CITE Research Symposium 2026
" Co-evolving Futures: Agency in Learning and Collaboration "
15 May 2026 (Friday) – Day 1
Rayson Huang Theatre & Runme Shaw Building, The University of Hong Kong
Parallel Sessions (Part 1)

Time	RHT	RMS 202	RMS 203	RMS 204	RMS 205	RMS 301
15:10 - 16:10	15:10 - 15:40 Tech in Practice Beyond the Novelty Effect: Evaluating the Impact of Large Language Model Recommender Systems on Motivation and Cognitive Load in Middle School Mathematics by Zhuoying Li and Khe Foon Hew | #32 **Abstract**	15:10 - 15:30 Paper Presentation Evaluation of an AI Chatbot for Supporting Senior-Year-Entry Students' Mental Health by Vanessa Wan Hei Leung, Muhammad Ali and Jeremy T. D. Ng | #3 **Abstract**	15:10 - 15:30 Paper Presentation AI-Driven Media and Multilingual Literacies: Co-Evolving Agency for Future-Ready Second-Language Learners in Malaysia by Yifan Gao, Yifan Liu and Jiale Dai | #5 **Abstract**	15:10 - 15:30 Paper Presentation Towards Human-AI Feedback Collaboration: Activating Learners in Feedback Processes by David Carless and Shijun Cindy Chen | #7 **Abstract**	15:10 - 15:30 Paper Presentation Bar-Anchored, Personalized Music Theory Tutoring from Uploaded Scores and Audio: A Learner Sourced Intelligent Tutor to Support Instrumental Teaching by In Son Zeng | #14 **Abstract**	15:10 - 15:30 Paper Presentation Enhancing Student Agency through Technology-Supported Teachers' Learning Design: Fostering Learner Agentic Resources by Linyuan Wang, Pokan Ko, Yanwen Zheng, Cong Liu, Jiewen Feng and Hongfeng Liu | #24 **Abstract**
	15:40 - 16:10 Tech in Practice From "Passive" to "Playful": Gamification and Student Engagement in Academic Library Workshops by Yin Shan Jian and Cindy Xinyi Liang | #9 **Abstract**	15:30 - 15:50 Paper Presentation Implementing Arduino Robot-Car Learning in Hong Kong Primary STEM Classrooms: An Exploratory Qualitative Case Study by Mian Muneeb and Muhammad Ali | #28 **Abstract**	**[Cancelled]** 15:30 - 15:50 Paper Presentation VR Creation Experience in Sustainability for Secondary School Students: A Preliminary Exploration by Ka Wai Lau, Xiao Hu, Chun Lai, Tzi Dong Jeremy Ng and Zuo Wang | #13 **Abstract**	15:30 - 15:50 Paper Presentation Enhancing Computational Thinking through POE-Based Experimental Teaching in Primary IT Education: An Action Research Study by Sun Yiyao | #19 **Abstract**	15:30 - 15:50 Paper Presentation Beyond Self-Reports: Tracing GenAI Literacy in Human-AI Interaction Using Trajectory Assessment by Xinyin Hu and Yao Zhang | #20 **Abstract**	15:30 - 15:50 Paper Presentation Mapping the Landscape of Teacher-AI Collaboration Research: A Bibliometric Review by Peiyao Tian and Ka Wai Gary Wong | #25 **Abstract**
		15:50 - 16:10 Paper Presentation PACES for Fostering Learners' AI Literacy: Progressions Across Cognition, Ethics, and Skills by Zemin Guo, Muhammad Ali and Gary K. W. Wong | #29 **Abstract**	15:50 – 16:10 Paper Presentation Generative Artificial Intelligence–Based Writing Feedback in Higher Education: A Systematic Review Using IEEE Xplore by Ka Shing Charles Ko | #23 **Abstract**	15:50 – 16:10 Paper Presentation MisEdu-RAG: A Misconception-Aware Dual-Hypergraph RAG for Novice Math Teachers by Zhihan Guo | #30 **Abstract**	15:50 – 16:10 Paper Presentation Parental Phubbing and Preschoolers' Screen Addiction: A Study on the Mediating Role of Parent–Child Interaction Quality by Xinling Hu | #36 **Abstract**	15:50 – 16:10 Paper Presentation Bridging the Gap Between High School and University: Developing Critical Thinking and Emerging Literacies through Research-Based Learning by Jiaan Sun | #38 **Abstract**

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Abstracts

Tech in Practice

Beyond the Novelty Effect: Evaluating the Impact of Large Language Model Recommender Systems on Motivation and Cognitive Load in Middle School Mathematics

Zhuoying LI - The University of Hong Kong; Khe Foon HEW - The University of Hong Kong;

Many middle school students struggle with mathematics, often experiencing low motivation and high cognitive load. While general Large Language Models (LLMs) may help enhance learners' motivation, empirical evidence remains inconsistent, and such models can verwhelm students with unstructured information, potentially increasing cognitive load. To address this issue, this study investigates whether a Retrieval Augmented Generation Recommender System (RAGRS) can reduce cognitive load and enhance motivation in Grade 7 mathematics compared to a general LLM system.

Paper Presentation

Evaluation of an AI Chatbot for Supporting Senior-Year-Entry Students' Mental Health

Vanessa Wan Hei LEUNG - The University of Hong Kong; Muhammad ALI - The University of Hong Kong; Jeremy T. D. NG - The University of Hong Kong;

This study has designed a customized AI chatbot via Poe and examines under-represented senior-year entry students' experiences and attitudes of this chatbot for offering them mental health related support. We report our ongoing evaluation of this chatbot in terms of students' perceived usefulness, how they interact with the chatbot, and their perceived ethical and practical issues arising from AI usage. Preliminary findings from analyzing user-chatbot interactions and semi-structured interviews will be presented.

Paper Presentation

AI-Driven Media and Multilingual Literacies: Co-Evolving Agency for Future-Ready Second-Language Learners in Malaysia

Yifan Gao - Universiti Kebangsaan Malaysia; Yifan Liu - Universiti Kebangsaan Malaysia; Jiale Dai - Universiti Kebangsaan Malaysia;

Investigating AI as a co-learner in Malaysian classrooms, this paper details a five-week intervention with 30 L2 undergraduates, grounded in Actor-Network Theory. Results highlight four core dimensions of human-AI collaboration and offer concrete strategies for using L1 resources to scaffold English learning. This is essential reading for scholars and practitioners engaged with Global South contexts, translanguaging, and emergent AI literacies.

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Paper Presentation

Towards Human-AI Feedback Collaboration: Activating Learners in Feedback Processes

David CARLESS - The University of Hong Kong; Shijun Cindy CHEN - The University of Hong Kong;

To what extent does AI offer part of a solution, or does it instead present new and different challenges? In this paper, we interweave conceptual thinking and recent data collection to discuss the respective strengths and limitations of human and AI feedback sources. We extract from Lipnevich and Smith framework with five core components of feedback messages: timeliness, accuracy, level of detail, comprehensibility, and tone. We conclude by raising some issues relevant to human-AI feedback collaboration.

Paper Presentation

Bar-Anchored, Personalized Music Theory Tutoring from Uploaded Scores and Audio: A Learner Sourced Intelligent Tutor to Support Instrumental Teaching

In Son ZENG - University of Macau;

This paper proposes a bar-anchored, personalized music theory tutor that transforms uploaded scores and audio into contextual explanations and practice cues for instrumental teaching. Guided by personalization, actionable cues, and learnersourcing, it combines OMR with human corrections to address LLM limitations. A prototype enables teachers to analyze piano pieces, contribute theory units, and build trusted content. Research questions target improvements in contextual theory uptake, teaching adaptability, and microcontent quality.

Paper Presentation

Enhancing Student Agency through Technology-Supported Teachers' Learning Design: Fostering Learner Agentic Resources

Linyuan WANG - The University of Hong Kong; Pokan KO - The University of Hong Kong; Yanwen ZHENG - The University of Hong Kong; Cong LIU - The University of Hong Kong; Jiewen FENG - The University of Hong Kong; Hongfeng LIU - The University of Hong Kong;

This study examines whether an LD-integrated Learning Analytics (LA) intelligent system can support student agency and agency-supportive learning conditions. Using mixed methods with 150 STEM students, results show significant improvements in perceived learning conditions, including teacher support for self-directed and inquiry-based learning. Student agency did not increase immediately but was predicted by perceived learning conditions, suggesting that agency may develop gradually as supportive learning environments expand.

Paper Presentation

Implementing Arduino Robot-Car Learning in Hong Kong Primary STEM Classrooms: An Exploratory Qualitative Case Study

Mian MUNEEB - The University of Hong Kong; Muhammad Ali - The University of Hong Kong;

This exploratory qualitative case study examines how a Primary 5 Arduino robot car unit was implemented within a Hong Kong primary STEM classroom. Guided by constructionist learning and Cognitive Load Theory, it investigates classroom enactment, learning and technical challenges, and teacher scaffolding. Preliminary findings suggest that robot car learning was motivating yet demanding, with assembly difficulties, uneven collaboration, and fluctuating engagement underscoring the importance of scaffolding in managing task complexity and sustaining participation effectively.

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Paper Presentation

VR Creation Experience in Sustainability for Secondary School Students: A Preliminary Exploration

Ka Wai LAU - The University of Hong Kong; Xiao HU - The University of Hong Kong; Chun LAI - The University of Hong Kong; Tzi Dong Jeremy NG - The University of Hong Kong; Zuo WANG - The University of Hong Kong;

Despite growing VR adoption in education, research on student-driven VR creation for sustainability is limited. This study examined 160 Grade 8 students who collaboratively developed VR stories about local landmarks. Preliminary findings indicate enhanced collaboration and digital skills, particularly in sourcing reliable information. Results suggest VR creation cultivates both sustainability awareness and technological proficiency, contributing to maker-based pedagogy discourse. Ongoing analysis will further elucidate learning outcomes.

Paper Presentation

Enhancing Computational Thinking through POE-Based Experimental Teaching in Primary IT Education: An Action Research Study

SUN Yiyao - The University of Hong Kong;

This action research study explores how POE-based experimental teaching cultivates computational thinking in primary IT education. Three iterative cycles were conducted with 50 fifth-grade students. Data included classroom observations, interviews, work analysis, and pre/post-test CT assessments. Results showed significant improvement in students' algorithmic thinking and problem-solving abilities. A "1+3+2" instructional model was derived, offering a practical approach aligned with curriculum standards.

Paper Presentation

Beyond Self-Reports: Tracing GenAI Literacy in Human-AI Interaction Using Trajectory Assessment

Xinyin HU - Zhejiang University of Technology; Yao ZHANG - Zhejiang University of Technology;

Assessing Generative AI literacy demands process-oriented evidence beyond self-report scales. This study proposes an framework that captures learner agency through multi-turn human-AI interaction trajectories. The MAPLE system maps observable discourse behaviors onto four literacy dimensions via stealth logging and LLM-based evaluation. Expert review confirmed content validity, and preliminary trajectory analysis revealed distinct structures corresponding to varying cognitive engagement levels, demonstrating that interaction trajectories yield richer, more dynamic literacy evidence than single-task performance or traditional self-assessments.

Paper Presentation

Mapping the Landscape of Teacher-AI Collaboration Research: A Bibliometric Review

Peiyao TIAN - The University of Hong Kong; and Ka Wai Gary WONG - The University of Hong Kong;

A bibliometric analysis was conducted on 572 articles published before March 2026, retrieved from the Web of Science Core Collection. Using CiteSpace, we performed keyword co-occurrence analysis, cluster analysis, burst detection, and timezone visualization. The results reveal that the field experienced exponential growth after 2022. Ten high-quality clusters were synthesized into four thematic groups. The study provides a framework for understanding human-AI collaboration in teacher education.

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Tech in Practice

From "Passive" to "Playful": Gamification and Student Engagement in Academic Library Workshops

Yin Shan JIAN - The University of Hong Kong; Cindy Xinyi LIANG - The University of Hong Kong;

This session examines how gamification in one-shot academic library instruction can strengthen learner agency by increasing students' opportunities to respond, make choices, and interact. Using ClassPoint, a gamified, problem-based workshop was implemented and compared with a traditional session with identical instructional content. The presentation highlights how specific gamification elements shaped participation and peer interaction, and shares design considerations and challenges for supporting student agency in time-limited library workshops.

Paper Presentation

PACES for Fostering Learners' AI Literacy: Progressions Across Cognition, Ethics, and Skills

Zemin GUO - The University of Hong Kong; Muhammad ALI - The University of Hong Kong; Gary K. W. WONG - The University of Hong Kong;

Despite the proliferation of AI literacy frameworks, few address age-specific considerations in conceptualizing, assessing, and teaching K-12 students' AI literacy. The PACES framework maps Progressions Across Cognition, Ethics, and Skills across four educational levels, foregrounding psychosocial enablers that support learners' progression to higher levels of AI literacy. Derived from an integrative review of 118 records using inductive content analysis, PACES provides actionable progression checkpoints for researchers and supports designing interventions and curricula for practitioners.

Paper Presentation

Generative Artificial Intelligence–Based Writing Feedback in Higher Education: A Systematic Review Using IEEE Xplore

Ka Shing Charles KO - Harvard Business Impact/SCOPUS;

The rapid integration of AI into higher education reshapes teaching with opportunities and concerns for learner agency, ethics, and human-centered education. This paper proposes the Learning Circle, an agile framework for human-AI collaboration in higher education. As AI integration reshapes teaching with opportunities and concerns for learner agency, ethics, and human-centered education, the model—derived from hematic synthesis of relevant literature—conceptualizes learning as an iterative cycle of engagement, AI-supported feedback, reflection, and adjustment.

Paper Presentation

MisEdu-RAG: A Misconception-Aware Dual-Hypergraph RAG for Novice Math Teachers

Zhihan GUO - The University of Hong Kong;

Novice mathematics teachers often struggle to turn student errors into actionable responses. This paper presents MisEdu-RAG, a dual-hypergraph RAG framework that links pedagogical knowledge with authentic misconception cases to generate structured teaching guidance. Evaluations on MisstepMath and a pilot study with teachers suggest that MisEdu-RAG improves retrieval and response quality, and the practical support available to novice teachers handling high-demand misconception scenarios.

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Paper Presentation

Parental Phubbing and Preschoolers' Screen Addiction: A Study on the Mediating Role of Parent–Child Interaction Quality

Xinling HU - The University of Hong Kong;

In today's digital era, increased screen exposure among preschoolers has made screen addiction a growing concern. However, the mechanism of children's screen addiction remains unclear. This study surveyed 294 parents of children aged 3–6. Results show that parental phubbing is positively associated with children's screen addiction and negatively related to parent–child interaction, which partially mediates this relationship (14.44%).

Paper Presentation

Bridging the Gap Between High School and University: Developing Critical Thinking and Emerging Literacies through Research-Based Learning

Jiaan SUN - East China Normal University;

The transition from high school to university often leaves students unprepared for academic learning in the AI era. Using a mixed-methods approach with 62 students, assessed across five skills—inquiry, analysis, evaluation, reflection, and communication—within three modules using a pre-post design. Results indicate significant gains in inquiry, evaluation, and reflection. Student-generated research questions and scaffolded instruction enhanced higher-order thinking, suggesting that enhanced student agency supports the development of academic literacy and emerging literacies for future-ready learning.