WS01: 4th International Workshop on Embodied Learning:Technology Design, Analytics & Practices

Monday, November 25

09:00–10:30	**WS01-1**
W01-004F	**Exploring Cognitive Engagement in AI-Driven Adaptive Psychomotor Sport Training** *Miguel PORTAZ, Rwitajit MAJUMDAR & Olga C. SANTOS*
W01-005F	**Exploring Graph Slopes Through a Series of Embodied Learning Experiences** *Priyadharshni ELANGAIVENDAN, Melwina ALBUQUERQUE, Shizuka DARA &* *Sanjay CHANDRASEKHARAN*
10:50–12:20	**WS01-2**
W01-006F	**Unpacking Interaction Markers of Critical Thinking** *Aditi KOTHIYAL, Rwitajit MAJUMDAR, Shitanshu MISHRA, Jayakrishnan Madathil WARRIEM &* *Prajakt PANDE*
W01-007F	**Actions and Interactions at Collaborative Engineering Design Hackathon: Looking Through the Lens of Embodied Cognition** *Soumya NARAYANAN, Navneet KAUR & Rwitajit MAJUMDAR*
W01-008F	**Designing an AI-Enhanced Timeline for Monitoring Multimodal Interactions in Embodied Learning Environments** *Joyce FONTELES, Namrata SRIVASTAVA, Eduardo DAVALOS, Ashwin T S & Gautam BISWAS*

Tuesday, November 26

09:00–10:30	**WS02-1**
W02-003F	**Exploring Learning Analytics: A Case Study of Tertiary Educators' Utilization and Integration of AnimoSpace LMS in the Online Learning Environment** *Rozanne Tuesday G. FLORES & Ethel C. ONG*
W02-007F	**An Implementation of Augmented Reality in Guided Inquiry-Based Learning for Enhancing Primary Students' Mental Models in Science** *Sasivimol PREMTHAISONG, Pawat CHAIPIDECH, Phattaraporn PONDEE & Niwat SRISAWASDI*
W02-001S	**Design and Assessment of a Mobile Cloud Learning Platform for the Classroom: Examining the Efficiency of Blended Learning in Post-COVID Science Education** *Joselito Christian Paulus VILLANUEVA, John Lorence VILLAMIN & Joshua TUMOLVA*
10:50–12:20	**WS02-2**
W02-014F	**Exploring Skills Enhancement in Student Teacher Through Implementation of Design Thinking in Unplugged Game Creation** *Tian Wong LING, Mas Nida Md. KHAMBARI, Mohd Mokhtar MUHAMAD, Sharifah Intan Sharina Syed-ABDULLAH & Saiful Hasley RAMLI*
W02-017F	**Factors Influencing ChatGPT Use Behaviour Among Trainee Teachers** *Sarala VALAIDUM & Jazihan MAHAT*
W02-009S	**Design and Implementation of an Educational Escape Rooms Class** *Jesus Alvaro C. PATO, Gerick Jeremiah Niño N. GO, Paolo Santino P. CAOILE, Gio Gabriel C. REYES, Joaquin Enrique B. SINJIAN, Jerold Luther P. AQUINO & Maria Mercedes T. RODRIGO*
13:20–14:50	**WS02-3**
W02-002S	**A Preliminary Investigation of the Definition and Components of Computational Thinking in the Malaysian Education Landscape: From Educational Technology Experts' Perspective** *Ahmad Sarji Abdul HAMED, Su Luan WONG, Mohd Zariat Abdul RANI, Mas Nida Md KHAMBARI, Nur Aira Abd RAHIM, Fariza KHALID & Priscilla MOSES*
W02-006S	**PERS: A Personalized Recommender System for Student-Generated Questions in Programming Courses** *Pham-Duc THO*
W02-010S	**A User Acceptance Testing Tool for Mobile Game-Based Learning Application** *Christian Jade D. GUILLEN & Saturnina F. NISPEROS*
W02-016S	**Sociotechnical Challenges of Older Educators in Delivering Medical Education Online** *Ryan EBARDO, John Byron TUAZON & Miriam Louella FERMIN*

WS02: The 13th International Workshop on ICT Trends in Emerging Economies (WICTTEE 2024)

15:10–16:10	WS02-4
W02-013S	**Minecraft as a Tool for Digital Game-Based Learning: Enhancing Conceptual Understanding and Attitudes in Mathematics Learning** *Sakda CHALEEPLIAM, Sasivimol PREMTHAISONG & Pawat CHAIPIDECH*
W02-008S	**Cognicraft: Smart Exam Question Generation with AI and Bloom's Taxonomy** *Christian SAGADRACA, Zainal SANTOS, Danilo SIMON Jr., Marianne Jessica TOLENTINO & Reymar VENTURA*
W02-004S	**Development and Evaluation of a Hybrid Mobile-Learning App Using Design Science Research (DSR) Framework** *John Lorence VILLAMIN, Joselito Christian Paulus VILLANUEVA & Joshua TUMOLVA*

WS03: Analysis and Design of Problems/Questions in the Digital Environment: The 17th Workshop on Technology Enhanced Learning by Posing/Solving Problems/Questions

Monday, November 25

09:00–10:30	WS03-1
W03-002	**Difficulty-Controllable Reading Comprehension Question Generation Considering the Difficulty of Reading Passages** *Yuto TOMIKAWA & Masaki UTO*
W03-005	**Learning Effectiveness and Reflections on AI Literacy in Junior High School Students with Game-Based Learning and Problem-Based Learning** *Shih-Hua HUANG & Ting-Chia HSU*
W03-009	**Does Experience of Feedback Generation Promote Student Novel Problem Posing? An Empirical Study in a Database Course** *Kazuaki KOJIMA*
10:50–12:20	WS03-2
W03-004	**Difficulty-Controllable Reading Comprehension Question Generation Considering the Difficulty of Reading Passages** *Yuto TOMIKAWA & Masaki UTO*
W03-006	**Iterative Problem Solving in the Integration of Design Thinking and Game-Based Learning into Enhancing Computational Thinking and AI Literacy** *Tai-Ping HSU & Ting-Chia HSU*
W03-007	**Design and Development of a Stepwise Learning Environment for Problem Posing of Arithmetic Word Problem** *Yusuke HAYASHI, Nagito YAMAMOTO, Susumu SHIMAKAWA & Tsukasa HIRASHIMA*

WS04: The 8th Computer-Supported Personalized and Collaborative Learning

09:00–10:30	**WS04-1**
W04-003F	**Investigating the Impact of Cooperative Group Learning on Blended Teaching and Learning Outcomes: A Case Study of Sixth-Grade Students in an Elementary School** *De Jun MO & Joni Tzuchen TANG*
W04-008F	**Investigating Students' Online Learning Perception Through the Lens of Constructivism** *May Marie P. TALANDRON-FELIPE, Kent Levi A. BONIFACIO & Gladys S. AYUNAR*
W04-001S	**Integrating Virtual Environment in Teaching Courses** *Chiu-Jung CHEN & Pei-Lin LIU*
10:50–12:20	**WS04-2**
W04-007F	**Investigating the Role of AI Book Talk Companion in Enhancing Student Performance: A Pilot Study on Self-Efficacy** *Yi-Cheng TSAI, Hsiao-Tung YANG, Chang-Yen LIAO, Yen-Cheng YEH & Tak-Wai CHAN*
W04-013F	**Investigation of Skills Training System Using TF-IDF for the Plasterer's Skeletal Data** *Ryota TANAKA, Naka GOTODA, Lee SAERON, Ryo KANDA, Ayaka HUNABIKI, Hirotake KANISAWA, Kanae KANDA, Yuka TAKAI & Toshihiro HAYASHI*
W04-002S	**The Trends in Computer-Supported Virtual Reality Collaborative Learning** *Ching-Yi CHANG & Cheng-Huan CHEN*
13:20–14:50	**WS04-3**
W04-012F	**Addressing Public Speaking Anxiety with an AI Speech Coach** *Frederick Voltair GARCIA Jr., Nicanor Froilan PASCUAL, Miguel Elijah SYBINGCO & Ethel ONG*
W04-005S	**Exploring the Impact of Integrating Auto-Photography and Imagery Strategies into Computer-Supported Collaborative Learning: A Case Study in a General Education Course on Climate Change** *Wen-Lung HUANG, Chia-Jung CHANG*
W04-010S	**Developing an LLM-Empowered Agent to Enhance Student Collaborative Learning Through Group Discussion** *Sixu AN, Yicong LI, Yu YANG, Yunsi MA, Gary CHENG & Guandong XU*
15:10–17:00	**WS04-4**
W04-006S	**Exploring the Effect of Collaborative Programming Learning Environment on Student's Computer Programming Competencies and Cognitive Learning** *Chia-Jung CHANG & Wen-Lung HUANG*
W04-009S	**Investigating the Impact of Kahoot! On EFL Grammar Learning** *Jonathan Y. CHIN & Ben CHANG*
W04-011S	**Designing an LLM-Based Dialogue Tutoring System for Novice Programming** *Julieto PEREZ & Ethel ONG*

WS06: GenAI in Education - From Hallucinations to Reality: Integrating Learning Analytics and Generative AI for Enhancing Personalized Learning Experiences

Tuesday, November 26

09:00–10:30	**WS06-1**
W06-001F	**Analyzing Teacher-Student Dialogues in Online One-on-One Primary Mathematics Tutoring: A Lag Sequential Analysis of Group Differences** *Gary CHENG, Bo JIANG, Daner SUN, Ming GAO & Zhixuan SONG*
W06-004F	**Supporting Teacher-Student Book Talk and Book Wish Lists with AI-Driven Technology** *Chih-En KUO, Hong-Min TU, Chang-Yen LIAO & Tak-Wai CHAN*
W06-005F	**AVERY: A GenAI-Based Approach to Enhancing Learner Engagement in English Writing** *Ka-Lai WONG, Patrick OCHEJA, Brendan FLANAGAN & Hiroaki OGATA*
10:50–12:20	**WS06-2**
	Panel Discussion
13:20–14:50	**WS06-3**
W06-007F	**How AI Supports Returning Adult Learners in a Developing Economy: Enhancing Academic Writing Through Self-Determination Theory** *Mary Rose MARTINEZ & Ryan EBARDO*
W06-009F	**Developing a Multimodal Learning Analytics Approach to Examine Students' Cognitive Presence and Metacognition in a Metaverse Environment** *Yanjie SONG, Lei TAO, Hao DENG & Jiachen FU*
W06-010F	**Integrating ChatGPT into Flipped Learning: Enhancing Students' Creative Writing Skills and Perception** *Worapong KHUIBUT, Sasivimol PREMTHAISONG & Pawat CHAIPIDECH*
15:10–17:00	**WS06-4**
W06-011F	**Competency-Based Assessment in the Era of Generative Artificial Intelligence: Perspectives of Selected STEM Educators** *Friday Joseph AGBO, Heather Kitada SMALLEY & Kathryn NYMAN*
W06-006S	**A Case Study for Educators with ChatGPT and Plato's Allegory of the Cave** *Anna Y.Q. HUANG, Jain-Wei TZENG, Chi-Sheng HUANG, Zhi-Qi LIU, Bryan Carl TANUJAYA, Owen H.Q. LU*
W06-008S	**Supporting Students' Post-Exam Reflection Needs in College Automation Engineering Course Using LLM** *Edward ANOLIEFO, Patrick OCHEJA, Regina OCHONU, Brendan FLANAGAN & Hiroaki OGATA*

WS07: The 7th Workshop on Predicting Performance Based on the Analysis of Reading and Learning Behavior

Tuesday, November 26

09:00–10:30	WS07-1
W07-001F	**Exploring Cross-Disciplinary Education: Enhancing Science Learning with Digital Picture Books** *Yan-Yu JAU & Joni Tzuchen TANG*
W07-002F	**Methods of Balancing Model Explainability and Performance in Identifying At-Risk Students** *Tiffany T.Y. HSU, Brendan FLANAGAN, Owen H.T. LU*
10:50–12:20	WS07-2
W07-003F	**Effects of the Self-Regulated Learning and Motivation on Learning Achievements of the Programming Courses** *Mu-Sheng CHEN & Ting-Chia HSU*
W07-004F	**GazeViz: A Web-Based Approach for Visualizing Learner Gaze Patterns in Online Educational Environment** *Eduardo DAVALOS, Namrata SRIVASTAVA, Yike ZHANG, Amanda GOODWIN & Gautam BISWAS*

WS08: The 12th Workshop on Technology-Enhanced STEM Education (TeSTEM Workshop)

Monday, November 25

09:00–10:30	WS08-1
W08-001F	**Novice Programmers' Saccadic Patterns in Error Message Comprehension and Syntax Error Identification** *Caren PACOL, Maria Mercedes RODRIGO & Christine Lourrine TABLATIN*
W08-004F	**Challenges and Opportunities for Designing and Implementing Ubiquitous Game-Based Learning to Cultivate Digital Citizenship in Thailand** *Patcharin PANJABUREE, Gwo-Jen HWANG, Niwat SRISAWASDI, Ungsinun INTARAKAMHANG & Sasipim POOMPIMOL*
W08-005S	**Reducing Undergraduate Students' Information Technologies (ITs) Anxiety Through Implementation of Blended Learning: A Case Study in the Basic Natural Science Course** *Anggiyani Ratnaningtyas Eka NUGRAHENI, Anggraeni Dian PERMATASARI & Antuni WIYARSI*
10:50–12:20	WS08-2
W08-002F	**Predicting Emotional Impact on Peer Review, Peer Assessment, and Self Assessments Using Deep Learning and NLP in STEM Education** *Pascal Muam MAH*
W08-008F	**Leveraging Generative AI for Automatic Scoring in Chemistry Education: A Web Based Approach to Assessing Conceptual Understanding of Colligative Properties** *Sri YAMTINAH, Dimas Gilang RAMADHANI, Antuni WIYARSI, Hayuni Retno WIDARTI & Ari Syahidul SHIDIQ*
W08-010S	**Fostering TPACK Self Efficacy Among Pre-Service Chemistry Teachers: A Case Study from Indonesia** *Anggiyani Ratnaningtyas Eka NUGRAHENI & Niwat SRISAWASDI*

WS08: The 12th Workshop on Technology-Enhanced STEM Education (TeSTEM Workshop)

13:20–14:50	WS08-3
W08-003F	**Math Learning Application on Mobile Devices Following the STEAM Educational Model** *Nguyen-Manh THANG & Pham-Duc THO*
W08-011F	**Does Interactive Augmented Reality Enhance Primary Students' Geometric Understanding and Visual-Spatial Skills in Mathematics Learning?** *Atcharaporn ASSAWAPHUM, Sasivimol PREMTHAISONG & Pawat CHAIPIDECH*
W08-007S	**Promoting Quantitative Analysis in School Chemistry with Technology-Supported Hands-On Laboratory Learning: A Case of Arduino-Based Portable Spectrophotometer** *Ari Syahidul SHIDIQ, Fa'ari SALSABIILA, Sri YAMTINAH, Sri MULYANI, Murni RAMLI, Hayuni Retno WIDARTI & Nahadi*
15:10–17:00	WS08-4
W08-009F	**The Urgency of Small-Scale Laboratory Learning Media with Ethno-Electrochemical Contexts Based on Content Creators** *Hayuni R. WIDARTI, Sumari, Munzil, Nahadi, Ari S. SHIDIQ, Berliyana I. PANULATSIH, Ghaitsa Z. S. P. PUTRI, Nafisah KHAIRUNNISA & Deni A. ROKHIM*
W08-012F	**Exploring the Effect of Marker-Based AR Gamification on Primary Students' Science Concepts and Motivation** *Pawat CHAIPIDECH, Sasivimol PREMTHAISONG, Phattaraporn PONDEE & Niwat SRISAWASDI*
W08-006S	**Exploring the Impact of Digital Divide on the Academic Performance of STEM Students in Hybrid Modality** *May Marie P. TALANDRON-FELIPE & Jundy V. INTAO*

WS09: The 4th Workshop on Innovative Technologies for Enhancing Interactions and Learning Motivation

09:00–10:30	WS09-1
W09-001S	**AR²: Augmented Reality for Enhanced Reading Comprehension** *Allan Jay ESTEBAN*
W09-002S	**Developing the Interactive Game-Based Picture Book "Food Ninja" to Enhance Creativity in Elementary School Students** *Wen Chun LAN, De Jun MO & Joni Tzuchen TANG*
W09-003F	**An Estimation of Student Well-Being Using Experience Sampling** *Arthur W. NEBRAO, Jr. & Maria Mercedes T. RODRIGO*
W09-004S	**Exploring the Use of Short Video Social Media for Learning ESL in Indonesia** *Riska SAPUTRA, Tsaqufal JALILIY & Intan SETIANI*
W09-005S	**Narrative Introduction Text Generation Support System According to Reader Preferences** *Ryusei SHIMONAKA, Kota KUNORI & Tomoko KOJIRI*
W09-007S	**Galvanic Skin Responses and Flow: Insights from Multimodal Learning Analytics in Personal Learning Environment** *Yu-Lin HO, Yuan-Hsuan LEE & Jiun-Yu WU*
10:50–12:20	WS09-2
W09-006F	**Transforming Student Feedback into Institutional Action Plans: A Data-Driven Approach** *Arlene Mae CELESTIAL VALDERAMA*
W09-008F	**BioMol DigiGames: An App for the Mastery of Biomolecules** *Joshua TUMOLVA, Armando Victor GUIDOTE, John Lorence VILLAMIN & Joselito Christian Paulus VILLANUEVA*
W09-009S	**The Era of Learning Programming Through Program: Challenges and Potential of ChatGPT in Revolutionizing High School Programming Education** *Tzu-Chi YANG*
W09-010S	**Code Visualization System for Writing Better Code Through Trial and Error in Programming Learning: Classroom Implementation and Practice** *Shintaro MAEDA, Kento KOIKE & Takahito TOMOTO*
W09-011S	**Optimization of Non-Verbal Information for English Conversation Agents Using Interactive Evolutionary Computation** *Yuma SHIMOSAKA, Emmanuel AYEDOUN & Masataka TOKUMARU*

WS09: The 4th Workshop on Innovative Technologies for Enhancing Interactions and Learning Motivation

13:20–14:50	WS09-3
W09-012S	**Exploring the Benefits of Strategic Hesitations in Language Learning Robots** *Ryusei AZUMA, Emmanuel AYEDOUN & Masataka TOKUMARU*
W09-013S	**Zooming In on Educator Well-Being: Exploring Behavior Attributes, Zoom Fatigue, and Burnout Dynamics** *Kevynn DELGADO, Mary Rose MARTINEZ, Christine Jamela VALSADO & Ryan EBARDO*
W09-014S	**The Effect of Collaborative Anchoring on the Development of Digital Curation Skills Among Nursing College Students** *Chun-Hao CHANG*
W09-015F	**Enhancing Health Education and Learning Motivation in Primary Students Through Augmented Reality and Game-Based Learning: A Case Study** *Nattapat BUNYUEN, Sasivimol PREMTHAISONG & Pawat CHAIPIDECH*
W09-016S	**Improving Engagement in Museums Through Virtual Reality Educational Escape Rooms (VREER): A Framework and Usability Study** *Eric Cesar E. VIDAL Jr., Nicko R. CALUYA, Joan Dominique L. LEE, Kenneth King L. KO, Jed Laszlo O. JOCSON & Gerick Jeremiah Niño N. GO*
W09-017S	**Explore the Effect of Metacognitive Awareness on University Students' Learning Outcomes in the Metaverse: Evidence from Eye-Tracking Data** *Tinghui WU, Yanjie SONG & Xuesong ZHAI*

Doctoral Student Consortium (DSC)

09:00–10:30	**DSC-1**
244	**Real-Time Adaptive Learning Environments Using Gaze and Emotion Recognition Engagement and Learning Outcomes** *AboulHassane CISSE*
254	**Developing a Multimodal Learning Analytics Approach for Collaborative Learning and Metacognitive Strategies in Virtual Learning Environments for Primary Science Education** *Lei TAO & Yanjie SONG*
223	**Competition and Collaboration: A Multi-Modal Analysis of Cognitive Load and Behavior Patterns in Game-Based Learning** *Lishan ZHENG & Wenli CHEN*
10:50–12:20	**DSC-2**
253	**A Proposal for a Quantitative Evaluation Model for Error Image Generation in L2 Vocabulary Learning** *Kazuki SUGITA, Wen GU, Koichi OTA, Prarinya SIRITANAWAN & Shinobu HASEGAWA*
212	**Development and Validation of a Problem-Solving Instrument (Multiple-Choice Questions) for Computational Thinking Among Trainee Teachers in the Klang Valley, Malaysia** *Ahmad Sarji Abdul HAMED, Su Luan WONG & Mohd Zariat Abdul RANI*
217	**OKLM: Open Knowledge and Learner Model Using Educational Big Data** *Kensuke TAKII, Changhao LIANG & Hiroaki OGATA*
13:20–14:50	**DSC-3**
248	**Exploring the Young Learners' Interactions with AI-Generated Multimodal Feedback in Collaborative Writing** *Xinyu GUO*
241	**The Bane of AI in Teaching: Innovation Resistance in Higher Education Instructional Design & Delivery** *Estefanie BERTUMEN & Ethel ONG*
	Discussion

Student Wing (SW)

14:30–16:30	**Student Wing Workshop**
	Chair: *Prof. Yanjie SONG*, The Education University of Hong Kong
	Introduction
	Topic: **Get Your Research Published: Essential Tools and Strategies** *Yin YANG, The Education University of Hong Kong*
	Q&A Session
	Topic: **Unlock Your Early Career Success: Tips and Opportunities for Securing Grants** *Shurui BAI, The Education University of Hong Kong*
	Q&A Session
	Interactive Session
	Closing

Early Career Workshop (ECW)

Monday, November 25

09:00–10:30	**ECW-1**
ECW01	**Can Use of Technologies help Reduce Biases in Academic Recruitment?** *Kashmira DAVE*
ECW02	**Leveraging AI-Powered Virtual Meeting Summaries: Towards an Evidence-Based Classroom Observation Assessment** *Arlene Mae CELESTIAL VALDERAMA*
	Advisors Tzu-Chi YANG, Assistant Professor, National Yang Ming Chiao Tung University Cheng-Huan CHEN, Associate Professor, National Tsing Hua University Shao-Chen CHANG, Assistant Professor, Yuan Ze University