

2025

The 6th Int'l Conf. on Learning Environment and Educational Technology



KYUSHU UNIVERSITY

2025 年 3 月 31 日

2025 年 4 月 5 日



The 6th International Conference on Learning Environment and Educational Technology (LEET)

March 31 to April 5, 2025, Fukuoka, Japan



MESSAGE FROM THE CONFERENCE CHAIR



Chengjiu YIN
Conference Chair
Kyushu University, Japan



Hui-Chun Chu (Carol Chu)
Conference Chair
Soochow University, Taiwan

On behalf of the organizing committee, we are pleased to welcome all participants to the 6th International Conference on Learning Environment and Educational Technology (LEET) 2025. LEET 2025 will be held at Kyushu University in Fukuoka, Japan, from Monday, March 31, to Saturday, April 5, 2025.

It aims to provide a forum, where the international participants can share their knowledge on the latest developments in LEET and map out the directions for future developments and the research collaborations. Participants of the conference will be able to interact and exchange ideas, which we hope we can stimulate more exciting ideas for future research.

LEET has been successfully held five times. The specific history is as follows:

- The 1st LEET was held in Kobe, Japan on August 23-26, 2017.
- The 2nd LEET was held in Taipei, Taiwan on November 13-14, 2017.
- The 3rd LEET was held in Kobe, Japan on June 16-18, 2018.
- The 4th LEET was held in Osaka, Japan on Aug 30 to Sep 1, 2019.
- The 5th LEET was held in Fukuoka, Japan on March 25-27, 2024.

Five outstanding keynote speakers will share their insights across varying areas in the field of LEET.

- **Gwo-Jen HWANG** from National Taiwan University of Science and Technology, will introduce "Tips and Strategies for Publishing Papers in SSCI Journals."
- **Hui-Chun Chu (Carol Chu)** from Soochow University, will share with us her version of "Application of Gamification Strategy in Education."
- **Stephen J.H. Yang** from National Central University, will share his insights on "Behind and Beyond the Algorithm: The Societal Impact of Artificial Intelligence."
- **Lin LIN** from Dalian University of Technology, will discuss "Exploring AI Methods in Learning Environments and Pedagogical Strategies."
- **Bo JIANG** from the East China Normal University, will talk about "Transforming Personalized Learning Experiences."

The conference received a total of 53 paper submissions (23 full papers, 10 short papers, and 10 posters) from different countries or economies. All submissions underwent a rigorous review process, evaluated by two to five reviewers from the respective program committees.

Organizing this conference requires coordinated efforts and unwavering support from the organizing committee members and paper reviewers.

We sincerely appreciate all individuals who have contributed in various ways to making this conference a reality.

We are also grateful to all paper authors and registered participants for their valuable academic contributions, fostering a fruitful intellectual exchange at this event.

Thank you!

KEYNOTE SPEAKERS



Gwo-Jen HWANG
National Taiwan University
of Science and Technology

Hui-Chun CHU (Carol Chu)
Conference Chair
Soochow University, Taiwan



Stephen J.H. YANG
National Central University,
Taiwan

Lin LIN
Dalian University of
Technology, China



Bo JIANG
East China Normal
University, China

PROGRAM Committee

General chairs

Gwo-Jen Hwang,
National Taiwan University of Science and Technology, Taiwan

Stephen J.H. Yang,
National Central University, Taiwan

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Carol H.C.
Chu, Soochow University, Taiwan

Chengjiu Yin,
Kyushu University, Japan

Local Committee Chairs

Wei Shi,
Kyushu University, Japan

Huiyong Li,
Kyushu University, Japan



The 6th International Conference on Learning Environment and Educational Technology (LEET)

Mar.31st ~ Apr. 5th, 2025, Fukuoka, Japan

March 30, 2025 (Sunday)

Registration (16:00 - 17:00)

Information Sharing Meeting (17:00 - 18:00)

March 31, 2025 (Monday)

March 31, 2025 (Monday)	
	Morning Session
08:30-10:00	Registration
10:00-10:05	Welcome Address
Room 203	Chengjiu Yin, Kyushu University, Japan
	Keynote Session 1 (Chair: Chengjiu YIN)
10:10-11:00	Artificial Intelligence in Education-Theoretical Perspectives and
Room 203	Research Approaches
	Speaker: Gwo-Jen HWANG , National Taiwan University of Science
	and Technology
11:00-11:10	Coffee Break
	Keynote Session 2 (Chair: Chengjiu YIN)
11:00-12:00	Introduction and Application of Gamification Strategy in Education
Room 203	Speaker: Hui-Chun Chu (Carol Chu) , Soochow University, Taiwan
	Lunch Break & Poster Session
12:00-13:30	
	Poster Session
12:00-13:30	❖ (ID: 6) Gamified intelligent tutoring in physical education: A
Room203&207	quasi-experimental research design
	<i>Lu-Ho Hsia, Yen-Nan Lin, Chung-Hisenh Lin & Gwo-Jen Hwang</i>

	<ul style="list-style-type: none"> ❖ (ID: 12) Generative AI-Assisted Multimodal Learning for Medical Students' Personalized Career Guidance <i>Hsin HUANG, Gwo-Jen HWANG</i> ❖ (ID: 13) Effect of Interactive Multimedia with Two-Tier Tests on Medical Technicians' Learning Performances <i>Hanyu SUNG, Tosti Hsueheng CHIANG & Janpan HWANG</i>
	Afternoon Sessions
	15 minutes presentation for each full paper (Q&A included) 10 minutes presentation for each short paper (Q&A included)
	Session 1 (Chair: Wei SHI)
13:30–14:30 Room 203	<ul style="list-style-type: none"> ❖ (ID: 50) The Effect of a Social Storytelling Scenario-Based Game Learning Model on Social-Emotional Competence of Elementary School Students about Autism in School Bullying <i>I-Chun Tsai, Hui-Chun Chu & Chun Chieh Wang</i> ❖ (ID: 3) Perceptions of the Effects of Flexible Progress on Learning Effectiveness in Gamified Flipped Teaching <i>Gwo-Haur HWANG, Chun-Chun Chang & Yi-Hua LI</i> ❖ (ID: 4) Effects of Image-Generative AI Combined with Game-Based Learning on Students' Learning Effectiveness and AI Literacy <i>Ying-Chieh Lin, Ting-Chia HSU</i> ❖ (ID: 9) Integrating Cognitive Prompts into Virtual Reality Inquiry Games: Advancing Science Learning Outcomes <i>En-Tzu CHANG, Chih-Hung CHEN</i>
	Session 2 (Chair: Huiyong LI)
13:30 – 14:35 Room 207	<ul style="list-style-type: none"> ❖ (ID: 32) Using Concept Maps and Multidimensional Scaffolding to Improve Problem-Solving in Climate Change Digital Games <i>Wei-Chieh PENG & Chia-Yu WANG</i> ❖ (ID: 34) Influences of an SVVR-based Experiential Learning Model on Students' Learning <i>Kuan-Ning HUANG, Ai-Ni TSAI, Sheng-Kai Chiu, Gwo-Haur HWANG, Lu-Ho HSIA, & Chih-Hung CHEN</i> ❖ (ID: 47) Impacts of Immersive Virtual Reality on Elementary School Students' Learning Outcomes, Flow Experience, Cognitive

	<p>Load, and Willingness to Participate in Environmental Protection in Marine Ecology</p> <p><i>Gwo-Haur HWANG, Siao-Yun CHEN, Lu-Ho HSIA, & Chih-Hung CHEN</i></p> <p>❖ (ID: 31) Toward Learning and Using Generative AI Tools for Natural-Language Programming</p> <p><i>YungYu ZHUANG, Jen-Hang WANG & Gwo-Dong CHEN</i></p> <p>❖ (ID: 8) Exploring the Impact of Uncertainty on English Pronunciation Learning in a Role-Playing Game</p> <p><i>Jie-Chi YANG, Tzu-Ching FANG</i></p>
14:35~15:00	Break
	<p>15 minutes presentation for each full paper (Q&A included)</p> <p>10 minutes presentation for each short paper (Q&A included)</p>
	Session 3 (Chair: Ming-Puu CHEN)
15:00~16:15 Room 203	<p>❖ (ID: 20) An Investigation into the Application of Digital Game-Based Learning in Chinese Language Teaching</p> <p><i>Yun-Yan Hsieh, Hao Chiang Koong LIN, Yu-Chun Ma & Yen-Fang Chen</i></p> <p>❖ (ID: 22) The Impact of Combining SDGs with Digital Puzzle Games on Students' Learning Outcomes and Behavioral Patterns</p> <p><i>Cheng-Hung Hsu, Hsi-Hsun Yang</i></p> <p>❖ (ID: 29) Embodied Effects of an AI-Based Concept Mapping Problem-Posing Strategy on Social Studies Learning Achievement and Cognitive Load</p> <p><i>Ting-Wei LIU & Chih-Hung CHEN</i></p> <p>❖ (ID: 46) Classroom Adventure: Comparing the Effects of Gamification on Media Literacy Across Different Competence Levels of Japanese Secondary School Students</p> <p><i>Pang-Chen CHAO, Chia-Yu WANG, Noa HORIGUCHI, Hinata FURUKATA & Zentaro IMAI</i></p> <p>❖ (ID: 19) Using AR-Scaffolding to Enhance Novices' Problem-Solving Performance</p> <p><i>Ming-Puu CHEN, Wen-Hsuan YIN & Li-Chun Wang</i></p>
	Session 4 (Chair: Hanyu SUNG)

15:00~16:15 Room 207	<ul style="list-style-type: none"> ❖ (ID: 15) The Study on the Relationship Between Adaptive e-Learning Strategies, Learning Emotions, and Learning Effectiveness - A Case of e-Testing <i>Ming Chun WU, Hao Chiang Koong LIN</i> ❖ (ID: 27) Exploring the Role of Artificial Intelligence in Strengthening Diversity Learning and Empowering Digital Intercultural Communication <i>Siska Budi JASMIN, Yossiri YOSSATORN & Tsai-Ju LEE</i> ❖ (ID: 44) Development of an Integrated Learning System Combining Mindtools and Generative AI in a Mobile Role-Playing Inquiry-Based Game <i>Ai-Ni TSAI, Kuan-Ning HUANG, Chih-Hung CHEN</i> ❖ (ID: 38) Research on AI Virtual Teachers in the Metaverse: Educational Level, Learning Domain, Theory, and Roles of Technology for Teaching Innovation <i>Chih-Ming CHEN, Cheng-Jiu YIN, Hsiu-Ling CHEN, Hsu-Cheng Tosti CHIANG & Kai-Yu TANG</i> ❖ (ID: 41) Beyond Acceptance: Understanding Critical Determinants of GenAI-supported Learning from Teachers' Perspectives <i>Chun-Hua HSIAO & Kai-Yu TANG</i>
	Welcome Reception <p>18:00 - 20:00</p> <p>博多焼肉 HACHI HACHI 博多本店 https://yakiniku-hachi-hachi3.owst.jp</p> <p>福岡県福岡市博多区博多駅東3丁目12-20 3-12-20, Hakata eki Higashi, Hakata-ku Fukuoka-shi Fukuoka-ken</p>



April 1st, 2025 (Tuesday)

April 1st, 2025 (Tuesday)

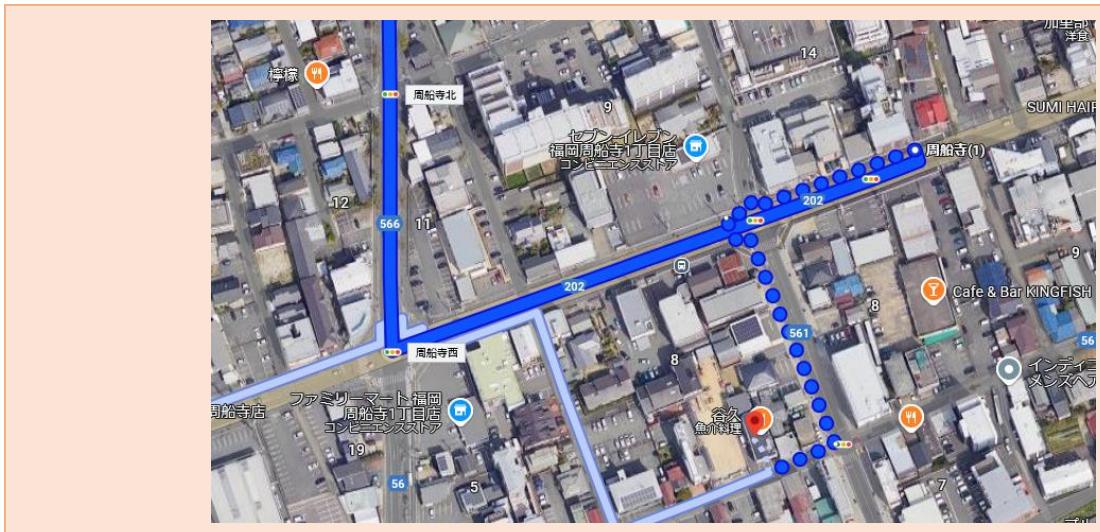
	Morning Session
	Keynote Session 3 (Chair: Ting-Chia HSU)
9:40-10:20 Room 203	Behind and Beyond the Algorithm: The Societal Impact of Artificial Intelligence Speaker: Stephen J.H. Yang , National Central University, Taiwan
	Keynote Session 4 (Chair: Chengjiu YIN)
10:20 - 11:00 Room 203	Exploring AI Methods in Learning Environment and Pedagogical Strategies Speaker: Lin LIN , Dalian University of Technology, China
11:00-11:10	Coffee Break
	Session 9 (Chair: Mei-Rong Alice Chen) 15 minutes presentation for each full paper (Q&A included) 10 minutes presentation for each short paper (Q&A included)
11:10 – 12:00 Room 203	<ul style="list-style-type: none"> ✧ (ID: 48) Enhancing IoT Programming Education with a Wearable AR Interactive Learning System: Improving Student Outcomes and Motivation <i>Jia-Yi Lu, Shu-Yu Hsu & Kai-YI Chin</i> ✧ (ID: 36) Development of Simulation-Based Learning System for Assisting the Novices Learning Recursive Programming Concepts

	<p>and Investigating Its Learning Effects <i>Pei Tong Chen, Ah Fur Lai, & Cheng Ying Yang</i></p> <p>❖ (ID: 5) Effects of a Cognitive Process-Based Visual Feedback Approach on EFL Writing Outcomes <i>Mei-Rong Alice CHEN</i></p> <p>❖ (ID: 53) CodeRunner Agent: Integrating AI Feedback and Self-Regulated Learning to Support Programming Education <i>Huiyong Li</i></p>
	<p>Session 10 (Chair: Tsai-ju Lee)</p> <p>15 minutes presentation for each full paper (Q&A included)</p> <p>10 minutes presentation for each short paper (Q&A included)</p>
11:10 – 12:05 Room 207	<p>❖ (ID: 42) CGT-GPT in Collaborative Discourse: Integrating Computational Grounded Theory with Large Language Models to Support Qualitative Coding <i>Tien-Chih CHANG, John J. H. LIN, Chia-Yu WANG</i></p> <p>❖ (ID: 35) Development of Interactive Learning Website for Assisting Senior Elementary School Students to Learn Decimal Concepts <i>Yung Chin Chao, Ah Fur Lai & Yen Hung Chen</i></p> <p>❖ (ID: 54) A case Study of Designing for a Collaborative Learning Simulation System <i>Juan Zhou, Yuima Yatsu, Hiromi Nakamura</i></p>
	Lunch Break & Poster Session
12:05-13:30	
	Poster Session
12:00-13:30 Room203 Room207 Room210	<p>❖ (ID: 1) Implementation of a VR-Based Escape Room Game to Build Nursing Students' Competence <i>Ching-Yi Chang</i></p> <p>❖ (ID: 2) An Escape Room Game in Virtual Reality to Foster Higher Education Students' Learning Performance <i>Yu-Yu Lina, Ching-Yi Chang</i></p> <p>❖ (ID: 7) Analyzing association between student learning outcomes and learning style <i>Christopher Ching-Yuan YANG</i></p>

	<ul style="list-style-type: none"> ✧ (ID: 16) Leveraging Generative AI Tools to Improve Prospective Teachers' Self-Directed Learning and Young Learners' Motivation <i>Wen-Chi Vivian Wu, Rong-Jyue Wang</i> ✧ (ID: 26) Virtual Reality as a Transformation of Digital Capital: The Experiences of Vocational Students in Northern Taiwan <i>Ming-Kuo HUNG</i> ✧ (ID: 40) Creating a Customized AI-Powered Agent for English Conversation Practice <i>Gloria Yi-Ming KAO</i> ✧ (ID: 43) The role of self-efficacy, self-regulated learning and cognitive strategies in online concept mapping learning <i>Yu-Xuan Lin, Shin-Ting Tsai, Shu-Ling Wang</i>
	<p>Afternoon Sessions</p>
	<p>15 minutes presentation for each full paper (Q&A included)</p> <p>10 minutes presentation for each short paper (Q&A included)</p>
	<p>Session 5 (Chair: Ching-Yi Chang)</p>
13:30–14:35 Room 203	<ul style="list-style-type: none"> ✧ (ID: 17) Designing a Virtual Reality Picture Book for Wetland Ecology Education <i>Yu-An Lin, Chia-Chieh Lee, Ching-Yu Chang & Min-Chai Hsieh</i> ✧ (ID: 23) Exploring the Impact of Virtual Reality Traffic Safety Learning on Sixth-Grade Elementary School Students of Different Genders through Drawing Analysis <i>Kuan-Ting LAI, Hsi-Hsun YANG & Gwo-Haur HWANG</i> ✧ (ID: 30) Transforming Pedagogy: A Study on the Integration of Generative AI in Self-Directed Learning Models for Pre-Service Teachers <i>Chen-Yin Lee</i> ✧ (ID: 10) Using Virtual Reality to Enhance Dementia Care Knowledge and Skills in Family Caregivers <i>Hui-Chen LIN, Gwo-Jen HWANG & Tzu-Chien TSENG</i> ✧ (ID: 51) Promoting Backtracking Behavior by Page Recommendation <i>Wenhao WANG & Chengjiu YIN</i>
	<p>Session 6 (Chair: Ching-Yuan Yang)</p>

13:30 – 14:35 Room 207	<ul style="list-style-type: none"> ✧ (ID: 14) Design Thinking Curriculum for Rural Junior High Schools: A Community Cultural Pathway Through Technological Arts Chieh FANG, Chuan Yu, LIN & Hao-Chiang Koong LIN ✧ (ID: 24) Motivating Learning with Tarot and ChatGPT: A Novel Game-Based Practice System <i>Yi-Chun, HSIEH, Stephen J.H. YANG & Albert C.M. YANG*</i> ✧ (ID: 25) A Retrieval-Augmented Generation-Based Virtual Teaching Assistant <i>Jiasheng DAI, Stephen J.H. YANG & Albert C.M. YANG*</i> ✧ (ID: 28) Embodied Multi-Modal Learning with Digital Human Twins: An AI-Driven Approach for Service-Oriented Courses <i>YungYu ZHUANG, Yao-En CHEN & Gwo-Dong CHEN</i> ✧ (ID: 33) Developing Bilateral Hybrid Learning between Japan and Taiwan: Overcoming Geographical Disadvantages and Making Unique Discoveries <i>Satoshi KATO</i>
14:35~14:50	Break
	15 minutes presentation for each full paper (Q&A included)
	10 minutes presentation for each short paper (Q&A included)
	Session 7 (Chair: Ming Chun WU)
14:50 – 15:45 Room 203	<ul style="list-style-type: none"> ✧ (ID: 11) A Preliminary Study on Enhancing the Effectiveness of Interactive Design Learning Through Digital Storytelling and the Golden Circle Theory <i>Chia-Hui FENG & Hao-Chiang Koong LIN</i> ✧ (ID: 18) Applying AIGC in Smart Assistive Device Designs: Impacts of Divergent and Convergent Thinking on Learning Emotions and Self-efficacy <i>Hsin-Jung CHIANG, Jing-Lin HUANG & Chia-Hui FENG</i> ✧ (ID: 21) Assessing GPT-4o and Large Language Models' Traditional Chinese Comprehension and Educational Potential through Taiwan's Junior High School Chinese Examinations <i>Yao-Cheng KUO, Chun-Yu CHEN, Wen-Hua CHEN, Anna Y.Q. HUANG, Owen H.T. LU, Stephen J.H. YANG*</i>

	<p>❖ (ID: 45) A Framework for Using Generative AI and RAG to Realize the Automatic Generation of Learning Materials from Lecture Slides <i>Kota Hashiyada, Wei SHI & Chengjiu Yin</i></p>
	Session 8 (Chair: Wen-Chi Vivian Wu)
14:50 – 15:45 Room 207	<p>❖ (ID: 37) Design a Financial Literacy Board Game Through Miro to Explore the Impact of Financial Literacy on Investment Attitudes and Financial Behaviors <i>Ching Fang HU & Hao Chiang Koong LIN</i></p> <p>❖ (ID: 39) The Effect of Introducing Interactive Robots in Learning Japanese Verb Conjugations <i>Jo-Ting CHEN & Pei-Chi LAN</i></p> <p>❖ (ID: 49) Effect of Humanoid Robot on Programming Learning Among Non-Information Related Students <i>Chih-Hung LAI, Dinh LE</i></p> <p>❖ (ID: 52) A Musical Instrument Learning System Utilizing Multi-Directional Videos and Hand Landmark Detection <i>Wei SHI & Yoshihiro OKADA</i></p>
15:45 - 16:00	Break
	Keynote Session 5 (Chair: Chengjiu YIN)
16:00 - 16:40 Room 203	<p>Transforming Personalized Learning Experience with Large Language Models</p> <p>Speaker: Bo JIANG, East China Normal University, China</p>
	Banquet
18:00 - 20:00	<p>いけす割烹谷久</p> <p>https://tabelog.com/fukuoka/A4001/A400203/40010271/party/207981331</p> <p>福岡県福岡市西区周船寺1丁目8-3</p> <p>1-8-3, Susenji, Nishi-ku, fukuoka-shi, Fukuoka</p>



April 2, 2025 (Wednesday)

Group Discussion (10:00 - 12:00)

Idea Exchange on LEET Research

Lunch Break (12:00 - 14:00)

Group Discussion (14:00 - 17:00)

Idea Exchange on LEET Research

April 3, 2025 (Thursday)

Group Discussion (10:00 - 12:00)

Group Discussion on the Future Cooperation

Lunch Break (12:00 - 14:00)

Group Discussion (14:00 - 17:00)

Group Discussion on the Future Cooperation

April 4, 2025 (Friday)

Group Discussion (10:00 - 12:00)

Using Generative AI Tools in Education

Lunch Break (12:00 - 14:00)

Group Discussion (14:00 - 17:00)

Group Discussion on the Future Cooperation

April 5, 2025 (Saturday)

Group Discussion (10:00 - 12:00)

Using Generative AI Tools in Education

Lunch Break (12:00 - 14:00)

Group Discussion (14:00 - 17:00)

Group Discussion on the Future Cooperation
