursera in the Era of Online Learning	382
<i>Giang Tien Thi Nguyen, Luan Trong Nguyen, Minh Uyen Vu, Tran Tam Luu</i>	
Design and Evaluation of Web-Based Learning Environments.....	388
<i>Chu-Hsuan Lee, I-Shan Jao, Ming-Hui Chang</i>	
Cloud-Based Certification Review Web Application with Fingerprint Authentication for Computer Engineering Students	393
<i>Kharyle Khaye A. Bohol, Mark Steven A. De Jesus, Aira Ysoebel B. Pangilinan, Maribelle Dequilla-Nicerio</i>	
International Collaborative Design, Development and Evaluation of a MOOC on Data Analytics for Educators	397
<i>Frances TRACY, Nurbiha SHUKOR, Noor Dayana ABD HALIM, Philip ROTHWELL, Matt MCLAIN, Graham DOWNES, Norah MD NOOR, Aini Marina MA'ROF</i>	
Database Repository with Data Analytics and Image-Capture to Text Feature for Microcredential Course.....	402
<i>Glenn Jonh A. Reforsado, Maribelle Dequilla-Nicerio</i>	
➤ Artificial Intelligence in Educational Applications	
Predicting Final Grades in Differential Calculus using Pre-College Profile and ALeKS Grades via Artificial Neural Network	407
<i>Crizepvill L. Dumalaog, Leo Matthew B. Sarne, Edgar M. Adina, Ericson D. Dimaunahan, Cesar Romeo V. Delos Reyes</i>	
Application of Generative Artificial Intelligence (GenAI) to Enhance English Listening Skill for Undergraduate Chinese Student.....	412
<i>Weifang Chu, Apichaya Khwankaew, Shujuan Zhao, Chuanjian Ye, Sirirat Petsangsri</i>	

AI Educational Support Framework for At-Risk Media Students	417
<i>Amr Assad</i>	
Predicting Student Dropout Rates in Online Education Platforms utilizing Naive Bayes Algorithm	425
<i>Warren Panizales, Herminiño Lagunzad, Melvin Ferrer, Crimgene Villanueva, Daisy Kalaw, Kris Garcia</i>	
Exploring Philippine Mental Health Podcasts: The Efficacy of Latent Dirichlet Allocation and BERTopic for Topic Modeling in Optimizing English-Filipino ASR-Derived Speech Content Analysis.....	430
<i>Jane Frances Ma. Vianney Flora, Joanna Elaine Talavera, Edgar Adina, Cesar Romeo V. Delos Reyes</i>	
Evaluating Pre-Service Teachers’ Confidence and Competence in utilizing Artificial Intelligence as Educational Tools	435
<i>Eubert R. Tagupa</i>	
A Study on Instructional Design and Application of Information Technology Courses Based on Generative Artificial Intelligence	440
<i>Hairu Yang, Jiayi Li, Jiang Chen, Qianchen Xiang, Zhou Liang, Xiaoyu Zhang</i>	
AI Hallucination in the Context of Education: Exploring College Students’ Use of Generative AI for Academic Tasks	445
<i>Ramachandra C. Torres</i>	
➤ E-Commerce and Consumer Behavior Analysis	
The Impact of Augmented Reality Technology on Consumers’ Purchase Intention Through Mobile Applications	450
<i>Hong Minh Ngoc Tran, Duy Vu Le</i>	
Harnessing Facebook Promotional Video on Food Tourism for Micro Businesses.....	455
<i>Merle U. Ruiz, Angelica Joy Martinez, Lyris Joy I. Paguio, Ma. Ellaica T. Saoit, Jeremie M. Maleon, Sarah Marie M. Aducal, Ma. Rovilla C. Sudaprasert</i>	
AHP Analysis of Factors Influencing Customer Trust in E-commerce Live Streaming Shopping in Hangzhou.....	461
<i>Yili Wang, Danaitun Pongpatcharatorntep</i>	
The Impact of ChatGPT’s Interactivity on Creative Workers’ Value Perceptions and Subscription Intentions	466
<i>Hsiu-Chia Ko</i>	
From Likes to Lifestyle: Exploring the Adoption of Healthy Food Recommendations on Social Media in Indonesia	471
<i>Karina Lia Meirita Ulo, Adrika Novrialdi, Fany Azka Hidayatulloh, Haikal R. Yusmananda, Naomi Riana Lumban Gaol, Wahyu Catur Wibowo</i>	
The Influence of Wanghong, Parasocial Interaction, and Homophily on Consumer Purchase Intention in Social Media Marketing	476
<i>Ming-Hsuan Wu</i>	
Facebook Advertising Boost for a Milk Tea Business: Applying Two-Dimensional (2D) Animation Promotional Videos	481
<i>Jaimie Lynn A. Borromeo, Ma. Rovilla C. Sudaprasert, Ramachandra C. Torres, Karl Samuel S. Adao, Olive Mae O. Villanueva, Monica Audrey E. Villeno</i>	
Exploring Purchase Intention on E-commerce Platforms in Vietnam: A Case Study of OCOP Durian Agricultural Products	486
<i>Quang Nguyen Phuong, Hong Minh Ngoc Tran</i>	

Search Recommendations and Their Impact on Gen Z’s Shopping Journey on e-Commerce	491
<i>Shinta Oktaviana R, Achmad Nizar Hidayanto, Ejo Imandeka, Jeri Apriansyah Pagua, Anne Aisyah Azka, Isyah Auliyarahmani, Muhammad Arkan Fauzan, Raditya Hanif Yudha P, Rizki Anugerah Ramadhan</i>	
➤ AR/VR and Gamification in Learning	
The Role of Virtual Reality for Improving Autism Spectrum Disorder (ASD) Education in Saudi Arabia	496
<i>Abdulaziz Saleh Alraddadi</i>	
AR Auto Academy: Exploring Car Parts in Augmented Reality	502
<i>Herminiño Lagunzad, Warren Panizales, Kris Garcia, Crimgene Villanueva, Carolyn Samonteza, Renan Bacit</i>	
A study on the design and application of desktop virtual reality resources in teaching geography in secondary school	507
<i>Hairu Yang, Weilong Liu, Zhou Liang, Rui Liu, Yan Fu, Changyuan Cao</i>	
SYNC: AR/VR Therapeutic Application for Immersive Physical Rehabilitation	512
<i>LUISSSE L. CALIBOSO, ANDREI E. GOC-ONG, JARO OLIVER LUCERO, AIN JACOB REYES, ELCID A. SERRANO</i>	
Gamification in E-Learning: The Role of Perceived Value in Influencing Student’s Motivation and Engagement.....	517
<i>Flourensia Spty Rahayu</i>	
Exploring Functions in A Collaborative Virtual Reality Environment Supporting Industrial Design Students’ Communication Effectiveness	524
<i>Allan Chung, Yo-Wen Liang</i>	
BGVLabs: An Interactive 3D Virtual Laboratory in Mechanical Engineering Training with User-Centered Feature Prioritization	529
<i>Mary Jane C. Samonte, Jacques Oneil Gonzalez, Reanne Angela Buccat, Miguel Antonio Villaruel</i>	
Design and Application of Gamified Teaching Mode of Primary School Programming Course Based on ARCS Model	535
<i>Qing Xu, Hairu Yang, Ziyang Huang, Zhou Liang, Feifan Wu, Xiaoyu Zhang</i>	
➤ Educational Assessment and Teaching Methodologies	
Analyzing Students’ English Proficiency Test Results Across Pre-, During, and Post-COVID Pandemic	541
<i>Jhona N. Gamez, Jonnah Belle V. Jagonia, Anthony S. Morfe</i>	
Integrating TikTok fitness videos and interactive dodgeball-relay activities to improve physical fitness and motor skill development in elementary school student.....	546
<i>Ira Kenyosi Br Manurung, Suryadi Damanik, Amir Supriadi, Miftahul Irfanda Harahap, FransFile Manihuruk</i>	
Measurement and Evaluation Platform for Vocational Competency Assessment	551
<i>Chareefah Hutye</i>	
Improving General Mathematics Instructional Competency: Identifying & Addressing Conceptual Difficulties with the Rasch Model.....	556
<i>Eubert R. Tagupa, Neil Cris B. Pasok</i>	
Integrating the 7Es Instructional Model in the Implementation of a Fully Online Asynchronous Course in Higher Education.....	561
<i>Erland D. Palean, Christie C. Amores, Ramachandra C. Torres</i>	

Construction and Application of a Project-based Learning Mode for the Development of Computational Thinking in junior high school	566
<i>Hairu Yang, Fan Xu, Cui Kang, Zhou Liang, Hongyan Chen</i>	
The Effectiveness of 2D Animated Videos in Improving Receptive Communication Viewing Task of Standardized Listening Test.....	572
<i>Jhona N. Gamez, Fe G. Dampil, Faye Andrea G. Dampil, John Enoc Gulay Diez, Sofia Giselle Quilos Pasia, Ethan Gomez Roxas</i>	
Developing a Cybersecurity Curriculum Using Best Practices and Student Awareness Insights.....	578
<i>Wasinee Noonpakdee</i>	
➤ Technology Adoption and Trust in Digital Tools	
The Role of Trust in Technology Adoption: Do Perceived Ease of Use and Usefulness Drive Cloud Computing Acceptance of Micro Enterprises in the Philippines?	583
<i>Donn Enrique Moreno, Ellenita Red, Keana Adrielle Del Pilar, Paul Matthew Parreño, Hannah Gwyneth Taduran</i>	
The Roles of Anthropomorphism and Perceived Usefulness on Usage Intention Of AI-Based Chatbot Application	587
<i>Ita Prihatining Wilujeng, Heny Kusdiyanti, Ely Siswanto, Andro Agil Nur Rakhmad, Himmatul Ulya Firdausi, Raisa Aulia Pratistha Putri</i>	
Factors Driving the Adoption of Virtual Concerts in Thailand: A Study on Demographics and Willingness to Pay ...	592
<i>Sarinpas Kornwattanakit</i>	
Building Trust in AI Voice Assistants: Exploring the Role of Security, Information Quality, and Social Influence in the Telecommunications Industry.....	597
<i>Mousa Al-kfairy, Ahmed Al-adaileh, Dheya Mustafa</i>	
Analysing the Factors that Influence the Intention in Utilising ChatGPT as a Lecture Support Tool Based on Social Cognitive Theory Perspective.....	602
<i>Darsono Nababan, Achmad Nizar Hidayanto, Bob Hardian Syahbuddin, Suryana Setiawan, Dony Martinus Sihotang</i>	
Evaluating Information Adoption Behavior on Social Q&A Platforms: Mediating Role of Information Usefulness and Moderating Role of Time Pressure	607
<i>Chiang-Kuo Tu, Kunhang Wu</i>	
➤ E-Management and Business Process Optimization	
IskarGul: Development of a Blockchain-Driven Smart Contract Cloud Market Platform.....	613
<i>William P. Rey, Kieth Wilhelm Jan D. Rey</i>	
Portfolio Research Based on LSTM Model.....	618
<i>Zhiyao Zuo, Fengwei Yang</i>	
Care Alerts: A health-sharing application	623
<i>Rafael Fernandez, Fiona Aeowyn C. Mangabat, Angel Faith P. Tuando, Elcid Serrano, Robert M. Dadigan, Perseval S. Pineda</i>	
A Conceptual Framework of Digital Twin for Smart Destination Management	628
<i>Adriana Reveiu</i>	

Optimizing Digital Approvals: Transforming Manual Processes for Enhanced Efficiency in E-Management and E-Business	633
<i>Maria Reschelle Sabile, Klint Allen Marinas</i>	
Loan Application and Management System with Credit Scoring Decision Support System for Cazanova Transport Cooperative.....	638
<i>Rainer Miguel, Charles Danielle D. Paglingayen, Rainne Alessandra M. Pimentel, Jayson R. Torres, Jay-ar P. Lalata</i>	
TAP: Timely Aid Provider	643
<i>Keziah Dawn R. Asuncion, Jied Joshua Angelo G. Castillo, Hailie Jade S. Reyes, Hans Harvey I. Santos, Elcid A. Serrano, Alberto C. Villaluz, Perseval S. Pineda</i>	
E-Development and Digital Infrastructure: Implications for Wage Employment	648
<i>Karnjana Songwathana</i>	
PARA: Passenger Accessibility Route Application	653
<i>Pfrancis Isaiah R. Ampiloquio, Aron Clark B. Bataller, Alain Marcus M. Leyva, Ivan Jay S. Medina, Elcid A. Serrano</i>	
Transforming E-Management with Industry 4.0: Approach to a Digital Assessment Tool	658
<i>Isaac Lemus-Aguilar, Jaime Palma-Mendoza, Claudia Lizette Garay-Rondero, Iván Andrés Arana-Solares</i>	
Transforming Organizational Performance Management: A Lean Six Sigma Approach using Monday.com for E-Business and E-Management.....	662
<i>Maria Reschelle Sabile, Klint Allen Marinas</i>	
Technology-Driven Innovations in Room Reservations: A Study of Malaysia’s Midscale Hotels in the Post-COVID-19 Era.....	667
<i>Jayanthy Periannan, Noelah Mae D. Borbon, Jeninah Christia B. Pulhin</i>	
Key Drivers of Smart Warehousing Adoption: Perspectives from Three Leading Logistics Companies in Southern Luzon, Philippines	674
<i>Donn Enrique Moreno, Ellenita Red, Jonas Kent Emping, Sarah Enriquez, Ricaela Rivera</i>	
➤ Digital Transformation in Education and Workforce	
Prioritizing Factors Influencing Gig Worker Upskilling Through E-Learning Platforms: A Hybrid AHP-TOPSIS Approach	679
<i>Ma. Kathleen L. Duran, Klint Allen A. Mariñas, Jacob O. Sabido, Jomar M. Llanto, Neil Cedric F. Awitan, Kent Patrick G. Ferraro, Eden Gay M. Deabanico, Joseph Carlo D. Labampa</i>	
Collaborative Professional Cultivation in the Digital Economy: An Evolutionary Game Theory Approach.....	684
<i>Bolun Liu, Xiaofen Li, Wenjun Lu, Jiachen Yu</i>	
The Impact of Digitalization on the Quality of Higher Education	689
<i>Nurlan Baigabylov, Altynbek Akpanov, Kanagat Baigusheva, Medet Kudabekov</i>	
The Power of Communication: Assessing the Role of Effective Information Dissemination in Advancing Sustainability in Higher Education.....	695
<i>Noelah Mae D. Borbon, Cherry Lyn M. Carpio, April Anne O. Marasigan, Jayson G. Malabanan, Josierene V. Abel, Rose-Anne B. Magsino, Chaira Faye L. Ferran</i>	

➤ **Social Media and Digital Marketing Strategies**

Using Association Mining to Improve Navigation Design in Online Lesson Mobile Application..... 702

Pakorn Leesutthipornchai, Denduang Pradubsuwun, Onjira Sitthisak

Design and Implementation of ReCol: A Web Based Digital Repository through WordPress and OneDrive..... 706

Richard Alphege A. Ravalo, Jacylyn D. Lapa

COMNET: Innovative Pedagogy for Integrating Virtual Labs into E-Learning Modules for Computer Networks..... 711

William P. Rey, Kieth Wilhelm Jan D. Rey, Althea Jodie B. Labayan

➤ **Author Index**