TIME	12/4	12/5	TIME	12/6	12/7	12/8
08:30 - 09:00	Registration					
09:00 - 10:30	Workshops	Workshops DSC	09:00 - 10:00	Opening Ceremony	Keynote Speaker	Keynote Speaker
			10:00 - 10:20	Coffee/Tea break		
10:30 - 10:50	Coffee/Tea break		10:20 - 11:20	Keynote Speaker	Theme Speaker Parallel Sessions	Parallel Sessions
10:50 - 12:20	Workshops	Workshops DSC	11:30 - 12:40	Panel Parallel Sessions	Panel Parallel Sessions CB Session	Parallel Sessions
12:20 - 13:20	Lunch		12:40 - 13:30	Lunch		
13:20 - 14:50	Workshops ECW Interactive Event	Workshops DSC CB Session	13:30 - 14:30	Theme Speaker Parallel Sessions Meet APSCE EC CB Session	Theme Speaker Parallel Sessions CB Session	Parallel Sessions
14:50 - 15:10	Coffee/Tea break		14:40 - 15:40	POSTER/WIPP/ SATELUC IPC Meeting CB Session	Keynote Speaker	Parallel Sessions
15:10 - 16:40	Workshops ECW Interactive Event	Workshops DSC Interactive Event	15:40 - 16:00	Coffee/Tea break		
			16:00 - 17:00	Parallel Sessions Interactive Event	POSTER/WIPP/ SATELUC	Closing Ceremony
16:40 - 17:40		Workshops Student Wing Interactive Event	17:00 - 18:20	Parallel Sessions Interactive Event		
		19:00-21:00 Welcome Reception		19:00-22:00 APSCE EC meeting	19:00-21:00 Dinner Banquet	Ver. 20231126

Acronyms

DSC: Doctoral Student Consortium BOPN: Best Overall Paper Nominee

ECW: Early Career Workshop BSPN: Best Student Paper Nominee

WIPP: WORK-IN-PROGRESS POSTERS BTDPN: Best Technical Design Paper Nominee

SATELUC: Showcase of Advancements in Technology-Enhanced Learning in Underrepresented Countries

Timings

F: Full Paper – 25minutes + 5 minutes Q&A

S: Short Paper – 15minutes + 5 minutes Q&A

ES: Extended Summary – 10minutes + 5 minutes Q&A

12/4	Room A	Room B	Room C	Room D	Room E
08:30-09:00	Registration				
09:00-10:30	W03	W01	W09	W05	W08
10:30-10:50	Coffee/Tea break				
10:50-12:20	W03	W01	W09	W05	W08
12:20-13:20	Lunch				
13:20-14:50	**Interactive Event** Bridging Learning Analytics Research -LEAF System	**Interactive Event** LA-ReflecT	ECW	W02	W08
14:50-15:10			Coffee/Tea break		
15:10-16:40			ECW	W02	W08
16:50-17:50					

12/5	Room A	Room B	Room C	Room D	Room E	Room F
08:30-09:00	Registration					
09:00-10:30	W04	DSC	W06	W14	W12	W10
10:30-10:50	Coffee/Tea break					
10:50-12:20	W07	DSC	W06	W14	W12	W10
12:20-13:20	Lunch					
13:20-14:50	W07	DSC	W13	W02	W12	SIG-09 CB Session (EUPQ)
14:50-15:10	Coffee/Tea break					
15:10-16:40	Student Wing	DSC	W13	W02	Interactive Event Metaverse in Education	
16:40-17:40			W13			
17:45-18:30	Move to Reception Venue (Bus)					
19:00-21:00	Welcome Reception					

12/6	Hall	Room P	Room A	Room B	Room C	Room D
08:30-09:00	Registration					
09:00-10:00	Opening Ceremony					
10:00-10:20	Coffee/Tea break					
10:20-11:20	Keynote Speaker Tak-Wai Chan					
11:30-12:40	Panel Chee-Kit Looi		CSCL-1	CUMTEL-1	AIED/ITS-1	EGG-1
12:40-13:30	Lunch					
13:30-14:30	Theme Speaker Kaushal Kumar Bhagat		Meet the APSCE Executive Committee	SIG-02 CB Session (CSCL)	AIED/ITS-2	EGG-2
14:40-15:40		POSTER/WIPP/ SATELUC		IPC Meeting	SIG-10 CB Session (LAEDM)	
15:40-16:00	Coffee/Tea break					
16:00-18:20	Interactive Event The G3 of Writing and Publishing		CSCL-2	TELL-1	PTP-1	ALT-1
			CSCL-3	TELL-2	PTP-2	ALT-2
18:30-18:45	Move to EC meeting Venue (Walk/Bus)					
19:00~22:00	APSCE EC meeting					

12/7	Hall	Room P	Room A	Room B	Room C	Room D
08:30-09:00	Registration					
09:00-10:00	Keynote Speaker Davinia Hernández-Leo					
10:00-10:20	Coffee/Tea break					
10:20-11:20	Theme Speaker Brendan Flanagan				AIED/ITS-3	ALT-3
11:30-12:40	Panel Mobile Learning	SIG-07 CB Session (PTP)	EGG-3	CUMTEL-2	AIED/ITS-4	ALT-4
12:40-13:30	Lunch					
13:30-14:30	Theme Speaker Daner Sun			SIG-06 CB Session (TELL)	PTP-3	ALT-5
14:40-15:40	Keynote Speaker Masaru Kitsuregawa					
15:40-16:00	Coffee/Tea break					
16:00-17:00		POSTER/WIPP/ SATELUC				
17:15-18:30	Move to Dinner Banquet Venue (Bus)					
19:00-21:00	Dinner Banquet					

12/8	Hall	Room A	Room B	Room C	Room D
08:30-09:00	Registration				
09:00-10:00	Keynote Speaker Curtis J. Bonk				
10:00-10:20	Coffee/Tea break				
10:20-11:20	ALT-6	EGG-4	AIED/ITS-5	PTP-4	CSCL-4
11:30-12:40	ALT-7	EGG-5	AIED/ITS-6	PTP-5	TELL-3
12:40-13:30	Lunch				
13:30-14:30	ALT-8	CSCL-5	CUMTEL-3	PTP-6	TELL-4
14:40-16:00	ALT-9	CSCL-6	PTP-7	PTP-8	TELL-5
16:00-17:00	Closing Ceremony				

December 4

09:00-12:20 **W03 - The Applications of Information and Communication Technologies Room A (ICTs) in Adult and Continuing Education**

Chair: Jyh-Chong Liang

W03-001S Investigating Students' Perceptions of Knowledge-building Environment and Learning Engagement
Wei-Shou CHEN, Min-Hsien LEE & Jyh-Chong LIANG

W03-002F Exploring The Framing Effect of Drawing Task Instructions on Science-Major Novice Preservice Teachers' Technology-use Knowledge
Yung-Hsiang HUANG, Yi-Sheng HUANG, Shan-Hui SU, & Chia-Ching LIN

W03-003S Exploring the Relationship Between Students' Preferences for Teacher Authority and Learning Approaches: An Example of Student Learning Communication Theory and Computer Technology Contexts
Wen-Lung HUANG

W03-004F Learning Analysis infrastructure to support optimal learning based on IRT and Video Enrollment Data
Masahiro SAKAMOTO, Yukihiro MATSUBARA, Kousuke MOURI

W03-005F Measuring Understanding in Video-Based Learning
Song-Yi Lin, Meilun Shih and Hsin-Mu Tsai

W03-009S Research and Design of Digital Learning Resource Management System in Meteorological Adult Training Based on Cloud Computing
Jinfang HOU

December 4

09:00-12:20 **W01 - The Applications of Generative Artificial Intelligence (GAI) in** Room B
Education

Session 1   Chair: Xiao-Li Zheng
W01-01S A prototype of a chatbot for evaluating and refining student startup ideas using a large language model
Joseph Benjamin ILAGAN, Jose Ramon ILAGAN
W01-03F Exploring the Integration of AI Creation and ICT-assisted Mandarin Teaching
Yi-Hsuan CHEN, Yun-Fang TU, Yu-Ju LAN
W01-04F Tools and Approaches of Generative Artificial Intelligence Used in Education
Hsin-Hsuan CHUNG, Fu-Ling CHUNG, Shu-Min LIN, Yu-Ju LAN
W01-05S Exploring ChatGPT Performance on PISA Multiple Choice Sample Questions Comparing English and Japanese Expression
Kyosuke Takami

Session 2   Chair: Chiu-Lin Lai
W01-06F A Systematic Review of Generative Artificial Intelligence in Language Education
Zilin WANG, Di ZOU, Lap-Kei Keith LEE, Haoran Xie, Fu Lee Wang
W01-07F Integrating ChatGPT into Synectics Model to Improve High School Student's Creative Writing Skill
Worapong KHUIBUT, Sasivimol PREMTHAISONG, Pawat CHAIPIDECH
W01-08F Generating Interactive Stories with ChatGPT to Teach Filipino Values
Angelo Miguel GREGORIO, Sarah Jessica MANUEL, Alyssa Jaye PALMARES, Sharlin Mae TANG, Ethel ONG

December 4

09:00-12:20 **W09 - The First International workshop on Ethics of AIED: Challenges and Opportunities for Achieving Learner Centricity** Room C

Session 1   Chair: Ramkumar Rajendran

WG09-02F Ethical Challenges and Best Practices for Transparency in AIED: A Literature Review and Learner Centric Guidelines

Ram Das Rai, Meera Daulatrao Pawar, Ramkumar Rajendran

WG09-03F Ethical Implications of Utilizing Artificial Intelligence in Education for Assessment

Mihir PATKI, Saira SANADI, Shraddha JADHAV, Ashish MUSALE, Kapil KADAM

WG09-04F Fostering Ethics in AI: Perceptions from the Indian AI Curriculum

Ashutosh Raina, Kushal Mundra, Prajish Prasad, Shitanshu Mishra C

WG09-01S Ethical Challenges of Artificial Intelligence in Education: Achieving Learner Centricity with Respect to Learner Autonomy

Meera Daulatrao Pawar, Ram Das Rai, Ramkumar Rajendran

WG09-05S ChatGPT in Education: Risks to Fairness of Access

Sumitra Sadhukhan, Shitanshu Mishra, Sridhar Iyer

Session 2   Chair: Shitanshu Mishra

WG09-06S AIED in K-12 Classrooms: Challenges and Opportunities from an Ethics Lens

Anabil Munshi

Panel Discussion on Ethics of AI in Education

Pre-Launch of UNESCO MGIEP Report on Ethics of AI in Education for Learner Centricity

December 4

09:00-12:20   **W05 - 3rd International Workshop on Embodied Learning: Technology Design, Analytics & Practices**   Room D

Session 1   Chair: Rwitajit Majumdar, Aditi Kothiyal, Prajakt Pande

W05-01F Embodied Learning of Integer Operations Using a Multitouch Design: Touchy Pinchy Integers

Priyadharshni Elangaivendan, Ashwin Ramaswamy, Melwina Albuquerque, & Sanjay Chandrasekharan

W05-03F Maker-Material Creative Embodiments in Collaborative Making

Alekh V & Chandan Dasgupta

Common Q&A and discussion (Session 1 papers only)

Session 2   Chair: Jayakrishnan Madathil Warriem, Shitanshu Mishra, Aditi Kothiyal

W05-05F Virtual Reality and Embodied Learning: Unraveling the Relationship via Dynamic Learner Behavior

Antony Prakash & Ramkumar Rajendran

W05-06F Enacting Biomolecular Interactions in VR: Impact on Student Conceptual Understanding in Biochemistry

Prajakt Pande

Common Q&A and discussion (Session 2 papers only)

Session 3

Workshop Synthesis cum Panel Discussion (Technology-enhanced Embodied Learning)

December 4

09:00-12:20   **W08 - The 11th Workshop on Technology-Enhanced STEM Education**   **Room E**

Session 1   Chair: Sasithorn Chookaew

W08-01F Arduino as Learning Tools for Artificial Intelligence Education: A Systematic Literature Review

Pornchai KITCHAROEN, Suppachai HOWIMANPORN, and Sasithorn CHOOKAEW

W08-05F A Preliminary Study on Knowledge Reconstruction Activity for Fostering Cognitive Presence in Online Discussion

Lintang Matahari HASANI, Kasiyah JUNUS, Lia SADITA, Tsukasa HIRASHIMA, and Yusuke HAYASHI

W08-02S Proposing a Training Model on Energy Management of Compressed Air Systems with Artificial Intelligence of Things

Noppadon MONOK, Suppachai HOWIMANPORN, and Sasithorn CHOOKAEW

W08-03S An Inquiry-based Learning Approach in Engineering Education regarding Simulation Practice on Automation Control

Santi HUTAMARN

December 4

09:00-12:20 **W08 - The 11th Workshop on Technology-Enhanced STEM Education** **Room E**

Session 2 Chair: Sasithorn Chookaew

W08-09F AquaFarm Ace: A Game on the Intensive Aquaculture Process of Oreochromis niloticus

Gerick Jeremiah Niño GO and Angela Nicole YAP

W08-04S Promoting STEM Interest through Empathy and Creative Thinking in a STEM-based Community Service Program

Ma. Jenina N. NALIPAY, Biyun HUANG, Morris Siu-Yung JONG, Ching Sing CHAI, and Eric Tsun-Hin LUK

W08-06S Technological Tools for the Teaching and Learning of Statistics

Mark Anthony C. TOLENTINO, Juan Carlo F. MALLARI, Maria Alva Q. ABERIN, Ma. Louise Antonette N. DE LAS PEÑAS, Agnes D. GARCIANO, Jumela F. SARMIENTO, and Debbie Marie B. VERZOSA

W08-07S A Visualization App on Proving Geometric Concepts

Ma. Louise Antonette N. DE LAS PEÑAS, Debbie Marie B. VERZOSA, Maria Alva Q. ABERIN, Agnes D. GARCIANO, Jumela F. SARMIENTO, Mark Anthony C. TOLENTINO, and Juan Carlo F. MALLARI

W08-10S Designing a Training Tool for an Industrial Robot Operating with a Programmable Logic Controller

Porramut WATANAKUL, Suppachai HOWIMANPORN, and Sasithorn CHOOKAEW

12:20-13:20 **Lunch**

December 4

13:20-16:40   **Interactive Event**   **Room A**

LA-ReflecT: Multimodal Learning Analytics of Micro-learning

Prajakt Pande Southern Methodist University, Dallas, USA.
Rwitajit Majumdar Kyoto University, Japan
Shitanshu Mishra MGIEP UNESCO, India
Jayakrishnan Madathil Warriem IIT Madras, India
Aditi Kothiyal Indian Institute of Technology Gandhinagar, India

13:20-16:40   **Interactive Event**   **Room B**

Bridging Learning Analytics Research and Practice With LEAF System

Changhao Liang, Kyoto University, Japan
Yiling Dai, Kyoto University, Japan
Izumi Horikoshi, Kyoto University, Japan
Rwitajit Majumdar, Kyoto University, Japan
Hiroaki Ogata, Kyoto University, Japan

December 4

13:20-16:40   **ECW**   **Chair: Hui-Chun Chu**   **Room C**

ECW01 Enhancing English as a Foreign Language (EFL) Learners' learning outcomes through a socially shared regulation-based First Principle Instruction approach
Mei-Rong Alice Chen

ECW02 Prompt Writing Patterns for Scenario-based Learning Tasks
Shurui BAI

ECW03 Learning Activity Visualizationfrom Cross-platform, Daily Trace Data
Izumi HORIKOSHI

ECW04 Developing and Evaluating AI-assisted Non-Player Characters in the Virtual Learning Environment for Pre-Service Teachers' Professional Development
Yin YANG

ECW05 How Laparoscopic Surgical Skills Training Impacts Eye Movement Patterns
Hung-Jen CHEN

December 4

13:20-16:40   **W02 - The 7th Computer-Supported Personalized and Collaborative Learning**   Room D

Session 1   **Chair: Ching-Yi Chang**

W02-01(286-F)   The Effect of Gamification with Self-Regulated Approach to Promoting Nursing Students' Leopold's Maneuvers Performance
Intan Setiani, Ching Yi Chang and Jie Chi Yang

W02-08(316-S)   Motivating Knowledge Seeking and Sharing Behavior in the Online Discussion Forum
Yue Hu, Baoping Li, Xiang Zhang and Ling Chen

W02-13(335-F)   Educational Use of SVVR: A Scoping Review on Harnessing EduVenture-VR in Learning and Teaching
Youwen Shi

W02-06(283-S)   The Trends of Computer-Supported Collaborative Learning in Two Decades
Hui-Chun Chu, Gwo-Haur Hwang, Han-Chieh Chao and Ching-Yi Chang

W02-05(307-F)   Improving Thinking Awareness in Animation Scriptwriting Through Learning Supporting Tool
Panadda Jaiboonlue, Wasan Na Chai, Taneth Ruangrajitpakorn and Thepchai Supnithi

December 4

13:20-16:40 **W02 - The 7th Computer-Supported Personalized and Collaborative Learning** Room D

Session 2   Chair: Ching-Yi Chang
W02-07(292-S) Facilitating nursing students' critical thinking and problem-solving competence in a computer supported collaborative learning environment
Zi-Ying Jiang and Ching-Yi Chang
W02-17(337-S) Supporting Peer Help Recommendation Based on Learner-Knowledge Model
Peixuan Jiang, Kensuke Takii, Changhao Liang, Rwitajit Majumdar and Hiroaki Ogata
W02-18(354-S) Conceptual Design of WHALE: a Wise Helper Agent for the LEAF Environment
Kento Koike, Rwitajit Majumdar, H. Ulrich Hoppe and Hiroaki Ogata
W02-09(321-S) Personalized Hands-on Training Via a Hybrid Intelligent Teacher System
Dongkun Han

December 4

13:20-16:40   **W08 - The 11th Workshop on Technology-Enhanced STEM Education**   **Room E**

Session 3   Chair: Pawat Chaipidech

W08-16F Encouraging Primary Students' Environmental Awareness by Using STEM Inquiry-based Learning

Sasivimol PREMTHAISONG and Pawat CHAIPIDECH

W08-23F A Proposal for Mobile-assisted Citizen Inquiry Learning Approach in Learning of Plastic Pollution

Chawadol SRIBOONPIMSUAY and Niwat SRISAWASDI

W08-11S Designing a Sorting System using Machine Vision Training Kit for Mechatronics and Robotics Engineering Students

Pakorn MUANGSUK, Suppachai HOWIMANPORN, and Sasithorn CHOOKAEW

W08-12S Computer-Supported Collaborative Work in Academics During the COVID-19 Pandemic

Bjorn Svetlana NG, John Michael CALVARA, and Judith AZCARRAGA

W08-13S Design of a Pneumatics System Learning Material with AR Technology for Vocational Education Students

Tanit PHETCHAKAN, Suppachai HOWIMANPORN, and Sasithorn CHOOKAEW

December 4

13:20-16:40   W08 - The 11th Workshop on Technology-Enhanced STEM Education   Room E

Session 4   Chair: Pawat Chaipidech

W08-15S Using of Augmented Reality Technology in the Learning Process of Calculus2 for Higher Education Students

Anek Putthidech, Amnaj Sookjam, Suwit Somsuphaprungyos and Sangtong Boonying

W08-17S Enhancing Understanding of Complex Systems through Analogy-Based Video Scenarios

Meera Daulatrao PAWAR, Sheeja VASUDEVAN and Sahana MURTHY

W08-19S Effectiveness of Learning Seminar Course to Promoting Research Skills : Observe-Plan-Organize-Present in Science Project

Chitphon YACHULAWETKUNAKORN, Witsanu SUPANDEE, and Ratthakarn NA PHATTHALUNG

W08-20S The Collaborative Learning of Science Project to Supporting 4C's Skills for Learning in 21st Century

Witsanu SUPANDEE and Chitphon YACHULAWETKUNAKORN

W08-21S Implementation of Professional Development Training for Industrial Employees on Artificial Intelligence of Things

Sasithorn CHOOKAEW, Suppachai HOWIMANPORN and Warin SOOTKANEUNG

W08-22S STEM Education in Sustainability: A Brief Literature Review (2019 - 2023)

Pawat CHAIPIDECH, Sasivimol PREMTHAISONG, and Niwat SRISAWASDI

December 5

09:00-10:30 **W04 - The 7th International Workshop on Information and Communication Technology for Disaster and Safety Education (ICTDSE)** Room A

Session   Chair: Hisashi Hatakeyama, Hiroyuki Mitsuhara

W04-01F Collaborate, Design, and Generate Cybercrime Script Tabletop Exercises for Cybersecurity Education
Joshua Dwight

W04-03F Non-Player Characters for Evacuation Training in Metaverse: Preliminary Experiment
Kaito Oe, Yusaku Ichino, Hiroyuki Mitsuhara, Masami Shishibori

W04-02S Local Safety Map for a Cornerstone of Local Disaster Prevention: A Case Study of a Historical Local Town in Japan
Yasuhisa Okazaki, Hiroshi Wakuya, Yukuo Hayashida, Nobuo Mishima

W04-04S Investigating How Technology May Negatively Affect the Academic Performance and Sleep Quality of Students
Cedric Miguel Chan, Josh Sarte, Allen Peter Sze, Jat Cedric Talampas, Judith Azcarraga

December 5

10:50-12:20　**W07 - The 3rd Workshop on Innovative technologies for enhancing interactions and learning motivation**　Room A

Session Chairs:
Dr. Jerry Chih-Yuan Sun, National Yang Ming Chiao Tung University, Taiwan
Dr. Hui-Chun Chu, Soochow University, Taiwan
Dr. Shih-Jou Yu, National Yang Ming Chiao Tung University, Taiwan
Dr. Chiung-Fang Chang, National Yang Ming Chiao Tung University, Taiwan

Session 1　Chair: Jerry Chih-Yuan Sun, Hui-Chun Chu, Shih-Jou Yu, Chiung-Fang Chang
Welcome session, workshop introduction, and group photo

Session 2　Chair: Jerry Chih-Yuan Sun
W07-02S Designing and Evaluating an Attention-Engagement-Error-Reflection (AEER) Approach to Enhance Primary School Students Artificial Intelligence Literacy and Learning-to-Learn Skills: A Pilot Study
Siu-Cheung Kong and Yin Yang
W07-04S Enhancing Trigonometry Learning through a Mobile App
Maria Alva Aberin, Ma. Louise Antonette De Las Penas, Agnes Garciano, Juan Carlo Mallari, Jumela F. Sarmiento, Mark Anthony Tolentino, and Debbie Marie Verzosa
W07-01F The Role of VR-Supported Co-Learning Environments in University Students' Self-Efficacy and Learning Engagement
Chiung-Fang Chang and Jerry Chih-Yuan Sun

December 5

09:00-12:20   DSC   Room B

Session 1   Chair: Jayakrishnan Madathil Warriem
278 Exploring the Potential of Mobile Assisted Language Learning in Rural Area of Indonesian
Fais Nurul Hadi
311 Supporting Interactive Learning in Active Video Watching
Ehsan Bojnordi
342 Learning Habits Mining and Data-driven Support of Building Habits in Education
Chia-Yu Hsu, Izumi Horikoshi, Rwitajit Majumdar and Hiroaki Ogata

Session 2   Chair: Jayakrishnan Madathil Warriem
293 Exploring a Supportive Ecosystem for Creative Teaching in Higher Education
Weijing Han and Nur Aira Abdrahim
359 Applying Macro- and Micro-scripts to Facilitate Undergraduates' Interdisciplinary Competence
Guo Su
361 Exploring Business Students' STEM Literacy for Work Preparedness
De-Qi Zhang and Morris Siu-Yung Jong

December 5

09:00-12:20   **W06 - The 16th Workshop on Technology Enhanced Learning by Posing/Solving Problems/Questions**   Room C

Session 1   Chair: Shitanshu

W06-01S Evaluation of an Automatic Generation System for Tracing Tasks Based on Textbook Programs
Tomohiro MOGI, Yuichiro TATEIWA, Takahito TOMOTO & Takako AKAKURA

W06-03S Using a Three-Problem Framework to Understand How Nursing College Students Learn to Design Healthcare Animations
Chun-Hao CHANG

W06-06S The Effect of Revision-Making of Contextualized Student-Generated Questions on University Students' English Grammar Learning Performance
Chih-Chung LIN & Fu-Yun YU

W06-02F Development of a Semi-Active Learning Support System with Operation Index for the Mathematics of Vectors
Tomohito JUMONJI, Nonoka AIKAWA & Takahito TOMOTO

Session 2   Chair: Jon

W06-04F Focal: A Proposed Method of Leveraging LLMs for Automating Assessments
Peter Meyersa, Annette Hana, Razik Grewala, Mitali Potnisa & John Stampera

W06-05F Preliminary Use of a Learning Game for Arithmetic Word Problems with Elementary School Students
Yusuke HAYASHI, Kohei YAMAGUCHI & Tsukasa HIRASHIMA

W06-07F Review of the Literature on Goal-Oriented Self-Directed Learning Based on Question Posing
Sumitra SADHUKHAN, Shitanshu MISHRA & Sridhar IYER

December 5

09:00-12:20   **W14 - Quantification of Learning in Virtual Learning Environments**   **Room D**

Session 1   Chair: Cheryl Wong

W14-07 Effectiveness of Synchronous and Asynchronous Online Learning in Bloom's Taxonomy Framework
Cheryl Sze Yin WONG, Lily HOANG & Chin Tuan TAN

W14-05 A Step toward Characterizing Student Collaboration in Online Knowledge Building Environments with Machine Learning
Alwyn Vwen Yen LEE , Chew Lee TEO & Aloysius ONG

W14-03 An Exploratory Study on Effects of WeChat-Assisted Self-Regulated English Writing Instruction on EFL Learners' Motivation
Ying ZHAO, Di ZOU, Haoran XIE, Pei LIU

Session 2   Chair: Tan Chin Tuan

W14-06 Student Engagement Detection: Case Study on Using Peer-to-Peer Emotion Comparison with Context Regularization
Geyu LIN, Manas GUPTA, Cheryl Sze Yin WONG & Huayun ZHANG

W14-01 Dynamic Facial Expression Recognition through Partial Label Learning and Federated Learning
Mohammad Alif DAFFA, Manas GUPTA, Hao CHEN & Cheryl Sze Yin WONG

W14-02 An Empirical Investigation on Google Classroom: Use Behaviour of Malaysian School Teachers
Priscilla MOSES, Jacqueline Chung Ling LAU, Phaik Kin CHEAH, Phoebe Soong Yee YAP, Mas Nida Md KHAMBARI, Su Luan WONG

December 5

09:00-12:20   **W12 - The 1st International Workshop on Computational Thinking and Programming Education(CTPE)**   Room E

Session 1   **Chair: Ting-Chia Hsu**

W12-01F The Impact of an Educational Board Game on Students' Learning Achievement and Flow State in Media and Information Literacy
Ya-Xuan ZHANG, Ting-Chia HSU

W12-09F Explainable AI in the Real World: Challenges and Opportunities
Dora HORVAT, Ivica BOTICKI, Peter SEOW & Antun DROBNJAK

W12-10F Empowering Students Computational Thinking through Robotics-enabled STEM Education
Daner SUN, Peiyao TIAN, Kam Yuen LAW, Wai Han CHEUK

Session 2   **Chair: Kai-Yu Tang**

W12-02F Game-Based Learning of AI Image Recognition on Computational Thinking and Self-Efficacy of Undergraduates
Hui-Wen HSUEH, Ting-Chia HSU

W12-04S Review of TAM used in Educational Technology Research: A Proposal Framework
Kai-Yu TANG, Chun-Hua HSIAO

W12-05S Exploring Motivational Differences in Competitive and Cooperative Game-Based Learning through Educational Board Games
Yuan-Yao Chiang, Ting-Chia HSU

W12-06S Developing Computational Thinking: Using TurtleStitch and Physical Computing
Peter SEOW, Chin-Lee KER & Haoran XUE

December 5

09:00-12:20   **W10 - The 12th International Workshop on ICT Trends in Emerging Economies (WICTTEE 2023)**   Room F

Session 1   Chair: Thanyaluck Ingkavara

W10-23010F Analyzing Sentiments of ChatGPT Users: Philippine Setting

Gisele DIZON & Dr. Ma. Rowena R. CAGUIAT

W10-23022F Application of Blended Learning with PhET Simulation to Encourage Learning in Mathematics of Fractions

Atcharaporn ASSAWAPHUM, Sasivimol PREMTHAISONG & Pawat CHAIPIDECH

W10-2301S Factors Affecting Sustainable Use of   Minecraft-based Lessons

Dominique Marie Antoinette B. MANAHAN & Maria Mercedes T. RODRIGO

W10-2304S A Mathematical App for the Conceptual Understanding of Area and Perimeter

Jumela F. SARMIENTO, Debbie Marie B. VERZOSA, Maria Alva Q. ABERIN, Ma. Louise Antonette N. DE LAS PEÑAS, Agnes D. GARCIANO, Juan Carlo F. MALLARI, & Mark Anthony C. TOLENTINO

December 5

09:00-12:20   **W10 - The 12th International Workshop on ICT Trends in Emerging Economies (WICTTEE 2023)**   Room F

Session 2   Chair: Thanyaluck Ingkavara

W10-2305S Design of a Mobile App to Promote Understanding and Fluency in Finding the Equation of a Line

Agnes D. GARCIANO, Maria Alva Q. ABERIN, Ma. Louise Antonette N. DE LAS PEÑAS, Juan Carlo F. MALLARI, Jumela F. SARMIENTO, Mark Anthony C. TOLENTINO & Debbie Marie B. VERZOSA

W10-2309S Towards Identifying the Learning Affordances of Social Media as Telemedicine Platforms among Physicians in a Developing Economy

Michelle BERNABE, Rowena CAGUIAT & Ryan EBARDO

W10-23021S Implementing a Gamified Inquiry-based Learning with Mobile Learning Perspective to Promote Primary Students' Attitude toward Mathematics Learning

Sakda CHALEEPLIAM, Sasivimol PREMTHAISONG & Pawat CHAIPIDECH

W10-23026S Design and Development of a Personalized Recommender System of Student Question-Generation Exercises for Programming Courses

Chih-Hung LAI, Pham-Duc THO

W10-23027S A Chatbot for Image Recommendation in Mobile Language Learning

Mohammad Nehal HASNINE, Huyen T. T. BUI & Hiroshi UEDA

December 5

12:20-13:20	**Lunch**

13:20-14:50   **W07 - The 3rd Workshop on Innovative technologies for enhancing**   Room A
interactions and learning motivation

Session 3   Chair: Chiung-Fang Chang
W07-03S Exploring the Benefits of Chatbots Game-based Learning in Science Learning Outcomes and Motivation
Ching-Huei Chen
W07-05S What's Going on Behind the Scenes? Peer Assessment as a Strategy for Enhancing Students' Commitment and Learning Motivation in Working Collaboratively
Nur Aira Abd Rahim, Norliza Ghazali, Zakiah Ponrahono, Sharifah Intan Sharina Syed Abdullah, Fadzilah Mohamad, and Syahidatul Khafizah Mohd Hajaraih
W07-06F The Effect of Enhancing Students' Learning Motivation on Bilingual Class with Integrating Augmented Reality in a Multimodality Learning Environment
Yi-Fang Lo and Jerry Chih-Yuan Sun
W07-08F The Course Learning Experience as a Forerunner in IT Internship: Assessment from the Student and the Host Training Establishment
Arlene Mae Celestial-Valderama
W07-09F Examining Different Affective Factors in Learning with Virtual Reality
Hsing-Ying Tu, Silvia Wen-Yu Lee, and Ting-Yueh Hsu

15:10-17:40	**Student Wing**

December 5

13:20-16:40   DSC   Room B

Session 3   Chair: Alwyn Vwen Yen Lee

371 Using meaningful gamification to redesign simulation-labs for engaging learners in science inquiry practices
Archana Rane

294 Gamification to Train Soft Skills of Software Professionals Through Active Video Watching
Pasan Peiris

299 An Empirical Study of the Computational Thinking Learning Game, "Online Robot City"
Tai-Ping Hsu and Ting-Chia Hsu

Session 4   Chair: Alwyn Vwen Yen Lee

291 Learning Effectiveness of Integrating Peer Assessment and Board Games in a Computational Thinking and Artificial Intelligence Unit: Taking Speech Recognition as Examples
Mu-Sheng Chen and Ting-Chia Hsu

310 Integrating Explainable Artificial Intelligence in Active Video Watching
Raul Vincent Lumapas

317 The design and use of conversational intelligent tutoring systems and computer simulation for the use of students of technology entrepreneurship
Joseph Benjamin Ilagan

December 5

13:20-17:40   **W13 - ICCE Workshop on "Towards the Practice of Seamless Interest-Driven Creators (SIDC) Theory with Technological Supports"**   Room C

Session 1   Chair: Lung-Hsiang Wong
W13-02F MEGA World – A Platform of Multiplayer Educational Game for All
Maiga Chang

Panel discussion 1:
Fusing Ideas for Engaging Learning: From Interest-Driven Creator Theory to Seamless Interest-Driven Co-Creator Theory for Learning Design

Chair: Su Luan Wong
Panelists: Maiga CHANG, Wenli CHEN, Ju-Ling SHIH, Longkai WU

December 5

13:20-17:40   **W13 - ICCE Workshop on "Towards the Practice of Seamless Interest-Driven Creators (SIDC) Theory with Technological Supports"** Room C

Session 2   Chair: Lung-Hsiang Wong
W13-01S Role of Seamless Learning in Enhancing Interest-Driven Creator Theory
Su Luan Wong, Mas Nida Md Khambari and Sai Hong Tang
W13-03S Web-based VR Education Contents Supporting VR-goggles and User Study
Yoshihiro Okada, Kosuke Kaneko and Wei Shi
W13-04S Development of TETPR: Technology-Enhanced Total Physical Response for Elementary Students to Learn English Vocabulary in Indonesia
Riska Saputra

Panel discussion 2:
Global 'Harwell' Goal as the Global Educational Goal: How it May be Achieved through SIDC Research and Practice Progressively?

Chair: Ben Chang
Panelists: Weiqin CHEN, Maria Mercedes T. RODRIGO, Ying-Tien WU, Shengquan YU

December 5

13:20-16:40   **W02 - The 7th Computer-Supported Personalized and Collaborative Learning**   Room D

Session 3   Chair: Huang-Yao Hong

W02-10(320-F)   Analysis of Students' Action Decisions about SDGs Issues in Open Inquiry Activity with Real Open Data
Yu-Hao Lu, Chia-Chun Tseng and Ju-Ling Shih

W02-11(326-F)   Empowering Language Learners: Harnessing Computer-Based Writing for Enhanced Chinese Language Proficiency
Lung-Hsiang Wong, Guat Poh Aw, Wenli Chen, Yin Ling Cheung and Seok Hwa Sim

W02-12(332-F)   Reader Characteristics, Reading Order, and Facial Emotions Expressed in Reading Science Texts
Yu-San Hsiang, Zheng-Hong Guan and Sunny S.J. Lin

W02-04(289-F)   Implementation of collaborative project-based learning approach: Spherical video-based virtual reality creation
Husni Mubarok, Gwo-Jen Hwang, Chi-Jen Lin and Darmawansah Darmawansah

W02-14(336-F)   Exploring Student Engagement and Teacher-Student Interaction Patterns in Collaborative STEM PBL courses through Epistemic Network Analysis
Ting Yen Kuo, Ssu Kuang Chen and Sunny S. J. Lin

December 5

13:20-16:40	**W02 - The 7th Computer-Supported Personalized and Collaborative Learning**	Room D

Session 4   Chair: Huang-Yao Hong

W02-02(287-F) Development and Usability Evaluation of an Intelligent Personalized Erhu Pitch and Rhythm Learning System
Gwo-Haur Hwang, Ping-Tsung Tsai, Jenn-Kaie Lain and Shiuan-Han Huang

W02-03(288-F) Impact of Gender on Students' Classroom Engagement, Flow Experience and Learning Outcomes When Game-Based Answering Activities Are Integrated into the Curriculum
Gwo-Haur Hwang and Yu-Cheng Lin

W02-15(349-F) The Effect of Genres and Reading Orders on Interest, Reading Comprehension, and Process: Evidence from Eye Movement of Multiple-text Reading
Ching-Yu Luan, Zheng-Hong Guan and Sunny S. J. Lin

W02-16(325-S) Develop and Analysis of Educational Board Game <The Golden Silk Road> on Cultural Cognition
Hsin-Ju Wang, Shaun-Wen Chen and Ju-Ling Shih

December 5

13:20-14:50	**W12 - The 1st International Workshop on Computational Thinking and Programming Education(CTPE)**	**Room E**

Session 3   Chair: Liang-Yi LI

W12-03S Using a four-step learning activity in a programming course: classroom participation, learning performance, and attitude
Liang-Yi LI, Wen-Lung HUANG & Chien-Ping CHUNG

W12-07S Applying cooperative learning with role division to learn recursion
YungYu ZHUANG, Hong-Wei CHEN, Jen-Hang WANG & Gwo-Dong CHEN

W12-08S Design Scaffolding Inquiry-based instruction to Promote Non-engineering students in STEM Learning
Chia-Jung Chang

13:20-14:50	**SIG-09 Community Building Session (EUPQ)**	**Room F**

15:10-17:40	**Interactive Event**	**Room E**

Metaverse in Education: Design, Applications, and Challenges

Yanjie SONG, The Education University of Hong Kong, Hong Kong, China
Ping LI, Hong Kong Polytechnic University, Hong Kong, China
Siu Cheung KONG, The Education University of Hong Kong, Hong Kong, China
Qing LI, Hong Kong Polytechnic University, Hong Kong, China
Xuesong ZHAI, Zhejiang University, China
Chengjiu YIN, Kyushu University, Japan
Peter Hiu Fung NG, Hong Kong Polytechnic University, Hong Kong, China

December 6

09:00-10:00	**Opening Ceremony**	**Hall**
10:00-10:20	**Coffee/Tea break**	
10:20-11:20	**Keynote Speaker** **Chair: Ju-Ling Shih**	**Hall**

'Global Harwell' as the ultimate educational goal: Can and should we pursue this goal through SIDC research and practice in the 'Seamless AI World'?

Tak-Wai Chan, National Central University, Taiwan

11:30-12:40	**Panel**	**Hall**

Towards a Collaborative Vision for Redesigning Education for Harmonious and Thriving Educational Futures in Asia and Beyond: will Seamless IDC Theory lead us there?

Chair:
Chee-Kit Looi, Education University of Hong Kong
Panelist:
Siu-Cheung Kong, Education University of Hong Kong
Ronghuai Huang, Beijing Normal University, China
Hiroaki Ogata, Kyoto University, Japan
Jon Mason, Charlese Darwin University, Australia
Hyo-jeong So, Ewha Womans University, South Korea
Lung-Hsiang Wong, Nanyang Technological University, Singapore

December 6

11:30-12:40 **CSCL-1** **Chair: Alwyn Lee** **Room A**

BSPN - 21F Tackling Unserious Raters in Peer Evaluation: Behavior Analysis and Early Detection with Learner Model
Changhao Liang, Izumi Horikoshi, Rwitajit Majumdar and Hiroaki Ogata
51S The Development and Evaluation of the Platform for Online High-Level Cooperative Games
Feng-Lung Liu, Geng-De Hong, Ju-Ling Shih and George Ghinea
72S A Thematic Analysis Exploring Flexibility in Programming-based Mathematical Problem Solving
Huiyan Ye, Oi-Lam Ng and Zhihao Cui

11:30-12:40 **CUMTEL-1** **Chair: Jerry Chih-Yuan Sun** **Room B**

BSPN - 50F Fostering Students' Dialogic Engagement with the Use of Visual Learning Analytics as a Teaching Assistant Tool in Primary School Classrooms
Fan Chen, Pengjin Wang, Deliang Wang and Gaowei Chen
145S Advancing Education through Stakeholder Engagement: An Evaluation of the Learning Butler Chatbot's Impact on Instructors, and Learners
Chih-Yang Peng, Su-Hang Yang, Pei-Yu Ho, Jen-Hang Wang and Gwo-Dong Chen
196S Effects of Audio and Tactile Biofeedback Based on EEG Attention Levels on University Students' Relaxation
Shih-Jou Yu, Wai Ki Rebecca Cheng, Yi-Hsuan Chen and Jerry Chih-Yuan Sun

December 6

11:30-12:40   **AIED/ITS-1**   **Chair: Tanja Mitrovic**   **Room C**

BSPN - 35F An Efficient and Generic Method for Interpreting Deep Learning based Knowledge Tracing Models
Deliang Wang, Yu Lu, Zhi Zhang and Penghe Chen
71S Developing a Video-based e-Learning System Incorporating a Fill-in-the-blank Question-type Concept Map
Takumi Hasegawa and Tessai Hayama
75S Exploring Students' Adoption of ChatGPT as a Mentor for Undergraduate Computing Projects: PLS-SEM Analysis
Swapna Gottipati, Kyong Jin Shim and Venky Shankararaman

11:30-12:40   **EGG-1**   **Chair: Ning Wang**   **Room D**

BOPN - 17F Design and Implementation of an Educational Game for Teaching Artificial Intelligence to High School Students
Ning Wang, Ryan Montgomery, Eric Greenwald and Maxyn Leitner
13S Enhancing Learning Experience in University Engineering Classes with Kahoot! Quiz Games
Zilu Liang
40S Executive Functions Training-oriented Digital Games: Effectiveness and Experience
Chi-Fang Huang, Hui-Ling Hsu and Zhi-Hong Chen

12:40-13:30   **Lunch**

December 6

13:30-14:30	**Theme Speaker** **Chair: Ying-Tien Wu**	**Hall**

Game On! Leveraging the Benefits of Game-Based Learning in the Digital Age

Kaushal Kumar Bhagat, Indian Institute of Technology Kharagpur, India

13:30-14:30	**Meet the APSCE Executive Committee**	**Room A**

13:30-14:30	**SIG-02 Community Building Session (CSCL)**	**Room B**

13:30-14:30	**AIED/ITS-2** **Chair: Michelle Banawan**	**Room C**

66F Studying Memory Decay and Spacing within Knowledge Tracing
Cristina Maier, Isha Slavin, Ryan Baker and Steve Stalzer
76F Deep Knowledge Tracing is an implicit dynamic multidimensional item response theory model
Jill-Jênn Vie and Hisashi Kashima

13:30-14:30	**EGG-2** **Chair: Gwo-Dong Chen**	**Room D**

89F Effects of different embodied scaffoldings on students' spatial abilities in digital game-based learning
Junyi Zhou, Jialing Zeng, John B. Black and Junjie Shang
91F Exploring the Impact of Designing a Robot as a Pet with Interdependence Theory on Long-Term Relationships and Learning Performance
Vando Gusti Al Hakim, Su-Hang Yang, Jen-Hang Wang, Yu-Chen Chang, Hung-Hsuan Lin and Gwo-Dong Chen
232S Enhancing Learner Satisfaction in Simulation-Based Learning: The Impact of Learner Characteristics and Expectancy
Steven Ck Ng, Li Fern Tan and Poh Nguk Lau

December 6

14:40-15:40   **POSTER**   **Room P**

AIED/ITS

58P Recommending Learning Actions Using Neural Network
Hirokazu Kohama, Yuki Ban, Tsubasa Hirakawa, Takayoshi Yamashita, Hironobu Fujiyoshi, Akitoshi Itai and Hiroyasu Usami

59P An agent-based modeling and simulation tool as a learning aid for diffusion of innovations
Joseph Benjamin Ilagan, Jose Ramon Ilagan and Maria Mercedes T. Rodrigo

92P Immediate Feedback in Computational Thinking: Generating hints using a Knowledge Graph
Nitesh Kumar Jha, Plaban Kumar Bhowmik and Kaushal Kumar Bhagat

149P Activity Analysis Support System by Causal Relation Check Between Sub-activities
Kota Kunori and Tomoko Kojiri

153P Method for Estimating Learning Strategies from Tools Using Bayesian Network
Kento Kuwajima, Atsushi Ashida and Tomoko Kojiri

CSCL

31P Future City: A Simulation for Making SDGs Action Decisions
Pin-Chen Chen, Yu-Hao Lu and Ju-Ling Shih

90P Multimodal analysis of learners' communications in CSCL of a mathematical proof
Masataka Kaneko, Hironori Egi and Takeo Noda

147P Assessing college students' sense of community for advancing community knowledge
Chih Hui Seet, Yi-Ning Tsai, Guo-Tsai Hung and Huang-Yao Hong

148P Teachers developing more creative learning views via online knowledge building activities
Mei-Ju Chen, Chao-Yu Guo and Huang-Yao Hong

December 6

ALT

113P Toward a Virtual Human Exhibit for Public AI Education
Ning Wang, Tim Hurt, Ari Krakowski, Eric Greenwald, Omkar Masur, Boxi Fu and Chirag Merchant
123P Analyzing Learning Patterns and Potential Interventions in First-Year Compulsory Course at an Online University
Yasuhisa Kato
129P Measuring Self-regulated Learning Processes in Computer Science Education
Elizabeth Cloude, Ryan Baker and Maciej Pankiewicz
139P Construction of a Japanese Language Learning Support System for Learning Semantic Negotiation
Satoru Kogure, Akira Yoshida, Yasuhiro Noguchi, Koichi Yamashita, Tatsuhiro Konishi and Makoto Kondo

CUMTEL

201P Estimating Physical Interactions with Neighboring Student for Detecting Active Learners in the Computer Classroom
Takahiro Yoshino, Shin Ueno and Hironori Egi
206P Effect of Active Breaks during e-Learning and Mental Arithmetic Tasks
Masaki Kodaira, Tatsuya Hamada and Hironori Egi
219P Chronotypes of Learning Habits in Weekly Math Learning of Junior High School
Chia-Yu Hsu, Mandukhai Otgonbaatar, Izumi Horikoshi, Huiyong Li, Rwitajit Majumdar and Hiroaki Ogata

December 6

EGG
7P Relationship Between Students' Minecraft Re-engagement Metrics and STEM Interest
Maria Mercedes T. Rodrigo, Jonathan Casano and Mikhail Fuentes
100P Analysis to Creation: Using the ADDIE Model to Develop an Educational Game for Children
Yufan Zhang, Nurul Nadwa Zulkifli, Ahmad Fauzi Mohd Ayub and Zewen Shang
118P Case study-based research on understanding app user engagement to develop environmental literacy of urban residents
Ewa Duda
169P GaMINLab - Meaningful gamification to engage students in science inquiry practices through simulation labs
Archana Rane, Sahana Murthy and Sasikumar M.

TELL
103P Tracking Knowledge for Learning Japanese as a 2nd Language
Tomoko Okimoto, Matthew Johnson, Huy Nguyen, Steven Moore, Michael Eagle and John Stamper
131P Constructing a Natural Conversation Learning Activity to Improve Students' English-Speaking Skills
Hong-Min Tu, Chang-Yen Liao and Te-Yang Chou

December 6

14:40-15:40 **POSTER** **Room P**

PTP
38P How Teachers' Conceptions of Student Engagement Influenced their Actual Strategy Implementation, and Student Online Engagement
Gulipari Maimaiti and Khe Foon Hew

WIPP

19WIPP Task-based Robot-assisted learning to support L2 Speaking Practice
Cheng Yueh Jao, Huichin Yeh, Shih-Hsien Yang, Ming-Chang Wu and Chen-Fu Wang
29WIPP Designing an IoT-based Biorobotic Complex Board Game <Eurasia Channel>
Song-Lin Chen, Ju-Ling Shih and Shaun-Wen Chen
52WIPP Application of ChatGPT in the Role-play Game of Modeled United Nations
Zhen Hung Tsai, Ju-Ling Shih and Geng-De Hong

December 6

14:40-15:40   **WIPP**   **Room P**

85WIPP IOT-integrated SDGs Scenario-based Games in the Classrooms
Ching-Chieh Lin, Ju-Ling Shih and Yu-Hao Lu

285WIPP Pupils' perceived immersion, attitudes, and learning effectiveness in virtual field trips: A comparison between immersive and projective environments
Kun-Hung Cheng

290WIPP Ethical and Privacy Concerns in Artificial Intelligence Dialogue Systems: Do Students in Higher Education Really Care About Them?
Chunpeng Zhai, Santoso Wibowo and Lily Li

295WIPP Resistance Training Support System with Pose Estimation
Koki Yamada, Naka Gotoda and Ryota Akagi

300WIPP Evaluation of Simulators to Promote the Understanding of Bioaccumulation among Elementary School Students
Yuka Matsuyama, Shinichi Kamiyama, Hideo Funaoi and Tomokazu Yamamoto

301WIPP App-Infused Preschoolers' Storyline Concept-Driven Numerical Curriculum Design
Ruei-Cheng Yen and Ben Chang

302WIPP A Proposal and Evaluation of Learning Advising using a Generative AI
Yasuomi Takano, Taketo Tsurube, Haruki Ueno and Hiroshi Komatsugawa

303WIPP The Roles of Students' Help-seeking Profiles and Self-efficacy in the AI-assisted Game-based Learning
Ching-Huei Chen

312WIPP Question-Driven Design Process for XAI in Active Video Watching
Raul Vincent Lumapas, Antonija Mitrovic, Matthias Galster, Sanna Malinen, Pasan Peiris and Jay Holland

December 6

14:40-15:40   **WIPP**   **Room P**

313WIPP Enhancing Mobile Learning App for Revamped Blended Learning Class in Beginner's Chinese Course
Yuichi Ohkawa, Xiumin Zhao, Takashi Mitsuishi, Wen Gui and Xuan Wang

319 WIPP Investigating Players' Social Interactions in IOT Board Games
Yueh-Chi Wang, Ju-Ling Shih and Shaun-Wen Chen

322 WIPP Method to Promote Social Facilitation of Learners by Presenting Writing Sounds
Tatsuya Ueda, Tatsuya Hamada and Hironori Egi

370WIPP How to "Unboxing" Gamer Competencies: via Systematic Literature Reviews to get Analytical Framework is workable?
Tieh-Huai Chang and Mingfong Jan

December 6

14:40-15:40   **SATELUC**   **Room P**

SATELUC-23-01 Promotion of ERD Design Comprehension Using Recomposing Method Putra Prima ARHANDI, Bani Satria ANDOKO, Tsukasa Hirashima **(Indonesia)**

SATELUC-23-02 Designing Educational Personas using Generative AI
Ivan TERZIC, Antun DROBNJAK & Ivica BOTICKI **(Croatia)**

SATELUC-23-03 Timorese University Students' Perception on E-learning: A Case Study
Agostinho Dos Santos GONÇALVES*, Sebastião PEREIRA, Saida ULFA **(Timor Leste)**

SATELUC-23-06 Technology-Enhanced Environmental Learning: Co-design of Educational Mobile Application Case
Ewa DUDA, Helena ANACKA, Jolanta KOWAL, Iwona NOWAKOWSKA & Hanna OBRACHT-PRONDZYŃSKA **(Poland)**

SATELUC-23-07 Urban Living Lab Enhanced by a Mobile Application as a New Way to Educate Towards Green and Inclusive Cities
Ewa DUDA, Łukasz GONTAR, Maksymilian KOCHAŃSKI & Mari Hanssen KORSBREKKE **(Poland)**

SATELUC-23-08 Supporting Engineering Degree Student Wellbeing with Compulsory Lessons on Stress Management
Marc BEARDSLEY **(Spain)**

December 6

14:40-15:40	IPC Meeting	Room B
14:40-15:40	SIG-10 Community Building Session (LAEDM)	Room C
15:40-16:00	Coffee/Tea break	
16:00-18:20	Interactive Event	Hall

The G3 of Writing and Publishing: Gentle Guidelines, Great Stories, and Gigantic Gains

Curtis J. Bonk, Indiana University
Meina Zhu, Wayne State University
Feng-Ru Sheu, Kent State University

December 6

16:00-18:20   **CSCL-2**   **Chair: Daniel Bodemer**   **Room A**

47F Multimodal assessment of an ultra-brief practice of progressive muscular relaxation adapted for the classroom
Marc Beardsley, Batuhan Sayis and Marta Portero Tresserra
BOPN - 78F Epistemic Network Analysis to assess collaborative engagement in Knowledge Building discourse
Aloysius Ong, Chew Lee Teo, Alwyn Vwen Yen Lee and Guangji Yuan

CSCL-3   **Chair: Daniel Bodemer**

102F Development and Evaluation of a Matching System to Facilitate Online Collaborative Learning
Haruka Tada and Fumihide Tanaka
192S The role of individual preparation for knowledge construction in collaborative argumentation: An Epistemic Network Analysis
Wenli Chen, Junzhu Su, Qianru Lyu, Siew Cheng Aileen Chai, Xinyi Li, Guo Su and Eng Eng Ng
214S Students know more than they can tell: Understanding learners' ideas of heat transfer via model revision activities
Rajashri Priyadarshini, Chandan Dasgupta and Sahana Murthy
376ES   Posthumanizing Creativity and Material Histories
Alekh V and Chandan Dasgupta

December 6

16:00-18:20 **TELL-1** **Chair: Kit Ling Lau** **Room B**

43F Relations between Instructional Factors and Student Acceptance of Flipped Learning in Chinese Language Learning
Kit Ling Lau and Quan Qian

BOPN - 56F Experimental Comparison of Promotion Effect for EFL Reading Comprehension between Conventional Summarization and Toulmin Argument Reconstruction
Banni Satria Andoko, Rosa Andrie Asmara, Vivin Ayu Lestari, Deasy Sandhya Elya Ikawati, Arief Prasetyo, Tsukasa Hirashima and Yusuke Hayashi

TELL-2 **Chair: Kit Ling Lau**

114F The Effect of Timing Differences in Online Corrective Feedback on Adult Verbal English Learners' Learning Engagement: A Micro-genetic Study.
Wanying Liang, Guang Chen and Wei Cheng

8S Using Flipped Classroom Approach to Integrate SRL Instruction in Classical Chinese Reading Instruction: Insights from the First-Year Results
Kit Ling Lau

54S The AI-Supported Instructional Design in PBL Integrating Chinese Language Learning and Multimedia Creation
Satoko Sugie

256S Design and Development of a Sentence Construction Game for Deaf and Hard of Hearing (DHH) Users: A Qualitative Usability Study
Arjun Prasad, Sunny Prajapati, Utkarsh and Vishwas Badhe

101S Enabling Visually Impaired People's Chinese Literacy learning through Information Technology
Shelley Shwu-Ching Young and Jen-Li Wang

December 6

16:00-18:20   **PTP-1**   **Chair: Jayakrishnan Madathil**   **Room C**

133F Assessment of Intelligent Teaching Preparation of EFL Teachers: Based on Two-Year Data Comparison

Xin An, Xi Shen, Jiannan Bai and Yushun Li

200F Exploring the Relationship between 21st Century Skills and Motivation: A Study Using Contextual Inquiry Project-based Learning

Jirapipat Thanyaphongphat, Preeyada Tapingkae, Kannika Daungcharone and Krittawaya Thongkoo

PTP-2   **Chair: Weiqin Chen**

65S ICCE 2023 Exploring the Social Media Discourse: the Impact of ChatGPT on Teachers' Roles and Identity

Yuchun Zhong, Davy Tsz Kit Ng and Samuel Kai Wah Chu

70S Designing Faculty Development Programs by a Team from Different Majors

Yukari Kato, Yukihiko Yamashita, Hisashi Hatakeyama and Toshiya Oishi

274S Supporting Content Creators in Creating Accessible Digital Materials in Higher Education

Eirik Hansen and Weiqin Chen

324ES Preservice Teachers' Video-Based Reflection Supported by the Teacher Dashboard: An Epistemic Network Analysis

Huiying Cai, Linmeng Lu and Xiaoqing Gu

December 6

16:00-18:20 **ALT-1** **Chair: Michelle Cheong** **Room D**

6F ChatGPT's Performance in Spreadsheets Modeling Assessments based on Revised Bloom's Taxonomy
Michelle Cheong
BOPN - 11F Promoting Middle School Students' Achievement and Attitude toward Science Learning through Sphere Recognition-Based AR Application
Ruixue Liu, Lijun Liang and Xiaodong Wei

ALT-2 **Chair: Ezekiel Adriel Lagmay**

14F Preparation for Future Lockdowns: A Comparison of Student LMS Activity During and After COVID-19
Ezekiel Adriel Lagmay and Maria Mercedes Rodrigo
15S Using Augmented Reality to Facilitate Music Learning for Preschool Children
Xiaodong Wei, Rui Qiu and Ruixue Liu
27S Comparing Perceived Cognitive Load while Learning Online with AI Chatbots, Pre-recorded Videos, and Live Lectures
Haixi Sheng, Xinran Zhou, Yue Zhao and Guoqing Zhao
240S Development of a Learning Support System for playing Ryuteki in Gagaku for Beginners
Yasushi Ueno and Masato Soga

18:30-18:45 **Move to EC meeting Venue (Walk/Bus)**

19:00~22:00 **APSCE EC meeting**

December 7

09:00-10:00	**Keynote Speaker** **Chair: Weiqin Chen**	**Hall**

Computers in Education: how can we support teachers?

Davinia Hernández-Leo, Universitat Pompeu Fabra, Barcelona

10:00-10:20	**Coffee/Tea break**	

10:20-11:20	**Theme Speaker** **Chair: Akihiro Kashihara**	**Hall**

Challenges and Opportunities of Educational Data Science for Reading Systems

Brendan Flanagan, Kyoto University, Japan

10:20-11:20	**AIED/ITS-3** **Chair: Swapna Gottipati**	**Room C**

97F Composite Score for ChatGPT Prompt Efficiency: A Computational Linguistic Analysis of Engineered Chatbot Prompts
Michelle Banawan
BOPN - 115F Large Language Models (GPT) for automating feedback on programming assignments
Maciej Pankiewicz and Ryan Baker

10:20-11:20	**ALT-3** **Chair: Zablon Pingo**	**Room D**

64F Process Evaluation for Concept Map Building and Its Experimental Evaluation
Ridwan Rismanto, Aryo Pinandito, Banni Satria Andoko, Yusuke Hayashi and Tsukasa Hirashima
94F On-demand lectures with humor and questions using avatars
Satoshi Toyota and Asuka Terai

December 7

| 11:30-12:40 | **Panel** | **Hall** |

Mobile Learning: Reflections on the Past and Visions for the Future

Chair:
Lung-Hsiang WONG, Nanyang Technological University (NTU), Singapore
Panelist:
Daner SUN, The Education University of Hong Kong
Hiroaki OGATA, Kyoto University, Japan
Hyo-Jeong SO, Ewha Womans University, South Korea
Xiaoqing GU, East China Normal University, China
Ting-Chia HSU, National Taiwan Normal University, Taiwan

| 11:30-12:40 | **EGG-3**   Chair: Cristina Maier | **Room A** |

BTDPN - 126F Design and development of a game to improve self-efficacy: A case study of addressing modes learning
Fuzheng Zhao, Danqing Luo, Etsuko Kumamoto and Chengjiu Yin
53S Incorporating tangible rewards into gamification increases students' identified regulation in fully online learning
Ya Xiao and Khe Foon Hew
130S Investigating Cognitive Biases in Self-Explanation Behaviors during Game-based Learning about Mathematics
J. M. Alexandra Andres, Elizabeth Cloude, Ryan Baker and Seiyon Lee

December 7

11:30-12:40   **CUMTEL-2**   **Chair: Pei-Shan Tsai**   **Room B**

BOPN - 154F Building Students' Learning Habits on Slack: An Application of the IDC Theory
Veenita Shah, Sahana Murthy and Sridhar Iyer
183S The Effects of Visualization Strategies on Students' Learning Outcomes in Augmented Reality Contexts
Pei-Shan Tsai
174S Using the Self-regulated Based Personalized Online Learning System for Learning Factorization in Mathematics
Thanyaluck Ingkavara, Patcharin Panjaburee and Wararat Wongkia

11:30-12:40   **AIED/ITS-4**   **Chair: Jill-Jenn Vie**   **Room C**

121F Improved Automated Labeling of Mathematical Exercises in Japanese
Taisei Yamauchi, Ryosuke Nakamoto, Yiling Dai, Kyosuke Takami, Brendan Flanagan and Hiroaki Ogata
176S Object Identification Training Support System for Object-Oriented Design with Cooking Recipes
Daiki Maeda, Kota Kunori and Tomoko Kojiri
212S Learning Support System to Understand Others Through Dramatic Script Reading and Its Evaluation
Hanano Okamoto, Yuki Hayashi and Kazuhisa Seta

December 7

| 11:30-12:40 | **ALT-4**   **Chair: Antonija Mitrovic** | **Room D** |

144F Creating Meaningful Connections: The Role of Simultaneous Multi Situational Learning in Knowledge Contextualization and Application
Chih-Yen Chen, Su-Hang Yang, Meng-Xuan Xie, Yi-Chuan Fan, Jen-Hang Wang and Gwo-Dong Chen
32S Do the Same Rules Apply? Transferring MOOC Success Behaviors to University Online Learning
Clarence James Monterozo and Maria Mercedes Rodrigo
309ES Evaluating the Assessment of Comment Quality in Learning Communication Skills using Active Video Watching
Raul Vincent Lumapas, Antonija Mitrovic, Matthias Galster, Sanna Malinen, Jay Holland and Negar Mohammadhassan
365ES Metaverse and Education: A Bibliometric Analysis Based on the Past Twenty Years
Chien-Liang Lin, Zeren Zhu, Yushun Su, Juan Zhou and Yu-Sheng Su

| 11:30-12:40 | **SIG-07 Community Building Session (PTP)** | **Room P** |

| 12:40-13:30 | **Lunch** |

December 7

13:30-14:30	**Theme Speaker** **Chair: Siu Cheung Kong**	**Hall**

Exploring the Evolution of Mobile Learning Environments

Daner Sun, Education University of Hong Kong, Hong Kong

13:30-14:30	**SIG-06 Community Building Session (TELL)**	**Room B**

13:30-14:30	**PTP-3** **Chair: Chengjiu Yin**	**Room C**

BTDPN - 205F Data-Driven Competency Assessment Supporting System for Teachers
Taito Kano, Izumi Horikoshi, Kento Koike and Hiroaki Ogata
213F Visualization of Instructional Patterns from Daily Teaching Log Data
Kohei Nakamura, Izumi Horikoshi, Rwitajit Majumdar and Hiroaki Ogata

13:30-14:30	**ALT-5** **Chair: Yasuhisa Kato**	**Room D**

182F Automatic Detection of Negotiation in Collaborative Complex Problem Solving Interactions
Daevesh Singh, Ulfa Khwaja, Sahana Murthy and Ramkumar Rajendran
198F Towards Automated Evidence Extraction: A Case of Adapting SAM to Real-World Educational Data
Koki Okumura, Izumi Horikoshi, Kento Koike and Hiroaki Ogata

14:40-15:40	**Keynote Speaker** **Chair: Hiroaki Ogata**	**Hall**

Building a Research Data Platform and Education

Masaru Kitsuregawa, Research Organization of Information and Systems, Japan

December 7

15:40-16:00 **Coffee/Tea break**

16:00-17:00 **POSTER** **Room P**

AIED/ITS

188P Development of Learning Support System for Critical Reading of Academic Papers
Aota Nishida, Kazuhisa Seta and Yuki Hayashi

199P Overcoming Barriers to Sustainable Dissemination of L2 Learning Resources: An Integrated Framework for Creating and Distributing Dialogue Scenarios
Emmanuel Ayedoun, Yuki Hayashi and Kazuhisa Seta

237P Development of Estimation Method for Learner's Emotional Concealment During Learning Using Biometric Information and Feedback Model
Koichi Shinohara, Keiichi Muramatsu and Tatsunori Matsui

244P An Adaptive Learning Support System based on Ontology of Multiple Programming Languages
Lalita Na Nongkhai, Jingyun Wang and Takahiko Mendori

249P Examination of the robot's role as a helper in learning situations
Makoto Shiraishi and Tatsunori Matsui

269P A Bio-Inspired Method for Personalized Learning Path Recommendation Problem
Yaqian Zheng, Deliang Wang, Yaping Xu, Ziqi Mao, Yaqi Zhao and Yanyan Li

December 7

16:00-17:00   POSTER   Room P

AIED/ITS
276P Developing Effective Educational Chatbots with ChatGPT: Insights from Preliminary Tests in a Case Study on Social Media Literacy
Cansu Koyuturk, Mona Yavari, Emily Theophilou, Sathya Bursic, Gregor Donabauer, Alessia Telari, Alessia Testa, Raffaele Boiano, Alessandro Gabbiadini, Davinia Hernandez-Leo, Martin Ruskov and Dimitri Ognibene

CSCL
178P Mathematic Learning-by-teaching:Video Creation and Cross-Schools Staging
Te-Yang Chou, Yen-Cheng Yeh and Hong-Ming Tu
223P Impact of 360°VR on Pre-Service Teachers' Empathy——Taking Educational Equity as an example
Yanjun Chen, Yiling Hu and Bian Wu
225P Enhancing student teachers' collaborative interdisciplinary design through knowledge-building activities
Pei-Yi Lin
246P Exploring Group Formation Strategies in Computer-Supported Collaborative Learning: A Systematic Review
Jiamin Tang, Huihan Zhou, Yajing Tan and Guang Chen

December 7

ALT

215P What does process mining of feedback-behavior reveal about problem-solving in chemistry undergraduates?
Anveshna Srivastava and Chandan Dasgupta

216P ICCE 2023 Learning Outcomes of Computer Programming and Information Technology - Integrated Courses for Non-Computer Science Majors: Case Study of a Public Research University in Taiwan
Che-Yu Hsu, Feng-Nan Hwang, Tseng-Yi Chen and Chia-Hui Chang

261P Supporting Learning Through Affordance-Based Design: A Comparative Analysis of "BioVARse" and a Standard Textbook Companion Application in Biology Education
Devanshu Saindane, Sunny Prakash Prajapati and Syaamantak Das

263P Investigating Programming Performance Predictability from Embedding Vectors of Coding Behaviors
Ikkei Igawa, Yuta Taniguchi, Tsubasa Minematsu, Fumiya Okubo and Atsushi Shimada

EGG

179P A Skill Tracing Model for Player Character Control in STG
Peizhe Huang, Wanxiang Li, Wen Gu, Kouichi Ota and Shinobu Hasegawa

252P Exploring the Impact on Student Reading Preferences in Gamified Reading Portfolio
Hsiao-Tung Yang, Chang-Yen Liao, Ciao-Min Syu and Tak-Wai Chan

268P Improving Teamwork through a Decision-Theoretic Coach in a Minecraft Search-and-Rescue Game
David Pynadath, Nik Gurney, Sarah Kenny, Rajay Kumar, Stacy Marsella, Haley Matuszak, Hala Mostafa, Pedro Sequeira, Volkan Ustun and Peggy Wu

December 7

TELL

135P Analysis of topic sentences of classification paragraphs and development of a diagnostic function

Kandai Ishikawa and Hidenobu Kunichika

257P Using T-Robot Board Games to Enhance Learning Gains of Rural Elementary School Students

Yu-Wei Wu, Wen-Yu Ye, Wen-Chi Vivian Wu and Rong-Jyue Wang

PTP

146P The Impact of Preschool Teacher Training on STEAM Education: Professional Preparedness and Confidence

Wan-Chen Chang

166P Design-Based Implementation Research: A Collaborative Approach to Educate Out-of-School Children

Faisal Badar and Jon Mason

175P A Study of Versatile Tutor Training Programs for Universities in Japan

Yumi Ishige, Kazuhiro Kabeya, Kayoko Nagao and Hirotoshi Tanigawa

184P Support for fitting Chromebooks to the child with cerebral palsy: A practical study on incorporating advice from ICT specialists

Tomohito Yamazaki and Toyokazu Mizuuchi

243P Incorporation of Robotics in AI Education: Barriers and Enablers as Perceived by K-12 Teachers

Miao Yue, Siu-Yung Jong, Yun Dai, Tsun-Hin Luk and Ma. Jenina N. Nalipay

December 7

16:00-17:00   WIPP   Room P

323WIPP Designing Learning Companions for Enhancing Students' Writing Habits
Chang-Yen Liao

330WIPP Practices of ARCS Chinese language instructional design with MR application participation
Zhenni Shi, Yuto Nagata and Yusuke Morita

339WIPP The Impact of Metaverse Worlds on International Collaborative Learning for Cross-Cultural Understanding
Masako Hayashi, Takehiro Suzuki, Yuki Kawata and Keisuke Goto

341WIPP Designing an Online Course on Learning Analytics for Educators: Preliminary Insights from a Scoping Review
Nurbiha A Shukor, Norah Md Noor, Aini Marina Ma'Rof, Noor Dayana Abd Halim, Matthew Mclain, Phillip Rothwell, Graham Downes and Frances Tracy

343WIPP Development of a Music Educational Board Game with Mobile Device: Learning Musical Theory and Emotional perception through Gameplay
Song-Zhu Xiao, Chih-Chen Kuo and Huei Tse Hou

344WIPP Designing a Virtual Reality Game for Religious Culture Guided Tour by Combining Voice Guided Scaffolding and Situated Learning Mechanism
Jui-Jong Wang, Chih-Chen Kuo and Huei Tse Hou

345WIPP Design and Preliminary Evaluation of an Educational Board Game on Urban Culture and History with Mobile Conceptual Scaffolding
Hau-An Yu, Chih-Chen Kuo and Huei Tse Hou

December 7

346WIPP A Preliminary Evaluation of Using Realistic Virtual Space in Designing Gamification Training Activities for Museum Interpreters
Shen-Yang Ni, Shu-Wei Liu and Huei Tse Hou

347WIPP Unmanned Robotic Online Laboratory with an Intelligent Cloud Teacher
Dongkun Han and Martin Yun-Yee Leung

356WIPP Learning Concentration on Virtual Reality Learning: Scale Development and a Pilot Study
Yi Hsuan Wang, Chun-Ping Wu, Kuan You Pan and Yu Hui Chen

357WIPP Methodology for the Participatory Design of a Learner-Facing Analytics Dashboard
Marie-Luce Bourguet

360WIPP Estimation of Features and Skills of　Drawing Experts by Tracing Figures
Yasuhisa Tamura, Kazunari Kaizu and Akito Hamano

364WIPP Logical Expression Tutoring System for Controlling Smart Devices in Multi-User Environments
Tomoya Takahashi, Yuko Murakami, Hidenobu Watanabe and Kouji Nishimura

366WIPP Proposing a Processing Distribution System for Cross-Organizational Use of Educational Data
Takahiro Morita, Yuko Murakami, Hidenobu Watanabe and Kouji Nishimura

367WIPP Catalyzing Python Learning: Assessing an LLM-based Conversational Agent
Daevesh Singh, Indrayani Nishane and Ramkumar Rajendran

377WIPP A Novel Interpretation of Classical Readability Metrics: Revisiting the Language Model Underpinning the Flesch-Kincaid Index
Yo Ehara

378WIPP Experimental study for a computational model in ITS to predict the learners' state
Yoshimasa Tawatsuji, Keiichi Muramatsu and Tatsunori Matsui

December 7

16:00-17:00 **WIPP** **Room P**

379WIPP Gamified Learning Objects for Inclusive Programming and Science Education
Saumay Garg, Seema Mittal and Mukta Goyal
380WIPP Exploring the Possibility of Harnessing Drones in Geography Education in High Schools
Morris Siu-Yung Jong, Chin-Chung Tsai and De-Qi Zhang
381WIPP Impact of Augmented Reality App on EFL Young Learners' Vocabulary Learning Engagement in a Seamless Learning Environment
Yanjie Song, Jianfeng Zhou and Yin Yang
385WIPP Optimization of Personalized Content Providing Function for Adult Learners with Diverse Backgrounds
Chikako Nagaoka, Masako Furukawa, Yuan Sun and Kazutsuna Yamaji

17:15-18:30 **Move to Dinner Banquet Venue (Bus)**

19:00~21:00 **Dinner Banquet**

December 8

09:00-10:00 **Keynote Speaker**   **Chair: Chee-Kit Looi**   **Hall**

Time to Wake Up from Our Innovative Learning Dreams and Make Smarter Learning a Reality

Curtis J. Bonk, Indiana University, USA

10:00-10:20 **Coffee/Tea break**

10:20-11:20 **ALT-6**   **Chair: Yoshimasa Tawatsji**   **Hall**

150S ECLAIR: A Centralized AI-Powered Recommendations System in a Multi-Node EXAIT System
Isanka Wijerathne, Brendan Flanagan, Yiling Dai and Hiroaki Ogata
163S Sharing Learning Log while maintaining privacy over blockchain: Heuristic Evaluation of BOLL
Patrick Ocheja, Rwitajit Majumdar, Brendan Flanagan and Hiroaki Ogata
164S Program Visualization System Supporting Teacher-Intended Stepwise Refinement
Koichi Yamashita, Hiroki Soma, Satoru Kogure, Yasuhiro Noguchi, Raiya Yamamoto, Tatsuhiro Konishi and Yukihiro Itoh

December 8

10:20-11:20 **EGG-4** Chair: Alex Wing Cheung Tse **Room A**

207F The Impact of Digital Game-based Learning with a Mathematical Game Application on Calculation Abilities of Grade 4 Students
Yinbei Liu and Alex Wing Cheung Tse
BSPN - 209F The Impact of Gamified Assessment on the Learning Burnout of Undergraduate Computing Students: a Quasi-experimental Research
Beilei Zhang and Alex Wing Cheung Tse

10:20-11:20 **AIED/ITS-5** Chair: Ning Wang **Room B**

138F Can We Ensure Accuracy and Explainability for a Math Recommender System?
Yiling Dai, Brendan Flanagan and Hiroaki Ogata
BTDPN - 160F ExGen: Ready-To-Use Exercise Generation in Introductory Programming Courses
Duong Ta, Hua Gia Phuc Nguyen and Swapna Gottipati

10:20-11:20 **PTP-4** Chair: Mas Nida Md Khambari **Room C**

141S Using Learning Design Technologies for Teachers' Practice-Driven Research
Marc Beardsley, Davinia Hernandez-Leo and Roberto Sánchez-Reina
228S A Preliminary Study: Exploring Teachers' Perspectives on the Role of Gathering Information in Supporting Teachers' Digital Learning Agility
Kamilah Abdullah, Mas Nida Md Khambari, Nur Dania Mohd Rosli, Su Luan Wong, Noor Syamilah Zakaria, Siti Raba'Ah Hamzah and Priscilla Moses
351ES Embracing Synchronicity in Distance Education: Unraveling the Paradox
Kumiko Aoki

December 8

10:20-11:20 **CSCL-4** **Chair: Daniel Bodemer** **Room D**

245S Remembering the knowledge of experts and novices in computer-supported collaborative learning: A multinomial processing tree approach
Oktay Ülker and Daniel Bodemer

247S A Comparative Analysis on the Effects of Cognitive Tools in Data Inquiry Cultivation
Hui Zhang, Bian Wu, Yiling Hu and Yujie Xu

280S Argumentative Knowledge Construction and Certainty Navigation: A Comparison between Individual and Group Work
Wenli Chen, Eng Eng Ng, Guo Su, Junzhu Su, Xinyi Li, Siew Cheng Aileen Chai and Qianru Lyu

December 8

11:30-12:40   **ALT-7**   **Chair: Maria Mercedes Rodrigo**   **Hall**

41S Visual Attention Patterns in Processing Compiler Error Messages
Christine Lourrine Tablatin and Maria Mercedes Rodrigo
187S A page jump recommendation model based on digital textbook contents and student log data
Wenhao Wang, Natsumi Yamamoto, Fuzheng Zhao, Etsuko Kumamoto, Zicheng Kang and Chengjiu Yin
195S Concept Map Recomposition Approach for Advanced Formative Assessment in Large-Scale Online Course
Sho Yamamoto, Aryo Pinandito and Tsukasa Hirashima
BTDPN - 251S DLOT: An open-source application to assist human observers
Ashwin T S, Danish Shafi Shaikh and Ramkumar Rajendran

11:30-12:40   **EGG-5**   **Chair: Curtis J. Bonk**   **Room A**

208F Develop and validate STEM education activities using the "6E Design Teaching Model": Taking "Dynamics and Energy Conversion in Sail Car Design" as an example
Chen Lu, Yang Yang and Chen Guang
193S The Design and Practice of Scientific Inquiry Activities for Children Aged 5-6 Based on an AR Flashcard Environment
Tian-Tian Gou, Min-Sheng Fan and Bin-Li Wang
197S Toward Game-Based Learning of Japanese Writing for Elementary School Students
Kazumasa Omura, Kei Kubo, Frederic Bergeron and Sadao Kurohashi

December 8

11:30-12:40   **AIED/ITS-6**   **Chair: Cristina Maier**   **Room B**

308ES Adding Interactive Mode to Active Video Watching
Ehsan Bojnordi, Antonija Mitrovic, Matthias Galster, Sanna Malinen and Jay Holland
350ES A holistic visualisation solution to understanding multimodal data in an educational metaverse platform – Learningverse
Yanjie Song, Jiaxin Cao, Lei Tao and Dragan Gašević
358ES A systematic review on the competences of human-AI collaboration
Youngjin Yoo, Young Hoan Cho and Jeewon Choi
363ES Influence of Robot Roles on Self-Review
Shunsuke Sada and Akihiro Kashihara
369ES An Interactive Robot Lecture System for Attention and Understanding Recovery
Toshiyuki Shimazaki and Akihiro Kashihara

11:30-12:40   **PTP-5**   **Chair: Su Luan Wong**   **Room C**

BSPN - 248F Collaborative design of a simulation-based math classroom: Contradictions and solutions between teaching and research
Wenxin Guo, Bian Wu and Dong Li
229S The Role of Flexibility in Shaping Teachers' Digital Learning Agility: A Preliminary Study
Nur Dania Mohd Rosli, Kamilah Abdullah, Mas Nida Md. Khambari, Su Luan Wong, Noor Syamilah Zakaria, Priscilla Moses and Siti Raba'Ah Hamzah
253S The Impact of Development-questioning Activities on Students' Pre-writing Ideas
Jia Ling Hong, Chang-Yen Liao, Tak-Wai Chan and Jui-Fen Chang

December 8

11:30-12:40 **TELL-3** **Chair: Daner Sun** **Room D**

BSPN - 125F Using Self-Regulated Digital Storytelling in Primary Students' English Learning: An Exploratory Factor Analysis
Yunsi Tina Ma, Siu Cheung Kong and Daner Sun
221S Impact of Self-analysis Behaviors in GOAL for Japanese High School EFL Learners
Zixu Wang, Rwitajit Majumdar and Hiroaki Ogata
231S AI-powered Collaborative Activities for Chinese Vocabulary Learning
Xinyu Guo and Yun Wen
328ES Interaction Patterns between Learners and AI Tools for English Writing
Yun-Shu Xie, Jin-Ho Jang, Su-Yeon Kim and Young Hoan Cho

12:40-13:30 **Lunch**

December 8

13:30-14:30	**ALT-8** **Chair: Ramkumar Rajendran**	**Hall**

BSPN - 266F Unveiling Learners' Interaction Behavior in Virtual Reality Learning Environment
Antony Prakash and Ramkumar Rajendran
277F Keeping Teams in the Game: Predicting Dropouts in Online Problem-Based Learning Competition
Aditya Panwar, Ashwin T S, Ramkumar Rajendran and Kavi Arya

13:30-14:30	**CSCL-5** **Chair: Daniel Bodemer**	**Room A**

161F Unveiling University Students' Data Literacy: A Case Study on Modeling Reasoning in Data Mining Projects
Tianqi Zhang
227F From Individual Ideation to Group Knowledge Co-Construction: Comparison of High- and Low-performing Groups
Wenli Chen, Guo Su, Xinyi Li, Qianru Lyu, Junzhu Su, Siew Cheng Aileen Chai and Eng Eng Ng

13:30-14:30	**CUMTEL-3** **Chair: Brendan Flanagan**	**Room B**

BTDPN - 190S Teaching Analytics with xAPI: Learning Activity Visualization with Cross-platform Data
Izumi Horikoshi, Yuko Toyokawa, Kohei Nakamura, Changhao Liang, Rwitajit Majumdar and Hiroaki Ogata
306ES Learner Perceptions on Gamifying Active Video Watching Platforms
Pasan Peiris, Matthias Galster, Antonija Mitrovic, Sanna Malinen and Raul Lumapas

December 8

13:30-14:30   **PTP-6**   **Chair: Akihiro Kashihara**   **Room C**

222F Sustaining Students' Interest in an Instructional System Design Course by Leveraging Interest-Driven Creator Theory
Vishwas Badhe, Sunita Raste, Sahana Murthy and Sridhar Iyer
BOPN - 224F Supporting science teachers to select quality edtech learning solutions for their context
Shruti Jain, Sheeja Vasudevan, Madhuri Mavinkurve and Sahana Murthy

13:30-14:30   **TELL-4**   **Chair: Lung-Hsiang Wong**   **Room D**

BTDPN - 69S Effects of a Machine Learning-empowered Chinese Character Handwriting Learning Tool on Rectifying Legible Writing in Young Children: A Pilot Study
Lung-Hsiang Wong, Guat Poh Aw, He Sun, Ching-Chiuan Yen, Chor Guan Teo and Yun Wen
82S Using TAASSC to Investigate Fine-Grained Grammatical Complexity in Reading Texts of Two High-Stakes English Tests in China
Shengshu Lin
83S Using Multidimensional Analysis to Investigate the Extrapolation Inference of a High-Stakes Test
Shengshu Lin

December 8

14:40-16:00   **ALT-9**   **Chair: Kae Nakaya**   **Hall**

107S Adapting Noticing Framework to Analyze Learner's Reasoning in VR-simulated complex scenarios
Herold Pc and Chandan Dasgupta

112S Analysis of algorithmic strategy development in the development of computational thinking of upper elementary school students
Xiaowen Wang, Pinqi Hu and Guang Chen

124S A Comparative Study of Traditional and Augmented Reality-Based Engineering Drawing Instruction: Effects on Visualization Skills and Cognitive Load
Ajay Shankar Tiwari and Kaushal Kumar Bhagat

327ES Extraction of Characteristic Answering Behavior Using Handwritten Log Data
Junya Atake, Taito Kano, Kohei Nakamura, Chia-Yu Hsu, Izumi Horikoshi and Hiroaki Ogata

December 8

14:40-16:00 **CSCL-6** **Chair: Ben Chang** **Room A**

84S Investigating Trustworthiness and Conflict in Historical Multiple Texts: From Eye-Tracking Data of Source and Content Processing
Zheng-Hong Guan and Sunny S. J. Lin

230S Discussion support agent system to promote equalization of speech among participants
Ryunosuke Nishimura, Risa Iharada, Yuya Sugamoto, Yutaka Ishii, Toshio Mochizuki and Hironori Egi

238S Experimental Verification of "Peer-ness" Formation by a Learning Companion Robot — Possibility of inducing a sense of competition through long-term nonverbal interaction
Koki Honda, Yoshimasa Tawatsuji and Tatsunori Matsui

242S Study on The Development of Computational Thinking Decomposition Strategies for Senior Primary Students
Mengtao Li, Yaxin Guan and Guang Chen

December 8

14:40-16:00 **PTP-7** **Chair: Peter Seow** **Room B**

128S Investigating Student Teachers' Learning Experience and Choice of Participation Modalities in a HyFlex Course: A Mixed Methods Approach
Liang Jing Teh, Su Luan Wong, Mohd Zariat Abdul Rani, Mas Nida Md Khambari and Sai Hong Tang
258S Promoting Teachers' Digital Literacy Achievement: A Nationwide Survey of Education Informatization in China
Ziyan Che, Jiumei Yang, Longkai Wu and Di Wu
265S Learning with Conversational AI and Personas: A Systematic Literature Review
Antun Drobnjak, Ivica Boticki, Peter Seow and Ken Kahn
155S Matching Intervention Messages Considering Complex Personality Types of High School Students
Taisei Yamauchi, Yuta Nakamizo, Kyosuke Takami, Rwitajit Majumdar and Hiroaki Ogata

14:40-16:00 **PTP-8** **Chair: Natalia Demeshkant** **Room C**

87S What digital tools teachers are ready to use in kindergarten – international comparative study with early childhood pre-service teachers
Natalia Demeshkant, Siri Sollied Madsen, Aleksander Janeš, Andreja Klančar, Rita Brito, Ahmet Sami Konca, Sergey Krasin, Heidi Iren Saure, Jane O'Connor, Mustafa Jwaifell, Steinar Thorvaldsen and Sławomir Trusz
88S Democratising AI Education: Teaching Autoencoders to Out-of-School Children from Low-income Backgrounds
Saumay Garg
96S Informatics Education for University Students based on Text Input Time
Yuko Murakami and Tomohiro Inagaki

December 8

14:40-16:00	**TELL-5** **Chair: Brendan Flanagan**	**Room D**

151S Construction of an English Grammar Quiz Recommendation System Using Explanation by a Knowledge Map
Kensuke Takii, Naomichi Tanimura, Brendan Flanagan and Hiroaki Ogata

152S Educational System of English Tense for Japanese Learners by Forming Temporal Constraints on Tense
Haruto Nagata, Tatsuhiro Konishi and Makoto Kondo

191S Exploring the use of chatbot to promote online EFL students' behavioral, cognitive, and emotional engagements
Xinyi Luo, Weijiao Huang, Khe Foon Hew, Chengyuan Jia and Xiangjie Cao

16:00-17:00	**Closing Ceremony**	**Hall**