



ICCE 2024

The 32nd International Conference
on Computers in Education

MANILA, PHILIPPINES

Keynote Speakers, Theme-Based Speakers, Panels

Wednesday, November 27

10:20–11:20	<p>Keynote Speaker</p> <p>Getting ready for the age of AI: Developing self-regulated learners</p> <p><i>Dragan Gašević</i></p>
11:20–12:20	<p>Panel-3</p> <p>Learning Languages in “Smarter” Ways: Theory-Informed Utilization of Smart Technologies in Contextualized, Authentic, and Communicative Language Learning</p> <p><i>Lung-Hsiang WONG, Yun WEN, Vivian Wen-Chi WU, Yoshiko GODA & Ting-Chia HSU</i></p>
13:20–14:00	<p>Theme-Based Speaker</p> <p>How to Better Understand the Collaborative Component in Computer-Supported Collaborative Learning (CSCL): Current Landscape, Challenges and Future Prospects</p> <p><i>Johanna Pöysä-Tarhonen</i></p>
15:20–16:50	<p>Panel-2</p> <p>Global Harwell' in an Examination-Driven Education System and an Excellence-Pursuing Society: Possible? How? Better with Digital Technologies?</p> <p><i>Fu-Yun YU, Tak-Wai CHAN, Sahana Murthy, Su Luan WONG, Wenli CHEN, Hyo-Jeong SO, & Hiroaki OGATA</i></p>

Thursday, November 28

09:00–10:00	<p>Keynote Speaker</p> <p>Critical Virtual Exchange for Critical Global Citizenship Education</p> <p><i>Mirjam Hauck</i></p>
10:20–11:00	<p>Theme-Based Speakers</p> <p>In search of Intelligent Pedagogical Content Knowledge (IPACK)</p> <p><i>Ching Sing Chai</i></p> <p>Multi-Modal Learning Analytics for Learning Design</p> <p><i>Wenli Chen</i></p>
11:00–12:00	<p>Panel-1</p> <p>Digital Technology for Inclusive and Equitable Quality Education</p> <p><i>Wei qin CHEN, Jon MASON, Faisal BADAR, Shitanshu MISHRA & Maria Mercedes T. RODRIGO</i></p>
13:00–14:00	<p>Keynote Speaker</p> <p>Learning from Generative AI for Cognitive and Pedagogical Advancement</p> <p><i>Michelle Banawan</i></p>

Friday, November 29

09:00–10:00	<p>Keynote Speaker</p> <p>Personalized Gamification Experiences: From Design to Impact</p> <p><i>Seiji Isotani</i></p>
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CI: ICCE Sub-Conference on Artificial Intelligence in Education/Intelligent Tutoring System (AIED/ITS) and Adaptive Learning

Wednesday, November 27

11:20–12:20	AIED/ITS-1
58F BSPN	The Impact of Instructional Videos Supported by AI-driven Tutoring System on EFL Listening and Speaking <i>Xiangyu TAN and Xiuyuan ZUO</i>
137F	LLM-Generated Personalized Analogies to Foster AI Literacy in Adult Novices <i>Chen CAO, Eason CHEN, Zoe Xiao FANG, Lydia CAO, Jionghao LIN, and Ruizhe LI</i>
14:00–15:00	AIED/ITS-2
13S	UniSpLLM: An Integrated Approach for Enhancing Reasoning and Education with Large Language Models <i>Hanyu ZHAO, Yuzhuo WU, Yang YU, Liangyu CHEN, and Xiaohua YU</i>
106S	Availability and Effectiveness of Generative AI for Web-based Investigate Learning <i>Yutaka WATANABE and Akihiro KASHIHARA</i>
122S	Developing a LLMs-driven System Based on Human-AI Progressive Code Generation Framework to Assist Mathematics Learning <i>Chun Yan Enoch SIT, Yin YANG, Wing Kei YEUNG, and Siu Cheung KONG</i>
15:20–16:50	AIED/ITS-3
175F	Evaluating the Performance of Copula based Item Response Theory Models for Interpretable Assessment <i>Eduardo GUZMÁN and Eva MILLAN</i>
80S	Enhancing Diversity in Difficulty-Controllable Question Generation for Reading Comprehension via Extended T5 <i>Teruyoshi GOTO, Yuto TOMIKAWA, and Masaki UTO</i>
190S	The Effect of Feature Reliability on the Generalization of Machine Learning Models in Educational Data <i>Yingbin ZHANG</i>
258ES	Exploring High School Students' Transition from Traditional Search Engines to ChatGPT for Course learning: A Push-Pull-Mooring Model Perspective <i>Chien-Liang LIN, Chih-Yu YANG, Pei-Chi WU, Yu-Cheng LIN, and Chi-Heng LI</i>
266ES	Exploring Dialogue Patterns in Argumentation with Pre-set ChatGPT Personas <i>Seunmin EUN</i>



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11:00–12:00	AIED/ITS-4
94F BOPN	Predicting and Analyzing Students' Higher-Order Questions in Collaborative Problem-Solving <i>Shan ZHANG, Toni EARLE-RANDELL, Qian SHEN, Anthony F. BOTELHO, Maya ISRAEL, Kristy Elizabeth BOYER, Collin F. LYNCH, and Eric WIEBE</i>
120F BTDPN	Reflection Support System with Audience Robots for Presentation Practice <i>Yuya KISHIMOTO and Tomoko KOJIRI</i>
15:50–16:50	AIED/ITS-5
151F	Facilitating Holistic Evaluations with LLMs: Insights from Scenario-Based Experiments <i>Toru ISHIDA, Tongxi LIU, Hailong WANG, and William CHEUNG</i>
126S	Is Internal State Feedback in an E-learning Environment Acceptable to People? <i>Atsushi ASHIDA, Ryosuke KAWAMURA, Shizuka SHIRAI, Noriko TAKEMURA, Mehrasa ALIZADEH, Hideaki HAYASHI, and Hajime NAGAHARA</i>
211ES	Integrating Explanations in Active Video Watching <i>Raul Vincent LUMAPAS, Antonija MITROVIC, Matthias GALSTER, Sanna MALINEN, Jay HOLLAND, and Pasan PEIRIS</i>

Friday, November 29

10:20–11:10	AIED/ITS-6
238ES	Personalized Comment Reviewing in Active Video Watching: Investigation of Learners' Cognitive Load <i>Ehsan BOJNORDI, Antonija MITROVIC, Matthias GALSTER, Sanna MALINEN, and Jay HOLLAND</i>
251ES	AI-Driven Feedback for Enhancing Students' Mathematical Problem-Solving: The ScaffoldiaMyMaths System <i>Daner SUN and Jingyun WANG</i>
259ES	A Study on High School Students' Continuance Intention to Use ChatGPT for Learning Assistance: An Exploration Based on Self-Determination Theory <i>Chien-Liang LIN, Tian-Yun LIN, Shi-En LIN, and Yu-Chen LIN</i>



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C2: ICCE Sub-Conference on Computer-supported Collaborative Learning (CSCL) and Learning Sciences

Wednesday, November 27

14:00–15:00	CSCL-1
31F	Unveiling the Interplay of Students' Epistemic Emotions and Knowledge Building Activities in Design Studios <i>Alwyn Vwen Yen LEE, Chew Lee TEO, Aloysius ONG, and Katherine YUAN</i>
144F BOPN, BSPN	MESHing Minds: Bridging the Gap Between Creativity and IoT Programming Through Collaborative Mixed Reality <i>Yusuke SAKABE, Emmanuel AYEDOUN, and Masataka TOKUMARU</i>

Thursday, November 28

14:00–15:30	CSCL-2
52S	Students' Verbal Interaction Patterns in Computer-Supported Collaborative Learning: The Role of Individual Preparation <i>Wenli CHEN, Lishan ZHENG, Mei-Yee Mavis HO, Qianru LYU, Hua HU, and Zirou LIN</i>
88S	Enhancing Social Learning in Active Video Watching <i>Ehsan BOJNORDI, Antonija MITROVIC, Matthias GALSTER, Sanna MALINEN, Jay HOLLAND, and Negar MOHAMMADHASSAN</i>
124S	Rethinking Trust in Human-AI Collaboration in the generative AI era <i>Yijie LU and Bo Jiang</i>
147S	Infrastructuring for Collective Cognitive Responsibility: A Case Study of a Student Collaboratory Design <i>Chew Lee TEO, Aloysius ONG, Alwyn Vwen Yen LEE, Guangji YUAN, and Kennedy LOO</i>
148S	Review of different assessment methods used by Online Inquiry-based learning systems <i>Nitesh Kumar JHA, Plaban Kumar BHOWMIK, and Kaushal Kumar BHAGAT</i>
200S	Investigating Secondary School Students' Academic Emotions in Data Science Learning <i>Gaoxia Zhu, Chew Lee TEO, Katherine Guangji YUAN, Chin Lee KER, Aloysius ONG, and Alwyn Vwen Yen LEE</i>

Friday, November 29

10:20–11:10	CSCL-3
185F	Online making-based learning at scale: Towards equity in STEM learning <i>Deeksha GAUTAM, Aditi KOTHIYAL, Rashmi SHEORAN, Neha GARG, Adithi IYER, Ashutosh BHAKUNI, Jay THAKKAR, Jyothi KRISHNAN, and Manish JAIN</i>
99S	Verbal Interaction Patterns in Online Collaborative Learning Design: Comparison of High Performing and Low Performing Groups <i>Wenli CHEN, Lishan ZHENG, Mei-Yee Mavis HO, Hua HU, and Qianru LYU</i>



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C3: ICCE Sub-Conference on Advanced Learning Technologies (ALT), Learning Analytics and Digital Infrastructure

Wednesday, November 27

11:20–12:20	ALT-1
64F	Proficiency modeling in junior high math: adapted cognitive statistical models to e-book learning contexts <i>Changhao LIANG, Kensuke TAKII, and Hiroaki OGATA</i>
98F	An Embodied Projection Recognition System for Situated Learning to Enhance Learning Effectiveness and Self-Reflection Ability <i>Hui-Ting LIU, Zi-Ting DING, Su-Hang YANG, Jian-Yu WU, Jen-Hang WANG, Po-Yao CHAO, Yung-Yu ZHUANG, and Gwo-Dong CHEN</i>
14:00–15:00	ALT-2
196F BOPN	Combining multimodal analyses of students' emotional and cognitive states to understand their learning behaviors <i>Ashwin T S, Caitlin SNYDER, Celestine AKPANOKO, Srigowri M P, and Gautam BISWAS</i>
136S	Development of Metacognitive Reflection Support System on Creative Discussion <i>Toshimasa SHIMIZU, Yuki HAYASHI, and Kazuhisa SETA</i>
149S	Utilization of Japanese Public Educational Data by Retrieval Augmented Generation for Policy Research <i>Kyosuke TAKAMI</i>
15:20–16:50	ALT-3
97F	Analyzing Student Behavior in Viat-map: Steps and Time as Performance Indicators <i>Banni Satria ANDOKO, Vivin Ayu LESTARI, Agung Nugroho PRAMUDHITA, Amalia NURAINI, Inda Khoirun NISAK, and Tsukasa HIRASHIMA</i>
113F	Comparison of Learners' Self-direction Behavior Across Contexts and Phases <i>Junya ATAKE, Chia-Yu HSU, Huiyong LI, Izumi HORIKOSHI, Rwitajit MAJUMDAR, and Hiroaki OGATA</i>
131S	Progressive Behavior Patterns of Online Discussion at Different Circle of Self-Regulated Learning <i>Shih-Hua HUANG, De-Yu SHIAU, Yung-Sian FANG, and Ting-Chia HSU</i>
143S	Forest/CR: Critical Paper Reading Support System <i>Tomoya KII, Kazuhisa SETA, and Yuki HAYASHI</i>



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Thursday, November 28

11:00–12:00	ALT-4
4S	Exploring the Relationship of Personality Domains and Visual Attention Patterns in Novice Programmers <i>Caren PACOL, Maria Mercedes RODRIGO, and Christine Lourrine TABLATIN</i>
35S	Construction of a Japanese Language Learning Support System that Enables Word Accent Learning <i>Satoru KOGURE, Kazuki TOMITA, Yasuhiro NOGUCHI, Koishi YAMASHITA, Tatsuhiko KONISHI, and Makoto KONDO</i>
41S	Developing a feedback analytic tool to support instructor reflection <i>Feng LIN, Chenchen LI, Rebekah Wei Ying LIM, and Yew Hau LEE</i>
139S	Effect of Re-composition Concept Mapping for Sharing Reference Maps on Serial Concept Mapping: A Preliminary Study <i>Rian FITRIANSYAH, Harry Budi SANTOSO, Lia SADITA, Baginda Anggun Nan CENKA, Syifa NURHAYATI, Yusuke HAYASHI, and Tsukasa HIRASHIMA</i>
14:00–15:30	ALT-5
48F BTDPN	Designing Recommendations for Productive Learning Habit-building from Learning Logs <i>Chia-Yu HSU, Izumi HORIKOSHI, Huiyong LI, Rwitajit MAJUMDAR, and Hiroaki OGATA</i>
101F	Designing Interaction Scenario for Alleviating Persistence in Learning Strategies <i>So SASAKI and Akihiro KASHIHARA</i>
166F	Enhancing Vocational Training Through Immersive Technology: A Study on Digital Magic Mirrors <i>Jen-Hang WANG, Hung-Wei TSENG, Su-Hang YANG, Chih-Kai CHANG, Yung-Yu ZHUANG, and Gwo-Dong CHEN</i>
145S	Facilitating Thinking Like a Historian in Open-ended Learning Space: A White Box Approach <i>Aoi MATSUURA, Yuki HAYASHI, and Kazuhisa SETA</i>
15:50–16:50	ALT-6
91S	Boosting Course Recommendation Explainability: A Knowledge Entity-Aware Model using Deep Learning <i>Tianyuan YANG, Baofeng REN, Boxuan MA, Tianjia HE, Chenghao GU, and Shinichi KONOMI</i>
191S	Error Tolerance in Automatic Short Answer Grading with Large Language Models: The Case of Handwriting Recognition Errors <i>Ziqi TAN, Yingbin ZHANG, and Su MU</i>
209ES	Identifying Key Indicators of Proficiency in Junior High Math : Roles of Daily Handwriting Learning Logs <i>Yudai OKAYAMA, Changhao LIANG, Kensuke TAKII, and Hiroaki OGATA</i>
267ES	Relationship Analysis Between Procrastination Behavior and Non-cognitive Abilities <i>Yasuhisa TAMURA and Keito MORINO</i>



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Friday, November 29

10:20–12:00	ALT-7/8
70F	Effectiveness of Information Organizing Activities After Lecture in Mathematics: A Comparison between Kit-Build Concept Mapping and Structured Summary Writing <i>Lintang Matahari HASANI, Kasiyah JUNUS, Lia SADITA, Tsukasa HIRASHIMA, and Yusuke HAYASHI</i>
77F BSPN	Automated Recommendations for Revising Lecture Slides Using Reading Activity Data <i>Erwin Daniel LÓPEZ ZAPATA, Cheng TANG, Yuta TANIGUCHI, Fumiya OKUBO, and Atsushi SHIMADA</i>
40S	Optimizing Causal Inference Approach for Exploring Shallow Reading Behavior with Generative Adversarial Networks <i>Yu BAI, Fuzheng ZHAO, Wenhao WANG, and Chengjiu YIN</i>
60S	Exploring Linguistic Sophistication of Discussion Board Posts in University Learning Management Systems <i>Michelle P. BANAWAN, Clarence James MONTEROZO, and Maria Mercedes T. RODRIGO</i>
227ES	Toward Contextualized Handwriting Process Analysis: Comparison between Problem Types in Math <i>Shunsuke TONOSAKI, Taito KANO, Satomi HAMADA, Izumi HORIKOSHI, and Hiroaki OGATA</i>
13:00–14:00	ALT-9
9S	Code Tracing Support Environment Based on Visualization of Cooperative Behavior of Multiple-Flows <i>Yasuhiro NOGUCHI, Kotaro SUNAMA, Satoru KOGURE, Raiya YAMAMOTO, Koichi YAMASHITA, and Tatsuhiko KONISHI</i>
90S	Peer Feedback Feature Analysis with Large Language Models: An Exploratory Study <i>Qianru LYU, Zirou LIN, and Wenli CHEN</i>
214ES	Relationship Between Students' Scores of Weekly Tests and Final Exam <i>Satomi HAMADA, Izumi HORIKOSHI, and Hiroaki OGATA</i>
218ES	Exploring reading speed profiles in EFL extensive reading <i>Hatsune ICHIDATE, Yiling DAI, Brendan FLANAGAN, and Hiroaki OGATA</i>



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C4: ICCE Sub-Conference on Technology Enhanced Learning for Mobility of Learners and Learning Experiences (TEML)

formerly known as Classroom, Ubiquitous and Mobile Technology-Enhanced Learning (CUMTEL)

Wednesday, November 27

11:20–12:20	TEML-1
71F BSPN	Linking Real-World Experiences with Course Contents: A Text Mining Approach Toward Effective “There and Back Again” <i>Manabu ISHIHARA, Izumi HORIKOSHI, and Hiroaki OGATA</i>
75F BTDPN	Marrying Physical and Virtual Realms: An Embodied, Multi-Modal Approach to Situational Learning in Digital Reality <i>Vando Gusti AL HAKIM, Yao-En CHEN, Meng-Heng LIN, Chia-Ying CHANG, Jen-Hang WANG, Chih-Kai CHANG, Yungyu ZHUANG, Su-Hang YANG, and Gwo-Dong CHEN</i>

Thursday, November 28

11:00–12:00	TEML-2
132F	Classifying Self-Reflection Notes: Automation Approaches for GOAL system <i>Zixu WANG, Chia-Yu HSU, Izumi HORIKOSHI, Huiyong LI, Rwitajit MAJUMDAR, and Hiroaki OGATA</i>
50S	Using Educational VR Systems to Promote Inquiry-Based Learning in Natural Science <i>Shu-Ying TSAI, Zhi-Hong CHEN, and Min-Hsuan WENG</i>
135S	Generative Artificial Intelligence in Education: Evaluating Students’ Self-efficacy and Utilization in their Homework <i>Elanie VIZCONDE, Ma. Rowena CAGUIAT, and Ethel ONG</i>

Friday, November 29

10:20–12:00	TEML-3/4
51F BOPN	Low vs. high immersion in Metaverse-based learning: How pre-service teachers balanced between instruction and assessment in learning design <i>Darmawansah DARMAWANSAH, Dani PUSPITASARI, and Gwo-Jen HWANG</i>
160S	Participatory Design of an AI Digital Textbook with Deaf and Hard-of-Hearing Students <i>Ga Young LEE, Jieun CHOI, Seonhee NA, and Hyo-Jeong SO</i>
161S	Technology Considerations in Building Virtual Educational Avatars <i>Antun DROBNJAK and Ivica BOTICKI</i>
194S	Data-driven Peer Recommendation and Its Applications in Extracurricular Learning <i>Peixuan JIANG, Changhao LIANG, and Hiroaki OGATA</i>



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C5: ICCE Sub-Conference on Educational Gamification and Game-based Learning (EGG)

Wednesday, November 27

15:50–16:50	EGG-1
16F BSPN	Design and Evaluation of the Usability of a Game-based Learning Application for Learners with Dyslexia <i>Vincent GARCIA, Arnel OCAY, Joshua PERADILLA, Mary Rose SAGUIPED, and Myla Karen ARENAS</i>
72F	Comparing Effects of Adaptive Gamification and One-size-fits-all Gamification on Students' Task Completion Process and Learning Performance <i>Shurui BAI and Yingxue LIU</i>
162F BOPN	Dialogue Game-based Learning for AI Ethics Education <i>Hyo-Jeong SO and Sung-Eun KIM</i>
125S	Detecting Off-task Behavior of Learners in Minecraft Using Exploration and Personalized Features <i>Maricel A. ESCLAMADO and Maria Mercedes T. RODRIGO</i>

Thursday, November 28

14:00–15:30	EGG-2
65F BTDPN	A Robot-assisted Scenario Training for Students with ASD <i>Ka Yan FUNG, Kwong Chiu FUNG, Tze Leung Rick LUI, Feifan PANG, Huamin QU, Shenghui SONG, and Kuen Fung SIN</i>
103F	Exploring the Impact of Incorporating Digital Escape Room on Learners' Performance and Motivation in Environmental Sustainability Education <i>Yu-Chao LAI and Jie-Chi YANG</i>
133S	Middle School Students' Ability to Detect Lies When Interacting with an Educational AI Robot <i>Ahmed SALEM and Kaoru SUMI</i>

Friday, November 29

13:00–14:00	EGG-3
73S	FLOU: Evaluating the Intrinsic Motivation of Learners in Gamifying Academic Programs through a Gamified Mobile Application <i>Ma. Louisa PEREZ, Marl Vincent AGRAVANTE, Jeru Kian FERNANDEZ, and Joshua MARTINEZ</i>
164S	Designing an Educational Game for Facilitating Development of Media and Information Literacy <i>Jun XIE, Xiang LI, Kotomi HASEGAWA, Zhichun LIU, and Frank REICHERT</i>
262ES	Developing a Visualized Data Guessing Game to Assess Data Literacy <i>Ruei-Yi XIE and Ming-Chi LIU</i>



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C6: ICCE Sub-Conference on Technology Enhanced Language Learning (TELL)

Wednesday, November 27

14:00–15:00	TELL-1
123F BSPN	TAMMY: Supporting EFL Translation Practice With an LLM-Powered Chatbot <i>Steve WOOLLASTON, Brendan FLANAGAN, Patrick OCHEJA, Yiling DAI, and Hiroaki OGATA</i>
172F BTDPN	Impact of Online Video Dubbing Activities on Grade 5 Students' Pronunciation, Accuracy, and Fluency in English Speaking: An Experimental Research <i>Min XIE and Alex Wing Cheung TSE</i>

Thursday, November 28

15:50–16:50	TELL-2
158F BOPN	Open Knowledge and Learner Model: Mathematical Representation and Applications as Learning Support Foundation in EFL <i>Kensuke TAKII, Changhao LIANG, and Hiroaki OGATA</i>
157S	The Effect of LINE Chatbot with Escape Game Design on English Learning Achievement, Situational Interest, and Student Engagement <i>Elva Yi Fang LO and Jerry Chih-Yuan SUN</i>
112S	Examining Augmented Reality's Influence on Pronunciation Training: Insights from PinyinGuo's Application and Comparative Avatar Testing <i>Daria SINYAGOVSKAYA</i>

Friday, November 29

11:10–12:00	TELL-3
115S	Improve English Pronunciation at Word Level for Thai EFL Learners in Southern Region using End-to-End Automatic Speech Recognition <i>Nattapol KRITSUTHIKUL, Kongpop BOONMA, Jirapond MUANGPRATHUB, Wasan Na CHAI, and Thepchai SUPNITHI</i>
128S	Investigation on the Usage Status of a Support System for Writing English Paragraph Outlines in English Classes <i>Afifah ILHAM, Tomohiro KUROKI, Akira NAKANO, and Hidenobu KUNICHIKA</i>
152S	Mapping Morphological Patterns: A Framework for Rinconada Bikol Language Morphological Analysis and Stemming <i>Tiffany Lyn PANDES and Joshua MARTINEZ</i>
13:00–14:00	TELL-4
14S	Enhancing Chinese Language Education through AI-Assisted Project-Based Learning: A Qualitative Study on Learning Values and Multimedia Skills Development <i>Satoko SUGIE</i>
184S	Development of a Chatbot and Evaluation of its Effects on Learning and Intrinsic Motivation of a Public Secondary School's Spanish Language Learners <i>Julian Eymard JANUBAS, Josiah Jose DEYSOLONG, Hanz Lucas ESTOPIA, Karl Mykell TABBAY, and Jun Rangie OBISPO</i>
186S	Enhancing Language Learning through Multimodal AI-Driven Feedback on Picture Descriptions: An Eye-Tracking Study <i>Ruibin ZHAO, Zhiwei XIE, Yipeng ZHUANG, Huixian LI, and Philip L.H. YU</i>



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C7: ICCE Sub-Conference on Practice-driven Research, Teacher Professional Development and Policy of ICT in Education (PTP)

Wednesday, November 27

11:20–12:20	PTP-1
24F	Do Academic Stress and Risk Propensity Affect Behavioral Intention to Use ChatGPT among University Students? <i>Brylle SAMSON, Ronnie LURIAGA, and Ryan EBARDO</i>
53F	Who is a good computational thinker? Mapping Behavioral Dispositions of Middle-School Children Based on Real-Life, Algorithmic Tasks <i>Shashaank PINNAMARAJU, Lazar TONY, and Anveshna SRIVASTAVA</i>
15:20–16:50	PTP-2
61F BOPN	Representing Learning Progression of Unguided Exercise Solving: A Generalization of Wheel-Spinning Detection <i>Taisei YAMAUCHI, H. Ulrich HOPPE, Yiling DAI, Brendan FLANAGAN, and Hiroaki OGATA</i>
6S	Factors Contributing to the Negative Online Learning Academic Self-Concept of College Students <i>Rex BRINGULA, Edmon TORRES, Roman Paulo BAET, Ralph Lawrence GARCIA, Franchesca Mari MORALES, Jan Carlo RAMOS, and Hanna Sophia SARMIENTO</i>
7S	Teachers' Perspectives on Integrating AI tools in Classrooms: Insights from the Philippines <i>Vanessa SIBUG, Vicky VITAL, John Paul MIRANDA, Emerson FERNANDO, Almer GAMBOA, Hilene HERNANDEZ, Joseph Alexander BANSIL, Elmer PENECILLA, and Dina GONZALES</i>
10S	Research on the Dual-Pathway Impact of Artificial Intelligence Technology on Teachers' Human-Machine Collaboration <i>Yujie XU and Yiling HU</i>
30S	Does Learning Interest Predict Academic Performance in an Interest-driven HyFlex Course? <i>Liang Jing TEH, Su Luan WONG, Mohd Zariat ABDUL RANI, Mas Nida MD KHAMBARI, and Sai Hong TANG</i>



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C7: ICCE Sub-Conference on Practice-driven Research, Teacher Professional Development and Policy of ICT in Education (PTP)

Thursday, November 28

11:00–12:00	PTP-3
19S	Using a Teaching Framework to Identify Resilient and Persistent Teaching Practices During the Pandemic <i>Ma. Monica MORENO, Johanna Marion TORRES, Timothy Jireh GASPAR, Jenilyn CASANO, and Maria Mercedes RODRIGO</i>
92S	Evaluating the Effectiveness of a Professional Development Course on Artificial Intelligence Literacy for Administrative Staff in Higher Education <i>Siu Cheung KONG, Zoe Wai Sum MAK, Yue WU, and Yin YANG</i>
140S	From textbooks to classroom implementation: Experience report of middle school science teachers' pedagogy for activity-based learning <i>Zun Phoo MO, Sunny Prakash PRAJAPATI, Sheeja VASUDEVAN, and Sahana MURTHY</i>
155S	Appropriating AI-powered Pedagogical Affordances for Vocabulary Learning <i>Xinyu GUO and Yun WEN</i>
14:00–15:30	PTP-4
114F BTDPN	Extraction of Important Characteristics for Data-informed Guidance and Counseling from Daily Usage Log Data <i>Junya ATAKE, Chia-Yu HSU, Izumi HORIKOSHI, and Hiroaki OGATA</i>
146F	Driving Informed EdTech Quality Decision-making: A Research-Practice Partnership-Based Solution For Diverse Stakeholders' Needs <i>Ishika ISHIKA, Angelina Susan PHILIP, Sheeja VASUDEVAN, and Sahana MURTHY</i>
20S	Determinants of ChatGPT Adoption in Academe & Other Fields – A Review on Theoretical Perspective <i>Gerand Boy ELINZANO and Michelle Renee CHING</i>
171S	Exploring the Entanglement between Technology and Pedagogy: A Case Study of Knowledge Building <i>Yee Yin Tan, Seng Chee TAN, and Chew Lee TEO</i>
15:50–16:50	PTP-5
95S	Determinants of ICT Competency Among Public School Teachers in Bukidnon <i>Gladys AYUNAR, Nathalie Joy CASILDO, May Marie TALANDRON-FELIPE, Kent Levi BONIFACIO, Jinky MARCELO, and Fe SEBUGUERO</i>
226ES	Preliminary Exploration on the Dimensions of Digital Learning Agility among Teachers in Malaysia <i>Nur Dania MOHD ROSLI, Kamilah ABDULLAH, Mas Nida MD KHAMBARI, Su Luan WONG, Noor Syamilah ZAKARIA, Priscilla MOSES, and Nur Aira ABDRAHIM</i>
228ES	Analysis of Factors Influencing Teacher Behavioural Engagement in Distance Training Based on MOA and SDT <i>Zhou JIN</i>
257ES	The Impact of AI Literacy on Teacher Efficacy and Identity: A Study of Korean English Teachers <i>Seunmin EUN</i>



ICCE 2024

The 32nd International Conference
on Computers in Education

MANILA, PHILIPPINES

C7: ICCE Sub-Conference on Practice-driven Research, Teacher Professional Development and Policy of ICT in Education (PTP)

Friday, November 29

11:00–12:00	PTP-6
183F	Constructing desirable learning habits: Evidence from an Instructional System Design course based on the IDC theory <i>Anveshna SRIVASTAVA, Sandeep YADAV, Sahana MURTHY, and Sridhar IYER</i>
188F BSPN	The Impact of Using an Online Collaborative Platform in Blended Learning on Postsecondary Vocational School Year One Students' Self-Regulated Learning Abilities: a Quasi-Experimental Research <i>Siyu WU and Alex Wing Cheung TSE</i>

Poster Session 1

Wednesday, November 27
16:50–17:50

AIED/ITS	
47P	Image-Based Pili (Canarium ovatum, Engl.) Fruit Variety Classifier App: An Approach to Enhancing Teaching Biodiversity and Crop Science <i>Leo Constantine BELLO and Joshua MARTINEZ</i>
54P	Authorship Forensics Portal <i>Robert SCHMIDT, Maiga CHANG, Hsiang-Han CHENG, Greg FREDIN, Kevin HAGHIGHAT, and Rita KUO</i>
55P	Designing learner-centered collaborative learning by incorporating AI-based teacher/learner agents with a cognitive model <i>Yugo HAYASHI, Shigen SHIMOJO, and Tatsuyuki KAWAMURA</i>
59P	Student Perceptions of Using Generative AI-driven Chatbot in Learning Programming <i>Ean Teng KHOR, Leta CHAN, Elizabeth KOH, and Peter SEOW</i>
ALT	
12P	Towards the Development of PIA 2.0: A Pedagogical Agent that Exhibits Synthetic Facial Expressions <i>John Lorenz DELA CRUZ, Paulyn Joy DELA CRUZ, Joyce Antonette GUADALUPE, Jiabianca MACARAE, Piolo Jose MONTESA, Mark Paul RAMOS, and Rex BRINGULA</i>
32P	Early Detection of At-Risk Students through Learning-Activity Forecasting <i>Yuya Ozaki, Daisuke Deguchi, Haruya Kyutoku and Hiroshi Murase</i>
165P	What Insights Are Gained from Students’ Trace Data in Homework? <i>Satomi Hamada, Yuko Toyokawa, Taito Kano, Izumi Horikoshi and Hiroaki Ogata</i>
TEML	
36P	A TPB-TAM Approach to Identifying Adoption Factors of Hyflex among Educators <i>Elanie VIZCONDE, Joshua ISAGUIRRE, Gabriel Luis LIWANAG, and Ryan EBARDO</i>
111P	Designing Interactive Mathematical Teaching Tools for Tablet-Based Learning: Enhancing Student Engagement and Tactile Exploration <i>Loong-Chuan LEE, Chia-Ying LIN, Yu-Han TAN, and Kuo-Yu LIU</i>
TELL	
127P	Implementation and an Evaluation of a Search Function Allowing Misspelling for a Japanese Learning System <i>Hidenobu KUNICHIKA and Miguel Antonio VILLALOBOS ZUNIGA</i>
PTP	
2P	An Experience Sampling Study of Student Emotional Life: Preliminary Results <i>Maria Mercedes T. RODRIGO, Liane Peña ALAMPAY, Queena N. LEE-CHUA, and Irish Danielle MORALES</i>
3P	Theory-driven Design for the Development of a Student-Centered Error-correction Online Learning System <i>Fu-Yun YU</i>
62P	Contextual factors affecting large-scale educational technology implementation: policy intention versus practice <i>Arjun PRASAD, Jayakrishnan WARRIEM, and Sridhar IYER</i>
WIPP	
216WIPP	Support System for Focused Discussion in Consensus Building for Team Sports <i>Kazuma KUWADA and Tomoko KOJIRI</i>
222WIPP	Understanding Collaborative Teacher Growth from the Lens of Digital Learning Agility: A Pathway to Educational Excellence <i>Kamilah ABDULLAH, Mas Nida MD KHAMBARI, Su Luan WONG, Noor Syamilah ZAKARIA, Nur Dania MOHD ROSLI, Priscilla MOSES, and Nur Aira ABD RAHIM</i>
239WIPP	Online Educational Game for Realistic Interior Design with Design Thinking Process and Multidimensional Scaffolding <i>Chou-Pai YEOH and Huei Tse HOU</i>
247WIPP	Microlearning strategy in ICT education <i>Kotaro TORII</i>
250WIPP	What do Students Say About ChatGPT? A Topic Modeling Analysis of Perception on GenAI in Academic Writing <i>Lingxi JIN, Kyuwon KIM, Hyo-Jeong SO, and Ga Young LEE</i>
265WIPP	Generative AI and XR in Education: Student Co-Created Metaverse Worlds in an International Virtual Exchange <i>Masako HAYASHI</i>
SATELUC	
202SAT	Practical Skills Acquisition in Domestic Wiring as Determinants of Entrepreneurship Development among Undergraduate Students in Nigeria <i>Ismaheel Adewale BADRU</i>
207SAT	Transforming Education in Timor-Leste: The Role of e-Learning and Artificial Intelligence in Boosting Student Achievements <i>Estanislau Sousa SALDANHA, Edio DA COSTA, Aderita Mariana TAKELEB, Salustiano DOS ROEIS PIEDADE, and Carla Alexandra DA COSTA</i>
208SAT	Learning with Virtual Avatars: Insights into Performance and Resource Needs <i>Antun DROBNJAK and Ivica BOTICKI</i>
219SAT	MS Teams acceptance factors among Polish and Ukrainian students <i>Nataliia DEMESHKANT, Sławomir TRUSZ, Tetiana MATUSEVYCH, and Amy SEPIÓŁ</i>
225SAT	Boosting Literacy with an Educational RPG For Polytechnic Students <i>Agung PRAMUDHITA, Puteri MAWANGI, and Banni ANDOKO</i>
230SAT	Development of the Board Game ‘Career Champion’: Gamification for Understanding Job Interview Preparation <i>Farid Angga PRIBADI, Eng. Banni Satria ANDOKO, and Erina SEVIYANTI</i>
232SAT	AI Tools Experience in Civitas Academic Portal in Timor Leste <i>Agostinho Dos Santos GONÇALVES, Sebastião PEREIRA, and Saida ULFA</i>
233SAT	AI Literacy among Lecturers in University: A Case Study in a Private University in Timor Leste <i>Agustinho Dos Santos GONCALVES, Jacinto DE OLIVEIRA JUNIOR, Natalino Pereira PARADA, and Saida ULFA</i>
235SAT	Tridharma-Based Lecturer Performance Assessment System Using the Saw Method <i>Anita GUTERRES, Delfim DA SILVA, Antonio GUTERRES, and Joaquim DE JESUS VAZ</i>
252SAT	AI as a Co-Teacher: Enhancing Creative Thinking in Underserved Areas <i>Roberto ARAYA</i>
268SAT	Global Trends in Computational Thinking in Curricula: A Comparative Review <i>Martha Nury BONILLA-CASTAÑEDA, Klinge Orlando VILLALBA-CONDORI, Hector CARDONA-REYES, Claudia Acra-DESPRADEL, and Kee-Fui TURNER-LAM</i>

Poster Session 2

Thursday, November 28
16:50–17:50

AIED/ITS	
66P	Quality Criteria Acquisition Support System of a Product by Explaining It with Components <i>Kota KUNORI and Tomoko KOJIRI</i>
74P	Exploring Explainable Artificial Intelligence in Active Video Watching <i>Raul Vincent LUMAPAS, Antonija MITROVIC, Matthias GALSTER, and Sanna MALINEN</i>
87P	A Proposal of Quality Assurance Programming Exercise <i>Nobuya ISHIHARA, Samsul HUDA, and Yasuyuki Nogami</i>
89P	Enhancing Engagement in Distance Learning: Overcoming Learner Isolation through ICT Tools <i>Kumiko AOKI, Itaru KANEKO, Ken KURIYAMA, Takeo TATSUMI, and Takahiro MIYAJIMA</i>
96P	Scaffolding Students’ Ill-structured Problem Solving Via LLM -- Multi-armed Bandit Problem as a Case <i>Jiayi LIU and Bo JIANG</i>
102P	Navigating Europe’s Artificial Intelligence Act: Application of LLMs in classrooms <i>Upasana DASGUPTA and Rwitajit MAJUMDAR</i>
142P	Learning Support Environment with Fill-in-Blank Exercise Based on Program Visualization System <i>Koichi YAMASHITA, Shuya SUZUKI, Satoru KOGURE, Yasuhiro NOGUCHI, Raiya YAMAMOTO, Tatsuhiko KONISHI, and Yukihiro ITOH</i>
CSCL	
38P	Pyzzles: Towards the design of a Zugzwang-inspired Learning Tool for Novice programmers and its effect on Debugging Skills and Self-Perceived Debugging Confidence <i>Elijah Justin CALLANTA</i>
195P	BioAnalogica: Designing SBF-Based Analogical Stories to Enhance Understanding of Complex Biological Processes <i>Meera PAWAR, Sheeja VASUDEVAN, and Sahana MURTHY</i>
198P	Challenging the Eye-Mind Link Hypothesis: Visualizing Gazes For Each Programming Problem <i>Michael T. LOPEZ II</i>
ALT	
49P	Program Learning Support System with Visualization Reflecting Teacher's Intent for Learner’s Code <i>Kenzo KOBAYASHI, Satoru KOGURE, Yasuhiro NOGUCHI, Raiya YAMAMOTO, Koichi YAMASHITA, Tatsuhiko KONISHI, and Yukihiro ITOH</i>
154P	Development of Annotation System for Learning from Others in Public Space Design using Extended Reality <i>Toshiki MUGURUMA, Yusuke YAGI, Yusuke KOMETANI, Saerom LEE, Naka GOTODA, and Rihito YAEGASHI</i>
156P	Development of Labourer Digital Twin Generation and Visualization Function for Hazard Prediction in Off-site Training <i>Kaito MINOHARA, Toshiki MUGURUMA, Yusuke KOMETANI, Naka GOTODA, Saerom LEE, Ryo KANDA, Shotaro IRIE, and Toru HARAI</i>
176P	HyCode: A Code Similarity Assessment Tool Utilizing Reccurent Neural Networks <i>James ABAWAG, Aleczia TORDILLA, and Joshua MARTINEZ</i>
178P	Empowering Educational Researchers with a Privacy-Centric Data Platform: Design, Implementation, and Implications <i>Isanka WIJERATHNE, Brendan FLANAGAN, and Hiroaki OGATA</i>
199P	Exploring the relationship between assignment submission behavior and final grade of information literacy education using big data <i>Yuki OE, Etsuko KUMAMOTO, Huiyong LI, and Chengjiu YIN</i>
EGG	
5P	Exploring the Effects of Leaderboards on an Online Professional Development Course for Teachers <i>Aime Michelle LAZARO and Marlene DE LEON</i>
170P	Game-Based College English Translation Instructional Design Based on Representational Redescription Model: Implicit Knowledge Transformed into Explicit Knowledge <i>Xinyu JIANG, Mengya CHEN, and Lu HUANG</i>
PTP	
11P	Online Student Testlet-generation as an Innovation Approach to Student-Created Assessment: Its Learning Effects <i>Fu-Yun YU and Ya-Shin CHANG</i>
110P	AI and Data Science Literacy Framework for Educators <i>Nurul Amelina NASHARUDDIN, Nurfadhlin MOHD SHAREF, and Mohd Khaizer OMAR</i>
138P	Challenges to Augmenting Literacy in the Digital Environment <i>Khalid KHAN and Jon MASON</i>
169P	Unboxing Learner Engagement in an Online SEL for Teachers Course on FramerSpace <i>Hritik GUPTA, Nandini CHATTERJEE, and Shitanshu MISHRA</i>
WIPP	
221WIPP	Influence of Telepresence Robot on Discussion in Hybrid Classes <i>Hiroaki ARUGA and Akihiro KASHIHARA</i>
234WIPP	Proposal for Simulation Environment to Support Understanding of Tactical Positioning <i>Yuki OHTSUKA and Tomoko KOJIRI</i>
240WIPP	An online MMORPG card game based on multi-dimensional scaffolding to develop reading comprehension and contextual problem-solving skills <i>Cheng-Tai LI, Chou-Pai YEOH, Yu-Chi CHEN, Hung-Yu CHAN, Yun-Chien CHUANG, Yu-Jen LIN, Min-Hsiong HONG, and Huei Tse HOU</i>
249WIPP	Instructors’ perceptions and use of feedback dashboard <i>Feng LIN and Rebekah Wei Ying LIM</i>
255WIPP	Exploring Student Emotion via Facial Expressions using Transfer Learning <i>Tita HERRADURA, Merlin Teodosia SUAREZ, and Macario CORDEL II</i>
263WIPP	The Effect of Stimulus Concurrence on Memorizing Constellations in VR <i>Nicko CALUYA, Eiji YAHARA, and Damon CHANDLER</i>