LIET2026

Learning Innovations and Emerging Technologies Conference 2026

PD4AI | AI4PD

28-29 November 2026

(Pre-conference Workshop: 27 November 2026)

Conference Handbook

Supporting Organisations:

Sponsors:

Gold

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Co-hosted by:

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01

Welcome Message

Foreword

About LIET2026

Greetings from the President of The Education University of Hong Kong



Professor John LEE Chi-Kin

President, The Education University of Hong Kong
Chair Professor of Curriculum and Instruction
UNESCO Chair in Regional Education Development and Lifelong Learning
The Education University of Hong Kong

Welcome to the Learning Innovations and Emerging Technologies Conference 2026 (LIET2026).

The theme of LIET2026, "PD4AI | AI4PD" (Professional Development for Artificial Intelligence and Artificial Intelligence for Professional Development), comes at a pivotal juncture for global education. As the educational landscape continues to evolve rapidly under the influence of Artificial Intelligence (AI), strengthening the competence and readiness of the education workforce through professional development (PD) has become an urgent priority. Sustainably enhancing AI literacy through PD and optimising human-AI collaboration within PD are equally vital to addressing diverse learning needs while advancing educational equity, quality, and efficiency for both the educators and students.

As the only publicly funded university in the Hong Kong SAR dedicated to teacher education, The Education University of Hong Kong (EdUHK) has long been at the forefront of educational innovation. Guided by EdUHK's *Strategic Plan 2025–2031*, we are committed to cultivating future-ready educators and professionals grounded in proper values, leveraging breakthrough research to generate social impact, and strengthening our global reach and engagement.

This occasion is particularly meaningful as 2026 marks the 10th Anniversary of EdUHK's Retitling. Alongside this milestone, our commitment to building a more sustainable future for education is stronger than ever. A notable example is the implementation of our university-level Artificial Intelligence and Digital Competency Strategy. Guided by the overarching *AI4EDU Framework for Staff Professional Development*,

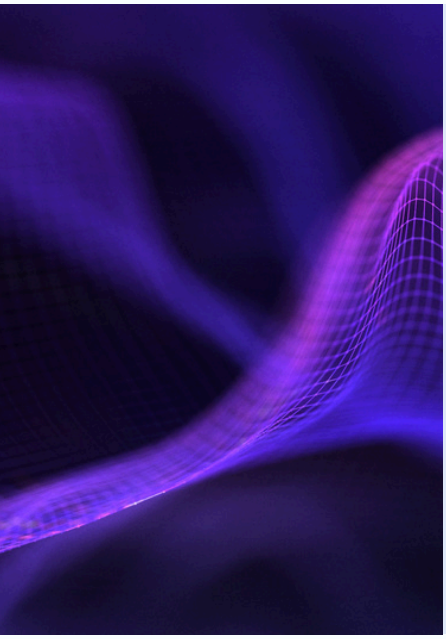
this Strategy has mobilised three Faculty Communities of Practice (CoPs) on AI in Learning and Teaching to foster digital and AI competencies, promote cross-disciplinary AI collaboration, and advance AI-empowered programme design across the EdUHK professional community.

Hosting LIET2026 closely aligns with these strategic priorities and reflects our mission to foster an environment conducive to equitable, quality, and efficient professional development at the local, regional, and international levels. We extend our sincere appreciation to our co-organisers for their invaluable support in making this important international initiative possible: the SEAMEO Secretariat, UNESCO Headquarters, the UNESCO Institute for Information Technologies in Education (UNESCO IITE), and the Global Partnership for Education Knowledge and Innovation Exchange Europe, Middle East and North Africa, Asia, and Pacific (GPE KIX EMAP) Hub. We are also deeply grateful to colleagues across the UNESCO Chairs network for their continued support and collaboration. Together, this global coalition reflects our shared commitment to building a reciprocal, collaborative ecosystem for AI and PD, in which knowledge, expertise, and innovation can be exchanged across backgrounds, sectors, and regions.

I wish LIET2026 every success. May this conference serves as an inspiring platform for intellectual exchange, cross-sectoral collaboration, and meaningful breakthroughs as we collectively shape the future of education.

Thank you.

**The views presented in this message are personal only and do not necessarily represent those of The Education University of Hong Kong (EdUHK) or UNESCO, and do not commit the respective organisations.*



Greetings from The LIET2026 Conference Chairperson



Professor LIM Cher Ping

Chair Professor of Learning Technologies and Innovation
Co-Director, Global Institute for Emerging Technologies (GIET),
The Education University of Hong Kong
Chair, LIET2026 Organising Committee

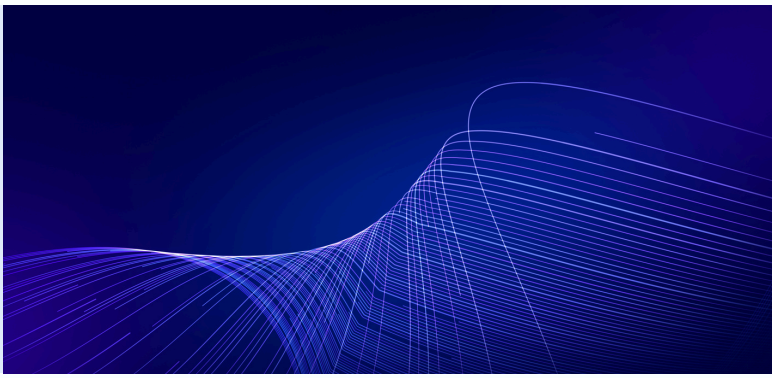
Welcome to the Learning Innovations and Emerging Technologies Conference 2026 (LIET2026), hosted by The Education University of Hong Kong (EdUHK).

As the Hong Kong SAR's flagship institution for education, EdUHK is deeply committed to nurturing forward-looking professionals equipped to navigate and lead educational transformations. Our overarching goal is to empower educators at all levels with comprehensive knowledge, digital competencies, and global perspectives needed to foster inclusive and sustainable learning environments.

To address the profound impact of artificial intelligence on education, LIET2026 centres on two mutually reinforcing themes. Professional Development for AI (PD4AI) explores how robust training and institutional strategies can support the professional learning of the education workforce to use AI wisely and responsibly. Complementing this, AI for Professional Development (AI4PD) investigates how AI itself can be leveraged to personalise professional learning pathways, facilitate AI-mediated mentoring, and scale equitable support across diverse contexts.

To unpack these vital topics, we have designed a comprehensive programme running from 27 to 29 November. The agenda features dedicated workshops for K-12 and higher education leaders, keynote speeches, expert panel discussions, a high-level roundtable policy dialogue, and parallel paper and poster presentations.

LIET2026 serves as a vibrant global platform for academic exchange. This year, we received 297 responses from 43 countries and regions to our



call for papers examining the interplay between AI and professional development. Following a rigorous peer-review process, 168 abstracts were officially accepted for presentation. I would like to extend my heartfelt thanks to all the presenters and authors for contributing their evidence-based frameworks, practical experiences, and real-world case studies to LIET2026.

The LIET2026 would not have been possible without the steadfast support of our co-organisers: the Southeast Asian Ministers of Education Organization (SEAMEO) Secretariat, UNESCO Headquarters, UNESCO IITE, the GPE and KIX EMAP Hub, and the UNESCO Chairs Programme. My deepest gratitude goes to the members of the Organising Committee, the review panel, and our supporting staff. Your meticulous planning and academic rigour have been instrumental in ensuring an enriching conference of the highest standard.

I look forward to the inspiring ideas that will emerge over the coming days, and I wish you all a fruitful and rewarding experience at LIET2026.

Thank you.

Greetings from SEAMEO Secretariat



Datuk Dr Habibah ABDUL RAHIM

Director
Southeast Asian Ministers of Education Organization (SEAMEO) Secretariat

On behalf of the Southeast Asian Ministers of Education Organization (SEAMEO), it is my great pleasure to welcome all participants to the *Learning Innovations and Emerging Technologies Conference 2026*, under the theme *"PD4AI | AI4PD."* We are honoured to co-organise this important gathering with The Education University of Hong Kong, UNESCO, and our fellow partners, bringing together diverse perspectives on the future of education and professional learning.

As SEAMEO celebrates its 60th anniversary, our commitment to advancing educational cooperation across Southeast Asia remains stronger than ever. Through our Member Countries, Regional Centres, and international partnerships, SEAMEO continues to promote collaborative approaches to addressing emerging educational challenges. Among these is the rapid advancement of artificial intelligence, which is transforming not only teaching and learning, but also the competencies and professional expectations placed upon educators.

At SEAMEO, we recognise that preparing educators for these changes requires more than introducing new technologies or training programmes. **As the nature of teaching evolves, the systems responsible for preparing, developing, and supporting teachers must evolve alongside it.** Our regional study, *An Analysis of Teacher Professional Development Systems in Southeast Asia (2026)*, drawing on nine countries, reinforces the importance of coherent policies, institutional capacities, partnerships, and sustained investment in professional learning. Together with global evidence from UNESCO and OECD, these insights highlight the need to strengthen teacher professional development as a systemic and collective responsibility.

Southeast Asian Ministers of Education Organization

The conference theme, *PD4AI | AI4PD*, reflects this important relationship between preparing educators to engage with AI and harnessing AI to transform professional learning itself. For SEAMEO, this presents an opportunity to deepen regional cooperation, share innovative practices, and advance more inclusive and sustainable approaches to professional development.

I hope this conference will inspire meaningful dialogue, new partnerships, and collective action that places educators at the heart of educational transformation. Together, let us ensure that the future of AI in education is shaped not only by technological progress, but by the strength of the people and systems that make learning possible.

I wish everyone a meaningful and productive conference.

Greetings from UNESCO IITE



Dr Shafika ISAACS

Interim Director
UNESCO IITE;
Chief of Section for Technology and AI in Education
UNESCO Headquarters

UNESCO Institute for Information Technologies in Education (UNESCO IITE) is pleased to co-organize the Learning Innovations and Emerging Technologies Conference 2026, hosted by The Education University of Hong Kong, with the SEAMEO Secretariat and the GPE KIX EMAP Hub. Higher education systems have been at the forefront of engaging with the philosophical debates, the approaches to AI system design and development, the strategies for governance and institutional change, and within this, the role of educator professional development. The Ministerial Statement adopted at UNESCO's Digital Learning Week in September 2026 states that 'the terms on which AI is introduced in education are a matter of public decision and public accountability.' The continuous professional learning of educators is therefore central to the capacity of education systems to govern AI in the public interest. Creating spaces for dialogue on the most purposeful professional learning strategies is thus a critical objective of this conference.

UNESCO's AI competency frameworks for teachers and for students are now being used and adapted in many contexts. Two years on, a growing range of frameworks gives us the opportunity to reflect on how we have understood and conceptualized professional learning and competence under the influence of AI, how educators across varied contexts of structural inequality have responded and which strategies for professional learning shift pedagogical practice toward cultivating human agency, critical thinking and creative enquiry.

This conference's twin themes, Professional Development for AI (PD4AI) and AI for Professional Development (AI4PD), address interconnected priorities. We welcome engagement on the reciprocal and contradictory relationship they describe between human

capacity and technological innovation. We look forward to discussing with participants how both themes attend to design, dependence and the role of human decision-making in advancing transformative agency.

For UNESCO IITE, dialogue between policymakers, researchers, teachers and private providers is at the heart of our work. We look forward to the robust exchange in Hong Kong, in our collective endeavor to sustain education as a common good.

We wish all participants a stimulating and productive conference.

Greetings from KIX EMAP Hub



Mr José Luís CANÊLHAS

Director
Knowledge and Innovation Exchange
Europe, Middle East and North Africa,
Asia and Pacific Hub (KIX EMAP Hub)

The Global Partnership for Education (GPE) Knowledge and Innovation Exchange (KIX) Europe, Middle East and North Africa, Asia and Pacific (EMAP) Hub is pleased to contribute to the Learning Innovations and Emerging Technologies Conference 2026, hosted by the Education University of Hong Kong. Through our work across countries in the EMAP region, there has been a growing interest in the use of artificial intelligence for strengthening education; at the same time, ensuring that teachers, school leaders, and other education professionals are adequately equipped to respond to the evolving needs of learners remains a challenge across contexts.

Current and emerging AI technologies have implications for practice, curriculum, policy and governance in education. These changes are particularly significant for education professionals, who need the knowledge, skills, and critical capacities to engage with AI effectively. At the same time, AI has the potential to support more adaptive, personalised, and accessible professional development for educators. Realising these possibilities requires careful attention to equity and ethics, as well as to the realities of education systems operating across diverse contexts, and with varying degrees of digital access and capacities.

The GPE KIX EMAP Hub supports evidence-informed policy dialogue, knowledge exchange, and learning among policymakers, researchers, and practitioners to help address education priorities in policy and practice.

As part of this work, the Hub recently organised a Learning Cycle (LC) on AI and Education, bringing together stakeholders from twenty countries to explore the implications of AI for education systems. Through the LC, country teams developed short policy research papers

reflecting diverse national experiences and priorities, while highlighting a shared commitment to ensuring that AI is used in ways that are ethical, equitable, and responsive to local needs.

Building on these regional efforts, the Hub is also supporting ongoing Rapid Country Customised Support (RCCS) initiatives in Indonesia and Viet Nam. Working alongside national institutions and education authorities, these initiatives are strengthening understanding of AI readiness and literacy, supporting the development of AI competency frameworks, and facilitating cross-country learning to inform education policy and practice.

The Conference's twin themes of PD4AI and AI4PD provide a timely opportunity to address these interconnected policy priorities and further explore the reciprocal relationship between human capacity and technological innovation. For us at the Hub, knowledge exchange is at the heart of our work. We hope that this conference will foster meaningful exchange between diverse stakeholders such as researchers, policy makers, teachers, teacher educators, school leaders, and other education partners, bringing together evidence, perspectives, and experiences from diverse contexts across the EMAP region and beyond.

The KIX EMAP Hub looks forward to contributing to these discussions by sharing lessons and reflections from the Learning Cycle on AI and Education and the ongoing work in Indonesia and Viet Nam, while continuing to support evidence-informed policy and practice in response to country priorities.

We wish all participants a stimulating and productive conference, and look forward to contributing to both the evidence base as well as practical approaches for navigating AI and professional development in education.

About LIET2026



Artificial Intelligence (AI) is rapidly transforming the education landscape. AI offers significant opportunities for the education workforce by enhancing personalised learning experiences, supporting teachers' lesson planning and instructional tasks, and optimising education management, thereby improving equity, quality, and efficiency in education (World Bank, 2024). However, AI also presents notable challenges that should be carefully addressed to avoid widening educational gaps. Key concerns include data privacy and security risks, algorithmic bias, hallucinations, and the digital divide in access to AI tools (UNESCO, 2025).

To navigate both opportunities and challenges arising from this transformation, the Learning Innovations and Emerging Technologies Conference 2026 (LIET2026): PD4AI | AI4PD, to be held at the Education University of Hong Kong from November 27 to 29, 2026, will focus on two mutually reinforcing themes:



PD4AI
Professional Development for Artificial Intelligence

How does professional development build the capacity of the education workforce to use AI to enhance education equity, quality and efficiency?

AI4PD
Artificial Intelligence for Professional Development

How can the education workforce use AI to personalise their own professional learning or that of their colleagues?

LIET 2026 will feature a comprehensive series of events, including workshops for educational leaders, keynote speeches, panel discussions, roundtable policy dialogues, and paper and poster presentations, offering attendees the opportunity to:

- Explore fresh perspectives on the interrelationship between professional development and AI.
- Gain hands-on experience with evidence-based frameworks, practical tools, and real-world case studies.
- Connect and network with internationally recognised scholars and experts.

These events would promote active interaction among researchers, policymakers, school leaders, teachers, teacher educators, and other education stakeholders to jointly build an AI-driven professional learning ecosystem, and, ultimately, to establish a more inclusive, equitable, and sustainable future of education.

02

Acknowledgement

Committee Members

Abstract Reviewers

Partner Organisations

Committee Members

Steering Committee

Chair **Prof LIM Cher Ping**

Global Institute for Emerging Technologies (GIET) (Equity Team)/Faculty of Education and Human Development (FEHD), EdUHK

Dr Shafika ISAACS

UNESCO Institute for Information Technologies in Education (IITE); UNESCO Headquarters

Mr José Luís CANÊLHAS

KIX Europe, Middle East and North Africa, Asia and Pacific (EMAP) Hub

Datuk Dr Habibah ABDUL RAHIM

Southeast Asian Ministers of Education Organization Secretariat (SEAMEO Secretariat)

Prof CHAN Ka Shing, Kevin

FEHD, EdUHK



Programme Committee

Chair **Dr BA Shen** — *GIET(Equity Team)/FEHD, EdUHK*

Mr Carlo FERNANDO
SEAMEO Secretariat

Mr John Arnold SIENA
SEAMEO Secretariat

Dr Natalia AMELINA
UNESCO IITE

Ms Aditi DESAI
KIX EMAP Hub

Dr LEE Juseong
GIET(Equity Team)/Faculty of Humanities (FHM), EdUHK

Dr ZHU Jinxin
GIET(Equity Team)/FEHD, EdUHK

Publicity Committee

Chair **Dr Norman B. MENDOZA** — *GIET(Equity Team)/FEHD, EdUHK*

Mr Carlo FERNANDO
SEAMEO Secretariat

Ms Allison VAS
KIX EMAP Hub

Ms Pohnkritsana PRACHUMWAN
ASEAN University Network

Ms Nisanat WATTHAYU
ASEAN University Network

Dr YUN Pui Ho, Patrick
GIET(Equity Team)/FEHD, EdUHK

Logistics and Operations Committee

Chair **Dr YANG Danlin, Lynn** *GIET(Equity Team), EdUHK*

Ms CHENG Kit Man, Kit
FEHD, EdUHK

Ms CHUNG Wai Lam, Viann
FEHD, EdUHK

Ms LEUNG Man Yin, Olivia
FEHD, EdUHK

Ms LI Wai Yu, Vivian
FEHD, EdUHK

Ms SUN Xueqi, Sheryl
FEHD, EdUHK

Ms WONG Ying Ting, Katie
FEHD, EdUHK

Ms HUANG Chen
GIET(Equity Team), EdUHK

Ms LI Yongqin
GIET(Equity Team), EdUHK

Ms WANG Yulin
GIET(Equity Team), EdUHK

Ms YI Jia
GIET(Equity Team), EdUHK

Ms YU Jiahui
GIET(Equity Team), EdUHK

Reception and Hospitality Committee

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Dr Emma E. BUCHTEL
FEHD, EdUHK

Ms Gemma SITCHON
GIET(Equity Team)/FEHD, EdUHK

Workshop Committee

Prof LIM Cher Ping Chair

GIET(Equity Team)/FEHD, EdUHK

Dr Natalia AMELINA

UNESCO IITE

Mr Korn RATANAGOSOOM

ASEAN University Network

Dr Dawisa SRITANYARAT

ASEAN University Network

Ms BI Xiaohan

International Centre for Higher Education Innovation under the auspices of UNESCO (UNESCO-ICHEI)

Dr CHENG Kwok Shing, Gary

GIET(Equity Team)/Centre for Learning, Teaching and Technology (LTTC), EdUHK

Dr LU Jiafang

GIET(Equity Team)/FEHD, EdUHK

Closed-door Roundtable Committee

Prof LIM Cher Ping Chair

GIET(Equity Team)/FEHD, EdUHK

Dr Shafika ISAACS

UNESCO IITE;
UNESCO Headquarters

Prof Sungsup RA

GIET (Equity Team), EdUHK;
KDI School of Public Policy and Management

Dr BA Shen

GIET(Equity Team)/FEHD, EdUHK

Dr LI Yixun, Annie

GIET(Equity Team)/FEHD, EdUHK

Prof WANG Lixun

GIET(Equity Team)/FHM, EdUHK

Abstract Reviewers

Dr BA Shen
Assistant Professor
EdUHK

Ms CHA Yingying
PhD Student
The University of Western Australia

Ms DU Xiaohui
EdD Student
EdUHK

Mr JIANG Qingyu, Jeremy
EdD Student
EdUHK

Ms LAI Sichen
PhD Student
The Chinese University of Hong Kong

Ms LAI Wan Yee, Winsy
PhD Student
EdUHK

Dr LEE Ju Seong
Associate Professor
EdUHK

Ms LI Fan
EdD Student
EdUHK

Ms LI Xiaoyu
EdD Student
EdUHK

Ms LIANG Jiaqi
PhD Student
Australian Catholic University

Ms LIU Que
EdD Student
EdUHK

Ms LIU Xian, Chrystal
EdD Student
EdUHK

Ms LU Yi
Research Assistant
EdUHK

Ms Jelli LUZANO
PhD Student
EdUHK

Ms MA Meng Ying, Emma
PhD Student
EdUHK

Dr Norman B. MENDOZA
Assistant Professor
EdUHK

Ms NIU Shijing
PhD Student
EdUHK

Dr QIU Xingyue
Assistant Professor
Guangdong University of Education

Dr SUN Lanfang
Postdoctoral Fellow
EdUHK

Dr XIONG Yuhan
Postdoctoral Fellow
EdUHK

Dr YEUNG Cheuk Lam, Jerry
Postdoctoral Fellow
EdUHK

Ms ZHANG Jiaen
PhD Student
EdUHK

Dr ZHU Jinxin
Assistant Professor
EdUHK

Partner Organisations

Co-organisers

The Education University of Hong Kong

The Education University of Hong Kong (EdUHK) is a publicly funded tertiary institution dedicated to the advancement of learning and teaching, through a diverse offering of academic and research programmes on teacher education and complementary social sciences and humanities disciplines.

We nurture educators and social leaders who are intellectually active, socially caring, and globally aware, to become agents of change in the communities that they serve. We place great emphasis on research capability — our research will contribute to the advancement of knowledge, scholarship and innovation, with sustainable impact on social progress and human betterment.

EdUHK aims to be a leading university in the Asia Pacific region and beyond, with a focus on educational research, development and innovation.

The Southeast Asian Ministers of Education Organization Secretariat

The Southeast Asian Ministers of Education Organisation (SEAMEO) is a regional intergovernmental organisation established in 1965 among governments of Southeast Asian countries to promote regional cooperation in education, science and culture in the region.

SEAMEO Secretariat is the executive arm of the Council and the headquarters of the Organisation. One of its main functions is to execute the instructions and decisions of the Council as contained in the Council resolutions. The SEAMEO Secretariat is located in Bangkok, Thailand.

United Nations Educational, Scientific and Cultural Organisation

UNESCO, the United Nations Educational, Scientific and Cultural Organisation, is a specialised agency dedicated to strengthening international cooperation in the fields of education, science, culture, and information.

We set standards, produce tools, and develop knowledge to create solutions to some of the greatest challenges of our time, and foster a world of greater equality and peace.

Protecting biodiversity, responding to Artificial Intelligence, advancing quality education, safeguarding heritage, and ensuring access to reliable information are some examples of the work that UNESCO does with its 194 Member States across the globe.



UNESCO Institute for Information Technologies in Education

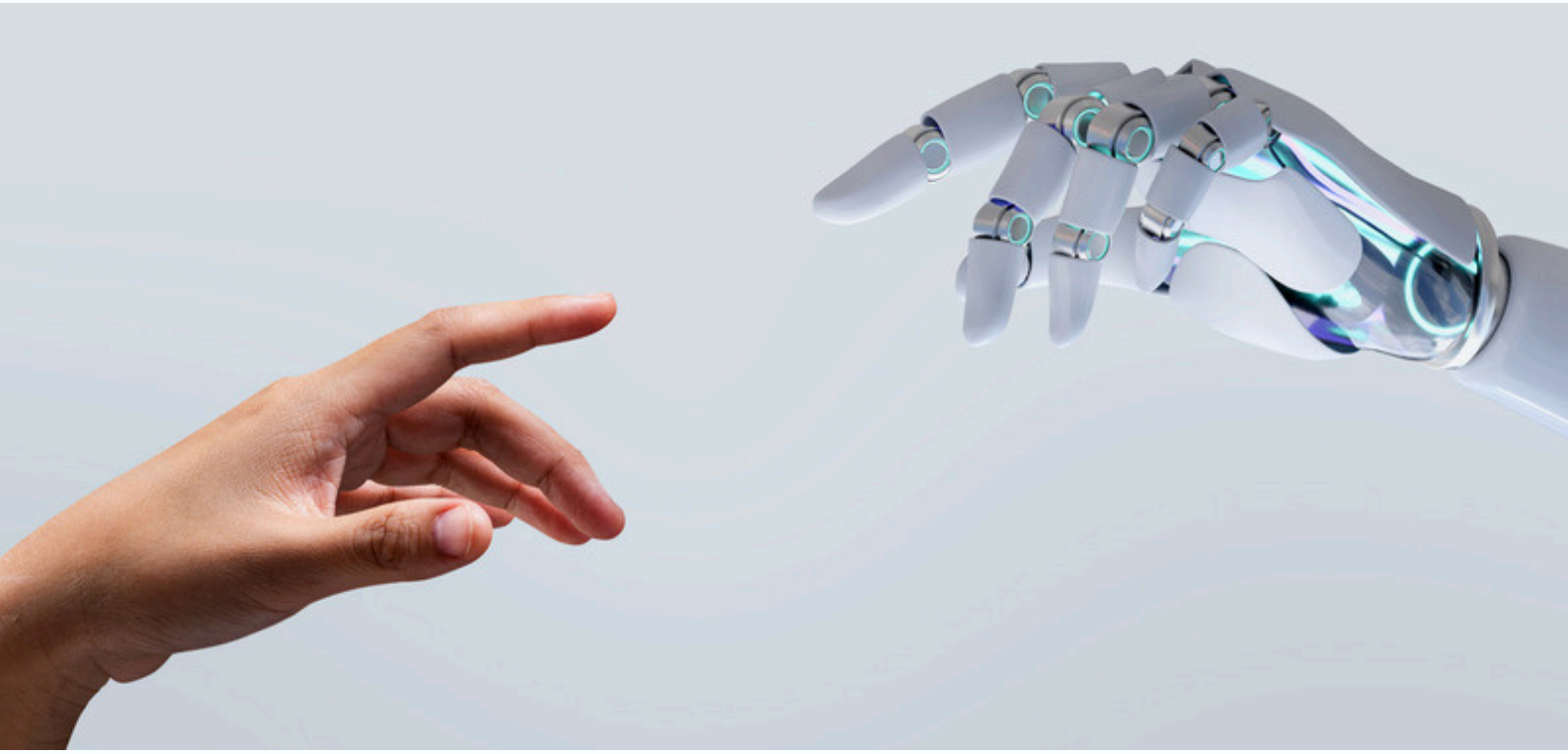
The UNESCO Institute for Information Technologies in Education (UNESCO IITE) was established as an integral part of UNESCO by the General Conference of UNESCO at its 29th session (November 1997) and is located in Moscow, Russian Federation. IITE is the only UNESCO category 1 Institute that holds a global mandate for ICT in education.

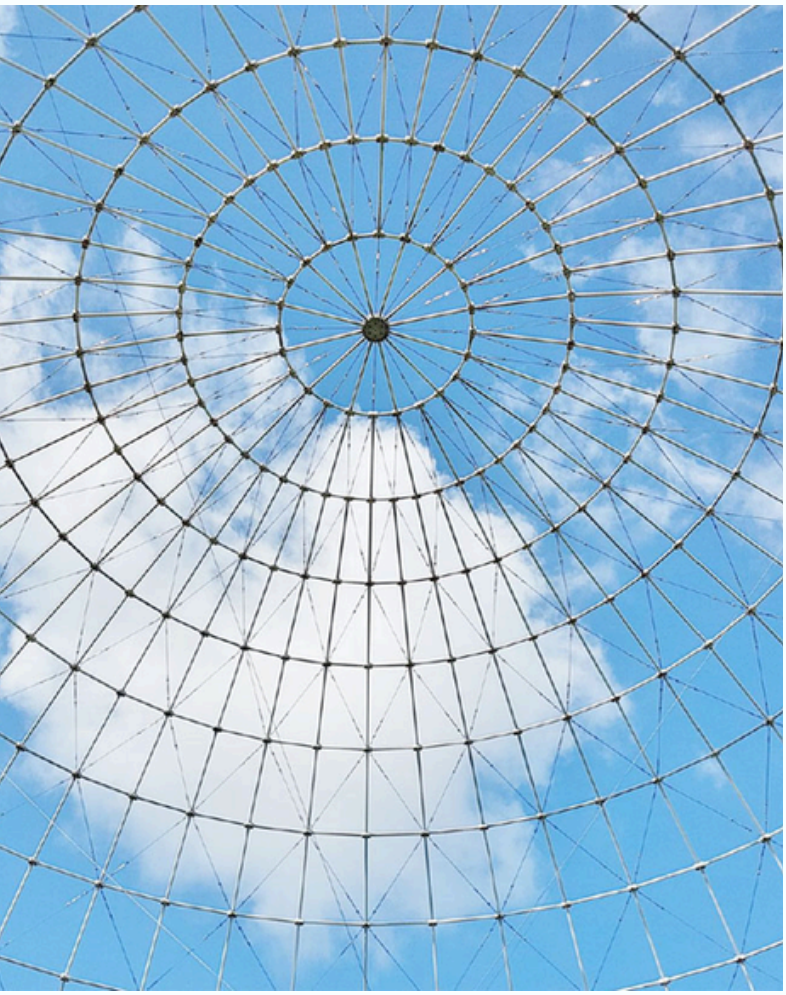
In line with the new Education 2030 Agenda, IITE has developed its strategic priority areas to meet new demands and tasks ahead. The mission of IITE in the new era is promoting the innovative use of ICT and serving as facilitator and enabler for achieving Sustainable Development Goal 4 (SDG 4) through ICT-enabled solutions and best practices.

KIX Europe, Middle East and North Africa, Asia, and Pacific Hub

The KIX Europe, Middle East and North Africa, Asia, and Pacific (EMAP) hub facilitates cross-country knowledge exchange and mobilisation, learning, synthesis, and collaboration among national education stakeholders in 30+ Global Partnership for Education partner countries in Europe, Middle East and North Africa, Asia and Pacific region. The hub functions as a regional forum within KIX.

KIX EMAP is made up of one organisation that oversees activities in Global Partnership for Education partner countries in Europe, Middle East and North Africa, Asia and Pacific region.





UNESCO Chairs Programme

The UNITWIN/UNESCO Chairs Programme, launched in 1992 to promote international inter-university cooperation, has grown to include around 1100 Chairs and 50 networks across 130 countries. This network of universities around the world supports UNESCO's work in education, the natural and social sciences, culture and communication, to help address pressing challenges and contribute to the development of their societies. The UNESCO Chairs and UNITWIN Network teams contribute at each stage of our work: from the exploration of emerging issues, through the development of international normative instruments to the implementation of policy recommendations at the national level. They also bring together partners in academia, civil society, local communities and policy-makers in dialogue for project implementation.

Supporting Organisations

ASEAN University Network

The Association of Southeast Asian Nations (ASEAN) University Network (AUN) came into being in 1995 when the AUN Charter was signed by Ministers responsible for Higher Education from ASEAN countries, the Agreement on the Establishment of the AUN was signed by the presidents, rectors, and vice chancellors of participating universities, and the formation of the AUN Board of Trustees.

The AUN was formed to address the need for the region to quickly develop a regional identity and solidarity while promoting the fostering of ASEAN talents by creating a platform to allow the region's leading higher education institutions to collaborate. From 1995 until now, the AUN remains firmly committed to the mission that was set out in the preamble to its charter.

Today, the AUN is a network widely recognised as a vital mechanism for the build-up of an active and renowned ASEAN community in higher education. Given such importance, the AUN was highly commended by the Meeting of Ministers for Education in ASEAN Countries for its achievements in upgrading the capacity of ASEAN human resources and enhancing the quality of education of the AUN member universities. With the strengths and expertise of our members, the AUN can play a major role in broadening the integration of the ten ASEAN countries, into one cohesive ASEAN Community and narrowing the development gap among them, which are ultimate goals of ASEAN.



The International Centre for Higher Education Innovation under the auspices of UNESCO

The International Centre for Higher Education Innovation under the auspices of UNESCO (UNESCO-ICHEI) was jointly established by UNESCO and the Shenzhen Municipal People's Government of the People's Republic of China on June 8, 2016. It was approved by the 38th General Conference of UNESCO held on November 13, 2015, as the Category 2 Centre focusing on higher education in China.

UNESCO-ICHEI works closely around the UN's Sustainable Development Goal 4 (Education 2030). Relying on the advantages of Shenzhen's information and communications technology (ICT) industry, UNESCO-ICHEI addresses the digital transformation needs of developing countries by fostering innovation in higher education institutions (HEIs) through technology and enhancing the digital competencies of the higher education workforce. UNESCO-ICHEI is committed to achieving equitable quality education and lifelong learning opportunities for all through multilateral collaborations with flagship universities, international organisations, EdTech enterprises, governments, and other stakeholders.

Hong Kong Education City

Established in 2000 with the support of the Quality Education Fund, Hong Kong



Education City (EdCity) was incorporated in 2002 to become a wholly-owned company of the Government. It is dedicated to enhancing teaching and learning effectiveness through innovative technologies.

As a 'super connector' in the education sector, we actively foster collaboration among education, innovation, and industry to drive digital transformation and jointly build a sustainable digital education ecosystem. EdCity's flagship platform, EdCity.hk, provides comprehensive professional education services by integrating teaching resources, information platforms, and interactive community features. The new digital education resources website digitaleduction.hk provides latest updates, policies, research and resources of digital education.

We are also deeply grateful for the support of Meetings and Exhibitions Hong Kong (MEHK), a dedicated division of the Hong Kong Tourism Board (HKTB).

Sponsors

Global SDGs and Leadership Development Center

The Global SDGs and Leadership Development Center (the "SDGs Center") is an independent research and capacity-building institution dedicated to advancing the United Nations 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs). Its work focuses on global governance innovation, leadership development, and sustainable development practice. Drawing on relevant academic networks, knowledge resources, and international cooperation within the United Nations system, the Center builds on the experience of the United Nations Institute for Training and Research (UNITAR) in global training, capacity development, and multilateral cooperation, helping connect international development agendas with implementation at the national, subnational, and industry levels.

By connecting international agendas, knowledge and research, capacity development, and innovation in practice, the Center promotes cross-sectoral and cross-regional collaboration, facilitates the adaptation of international experience to local needs, and supports promising solutions in moving from demonstration to wider adoption, knowledge sharing, and scalable implementation.

WisdomGarden

WisdomGarden (WG) is a TalentTech company building AI-powered platforms that help universities, corporations, governments, and professional organisations develop future-ready talent. Our integrated ecosystem brings together learning, coaching, assessment, knowledge, certification, and workforce development to enable continuous capability development at scale.

We believe talent development should be continuous, personalised, and measurable. Our AI TalentTech platform connects learning, coaching, assessment, and workforce intelligence into a single ecosystem that helps organisations unlock human potential. Today, millions of learners and professionals rely on WG to learn, perform, and grow.



Facilitating Departments

Faculty of Education and Human Development, EdUHK

The Faculty of Education and Human Development (FEHD) is one of the three faculties here at The EdUHK. FEHD is the leading provider of educational courses and research at the University and is proud to stand at the forefront of research into education and psychology. FEHD provides students with a wide array of specialisms, ranging from subjects as diverse as curriculum, educational leadership, psychology, global studies, speech therapy, counselling and many more. FEHD has nurtured over 80% of local kindergarten teachers in Hong Kong, as well as over 20,000 professional educators, psychologists, counsellors, speech therapists, and more.

Global Institute for Emerging Technologies (GIET) Equity Team, EdUHK

The Equity Team of the Global Institute for Emerging Technologies (GIET) at The Education University of Hong Kong (EdUHK) builds the capacity of the education workforce and provides professional development training for learning innovations and emerging technologies.

Visit our website at https://giet-equity.eduhk.hk/ or follow us on LinkedIn: @Global Institute for Emerging Technologies Equity Team!



03

Programme Agenda

DAY 0

DAY 1

DAY 2

DAY 0: Pre-Conference Workshop

Friday, 27 November 2026
09:00 – 16:00 | Venue: N-2/F-02, Tai Po Campus, EdUHK

09:00 - 09:15	**Opening Remarks & Group Photo** **Prof LIM Cher Ping** Chair *Chair Professor of Learning Technologies and Innovation* *Co-Director, Global Institute for Emerging Technologies (GIET), EdUHK*
09:15–10:15	**Lecture: Professional Development for AI Competencies of University Teachers – Framework, Self-Assessment, and Strategies** **Prof LIM Cher Ping** *Chair Professor of Learning Technologies and Innovation* *Co-Director, GIET, EdUHK* **Dr BA Shen** *Assistant Professor, Department of Curriculum and Instruction (C&I);* *Affiliated Fellow, GIET Equity Team, EdUHK*
10:15–11:15	**Case Study Presentations** **Dr CHENG Kwok Shing, Gary** *Director, Centre for Learning, Teaching and Technology (LTTC),* *Associate Co-Director, GIET Equity Team, EdUHK* **Dr Vorasuang DUANGCHINDA** *Special Advisor, AUN*

10:15–11:15	**Case Study Presentations - continued** **Dr Dawisa SRITANYARAT** *Deputy Executive Director, AUN* **Ms WANG Yuting** *Programme Officer, International Centre for Higher Education Innovation under the auspices of UNESCO (UNESCO-ICHEI)*
11:15–11:30	Coffee / Tea Break
11:30–12:45	**Lecture and Group Discussions: Professional Development Ecosystem and Professional Development Strategies** **EdUHK** **Prof LIM Cher Ping** *Chair Professor of Learning Technologies and Innovation* *Co-Director, GIET, EdUHK* **Dr BA Shen** *Assistant Professor, C&I;* *Affiliated Fellow, GIET Equity Team, EdUHK* **Dr CHENG Kwok Shing, Gary** *Director, LTTC, Associate Co-Director, GIET Equity Team, EdUHK* **AUN** **Dr Dawisa SRITANYARAT** *Deputy Executive Director, AUN* **Dr Vorasuang DUANGCHINDA** *Special Advisor, AUN*
12:45–13:45	The Cove View – Canteen (Block C, P/F)

13:45–14:45	**Preparation for Sharing of Professional Development Strategies** **Dr BA Shen** *Assistant Professor, C&I;* *Affiliated Fellow, GIET Equity Team, EdUHK*
14:45–15:45	**Sharing of Professional Development Strategies** **Dr BA Shen** *Assistant Professor, C&I;* *Affiliated Fellow, GIET Equity Team, EdUHK* **Dr Vorasuang DUANGCHINDA** *Special Advisor, AUN*
15:45–16:00	**Reflections and Closing Remarks** **Dr Dawisa SRITANYARAT** *Deputy Executive Director, AUN* **Ms WANG Yuting** *Programme Officer, UNESCO-ICHEI* **Prof LIM Cher Ping** *Chair Professor of Learning Technologies and Innovation* *Co-Director, GIET, EdUHK*

DAY 1: Morning main session

Saturday, 28 November 2026
09:00 – 13:45 | Venue: D1-LP-02, Tai Po Campus, EdUHK

Opening Ceremony

Background and Introduction

Prof LIM Cher Ping Chair
Chair Professor of Learning Technologies and Innovation;
Co-Director, Global Institute for Emerging Technologies (GIET),
EdUHK

Welcome Remarks

Prof CHAN Che-hin, Chetwyn

Vice President (Research and Development)
Peter T. C. Lee Chair Professor of Psychology, EdUHK

09:00 - 09:45

Opening Keynote I

Professional Competence and Beyond. Lessons from Two years of AI Competency Frameworks

Dr Shafika ISAACS

Interim Director, UNESCO IITE
Chief of Section for Technology and AI in Education,
UNESCO Headquarters

Opening Keynote II

Are We Preparing Teachers for AI, or Preparing Education Systems for Change?

Datuk Dr Habibah ABDUL RAHIM

Director, SEAMEO Secretariat

09:45–10:05	**Keynote Speech III** ***Hybrid Human-AI Collaboration Explored: Human Agency and Its Implications for Teacher Professional Development*** **Prof Inge MOLENAAR** *Scientific Director of National Education Lab AI & Adaptive Learning Lab* *Professor of Education and Artificial Intelligence, Radboud Universiteit* **Mr José Luís CANÊLHAS** Chair *Director, Knowledge and Innovation Exchange Europe, Middle East and North Africa, Asia and Pacific Hub (KIX EMAP Hub)*
10:05–10:20	***Launch of the special issue: ECNU Review of Education Teacher Professional Development at Scale Enabled by Emerging Technologies*** **Prof LIM Cher Ping** *Chair Professor of Learning Technologies and Innovation; Co-Director, Global Institute for Emerging Technologies (GIET), EdUHK* **Dr ZHANG Miao** *Executive Associate Editor, ECNU Review of Education, East China Normal University* **Ms Victoria L. TINIO** *Executive Director, the Foundation for Information Technology Education and Development*
10:20–10:30	**Group Photos and Exchange of Tokens**
10:30 - 10:45	Tea Break

10:45–11:25

Panel Discussion 1

Institutional/National TPD for AI Ecosystem and Practices

Dr YUM Yen Na, Cherry Moderator
Associate Head (International Engagement), Associate Professor, Department of Special Education and Counselling, EdUHK

Prof Betty EZATI
Vice Chancellor, Uganda National Institute for Teacher Education

Prof Grace OAKLEY
Deputy Dean and Professor, Graduate School of Education, The University of Western Australia

Dr Rehana SHANKS
Principal, ESF Sha Tin Junior School

11:25–12:05

Panel Discussion 2

Inclusive and Equitable Quality TPD Initiatives in the AI Era

Dr Natalia AMELINA Moderator
Chief of Unit, Unit of Teacher Professional Development and Networking Senior National Project Officer in Education, UNESCO IITE

Mr XU Jian Jeffrey
Senior Education Specialist (Education Technology), Asian Development Bank

Dr Glenn LOW
COO & Co-founder, HeyHi

Ms Victoria L.TINIO
Executive Director, Foundation for Information Technology Education and Development

12:05–12:30	**Reflections by policymakers** **Mr John Arnold S. SIENA** Moderator *Deputy Director for Programme and Development, SEAMEO Secretariat* **H.E. Dr SANN Vathana** *Secretary of State* *Ministry of Education, Youth and Sport* *Cambodia* **Dr Jennie V JOCSON** *Executive Director V* *Teacher Education Council* *The Philippines* **Dr Zakiah BINTI SHAFIEE** *Senior Deputy Director* *Educational Resources and Technology Division* *Ministry of Education* *Malaysia*
12:30-13:45	**Lunch** The Cove View - Canteen (Block C, P/F)

DAY 1: Afternoon parallel tracks

Saturday, 28 November 2026

Track A — Paper and Poster Presentation

Time	Room 1 B4-LP-08 Moderator Ms LI Fan	Room 2 B4-LP-09 Moderator Mr JIANG Qingyu Jeremy	Room 3 B4-LP-10 Moderator Ms ZHANG Jiaen	Poster venue D1-LP-02 Common Area
13:45 –15:00	Paper Presentation Session 1	Paper Presentation Session 2	Paper Presentation Session 3	Poster Presentation
15:00–15:10	Break			
15:10-16:25	Paper Presentation Session 4	Paper Presentation Session 5	Paper Presentation Session 6	
16:25-16:35	Break			
16:35-17:50	Paper Presentation Session 7	Paper Presentation Session 8	Paper Presentation Session 9	

Please kindly note that for paper presentations, each presenter has 15 minutes to present.

Track B — High-level Roundtable Policy Dialogue

Venue: N-4/F-02

13:45–13:50	**Group Photos**
13:50–14:10	**Extended Outline of Handbook**
14:10–15:30	**Roundtable Discussions** **Dr RA Sung Sup** **Chairperson** *Former Deputy Director General and Deputy Chief, Sectors Group, ADB* *Advisor, Global Institute for Emerging Technologies (GIET) Equity Team, EdUHK*
15:30–15:45	Tea break
15:45–15:55	**MoU signing ceremony for SEAMEO INNOTECH and UWA**
15:55–17:15	**Roundtable Discussions**
17:15–17:25	**Reflections** **Dr Anindito ADITOMO** *Associate Professor, University of Surabaya* *Former Head of the Agency for Education Standards, Curriculum, and Assessment, Ministry of Education, Indonesia* **Prof Dr Khadga Bahadur KC** *Chairman, University Grants Commission, Nepal*
17:25–17:30	**Closing**

17:25–17:30	**Closing - continued** **Dr Shafika ISAACS** *Interim Director, UNESCO IITE* *Chief of Section for Technology and AI in Education, UNESCO Headquarters* **Prof LIM Cher Ping** *Chair Professor of Learning Technologies and Innovation;* *Co-Director, Global Institute for Emerging Technologies (GIET), EdUHK*
17:30–17:45	**Pre-dinner Introduction** **Dr TAN Eng Han** *Executive Director, Global Youth Leadership Development Council*

**** Please kindly note that the High-level Roundtable Policy Dialogue is a closed-door event.***

DAY 2: Paper/Poster Sessions & Closing

Sunday, 29 November 2026
09:00 – 13:35 | Venue: Tai Po Campus, EdUHK

Time	Room 1 B4-LP-08 Moderator Ms LI Fan	Room 2 B4-LP-09 Moderator Mr JIANG Qingyu Jeremy	Room 3 B4-LP-10 Moderator Ms ZHANG Jiaen	Poster venue D1-LP-02 Common Area
09:00–10:15	Paper Presentation Session 10	Paper Presentation Session 11	Paper Presentation Session 12	Poster Presentation
10:15–10:25	Break			
10:25–11:40	Paper Presentation Session 13	Paper Presentation Session 14	Paper Presentation Session 15	
11:45-12:10	Closing Ceremony			D1-LP-02
12:10-13:35	Lunch			The Cove View - Canteen (Block C, P/F)

Please kindly note that for paper presentations, each presenter has 15 minutes to present.

04

Pre-Conference Workshop

Higher Education Sector

K12 Sector

Pre-Conference Workshop

Higher Education Sector

Time	Co-organiser	Location
9:00 – 16:00	ASEAN University Network UNESCO-ICHEI	N-2/F-01

This interactive workshop supports higher education leaders in translating the ***GenAI-Responsive Competency Framework for University Teachers*** into context-specific professional development initiatives that prioritise human agency.

Generative AI (GenAI) is reshaping teaching, learning, leadership and management in higher education. Changes in how knowledge is constructed, how people interact and how teachers fulfil their roles call for new competencies across the higher education workforce.

The GenAI-Responsive Competency Framework for University Teachers outlines essential competency domains for effective, human-centred and responsible GenAI integration. Translating the Framework into practice requires approaches that reflect diverse classroom realities, institutional policies, and available resources.

Higher education leaders play a critical role in translating competency frameworks into institutional practice and creating conditions that support professional learning. This workshop brings leaders together to examine teachers' learning needs, identify institutional priorities, and design actionable professional development initiatives. Throughout these activities, human agency remains central to decisions about GenAI integration.

See detailed programmes on the *Programme Agenda* page.

i. Target audience

Higher education leaders responsible for teaching and learning, staff professional development, educational innovation or institutional planning.

ii. Expected outputs

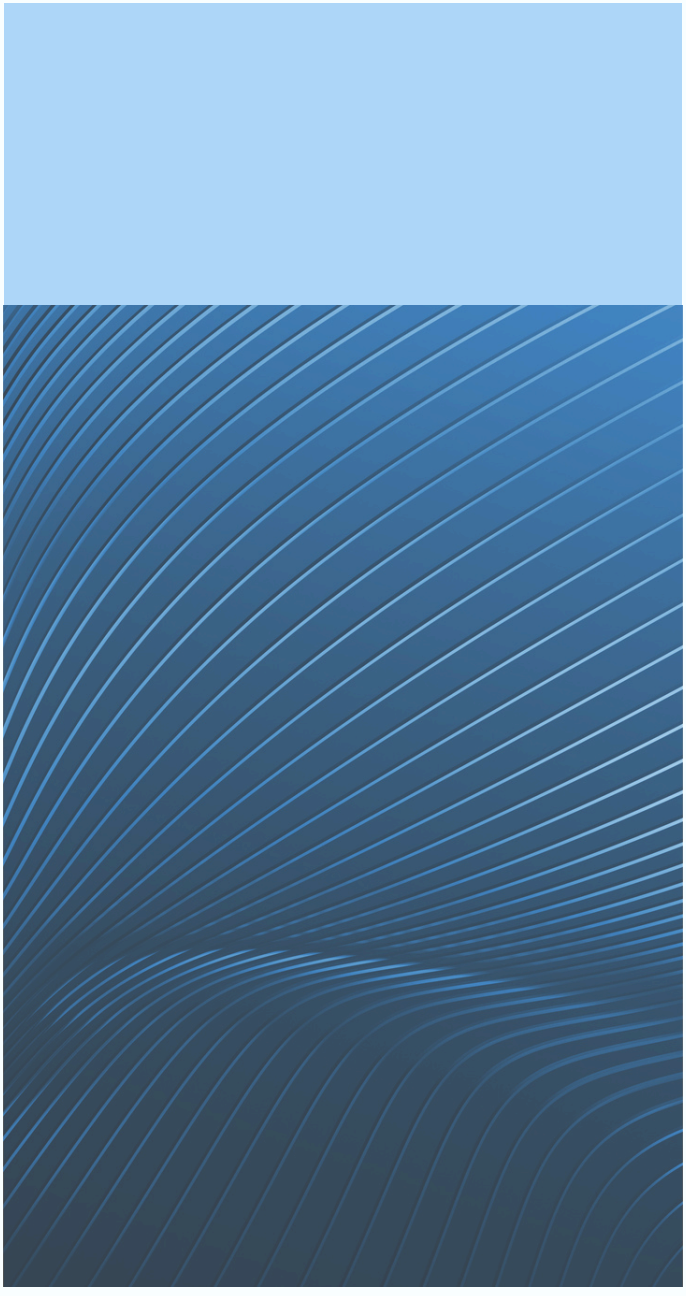
Participants will develop:

- A **contextualised analysis** of university teachers' professional learning needs and the institutional conditions that support GenAI integration.
- A **mapping of available personnel, including their roles and responsibilities** in supporting professional development.
- A **set of clearly defined activitie**s and an **actionable implementation timeline**.

iii. Expected outcomes

By the end of the workshop, participants will be able to:

- Analyse at least one case study and identify lessons applicable to their institutional context.
- Identify institutional professional development gaps and priorities, alongside the GenAI-responsive competencies university teachers need.
- Explain the importance of needs-driven, teacher-managed professional development.
- Identify practical ways to support university teachers in their professional learning.
- Design a professional development programme or initiative to strengthen university teachers' GenAI-responsive competencies.



K12 Sector

Time	Co-organiser	Location
13:00 – 17:00	The Education Bureau of the Hong Kong SAR Government Hong Kong Education City	Room 02A, 02B & 03, West Kowloon Study Centre (Museum Drive), EdUHK

This workshop series supports K–12 school leaders in exploring how AI, robotics and inclusive educational practices can strengthen teaching, learning and school development. Through professional exchange, practical examples and hands-on exploration, participants will consider how to support teachers and adopt AI and educational technologies responsibly and effectively.

The Education Bureau of the Hong Kong Special Administrative Region Government (EDB)'s Blueprint for Digital Education Development in Primary and Secondary Schools provides the strategic direction for Hong Kong's digital transformation in education. Guided by the principle of "students as the foundation, teachers as the profession, schools as the base, and society as the partner", the Blueprint emphasises strengthening teachers' digital competence and their capacity to integrate artificial intelligence effectively into teaching and learning.

In support of this direction, the EDB and Hong Kong Education City (EdCity) organise the AI in Education (AIED) Forum for school leaders and teachers. The Education University of Hong Kong and the LIET2026 Organising Committee serves as a strategic partner.

In collaboration with the AIED Forum, the workshops bring together the education, academic, and technology sectors to support educators in adopting AI and EdTech in practice. Through expert-led seminars, EdTech solution showcases, and hands-on workshops, educators can connect research and emerging trends to practical applications, examine technologies relevant to school needs, and build skills for classroom and whole-school implementation.

05

Main Conference

Keynote Speeches

Panel Discussion 1

Panel Discussion 2

Reflections



Speaker

Dr Shafika ISAACS

Interim Director, **UNESCO IITE**
Chief of Section for Technology and AI in Education, **UNESCO Headquarters**

Biography

Dr Shafika Isaacs is Chief of Section for Technology and AI in Education at UNESCO in Paris, where she provides strategic leadership on the use of technologies and AI in education. She also serves as Professor of Practice at the University of Johannesburg and is an international specialist in digital learning, AI, and education. She has devoted herself to building communities, coaching professionals, supporting major global, regional, and national initiatives on digital learning policy and large-scale education programs, including UNESCO's AI Competency Framework for Teachers and AI research in African primary education. As Founding Executive Director of SchoolNet Africa, she helped pioneer equitable and justice-driven use of technology in schools across 16 African countries.

Abstract

Professional Competence and Beyond. Lessons from Two years of AI Competency Frameworks

Two years after UNESCO published its AI Competency Framework for Teachers, a plethora of similar frameworks now guide how educators are prepared for AI. This keynote reviews the field and draws on UNESCO's experience of its framework in practice, in tandem with the UNESCO AI Competency Framework for Students. It asks how these frameworks are conceptualized and enacted, what they have achieved, where they may fall short, and what the implications may be as we contemplate a similar framework for higher education. It argues that competence is necessary but not sufficient, and that professional learning must also build educators' transformative agency to shape, question and govern how AI is allowed to infuse pedagogical practice. The keynote closes with lessons for designing a framework for higher education professional learning, in ways that invite global dialogue.





Speaker

Datuk Dr Habibah ABDUL RAHIM

Director,
Southeast Asian Ministers of Education Organization (SEAMEO) Secretariat

Biography

Datuk Dr Habibah Abdul Rahim is currently Director at the Southeast Asian Ministers of Education Organization Secretariat. She is also Honourary Fellow at MASA Institute, Senior Advisor of Edvolution, and Board Member of Teach for Malaysia Foundation and Dewan Bahasa and Pustaka.

Datuk Habibah is the former Director General of Education Malaysia and has served the Ministry of Education Malaysia for more than 34 years before retiring on 6 April 2021. She began her career as a secondary school teacher and among posts held are the Head of the Delivery Management Office, Executive Director of the Education Performance and Delivery Unit, Director of the Educational Planning and Research Division, and Deputy Director General of Education (Policy and Curriculum). She has extensive experience in policy development, macro planning, programme implementation and evaluation.

She played an instrumental role in the development of the Malaysia Education Blueprint 2013-2025, Education Development Master Plan 2006-2010 and Education Development 2001-2010.

Abstract

Are We Preparing Teachers for AI, or Preparing Education Systems for Change?

Artificial intelligence may be the most visible force reshaping education, but its deepest transformation is fundamentally human. As AI changes how knowledge is created, how students learn, and how learning is assessed, it also redefines what it means to be a teacher. Beyond acquiring new technological competencies, teachers must increasingly exercise critical judgment, navigate ethical complexities, and guide learners through a rapidly changing world. Yet, expecting teachers to navigate these transformations through individual effort alone overlooks a fundamental reality: when the nature of teaching changes, the systems responsible for preparing, developing, and supporting teachers must change alongside it.

Global evidence increasingly reinforces the need to rethink the systems that sustain the teaching profession.

UNESCO's Global Report on Teachers (2024) underscores the importance of coherent policies, institutional support, and sustained investment in teachers, while OECD's TALIS 2024 highlights growing professional learning needs related to AI alongside persistent barriers to meaningful professional development. UNESCO's AI Competency Framework for Teachers (2024) further illustrates how emerging technologies are redefining the knowledge, skills, values, and professional agency expected of educators. Together, these global perspectives suggest that responding to AI requires more than expanding training opportunities; it demands a fundamental reconsideration of how teachers are prepared and supported throughout their careers.



Across Southeast Asia, this challenge is further shaped by diverse education systems, institutional capacities, and socioeconomic realities. SEAMEO's regional study, An Analysis of Teacher Professional Development Systems in Southeast Asia (2026), drawing on evidence from nine countries, highlights the interconnected roles of policies, ICT, supporting capacities, partnerships, learning design, and communication in strengthening equitable, quality, and sustainable teacher professional development (TPD). These regional insights reinforce the importance of moving beyond fragmented training initiatives towards coherent professional learning systems that can respond to emerging educational demands while remaining sensitive to national and local contexts.

The convergence of Professional Development for AI (PD4AI) and AI for Professional Development (AI4PD) creates an opportunity to rethink both the competencies teachers require and the systems through which professional learning is organised, delivered, and sustained. This requires corresponding transformations in teacher preparation, professional standards, institutional leadership, educational policies, and investment in continuous professional development.

The AI shift is ultimately human, not because teachers alone must adapt to technological change, but because education systems must evolve to meet the changing needs of the teaching profession. For Southeast Asia, reimagining professional learning means building systems that continuously empower teachers, strengthen their professional agency, and enable them to shape, rather than merely respond to, the future of education.



Speaker

Prof Inge MOLENAAR

Scientific Director of National Education Lab AI & Adaptive Learning Lab
Professor of Education and Artificial Intelligence, **Radboud Universiteit (Netherlands)**

Biography

Inge Molenaar is a world-renowned Professor of Education and Artificial Intelligence at the Behavioral Science Institute of Radboud University and the Scientific Director of the National Education Lab AI (NOLAI) in the Netherlands. Her pioneering research sits at the critical intersection of the learning sciences, educational technology, and AI, with a specific focus on how technology can enhance human intelligence and learning.

Dr. Molenaar is a leading expert in Self-Regulated Learning (SRL) and the development of Hybrid Human-AI collaboration. Her work explores how AI-driven learning analytics and adaptive educational technologies can be designed to support—rather than replace—the teacher's role, fostering more personalised and effective student development. By analysing multimodal data, her research provides deep insights into

how students monitor and control their own learning processes in real life, digital environments and in interaction with AI.

Abstract

Hybrid Human-AI Collaboration Explored: Human Agency and Its Implications for Teacher Professional Development

The keynote explores how education can shape a responsible hybrid future in which humans and AI collaborate and what this means for teachers professional development . Rather than allowing technology to drive educational change, educators, learners, researchers, developers, and policymakers should actively determine AI's role.

In three sections, hybrid Human-AI collaboration is further explored.

First, a key distinction is made between general-purpose AI and educational AI, which should be deliberately designed around scientific knowledge of learning and teaching and developed in close collaboration with education.

Second, for learners, AI creates a new tension between performance and learning: good results can increasingly be achieved with little effort, while genuine learning still requires effort, self-regulation, and reflection. How can we equip learners to navigate this performance- learning paradox?

Third, for teachers, the challenge is to design productive teacher–AI collaboration that balances automation with AI that complements and augments professional expertise. The implications for teacher professional development are futher explored in this space.

Ultimately, the keynote argues for human agency: education must collectively design AI that strengthens learning, teaching, and human development.

Panel Discussion 1

Institutional/National TPD for AI Ecosystem and Practices

10:45 AM –11:25 AM

D1-LP-02, Tai Po Campus, EdUHK

Moderator



Dr YUM Yen Na, Cherry

Associate Head (International Engagement), Associate Professor, Department of Special Education and Counselling

The Education University of Hong Kong

Panel Speaker



Prof Betty EZATI

Vice Chancellor,

Uganda National Institute for Teacher Education



Prof Grace OAKLEY

Deputy Dean and Professor, Graduate School of Education,

The University of Western Australia



Dr Rehana SHANKS

Principal,

ESF Sha Tin Junior School

Panel Discussion 2

Inclusive and Equitable Quality TPD Initiatives in the AI Era

11:25 AM –12:05 PM

D1-LP-02, Tai Po Campus, EdUHK

Moderator



Dr Natalia AMELINA

Chief of Unit, Unit of Teacher Professional Development and Networking
Senior National Project Officer in Education
UNESCO IITE

Panel Speaker



Mr XU Jian Jeffrey

Senior Education Specialist (Education Technology),
Asian Development Bank



Dr Glenn LOW

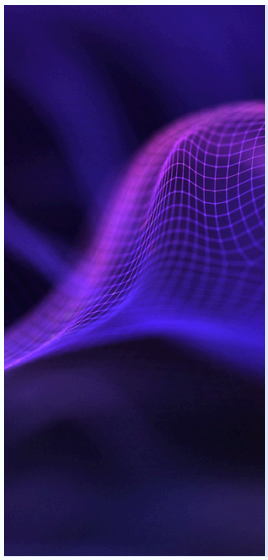
COO & Co-founder,
HeyHi



Ms Victoria L.TINIO

Executive Director,
The Foundation for Information Technology Education and Development

Reflection



Reflections by Policymakers and Governmental Officials

12:05 PM – 12:30 PM

D1-LP-02, Tai Po Campus, EdUHK

Moderator



Mr John Arnold S. SIENA

Deputy Director for
Programme and Development,
SEAMEO Secretariat

Panel Speaker

H.E. Dr SANN Vathana

Secretary of State
Ministry of Education, Youth and Sport
Cambodia

Dr Jennie V JOCSON

Executive Director V
Teacher Education Council
The Philippines

Dr Zakiah BINTI SHAFIEE

Senior Deputy Director
Educational Resources and Technology Division
Ministry of Education
Malaysia

06

Paper Presentations

Abstracts

Presentaton Schedule

PD4AI

Professional Development for Digital Transformation in Education in Latin America and the Caribbean: Where Are We and Where Are We Heading in terms of AI integration?

Dr Carolina Duer	Fundación Ceibal, Uruguay	
Miss Belén Martino	Fundación Ceibal, Uruguay	Presenter
Miss Marina Porcel	Fundación Ceibal, Uruguay	
Miss Jesica Pouzo	Fundación Ceibal, Uruguay	Presenter

Fundación Ceibal (Uruguay) leads a regional initiative on Digital Transformation in Education (DTE) (2025–2027), funded by IDRC Canada. As part of this initiative, a diagnostic study collected more than 200 responses across 27 LAC countries, assessing nine thematic pillars of DTE: Context of the Education System, Problem Identification, Definition of Success, Devices, Connectivity, Platforms, Programs, Teacher Training, and Data. Responses came from governmental, school-level and third sector. Responses were collected using a four-point scale and grouped into six maturity levels ranging from 1 (incipient) to 10 (advanced).

Among the nine pillars, Teacher Training obtained the lowest regional score (5.20, "developing" maturity), making it the most critical area for intervention. Within this pillar, the Equity dimension scored lowest of all (4.39): training remains largely generalist and poorly adapted to diverse educational contexts.. Teachers' actual engagement with technology is similarly constrained. The Capacity dimension — preparedness and experience using technological resources, including AI — scored 4.87 (developing), and qualitative responses repeatedly describe training as disconnected from classroom practice, offered without follow-up or continuity. Rather than a lack of access to training opportunities, this suggests engagement is limited by relevance and sustained support, favoring professional development (PD) models built around communities of practice, ongoing mentoring, and feedback loops over one-off workshops. Institutional support for wise and responsible technology use also emerges as underdeveloped: Policy Coordination — strategies to involve stakeholders in designing training — scored 5.47 (developing), and respondents across countries flagged the absence of systematic impact evaluation as a structural gap. Governmental actors rated all dimensions more favorably than non-governmental actors, exposing a disconnect between policy perception and classroom reality.

Four additional thematic pillars of the diagnostic report also include AI as a dimension of inquiry and analysis. In all cases, a closer look at teachers' responses shows ratings significantly lower than those recorded among the governmental actors who answered the same questionnaire.

Taken together, these findings suggest that closing the PD4AI gap in Latin America and the Caribbean requires more than expanding training coverage: it calls for context-sensitive design, sustained pedagogical support over one-off delivery, and institutional mechanisms that connect stakeholders and monitor real classroom impact. This paper shares this regional evidence base with the LIET2026 community as a contribution to the discussion on how professional development can be designed, delivered, and sustained to equip the education workforce to use AI wisely, responsibly, and equitably.

PD4AI

Comparing Teacher Need and Provision of AI Professional Development across 55 Education Systems

Prof Zixi Chen New York University Shanghai, China **Presenter**

Prof Huacong Liu Shanghai Jiao Tong University, China

This study examines how teachers' need for professional development related to artificial intelligence (AI) and their participation in such development vary across education systems. International frameworks, including UNESCO's AI Competency Framework for Teachers (Miao and Cukurova 2024), emphasize professional development as a means of preparing teachers for AI (Doğan et al. 2025). However, less is understood about whether teachers with greater needs can be identified through teacher and school characteristics and whether provision corresponds to systems' economic and digital capacity.

We use data from the OECD Teaching and Learning International Survey (TALIS) 2024 (OECD 2025), covering up to 126,031 lower-secondary teachers in 55 education systems. We examine variation in reported need within and between systems and use survey-weighted regressions to assess its relationship with teacher and school characteristics. We also examine system-level associations among need, provision, AI adoption, attitudes toward AI, and workload stress.

Results indicate that need for AI-related professional development is widespread, with system means ranging from 2.4 to 3.4 on a four-point scale. Only 7 percent of the variation lies between systems, while the teacher and school characteristics examined account for less than 1 percent of the remaining variation. This pattern holds across contexts with differing attitudes toward AI and levels of development. Participation varies considerably: the proportion of teachers whose recent professional development included AI ranges from 9 percent in France to 76 percent in Singapore. Provision is modestly associated with reported need (ρ = .40), but is unrelated to national income, government AI readiness, or digital infrastructure.

At the system level, reported need is associated with workload stress (ρ = .33). AI adoption is strongly associated with optimism about AI (ρ = .70), while its association with workload stress is small (ρ = .05). These patterns remain broadly consistent after accounting for national income.

Overall, the findings suggest limited scope for targeting support through the measured teacher and school characteristics and lend support to universal access to AI-related professional development. Differences in provision also warrant attention to policy arrangements beyond national wealth and digital capacity. Where institutional support is limited, responsibility for AI readiness may fall to individual teachers, an interpretation informed by the concept of teacher responsibilization (Done and Murphy 2018). Although the cross-sectional data cannot establish causal relationships, the study offers comparative evidence to inform the implementation of UNESCO's AI for professional development dimension across education systems.

PD4AI

AI starts with good data systems: PD4AI through the MICS-EMIS initiative

Miss Femke van den Bos	UNICEF, Netherlands	Presenter
Miss Sakshi Mishra	UNICEF, Netherlands	
Mr Luc Warde	UNICEF, Netherlands	
Mr Nurshat Ababakirov	UNICEF, Netherlands	
Mr Aiman Noman	UNICEF, Netherlands	

AI can create new opportunities for education policymakers to work with data, spot patterns and support decision-making. But it is only as useful as the data behind it. If those data are incomplete, poorly structured, difficult to access or not suited to the question being asked, AI can just as easily produce weak or misleading results. For that reason, PD4AI should not only be about learning how to use AI tools. It also needs to include the work required to make education data usable in the first place.

The GPE KIX-funded MICS-EMIS initiative is co-created with Ministries of Education, National Statistical Offices and UNICEF around this broader challenge. It brings together UNICEF's Multiple Indicator Cluster Surveys (MICS) and Education Management Information Systems (EMIS). MICS provides nationally representative information on children, school participation and foundational learning, while EMIS provides administrative information on schools, enrolment, teachers, infrastructure and resources. Through MICS-Link, children in MICS can also be connected to the schools they attend, making it possible to look at household circumstances and school environments together.

In many countries, the issue is not simply a lack of data. EMIS often contains rich school information collected every year, but much of it may remain inside the system, not fully cleaned, analysed or published. MICS also contains useful education information, including on out-of-school children and foundational learning, that is often underutilised by policymakers. MICS-EMIS works across this space: generating education insights from MICS, cleaning and structuring EMIS data, producing statistics and dashboards, and linking the two sources for joint analysis around nationally defined policy questions. The work is done through co-creation with national Technical Working Groups.

AI can support many of these tasks, from preparing and documenting data to writing code, querying datasets, producing visualisations and checking results. We argue that this brings together two skill sets that are often treated separately: data skills to make education data reliable and usable, and AI skills to work with those data efficiently and critically.

MICS-EMIS therefore sits one step before what is often understood as PD4AI. Drawing on implementation in Fiji, Eswatini, Madagascar, Nepal, Belize, Guatemala, Ukraine and Samoa, this presentation shows how better connected and usable education data provide a stronger basis for AI-supported analysis. For the policy side of the education workforce, PD4AI should cover both: using AI, and building the data it depends on.

PD4AI

Beyond AI Literacy: Preparing Educators to Design for Cognitive Responsibility in Human–AI Learning

Dr Quynh Dang Hanoi University of Science and Technology, Faculty of Education, Vietnam **Presenter**

Generative AI has intensified calls for teacher professional development focused on AI literacy, ethical use, and effective tool integration. These competencies are necessary, particularly as emerging frameworks emphasize human agency, AI pedagogy, and responsible use (Miao & Cukurova, 2024). Yet they do not fully address a pedagogical problem created by generative systems: learners can produce successful outputs while delegating portions of the cognitive, epistemic, and metacognitive work through which capability is developed and demonstrated. Research on cognitive offloading and recent human–AI learning studies makes this distinction between performance support and learning consequential (Risko & Gilbert, 2016; Fan et al., 2025). This raises a professional learning question: how should educators design AI-mediated learning when assistance can extend performance and obscure where intellectual work is occurring?

This conceptual paper develops an integrative instructional-design framework for professional development around cognitive responsibility in human–AI learning. Rather than proposing an entirely new pedagogy, it synthesizes established work on cognitive offloading, self-regulated learning, human agency, assessment, and AI pedagogy to make the distribution of intellectual work an explicit object of instructional reasoning. The framework begins with cognitive allocation, defined as the distribution of task-level cognitive work across learner and AI, and capability–allocation alignment, defined as the fit between that distribution and the capability learners are intended to develop and ultimately demonstrate.

Four recursive design moves organize the framework. SPECIFY asks educators to articulate the intended capability, conditions for its demonstration, and consequential cognitive or epistemic work. ALLOCATE requires a defensible decision about which work should be retained by the learner, shared with AI, or delegated. ORCHESTRATE structures the timing, sequencing, degree, and adaptation of AI assistance so that support does not inadvertently replace responsibility-bearing processes. EVALUATE examines whether available evidence warrants claims about learner capability and whether the allocation should be recalibrated. Reflection across these moves positions teachers not merely as users or regulators of AI tools, but as reflective regulators of cognitive responsibility.

For PD4AI, the framework extends professional learning beyond prompt proficiency and responsible-use rules toward pedagogical judgment about when, where, and why AI should participate in learning. It offers a common language for analysing lesson designs, assignments, and assessments, and could support case-based professional development in which educators compare intended and enacted distributions of intellectual work. The paper contributes an integrative reasoning architecture for strengthening teacher agency in AI-rich classrooms while preserving opportunities for learners to develop and demonstrate intended capabilities.

PD4AI

Conceptualising AI Bias in Visual Arts Education: A Sociomaterial Ecological Typology for Policy and Practice

Dr Ning Luo The Education University of Hong Kong, Hong Kong, China **Presenter**

Generative artificial intelligence (GenAI) is increasingly entering visual arts education, enabling students to generate images, visual references, stylistic variations, and compositional possibilities through text prompts. Yet educational discussions often address AI risks through broad concerns about ethics, academic integrity, or responsible use. Such approaches are insufficient for visual arts education, where text-to-image systems can influence not only what students produce but also how identities, cultures, aesthetic values, and artistic traditions become visible and valued. Recent research documents persistent demographic and cultural biases in AI-generated imagery and calls for more critical and context-sensitive approaches to AI literacy in education (Alon et al., 2026; Weinmann et al., 2026). However, these emerging discussions remain fragmented across AI bias, aesthetics, cultural representation, and educator AI literacy, leaving the specific operation of bias within visual artmaking insufficiently conceptualised.

This conceptual paper develops a sociomaterial ecological typology of AI bias in visual arts education. Rather than locating bias solely within algorithms or individual users, it conceptualises AI-assisted artmaking as an ecology of relations among learners, educators, generative models, training data, prompts, interfaces, generated images, visual cultures, aesthetic conventions, art-historical knowledge, and assessment practices. Within this ecology, five interrelated forms of bias are distinguished. Representational bias concerns stereotyped or unequal depictions of social identities and roles. Cultural bias concerns the simplification, homogenisation, or misrepresentation of culturally situated visual forms. Aesthetic bias concerns the privileging of particular visual qualities, styles, and conventions as desirable or artistically valuable (Declos, 2026). Historical bias concerns the privileging and amplification of dominant artists, traditions, and canonical art-historical references. Process bias concerns how students may uncritically trust, select, reproduce, or incorporate biased AI outputs into their artistic decision-making.

The typology contributes to Professional Development for AI (PD4AI) by identifying a domain-specific dimension of AI literacy for visual arts educators. Recent reviews emphasise that educators require not only operational knowledge of AI but also critical, ethical, culturally responsive, and context-sensitive competencies (Pei et al., 2026; Tagare et al., 2025). Extending this work, the paper argues that professional development in visual arts should prepare educators to recognise how AI can shape social visibility, cultural interpretation, aesthetic judgement, art-historical authority, and creative agency. It concludes by considering implications for teacher professional development, curriculum design, studio critique, assessment, process documentation, and institutional guidance for responsible AI-assisted artmaking.

PD4AI

Meeting Educators Where They Work: A Practice Informed Framework for Contextually Responsive AI Professional Learning

Mr Brian Drake Australian Institute of Machine Learning - Responsible Artificial Intelligence Research Centre, Australia — Presenter

Miss Ruoxin Wang Australian Institute of Machine Learning - Responsible Artificial Intelligence Research Centre, Australia — Presenter

Dr Jinan Zou University of New South Wales, Australia

Professional Development (PD) for Artificial Intelligence (AI) in education requires balancing technical concepts, pedagogical purpose, and responsible governance within institutional constraints (Miao & Cukurova, 2024; Mishra et al., 2023). Yet AI PD is often delivered as short tool centred sessions, and the design reasoning of the facilitators who run them is rarely examined. This study presents a practice informed framework for contextually responsive AI professional learning, investigating how facilitators adapt workshop design to the operational realities of the education workforce. Through collaborative autoethnography (Chang et al., 2013) grounded in critical reflection, the facilitator-researchers analyse their accounts of workshops delivered between 2024 and 2026, across higher education, professional, and K-12 contexts. The study is organised around three core research questions: (1) How do facilitators adapt AI learning to educators' working conditions? (2) How are technical understanding, practical experimentation, and responsible judgement connected through workshop design? and (3) What structural and resource constraints shape these design choices?

The analysis synthesises five interrelated dimensions of workshop design: (1) translating technical concepts for target audiences; (2) connecting concepts to professional purposes; (3) structuring time for guided and open experimentation; (4) designing deliberate encounters with AI failure to build responsible judgement; and (5) navigating resource and institutional realities. Illustrative practices examined include technical translation through contextual analogies for technical translation, adversarial prompting to expose output unreliability, scaffolded sandbox exploration, and traffic light models for data privacy classification.

Initial findings indicate that contextual responsiveness extends well beyond translating technical concepts, learning objectives, activities, and ethical inquiry must also be adapted to each context. The analysis also identifies three design tensions that arise across the five dimensions: accessibility versus technical precision, immediate task efficiency versus long term pedagogical transformation, and individual professional agency versus institutional compliance. Rather than assessing short term intervention effectiveness, the study offers a conceptual framework and propositions for empirical investigation. The study contributes to building sustainable workforce capacity, supporting educators as critical, evaluative decision makers in an AI integrated educational environment.

PD4AI

Media and AI Literacy for Aesthetic Educators: Guiding Students' Aesthetic Experience Reconstruction in the Digital-Intelligent Media Era

Dr Yuting Huang Guangxi Normal University, China **Presenter**

Digital and AI-enabled media are reshaping students' aesthetic experience through multi-modal interfaces, immersive environments, and algorithmic curation. These technologies expand opportunities for artistic participation while influencing what students encounter, how they perceive it, and how aesthetic preferences develop. Such changes call for a clearer account of the competencies teachers need to guide reflective aesthetic learning. This paper develops a framework of media and AI literacy for aesthetic educators and considers its implications for teacher professional development.

Using conceptual analysis and interdisciplinary theoretical synthesis, the paper draws on Dewey's pragmatist aesthetics, post-phenomenology, and critical algorithm studies. Dewey's account of experiential continuity connects artistic encounters with lived experience; post-phenomenology examines how technologies mediate perception and embodiment; and critical algorithm studies illuminates how computational selection structures cultural visibility and taste formation. These perspectives inform a conception of aesthetic experience reconstruction as a reflective process in which students rework mediated encounters by relating them to embodied exploration, cultural interpretation, and creative expression.

The resulting framework specifies four interrelated competencies: (1) media materiality literacy, analyzing how the material, technical, and sensory properties of media shape the presentation and interpretation of artworks; (2) algorithmic awareness, examining how recommendation, ranking, and generative AI systems influence aesthetic exposure and preference formation; (3) embodied interaction literacy, designing activities that connect immersive encounters with bodily exploration and lived contexts; and (4) critical aesthetic mediation, guiding students to compare interpretations, examine how technologies and cultural assumptions frame artworks, and develop informed aesthetic judgments. Together, these competencies connect an understanding of mediated experience with the pedagogical cultivation of aesthetic agency.

Two illustrative school-based scenarios clarify the framework's pedagogical possibilities: students compare algorithmically recommended artworks with intentionally diverse selections to examine taste formation, and reinterpret an immersive virtual exhibition through place-based, cross-media creation. For PD4AI, the framework suggests professional learning that combines comparative media analysis, collaborative design of embodied learning activities, and reflective inquiry into algorithmic influence. It offers a conceptual basis for strengthening educators' professional judgement in the responsible use of AI while supporting students' experiential continuity, interpretive autonomy, and engagement with cultural diversity.

PD4AI

From AI Literacy to Pedagogical Agency: Five Teaching Capacities for Higher Education in Human–AI Environments

Dr Ana Maria Miralles Institución Universitaria Digital de Antioquia (IUDigital), Colombia **Presenter**

The rapid integration of generative artificial intelligence (GenAI) into higher education has prompted teacher professional development initiatives focused on AI literacy, digital competencies, prompting, and tool use. While necessary, these approaches may be insufficient to address a deeper transformation: AI systems increasingly participate in activities traditionally associated with teachers and students, including content generation, feedback, learning design, and assessment. Building on human-centred approaches to AI (Miao & Cukurova, 2024) and ecological understandings of teacher agency (Priestley, Biesta, & Robinson, 2015), this paper argues that professional development should move beyond what teachers need to know about AI towards the pedagogical capacities required to exercise professional judgement in human–AI environments.

The paper proposes five interconnected teaching capacities: mediating, contextualizing, accompanying, problem-posing, and designing learning experiences. Mediating involves critically configuring relationships among students, knowledge, and AI, deciding when AI enhances learning and when it may diminish meaningful cognitive activity. Contextualizing situates knowledge and AI-generated resources within students' disciplinary, cultural, social, and territorial realities. Accompanying emphasizes pedagogical presence, recognition, and learner autonomy rather than replacing human educational relationships with automated interaction. Problem-posing, drawing on Freirean pedagogy (Freire, 1970), becomes particularly relevant when AI makes answers increasingly accessible: teachers transform social, professional, cultural, and territorial realities into authentic problems for inquiry and critical judgement. Designing learning experiences involves deliberately determining how cognitive activity should be distributed among students, teachers, and AI.

The framework also engages with Digitalidad Próxima, an educational construct developed by Institución Universitaria Digital de Antioquia (Colombia), which conceives digital technologies as mediators of relational proximity and connects digital education with inclusion and territorial realities. Territory is understood not merely as geographical location, but as a social and cultural construction whose problems, questions, knowledge, and experiences can become integral to learning. The framework is situated within an ongoing institutional context in which guidelines for the critical, ethical, and pedagogical use of AI are being implemented alongside a professional development programme for faculty.

The proposal reframes teacher professional development from acquiring AI-related skills towards strengthening teachers' capacity to pedagogically configure human–AI activity. Pedagogical agency is understood not as resistance to automation, but as the situated professional capacity to determine how, when, why, and to what extent AI should participate in learning while preserving opportunities for human thought, autonomy, relationships, and knowledge construction.

PD4AI

Professional Development Needs for Responsible Generative AI Use among Educators in Infant and Toddler Care Services and Management Programmes at Higher Vocational Colleges with a Guangzhou Campus: An Exploratory Mixed-Methods Study

Miss Runlei Yang Guangdong Engineering Polytechnic, China **Presenter**

Generative artificial intelligence (GenAI) is reshaping teaching, assessment and professional learning (Miao & Cukurova, 2024). Its use in vocational infant and toddler care education is especially consequential because educators prepare students for safety-critical, relational and context-sensitive work, including child behaviour observation, care routines, safety judgement, play-based learning and family communication. These responsibilities require professional judgement that generic, tool-led AI training may not adequately support (Celik, 2023; Miao & Cukurova, 2024).

This exploratory mixed-methods study investigates educators' professional development needs regarding responsible GenAI use in Infant and Toddler Care Services and Management programmes. Responsible use entails safeguarding confidential child-observation and family information entered into GenAI tools, verifying safety-related outputs against authoritative sources, retaining human accountability for care decisions and modelling professional integrity for students. Guided by Intelligent-TPACK (Celik, 2023) and informed by UNESCO's AI Competency Framework for Teachers (Miao & Cukurova, 2024), the study asks how educators currently understand and use GenAI for authentic teaching tasks, what pedagogical, disciplinary and ethical capabilities they require for integrated education, care and health-informed practice, and what forms of professional development they consider feasible and valuable.

All eligible educators teaching on the programme at higher vocational colleges with an officially listed campus in any of Guangzhou Municipality's 11 districts will be invited, irrespective of the delivery campus. An explanatory sequential mixed-methods design will be used (Creswell & Plano Clark, 2018). An online questionnaire will examine current GenAI use, perceived competence, intended applications, ethical concerns and professional learning preferences. Survey findings will inform participant selection and interview prompts. From pseudonymised survey responses, four teachers who separately consent to recontact and data linkage will be selected purposively to maximise variation in GenAI experience and curricular responsibilities; salient or contrasting profiles will guide within-group selection. Questionnaire data will be summarised descriptively, while semi-structured interviews will undergo reflexive thematic analysis (Braun & Clarke, 2021). A joint display will align survey patterns with interview themes and support integrated interpretations (Fetters et al., 2013). Recruitment will begin only after ethics approval and institutional access are secured; data collection and preliminary integration are planned for September–November 2026.

The study will provide context-specific evidence for PD4AI and inform the subsequent co-design of a professional development programme and AI-supported reflective-feedback resources, extending the project towards AI4PD. More broadly, it positions AI professional development within educators' authentic work, disciplinary responsibilities and ethical concerns rather than generic tool training alone.

PD4AI

From Answers to Understanding: Designing AI-Integrated Assignments That Promote Critical Thinking and Verification

Prof Youqin Pan Salem State University, United States Presenter

The rapid growth of generative artificial intelligence (AI) in higher education has created new opportunities for learning, but it has also made it easier for students to obtain answers without fully understanding the underlying concepts. This challenge is especially important in quantitative courses, where students must be able to evaluate assumptions, interpret results, and judge whether an answer is reasonable.

This paper presents a practical framework for designing AI-integrated assignments that promote active learning rather than passive answer seeking. The framework includes four stages: Prompt, Critique, Verify, and Reflect. Students first use a purposeful prompt to generate an AI response. They then evaluate the response for errors, weak reasoning, unsupported assumptions, or incomplete interpretations. Next, they verify key results using tools such as Excel, JMP, calculations, course materials, or credible sources. Finally, students reflect on what they learned from comparing the AI response with verified results.

Examples from undergraduate quantitative courses show how the framework can be applied in statistics, business analytics, operations management, and quality management. The approach shifts AI from an answer generator to a tool for critical evaluation and deeper learning.

The study indicates that effective AI integration should focus not simply on whether students use AI, but on whether assignments require them to question, verify, explain, and learn from AI-generated outputs. The framework offers instructors a flexible strategy for developing AI literacy, critical thinking, and conceptual understanding in an AI-rich learning environment.

PD4AI

Augmented and Virtual Reality Competencies for Future-Ready TVET Educators: Implications for Professional Development in the AI Era

Dr Nurul Hidayah Mohd Ali	Ministry of Education, Malaysia	Presenter
Prof Ridzwan Che' Rus	Faculty of Technical & Vocational, Universiti Pendidikan Sultan Idris, Malaysia	
Prof Azlin Iryani Mohd Noor	Faculty of Art, Sustainability & Creative Industry, Universiti Pendidikan Sultan Idris, Malaysia	
Prof Dayang Suryati Abang Ibrahim	Ministry of Education, Malaysia	

The rapid development of digital and AI-enabled technologies is reshaping the competencies required of Technical and Vocational Education and Training (TVET) educators. In Landscape Architecture education, Augmented Reality (AR) and Virtual Reality (VR) offer potential for visualisation, interactive learning and experiential learning. However, their effective integration depends not only on access to technology, but also on educators' conceptual, technical and pedagogical readiness. This paper examines AR and VR competencies identified through a larger Design and Development Research (DDR) study on the development of an Education for Sustainable Development framework for the Diploma in Landscape Architecture programme at Malaysian Vocational Colleges.

The study employed a three-phase DDR design, preceded and informed by a review of relevant literature and documents. The needs analysis phase involved interviews with seven experts to determine whether AR and VR were necessary and relevant competency elements for Landscape Architecture TVET. In the design and development phase, evidence from the literature, document analysis and expert interviews was synthesised to identify competency elements, followed by validation using the Fuzzy Delphi Method with 15 experts. The usability phase involved 16 Landscape Architecture lecturers using a modified virtual Nominal Group Technique. The findings showed that both AR and VR were accepted as relevant competency elements for Landscape Architecture TVET. AR achieved 100% expert consensus with a fuzzy score of 0.8200, while VR achieved 100% expert consensus with a fuzzy score of 0.7667. For AR, the highest-rated competencies included basic AR concepts, its role in the landscape industry, and the use of AR tools and applications. For VR, the highest-rated competencies included landscape design visualisation, new technology skills and experiential learning. In the usability phase, both AR and VR recorded 83.04% acceptance among lecturers. The findings also indicated that implementation depends on institutional readiness, access to technological resources, pedagogical change and further educator training.

These findings suggest that professional development for TVET educators should not treat AR and VR as generic or interchangeable digital competencies. AR-related development should emphasise conceptual understanding, industry applications and tool use, whereas VR-related development should place stronger emphasis on design visualisation, immersive experiential learning and emerging technology skills. Institutional readiness and technological access should therefore be addressed alongside educator competency development. These findings provide a context-specific basis for preparing TVET educators to work in increasingly technology-rich and AI-influenced learning environments.

PD4AI

From Using AI Tools to Overseeing AI Agents: The Professional Development Competencies Education Workforce Now Needs

Ms Anamika Ved Cambridge University Press & Assessment, United Kingdom Presenter

If professional development for artificial intelligence (PD4AI) is to strengthen the education workforce's capacity to use AI wisely and responsibly, it must keep pace with what AI is becoming. AI in education is moving from tools that respond to prompts towards agentic systems capable of pursuing goals across multiple steps. Potential applications include planning learning pathways, producing adaptive feedback, supporting marking and quality assurance, and acting across connected platforms. Current developments signal this direction: AI assistants such as Khanmigo and Claude support teaching workflows, while Gartner predicts that 40 per cent of enterprise applications will include task-specific AI agents by the end of 2026.

This conceptual paper draws on a landscape analysis of emerging applications, policy and regulatory developments, including Ofqual's 2026 working paper on principles for AI use in marking, and a structured review distinguishing established evidence, context-dependent findings and evidence gaps. It argues that agentic AI changes the professional development question in kind, not merely in degree. AI literacy centred on prompting and responsible tool use does not fully prepare teachers, assessors, leaders, teacher educators and policymakers to delegate to, supervise and critically evaluate systems acting within learning and assessment processes.

The paper makes two contributions. First, it identifies the oversight competencies professional development must build and translates them into design implications. These include verifying AI outputs against professional judgement; identifying hallucination, bias and uneven performance, particularly in low-resource and multilingual contexts; deciding when to intervene, escalate or override; and examining what a system did, why it acted and who remains accountable. Developing these capabilities requires supervised engagement with live systems, scenario-based learning and case-based professional judgement rather than tool tutorials. PD must work across settings where connectivity, device access, institutional capacity and AI-literate colleagues remain uneven.

Second, the paper proposes a six-question readiness framework covering purpose, evidence, validity, governance, people and assurance. The framework connects workforce capability with institutional strategy, helping schools and systems decide which applications should be encouraged, tested, constrained or retained as human-led work. It supports discussion about roles, accountability and safeguards before autonomous capabilities are introduced.

The paper recognises that professional development alone cannot resolve accountability gaps, unequal access, over-reliance or skill atrophy. These challenges require institutional governance, policy and system-level responses. It concludes by considering how professional development, institutional strategy and policy can together prepare the education workforce across diverse systems and communities to engage critically and responsibly with increasingly agentic AI.

PD4AI

School Digital Conditions for Delivering Professional Development for Artificial Intelligence Across 137 Education Systems

Mr Jie Wang The Education University of Hong Kong, Hong Kong, China **Presenter**

UNESCO's Acquire, Deepen, and Create progression frames learning goals for professional development for artificial intelligence (PD4AI), but this study neither tests that progression nor maps infrastructure onto its stages (Miao & Cukurova, 2024). Li et al. (2025) reviewed 16 AI-integrated teacher professional-development studies and found greater attention to individual outcomes than organisational change. This study complements that programme-level evidence with a cross-system comparison of the school infrastructure relevant to digital PD4AI delivery. It asks how primary-school Internet access for pedagogical purposes is distributed across education systems, and how strongly it is associated with electricity coverage and national income.

The analysis drew on the February 2026 release of UNESCO Institute for Statistics (UIS) SDG 4 data and World Development Indicators (WDI) (UIS, 2026; World Bank, 2026). This date denotes the release, not an observation year; the unit was the education system. The outcome was primary-school Internet access for pedagogical purposes; predictors were electricity coverage and log2 GDP per capita at purchasing-power parity in constant 2021 international dollars. Sources were matched by country code and observation year. For 2019–2024, each system's latest complete record was retained: 137 of 241 UIS codes, including 94 observations from 2024. Systems without complete same-year data were unrepresented, limiting generalisation even within the UIS frame.

Giving each system equal weight, Internet coverage averaged 69.1%, versus 88.0% for electricity. These separate marginal percentages do not identify the same schools. Fifty-three systems reported 100% Internet coverage, whereas 44 were below 50%. In a fractional logit model with HC3 robust standard errors and observation-year adjustment (Papke & Wooldridge, 1996), the average marginal effect of electricity, scaled to a 10-percentage-point increase, was 6.0 percentage points in predicted Internet coverage (95% CI [3.6, 8.3]). The average marginal slope with respect to log2 GDP per capita was 9.4 percentage points (95% CI [6.6, 12.3]) per unit of the transformed predictor, that is, per doubling. These education-system-level associations are ecological, not causal.

These findings describe school-based conditions for digitally delivered PD4AI; they do not measure teachers' AI competence, training participation, training quality, or training effects. Teachers may also use home or mobile networks, which UIS does not capture. Education systems with limited school connectivity could consider and evaluate low-bandwidth, downloadable, offline, or hybrid formats when planning PD4AI delivery. This comparison informs delivery planning while keeping UNESCO competence stages separate from infrastructure measures.

PD4AI

Teacher Readiness for AI and ICT Integration: Insights from a Short-Term Online Training Program

Mr Ramesh Prasad Badoni State Council of Educational Research and Training Uttarakhand, India Presenter

Ms Huong Thuy Vu Thang Long High School for the Gifted, Vietnam Presenter

The study examined the feelings of science teachers of government schools of Uttarakhand about a 10-hour training program on use of ICT and AI tools in classroom teaching. Following the training, an online survey (Google Form) was used to query teachers with open-ended questions for honest opinions. Thematic analysis was used to study their answers in an effort to identify common trends.

The findings suggest that teachers have good attitude to use technology in the classroom but they also have many obstacles to implement it. The most important worry (26.3% of teachers) was the necessity for face-to-face or offline training and not totally online courses, especially for teachers in rural and remote institutions. Second, 24.2% stated they'd like more hands-on, practical training compared to theory-based courses. Weak infrastructure (22.0%) and poor internet access (20.8%) were also cited by many as key impediments. Other needs were frequent ongoing training instead of one-time programs (17.8%), better scheduling (14.0%), subject- and level-specific training (11.9%), technical support workers (10.2%) and simple training material in local language (9.7%). Interestingly, 8.1% expressed interest in modern technologies such as AI, coding, and cybersecurity.

The study suggests that instructors are willing to use technology, but success depends on the correct infrastructure, practical assistance and training that meets their genuine classroom demands. The limitations of this study include self-reported data from only one state, which may restrict the generalisability of the findings to other settings. There is a need for future training to be more practical and subject-specific and supported by greater infrastructure and continuous mentoring.

PD4AI

From "AI Will Replace Us" to "AI Can Empower Us": Exploring High School Bel Canto Teachers' Attitudes Changes Toward AI Voiceprint Analysis Through PD4AI

Miss Jingqi Feng The Education University of Hong Kong, Hong Kong, China Presenter

Empirical research on the pedagogical use of artificial intelligence (AI) in vocal music education remains limited, particularly regarding how teachers incorporate AI into classroom practice. Existing scholarship has largely focused on the possibilities and challenges of AI, with less attention given to teachers' attitudes and the ways these attitudes may shape pedagogical decisions. The present study explores changes in high school Bel Canto teachers' attitudes toward AI voiceprint analysis following a PD4AI-based professional development intervention, with particular attention to their instructional practices and pedagogical decision-making.

An exploratory multiple-case study design will be adopted with three Chinese high school Bel Canto teachers who have provisionally agreed to participate. The intervention will consist of a two-week professional development workshop centered on the AI software "Zhizhi Liansheng." Data will be collected through pre- and post-intervention surveys, semi-structured interviews, and systematic classroom observations. These sources will be triangulated to examine attitudinal changes and possible modifications in teachers' instructional practices following the intervention.

The study focuses on how teachers interpret AI-generated vocal analysis in relation to their professional judgement and pedagogical authority. It examines whether and how spectrograms, pitch curves, and formant data are incorporated into instructional decision-making, and how such tools may function as supplementary visual and analytical references rather than prescriptive measures of vocal quality. It also considers whether teachers' practices shift from predominantly aural-based assessment toward a more integrated auditory-data approach to vocal instruction.

Theoretically, the study draws on the PD4AI framework as a conceptual basis for examining teacher attitudes toward AI in vocal music education. Rather than treating technical proficiency as the sole condition for AI adoption, this perspective highlights teachers' perceptions, professional judgment, and pedagogical agency as important considerations in the integration process. Practically, the study explores how AI might support routine corrective tasks, including pitch detection, vocal placement analysis, and basic intonation correction, potentially reducing remedial workload and creating more space for teachers to focus on emotional interpretation, stylistic development, and expressive coaching. As this study with a small number of cases, it does not aim to produce generalized findings. Instead, it seeks to generate initial insights into how teachers' perceptions shape the way AI is incorporated into vocal music teaching, which may inform future research and professional development initiatives concerning AI integration in vocal music education.

PD4AI

Mathematics Teachers' AI-Related Professional Development Needs: Evidence from TALIS 2024

Miss Xiaoxia Wu The Education University of Hong Kong, Hong Kong, China Presenter

Dr Ying Zhang The Education University of Hong Kong, Hong Kong, China

Artificial Intelligence (AI) is increasingly integrated into teaching and learning, yet substantial uncertainty remains about how teachers across different subject areas experience AI-related professional development (PD). Aligned with the PD4AI track, this study investigates the gap between AI-related PD participation and perceived learning needs among lower secondary mathematics teachers across the Asian systems covered by the Teaching and Learning International Survey (TALIS) 2024.

Mathematics teachers face subject-specific challenges in adopting AI. Large language models struggle to maintain cognitive demand when generating mathematical tasks, often producing routine rather than conceptually demanding problems (Sapkota & Bondurant, 2024). Furthermore, preservice mathematics teachers show limited ability to evaluate the mathematical correctness of AI-generated outputs, even when they can assess pedagogical appropriateness (Gurl et al., 2025). These subject-specific constraints raise the question of whether mathematics teachers' AI-PD needs differ systematically from those of teachers in other subjects; to our knowledge, no published TALIS-based analysis has addressed it (cf. Murillo & Herrero, 2026).

Using the TALIS 2024 dataset (OECD, 2025), this analysis compares 7,390 mathematics teachers and 68,682 teachers from other subjects across 12 Asian systems. AI-PD need was measured by a single self-report item (level of need for training in AI teaching and learning skills), rated at four levels: none, low, moderate, and high. Three key findings emerge: (1) Mathematics teachers participated less in AI-related PD in the past 12 months (39.3% vs. 46.8% for other subjects; Rao-Scott adjusted $\chi^2 = 74.2$, significant at the .001 level). (2) All mathematics teachers reported at least some need for AI-PD, compared with 42.2% of teachers in other subjects who reported none; over 70% reported moderate to high need. (3) Cross-system variation was substantial: AI-PD participation among mathematics teachers ranged from 25.4% (Japan) to 68.0% (South Korea).

These findings indicate a substantial unmet need for AI-related PD among mathematics teachers in Asian education systems. As a cross-sectional secondary analysis using unadjusted estimates, this study is descriptive rather than causal; whether the subject gap persists after controlling for teacher demographics and school/system factors requires multivariable analysis. The results suggest that AI-PD for mathematics should be embedded in subject-specific task design, assessment, and evaluation of AI-generated outputs rather than delivered as generic technology training—directly addressing the PD4AI question of how PD design can support AI learning needs in diverse subject and national contexts.

PD4AI

PD4AI in Tutoring Organisations: Pathways and Constraints of Generative AI in Hong Kong

Miss Yuyan He Presenter

Against the backdrop of generative-AI-driven educational transformation, most existing studies on PD4AI (Professional Development for AI-enabled teaching) centre on individual teachers within formal subsidised or government-run schools. Relatively little scholarly attention has been paid to non-state-run supplementary education providers, namely Hong Kong tutoring organisations, which constitute a vital complementary educational ecosystem and have embraced generative AI at an early stage. This study explores institutional-level PD4AI practices in local tutoring organisations, identifying enabling pathways as well as practical constraints when adopting generative-AI tools for teaching-related workflows.

Drawing on qualitative insights from Hong Kong tutoring organisations, this research examines multiple institutional pathways to leverage generative AI: building in-house PD4AI training modules for front-line tutors; deploying AI for differentiated worksheet generation, assignment feedback and lesson-preparation workload reduction; establishing internal review protocols to verify factual accuracy and appropriateness of AI-generated teaching materials; and aligning AI deployment with organisational teaching objectives.

Nevertheless, the adoption of generative AI is bounded by distinctive institutional constraints. Commercial tutoring providers operate under profit-oriented logic, which may prioritise cost-reduction over educational equity. Other major barriers include limited time and budget for systematic PD4AI training, uneven digital readiness among tutors, ethical risks such as AI-produced content errors and student plagiarism, and the lack of clear industry-wide guidelines for AI-assisted supplementary teaching.

This study argues that institutional-level PD4AI is more than merely teaching staff to operate AI tools. It requires organisations to balance efficiency gains, teaching-quality safeguards and equity considerations. Findings offer empirical references for designing PD4AI frameworks for supplementary-education settings and provoke reflections on governance for AI-enhanced private education in Hong Kong.

PD4AI

Study on the Leadership Substitution Effect of AI Digital Teaching Systems — An Empirical Analysis Based on Ten K-12 Schools in Shenzhen

Dr Xia Mei The Education University of Hong Kong, Hong Kong, China **Presenter**

Abstract Against the backdrop of educational digital transformation, AI digital platforms are gradually integrated into school governance and teaching management, providing a new research context for applying leadership substitution theory in K-12 settings. This study explores the intrinsic mechanisms through which AI digital teaching systems substitute, neutralize and strengthen principals' instructional leadership. It compares technological effects across organizational management, teaching and education, and value leadership, and examines whether technical task substitution empowers teachers' instructional autonomy and independent educational research. Taking PIMRS (instructional leadership theory) as the core, this study incorporates leadership substitution theory and extends three digital leadership dimensions to build a three-layer nested theoretical framework. For K-12 cross-school investigation across ten sites, the original PIMRS scale is localized for digital contexts. Primary-school-specific items are removed, and items concerning digital governance, technological substitution and teacher autonomy are added to form a five-dimension general measurement scale. Adopting an explanatory sequential mixed-methods design, this research integrates teacher questionnaires, AI platform backend data and semi-structured interviews, and conducts multi-source data verification via quantitative statistics, qualitative thematic coding and triangulation. This study clarifies how AI digital systems shape instructional leadership functions, expands the explanatory boundary of leadership substitution theory in digital education, and develops human-machine collaborative governance strategies for primary and secondary schools. The revised localized scale supports future empirical studies. Findings offer theoretical and practical references for K-12 schools to deploy digital platforms to reduce workload and empower educators.

PD4AI

How Teachers Navigate Disagreements Between AI Outputs and Professional Judgment

Mr Juyeong Lee Seoul National University, South Korea

Ms MinSeo Chang Seoul National University, South Korea Presenter

Prof Young Hoan Cho Seoul National University, South Korea

1. Introduction
Artificial intelligence(AI) increasingly supports teachers' instructional and administrative work, yet its outputs may diverge from teachers' professional judgment. Although teachers' perceptions shape educational change involving generative AI (Bower et al., 2024), how they interpret and navigate such discrepancies remains underexplored. This study examined where discrepancies arise, the criteria guiding acceptance or rejection, and teachers' responses.

2. Research Methods
Vignette-based interviews were conducted with 15 primary and secondary teachers, with fewer than five to more than 30 years of experience(Skilling & Stylianides, 2020). Four vignettes each presented an educational situation in which an AI output diverged from teachers' professional judgment. As teachers responded, the situational conditions of each vignette were progressively adjusted to examine whether and how their judgments shifted. Data were analyzed using thematic analysis (Braun & Clarke, 2006).

3. Findings
Across vignette responses and accounts of their own practice, teachers reported discrepancies in four domains: instructional design and enactment, student counseling and guidance, student assessment and recordkeeping, and administrative tasks. Discrepancies were detected when AI outputs failed to reflect classroom situations, learners' backgrounds, or curricular and pedagogical knowledge. In deciding whether to accept outputs, teachers considered whether the rationale was explicit and verifiable, whether sufficient data had been used, and whether classroom and learner contexts were represented. They also scrutinized risks of negatively labeling students and compromising privacy. Teachers rarely accepted discrepant outputs without modification and favored rejection or conditional acceptance. They were more receptive in administrative tasks, which required less specialized knowledge and involved fewer stakeholders. These judgments reflected a view of AI as an assistive decision-support tool, with contextual interpretation and final authority remaining with teachers. In practice, teachers cross-checked outputs against actual data, consulted colleagues, observed students further, and revised outputs through their own professional intervention.

4. Conclusion
These findings suggest that teachers exercised situated professional judgment. They applied multiple criteria to interpret AI outputs and their anticipated consequences according to context and task characteristics, and they responded in ways that compensated for AI's limitations. However, positioning AI primarily as a subordinate tool sometimes led teachers to define their expertise in vague and overly broad terms, which may limit more active teacher–AI collaboration. Teachers therefore need support to redefine the respective roles of teachers and AI based on evidence and to identify areas where AI can more actively complement their professional judgment.

PD4AI

Examining Teaching-Focused Digital Literacy among Primary and Junior Secondary School Teachers: Evidence from Southwestern China

Ms Zihan Wang Guangxi Normal University, China Presenter

The development of teachers' digital literacy is essential for improving educational quality in the context of digital transformation. However, teaching-focused digital literacy may vary across different instructional dimensions and teacher groups. Grounded in pedagogical-technology integration perspectives and international teacher-competence scholarship, and adapted from China's national policy on teachers' information-technology application capacity, this study adopts a teaching-centred four-dimension framework: learning analysis, teaching design, instructional guidance, and academic evaluation. Aligned with key stages of the teaching-learning cycle, these dimensions capture core classroom-based capacities while excluding non-teaching components such as digital citizenship and ethics. This logic underpins our dimension selection. This study aims to examine the dimensional characteristics, group differences, and heterogeneous patterns of teaching-focused digital literacy among primary and junior secondary school teachers in Southwestern China. A total of 40,598 primary and junior secondary school teachers from 14 cities across Southwestern China were recruited for this study through an online questionnaire survey platform. Data collection relied on a validated self developed scale tailored to measure teaching focused digital literacy. This 24 item instrument adopts a Likert type self report format, where participants evaluated their own digital teaching capabilities, and dimension scores are calculated as the mean value of corresponding item responses. Reliability analysis, confirmatory factor analysis, group difference tests, correlation analysis, and latent profile analysis were conducted to examine the characteristics and patterns of teaching-focused digital literacy. The results showed that the questionnaire demonstrated satisfactory reliability and construct validity. Teachers reported relatively higher scores in teaching design and instructional guidance, whereas learning analysis and academic evaluation showed comparatively lower scores. Significant differences were identified across gender, age, teaching experience, academic stage, and subject categories. Correlation analysis indicated strong associations among the four dimensions. Furthermore, latent profile analysis identified four distinct patterns of teaching-focused digital literacy: "Lower-score integrated" (2.23%), "Developing instructional-use" (20.11%), "Established instructional-use" (62.99%), and "Advanced integrated" (14.67%), revealing substantial heterogeneity in teachers' teaching-focused digital literacy patterns. These patterns reflected different configurations of the four dimensions, indicating substantial variation in teachers' overall scores and dimensional characteristics. The findings indicate that teaching-focused digital literacy is not uniformly distributed among teachers but characterized by meaningful heterogeneity. These identified teacher subgroups can support targeted capacity building according to different teachers' competence profiles. Beyond generic technical training, differentiated professional development is required. Priority should be given to strengthening teachers' capabilities in learning analysis, digital assessment and data informed instructional decision making to advance context adapted educational digital transformation in under resourced regional contexts.

PD4AI

From PD4AI to Practice: How EFL Pre-service Teachers Enact Generative AI During Teaching Practicum

Ms Thamonthon Yordming Phranakhon Si Ayutthaya Rajabhat University, Thailand **Presenter**

Ms Nanthaporn U-saard Mahasarakham University, Thailand

Professional development for artificial intelligence (PD4AI) is expected to support teachers in translating AI-related learning into meaningful classroom practice. This study examined how fourth-year EFL pre-service teachers enacted generative artificial intelligence (GenAI) during their teaching practicum after participating in a three-hour ELT TechCraft professional development workshop. Specifically, it investigated how AI-supported professional learning was translated into lesson design and classroom implementation, and what opportunities and challenges emerged during this process. Participants were 20 EFL pre-service teachers from the Faculty of Education, Phranakhon Si Ayutthaya Rajabhat University, Thailand. Data comprised AI-integrated lesson plans, documented evidence of AI use, and reflective journals.

Qualitative content analysis was conducted using a four-level AI Pedagogical Enactment framework informed by research on AI competency and GenAI-supported pedagogical design (Chiu et al., 2024; Moundridou et al., 2024). The framework examined AI use across four forms of enactment: AI-assisted preparation, AI-supported pedagogical design, AI-supported classroom enactment, and learner-AI interaction. Rather than assigning participants only to a single highest level, the analysis examined patterns and depth of integration, classroom implementation, and barriers across the four levels.

Findings showed that GenAI was used predominantly as a teacher-facing design partner for lesson planning, material development, gamified activities, and assessment preparation. Many participants subsequently implemented these AI-supported designs in authentic classrooms, while direct learner-AI interaction occurred less frequently. Reflective evidence also identified barriers related to internet connectivity, device availability, classroom time, learner readiness, and the need to verify and adapt AI-generated outputs. These findings highlight three implications for PD4AI: efficiency through reduced preparation demands, quality through pedagogical adaptation and teacher judgement, and equity through attention to learners' access to technology and differing classroom conditions.

The study suggests that practice-oriented PD4AI can support the transfer of professional learning into classroom enactment while emphasizing the need to prepare pre-service teachers for pedagogically sound, equitable, and context-responsive AI integration.

PD4AI

From AI Literacy to Cognitive Ownership: A Modified ICAP Framework for Professional Development on AI-Integrated Teaching

Dr Fridolin Ting The Education University of Hong Kong, Hong Kong, China Presenter

Much professional development (PD) on generative AI in teaching stops at "AI literacy" — familiarising staff with tools and prompting — without giving them a way to judge whether a specific AI-integrated activity is actually helping students think, or quietly letting them outsource the thinking. This paper reports on the design and delivery of an academic staff PD workshop which addresses this gap directly. The ICAP framework (Chi & Wylie, 2014) assumes that behaviour signals cognition: if an activity is designed as Constructive and students produce a Constructive-looking output, Constructive thinking is assumed to have occurred. We argue, and demonstrated to participants, that generative AI breaks this assumption — a student can produce a novel AI-generated artefact while doing no cognitive work, or can appear to passively click through an interface while engaged in deep evaluation. To resolve this "behavioural-cognitive decoupling," the workshop introduced a second dimension alongside Designed Engagement Level (Passive, Active, Constructive, Interactive): a Cognitive Ownership Spectrum describing who actually owns the thinking when AI is present (Substituted, Directed, Tool, Evaluated, Collaborated). A combined matrix showing all twenty intersections lets staff predict whether the effective engagement of an activity matches, exceeds, or collapses below its designed level. After presenting the theory (drawing on Bonwell & Eison, 1991, and Freeman et al., 2014, on why active learning raises performance), the 50-minute session moved to discipline-specific, hands-on practice: nursing, business, and psychology faculty each generated an AI output (a care plan, a market analysis, case notes), critiqued it against professional criteria, then shared and refined it with peers in a shared collaborative AI room — directly experiencing the shift from low-ownership (Substituted/Directed) to high-ownership (Evaluated/Collaborated) use of the identical AI output. The session closed with a transferable "Three Questions, One Decision" audit protocol and a redesign playbook (require justification, insert a critique step, delay AI access, mandate visible refinement cycles) that staff can apply immediately to their own AI-integrated activities and assessments. We discuss early, pilot-stage classroom evidence that AI-assisted activities do not uniformly help — one activity showed decreased creativity outcomes, underscoring that PD must build workforce capacity to diagnose per-activity effectiveness rather than assume AI helps by default. We argue that AI-competency PD should center on such transferable, discipline-agnostic diagnostics rather than platform-specific training, offering institutions a portable model for building AI capacity responsibly across faculties.

PD4AI

Pre-service Teachers' Perspectives on Feedback from Chatbots in Higher Education

Dr Anika Saxena The Education University of Hong Kong, Hong Kong, China Presenter

Ms Yujie WEI The Education University of Hong Kong, Hong Kong, China

Feedback is one of the most powerful influences on learning, yet its impact can be positive or negative depending on its type and delivery (Hattie & Timperley, 2007). Since late 2022, chatbots such as ChatGPT have provided university students with immediate, on-demand feedback. This is particularly significant in teacher education, where pre-service teachers are both recipients and future providers of feedback. Early evidence suggests that chatbot feedback can be detailed, fluent, and coherent, with a focus on the task-completion process (Dai et al., 2023). Nonetheless, the feedback is useful only if the learner understands and reacts to it (Carless & Boud, 2018). Despite mixed views on AI feedback and its links to digital self-efficacy, little is known about how pre-service teachers perceive chatbot feedback on university assignments (Appleget, 2026; Heine & König, 2025).

This study combines two different theoretical perspectives. Firstly, Hattie and Timperley's (2007) theory of feedback differentiates feedback concerning task, process, self-regulation and self. This perspective is used to determine which types of chatbot feedback are appreciated by pre-service teachers. Secondly, the framework of feedback literacy developed by Carless and Boud (2018), which comprises appreciation of feedback, judgment, affect management, and action taking, is used to explore how participants interact with and respond to the chatbot's feedback.

A mixed-methods approach was chosen for data collection and analysis. The participants received chatbot feedback on drafts of university assignments, followed by completion of a survey assessing the perceived value of the feedback across four levels, components of feedback literacy, digital self-efficacy, and preferred sources of feedback (chatbot, human, or combined). In addition, the survey contained open-ended questions intended to elicit participants' experiences, perceptions, and reflections on the chatbot feedback. The quantitative data were analyzed using descriptive statistics, repeated-measures comparisons, and correlation analyses, while the qualitative data were analyzed using thematic analysis. Data analysis examined differences in the perceived value of chatbot feedback across the task, process, self-regulation, and self levels, its relationship with digital self-efficacy, and preferred feedback sources (chatbot, human, or combined). Qualitative themes contextualized the quantitative findings.

The findings indicate that the challenge for teacher education lies not in whether to permit chatbot feedback, but in how to cultivate pre-service teachers' feedback literacy so they can use it critically and subsequently model this practice for their own students. This study offers practical implications for assessment design, AI literacy training, and the preparation of future teachers.

PD4AI

Building the capability of an education workforce when the only constant is change

Prof Jason Lodge The University of Queensland, Australia **Presenter**

As far as the future development of AI and associated technologies goes, the only certainty at this point is ongoing uncertainty. Perhaps the most urgent current need in education systems globally is professional learning for teachers, and that need is felt most acutely in the systems with the least capacity to meet it. AI is also greatly exacerbating existing problems, such as the digital divide, workforce shortages, and teachers having little time or capacity to absorb professional development (Lodge, 2024).

Two responses dominate. The first is to train the workforce in the tools. Professional learning focused on skills such as prompt engineering is not a good use of time and resources; one does not need to be an expert in fuel injection systems to drive a motor vehicle safely and effectively. Generative AI is not a calculator, however, and the learner–AI relationship is not simple tool use (Lodge et al., 2023). The second imports the practice of innovators. In a highly resourced school, an approach to AI may rely on assistance that is not viable elsewhere. Think of the situation as being somewhat like giving educators a ladder with the first three rungs missing.

When a situation changes rapidly and substantially, there is a need to build a foundation on what is not changing: attention, memory and executive functioning are unlikely to look significantly different no matter how advanced these technologies become (Lodge & Harrison, 2019). The capabilities educators need are therefore general and adaptable, not the specifics of any particular tool, and evaluative judgement is chief among them (Bearman et al., 2024).

Capabilities of this kind are demonstrated, not transmitted. Initial teacher education programs have a responsibility not just to teach content but to model effective teaching approaches. The same should be true for AI, and across the workforce. Education, at its most powerful and effective, is relational in nature, and relationships and community remain the first pillar of digital pedagogy (Archambault et al., 2022). Generative AI means that technology can now be relational, which makes human demonstration of judgement more important, not less.

It is a cliché that pedagogy should come before technology. History has shown that this ideal is easier said than achieved. There is no formula or recipe, because such an approach is complex and will require ongoing dialogue between stakeholders. The adaptation to AI cannot be left to classroom teachers to sort out.

PD4AI

Towards more meaningful AI-integrated teaching and learning: Empirical Evidence on Student AI Profiles and Teacher Integration Gaps for Targeted Professional Development in Indonesia

Ms Angela Merici Center for Education and Policy Study, Indonesia Presenter

Dr Anindito Aditomo Center for Education and Policy Study, Indonesia Presenter

Mr Muhamad Nur Chozin State University of Yogyakarta, Indonesia

Ms Hanna Raisya Yayasan Universa Cita Indonesia, Indonesia

Mr Ivan Manalu Center for Education and Policy Study, Indonesia

As Generative Artificial Intelligence (GenAI) transforms the traditional teaching and learning relationship into a triadic interaction of teacher, AI, and student, effective teacher professional development (PD) grounded in empirical data is urgently needed. In Indonesia, systematic evidence regarding classroom AI prevalence and pedagogical practices remains scarce. This quantitative study addresses this gap by examining GenAI prevalence, quality of use, and potential dependency among secondary school teachers (n = 94) and students (n = 652) in Jakarta Province. Initial findings reveal near-universal adoption: over 90% of both teachers and students have used GenAI, with 90% of teachers and 74% of students utilizing it intensively (>3 days per week). Students were primarily engaged in augmentative learning activities, such as understanding subject matter (60%), completing assignments (55%), and information retrieval. Similarly, teachers relied on GenAI for information retrieval (>80%), understanding concept/topic and brainstorming, which counted for around 65% each. Constructing a typology of student AI agency and dependency reveals critical vulnerabilities. Almost 20% of students exhibited low self-regulated agency, coupled with high AI dependency, underlining the need for immediate scaffolding. An additional 21.2% demonstrated high agency alongside high dependency, indicating acute vulnerability to performance loss should AI access be restricted. While teachers demonstrated early awareness of AI risks and frequently engaged in normative discussions regarding ethics and regulations, a pronounced pedagogical implementation gap existed. Teachers hesitated to model practical AI workflows, such as live classroom usage, output critique, and iterative prompting, a deficit independently confirmed by student reports. Consequently, students received policy warnings without actionable workflow guidance. Although existing PD interventions yielded positive outcomes, showing teachers with higher PD exposure demonstrate significantly greater classroom AI integration and self-regulated agency with negligible rises in dependency risk, access remained shallow, brief, and inequitable. Private school educators face systematic exclusion compared to their public school peers, and existing training remains narrowly focused on technical utility. Taken together with how students perceive their AI-mediated learning process, a systemic, long-term PD that balances technical proficiency with pedagogical workflow modeling is essential to bridge the classroom guidance gap. This result might further contribute to shaping policy dialogue towards more meaningful and evidence-based teachers' PD. Declaration of AI use: AI is used in a limited capacity to improve grammar and language refinement, and for initial data cleaning. All technical processes were conceptualized and verified by human researchers. We maintain the process to be fully under human oversight.

PD4AI

Teachers as AI Frontliners for Nurturing Self-Learners

Ms Munia Islam Mozumder Presenter

Teachers are among the most essential stakeholders whose teaching activities have the potential to significantly alter the way teaching and learning are carried out . In Bangladesh, teachers rarely use digital tools for their daily classroom practices and take the support of digital knowledge banks for lesson plan preparation particularly in the public schools (Imon, 2024). Lack of infrastructural access to digital aids e.g. projectors, computers etc. combined with limited digital knowledge and skills among teachers constrains technology adoption (Khan et al., 2011) Against this backdrop, the National AI-adoption framework has not been developed and AI-empowered classrooms are yet to be seen in the public-school system.

With the support of Alumni Engagement Innovation Fund (AEIF) of State Department, "Future-Ready Education: Nurturing Self-Learners through AI" initiative marked a groundbreaking step showing how underserved public schools can create sustainable AI-empowered learning environment for students through a community-driven approach by equipping the front-line teachers with the proper knowledge, training, and ethical framework to integrate AI into classroom instruction.

This study used a mixed-methods approach to investigate the role of teachers and their training to create AI-empowered learners in the marginalised schools. The qualitative component explored the perspectives of educators, students, and parents who experienced the shifts and signaled the change, while the quantitative data identified the outcomes and effectiveness of AI adoption framework, impact of related teacher training and student outcomes.

The project was implemented through four key pillars: teacher training, peer learning and coaching, student empowerment, and community involvement. The early phases focused on classroom teaching techniques grounded in empathy, responsibility, and relevance, while later phases expanded the intervention to parents and community members to extend learning beyond school walls and into homes. More than 3,300 Grade 6–8 students across Dhaka and Chattogram were reached, alongside 5,000+ parents and 290+ government teachers, who embedded the learning in their classrooms. A comprehensive AI framework was developed with the support of an AI expert and 3 education specialists (Master Trainers) who cascaded the content to 30 teachers (Fellows of Teach For Bangladesh placed as full-time teachers) through Training-of-Trainers (ToT) sessions and reinforced the self-learning for the learners beyond school hours through 116 parent-teacher meetings.

The project demonstrated the significant potential of AI empowerment for teachers in Bangladesh. Integrating computer technologies into the teaching and learning transaction transforms the teacher's role of "knowledge dispenser" to "learning facilitator" and makes learning

PD4AI

When Performance Is No Longer Proof: Rethinking Teacher Professional Development in AI-Rich Education

Mr Jim Yongzhi Huang University of Toronto, Canada Presenter

Generative artificial intelligence is altering not only how teachers work but also what observable professional performance can demonstrate about teacher learning. Conventional approaches to teacher professional development often rely on visible outputs—lesson plans, instructional materials, written reflections, assessment designs, and other artifacts—as evidence that professional learning has occurred. In artificial intelligence-rich environments, however, increasingly sophisticated outputs can be produced with substantial machine assistance. The quality of an artifact therefore no longer provides sufficient evidence of the professional judgment through which it was produced.

This conceptual paper examines the resulting distinction between performance and professional formation. It argues that teacher professional development must increasingly attend to the reasoning that precedes and accompanies observable performance: how teachers frame problems, evaluate alternatives, interrogate artificial intelligence-generated suggestions, recognize contextual constraints, justify choices, and revise decisions. The paper develops a process-oriented account of professional learning in which artificial intelligence is treated neither simply as a productivity tool nor as a substitute for teacher expertise, but as an environment in which the relationship between output and underlying judgment has become less transparent.

The analysis has implications for the design and evaluation of teacher professional development. Rather than abandoning performance evidence, institutions need to situate artifacts within evidence of the decision processes that generated, selected, modified, or rejected them. In practice, a professional development task might ask teachers to redesign an existing assessment for an artificial intelligence-rich environment, compare alternative designs, identify what forms of student performance would constitute meaningful evidence of learning, and explain why particular artificial intelligence-generated suggestions were accepted, modified, or rejected. Evaluation would therefore consider not only the resulting assessment design but also the professional reasoning through which it was developed.

Such redesign, however, cannot be treated solely as an individual teacher responsibility. Teachers' capacity to reconsider learning and assessment depends on the professional autonomy available to them, their knowledge of assessment and artificial intelligence, the time and opportunities available for sustained professional learning, and the institutional policies and expectations within which they work. Teacher professional development must therefore address both educators' capacity to exercise professional judgment and the organizational conditions under which that judgment can meaningfully shape practice.

The paper concludes that the central challenge for teacher professional development in artificial intelligence-rich education is therefore not simply helping teachers use new technologies effectively but preserving the visibility and development of professional judgment when performance alone is no longer proof of learning.

PD4AI

Configuring Institutional Support and Collegial Learning for University Teachers' PD4AI

Dr Boxiang Lin Strategy and Planning Team, University of Nottingham Ningbo, China — Presenter

Prof Xiji Zhu Hitotsubashi University, Japan

Mr Xiaoyu Peng University of Nottingham, United Kingdom

Universities are increasingly investing in formal professional development and institutional policies to strengthen teachers' capabilities for using artificial intelligence in teaching. However, many initiatives remain exploratory and may not fully address situated pedagogical needs. In this context, informal collegial learning offers an important complement, enabling teachers to share practical experience and adapt AI knowledge to specific disciplinary and classroom settings. Although recent research has examined support for teachers' AI development, how formal institutional support and informal collegial interaction combine in professional development for AI (PD4AI) remains unclear (Baggia et al., 2026; Al-Ahmed et al., 2026).

This study examines how institutional support and collegial knowledge exchange jointly fosters university teachers' AI pedagogical competence. Using fuzzy-set qualitative comparative analysis (fsQCA), we analyzed survey and open-ended responses from 100 teachers. The four conditions were assessed using measures adapted from Ragu-Nathan et al. (2008) for AI literacy facilitation, technical support provision, and involvement facilitation, and from de Vries et al. (2006) for collegial knowledge collecting. The outcome was AI pedagogical competence self-efficacy, adapted from Chiu et al. (2025).

For high AI pedagogical competence self-efficacy, three sufficient configurations were identified: (1) combining high literacy facilitation, high technical support, and high involvement facilitation; (2) combining high literacy facilitation and high collegial knowledge collecting with low involvement facilitation; and (3) combining high involvement facilitation and high collegial knowledge collecting with low literacy facilitation and low technical support.

For low AI pedagogical competence self-efficacy, three sufficient configurations were identified: (1) combining low literacy facilitation and low involvement facilitation with high collegial knowledge collecting; (2) combining low literacy facilitation, low technical support, and low involvement facilitation; and (3) combining high literacy facilitation and high technical support with low involvement facilitation and low collegial knowledge collecting.

Open responses clarified these contrasts. Institutional provision offered knowledge, guidance, resources, and participation opportunities. Some teachers described formal training as too general or insufficiently aligned with disciplinary and classroom needs. Collegial learning addressed this limitation through subject specific examples, shared teaching practices, and practical problem solving. Its value was constrained when peers lacked relevant expertise or institutional support was weak.

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Configuring Institutional Support and Collegial Learning for University Teachers' PD4AI

Collegial learning therefore appears to complement institutional support rather than substitute for it. Theoretically, the findings indicate configurational and asymmetric relationships between institutional and collegial resources in PD4AI. Practically, universities should connect structured training and technical support with participation opportunities and sustained collegial learning that helps teachers adapt AI knowledge to teaching contexts.

PD4AI

From AI Competence to Professional Judgement: Rethinking PD4AI

Miss Hanwei Jin Hong Kong Metropolitan University, Hong Kong, China **Presenter**

Professional development for AI in education (PD4AI) is increasingly organised around competency frameworks that specify what the education workforce should know, value, and be able to do with AI. The UNESCO AI Competency Framework for Teachers (Miao & Cukurova, 2024) goes well beyond tool literacy, emphasising human-centred values, critical evaluation, teachers' capacity to determine how and when AI should be used, and human accountability in AI-mediated decisions. This paper takes these advances as its starting point rather than its target. It asks whether specifying such capacities as competencies is sufficient to explain how professional judgement is formed when the relevance of AI, the criteria of adequacy, and the scope of human responsibility are themselves at issue.

The distinction is not between frameworks that include judgement and those that do not. It is between competence as specified knowledge, skills, values, and capacities, and judgement as the situated process through which these resources are selected, ordered, and sometimes withheld in relation to educational purposes and responsibilities (Biesta, 2015). A framework can specify that teachers should determine when AI use is appropriate; such specification does not by itself explain how practitioners come to recognise what counts as appropriate here, how they respond when legitimate educational aims or responsibilities conflict, or when apparently useful assistance should be refused.

The paper develops three dimensions of this process. Invocation governance concerns whether an educational judgement should be opened to AI participation at all. Criterion articulation concerns how standards of adequacy are identified, made explicit, and retained as objects of professional justification rather than tacitly reshaped by AI-generated options. Answerability concerns the capacity to give reasons for a decision in which AI participated, including reasons for limiting, deferring, or refusing its contribution. For example, when deciding whether to act on an AI-generated marking or academic-integrity indicator, a teacher must determine whether that signal should enter the judgement, what evidential weight it should carry relative to student work and institutional policy, and how the eventual decision can be justified.

The challenge for PD4AI is therefore not simply to add competencies, but to design professional formation in which practitioners exercise judgement about when AI-related capacities should be used, limited, or withheld, especially when educational purposes come into tension. The paper closes by considering implications for PD design: shifting from AI-related capacity acquisition alone toward cultivating the judgement that governs its exercise.

AI4PD

Supporting Teachers' Interdisciplinary Professional Learning Through Multi-Agent AI: A Boundary-Crossing Case Study

Mr Kaiheng Li The Education University of Hong Kong, Hong Kong, China Presenter

Mr Xingyue Qiu Guangdong University of Education, China

AI is increasingly being used to support curriculum co-design, yet less is known about how AI-supported co-design can contribute to teachers' professional learning when they need to understand and connect knowledge across disciplinary boundaries. Interdisciplinary teaching requires teachers not only to acquire knowledge from other subjects, but also to interpret different disciplinary perspectives, identify connections across domains, and apply such knowledge to curriculum-aligned teaching.

Situated within the Artificial Intelligence for Professional Development (AI4PD) perspective, this study asks: **(1) How does multi-agent AI support teachers' acquisition and interdisciplinary understanding of cross-disciplinary knowledge? (2) How do teachers apply this knowledge in interdisciplinary lesson design? (3) How do teachers evaluate their experience with the multi-agent environment?** Drawing on Akkerman and Bakker's (2011) Boundary Crossing and Boundary Objects framework, four processes—identification, coordination, reflection, and transformation—guided the design of the AI support process, from identifying knowledge needs to connecting, reconsidering, and applying cross-disciplinary knowledge. The evaluation was also informed by Desimone's (2009) framework for studying professional development outcomes, focusing on changes in teachers' professional knowledge and instructional practice.

An exploratory case study involved six secondary-school Chinese language teachers, each independently completing a five-lesson interdisciplinary design task on Li Qingzhao integrating Chinese language, history, and geography. Each teacher interacted with specialised history, geography, and interdisciplinary instructional-design agents to obtain disciplinary knowledge, compare perspectives, explore connections, and refine a lesson plan, followed by an individual interview. Data included teacher–AI interaction records, lesson designs, interviews, and expert and AI evaluations. Interviews focused on changes in teachers' interdisciplinary knowledge and understanding, application in lesson design, and their experiences, evaluations, and suggestions regarding the AI environment.

The findings suggest that multi-agent AI supported teachers in acquiring unfamiliar disciplinary knowledge, developing interdisciplinary understanding, and connecting such knowledge to Chinese language curriculum goals. Teachers also applied these understandings when revising their lesson designs. However, professional learning did not arise from AI-generated information alone; teachers' questioning, comparison, judgement, and revision were central to turning information into understanding and practice. Teachers also identified strengths and areas for improvement in the multi-agent environment.

The study highlights how AI-supported curriculum co-design can function as work-embedded professional learning. It offers implications for schools seeking to design AI-supported professional development that strengthens teachers' interdisciplinary knowledge, understanding, and application while preserving professional judgement and agency.

AI4PD

Human–AI Advising for Equitable University Admissions: Design Implications for Counsellor and Mentor Professional Development

Miss Kamila Kargabaeva The Education University of Hong Kong, Hong Kong, China — Presenter

Miss Eman Qaiser Sheikh The Education University of Hong Kong, Hong Kong, China

Miss Tsz Ching Wong The Education University of Hong Kong, Hong Kong, China

University admissions advising is a neglected site of education-workforce practice. In Hong Kong, students pursuing overseas study depend on school counsellors, teachers and, for families who can pay, private agencies whose methods are opaque. Selective admission systems that appear individualised can still distribute advantage by class (Bourdieu & Passeron, 1990; Stevens, 2007). Counsellors, meanwhile, spend much of their time tracking deadlines, documents and school lists, crowding out the judgement-intensive guidance students need most.

This paper presents the design of Gnosis, an AI-supported advising platform for students aged 15–19, and analyses it as a case of human–AI collaboration in mentoring. It responds to Theme 2 (AI4PD), specifically how AI can scale quality, equitable professional support. A university matcher sorts options into reach, match, and safe groups. An Essay Coach uses Socratic questioning and never drafts text, so the student writes every word. A timeline manager contains a proactive intervention engine that flags imbalanced school lists, missed deadlines and stalled drafts, then routes the student to a vetted human mentor. Adaptive exam practice and a document vault complete the workflow.

We analyse this division of labour through Molenaar's (2022) detect–diagnose–act framework and six levels of automation. In Gnosis, AI detects and diagnoses, while humans act: mentors decide what to do with a flag, and students remain authors of their own narratives. This deliberately mid-range, hybrid configuration augments rather than replaces human advisers.

The design carries implications for professional development. Counsellors and mentors working with such systems need new capacities: interpreting AI flags critically, recognising bias in recommendations, deciding when to override a system, and protecting student authorship. These map onto the human-centred mindset, AI ethics, and AI pedagogy aspects of UNESCO's AI competency framework for teachers (Miao & Cukurova, 2024). We propose three principles for PD preparing the workforce for AI-mediated mentoring: (1) rehearsal with AI-generated flags on anonymised cases; (2) explicit routines for human override and escalation; and (3) bias-audit literacy, including who receives flags.

Gnosis suggests AI4PD can be embedded as on-the-job learning in which mentors develop expertise by working alongside AI. We also discuss risks that require governance: algorithmic bias, data privacy, over-reliance, and transparency in AI use. The session invites dialogue on how institutions can adopt such tools to extend equitable guidance to first-generation students without displacing human professionals.

The contribution is a transferable design case and an analytic lens for researchers and PD designers.

AI4PD

Teachers' Adaptation to AI-Driven Educational Transformation: How AI Perceptions and Change Fatigue Shape Teacher Workload Stress in East Asia

Dr Xiaojuan Hu Guangxi Normal University, China **Presenter**

The rapid integration of artificial intelligence (AI) into education represents a new phase of educational transformation, creating both opportunities and challenges for teachers' professional work. However, limited attention has been paid to how teachers psychologically adapt to AI-driven educational change and how such adaptation influences their work-related stress, particularly in East Asian education systems. Drawing on the Job Demands–Resources (JD-R) model and Technostress Theory, this study investigates how teachers' perceptions of AI-related opportunities and challenges influence workload stress, with change fatigue examined as an underlying psychological mechanism. Using data from 1,418 teachers in Shanghai (China), Japan, and South Korea from the OECD TALIS 2024 survey, this study employed partial least squares structural equation modeling (PLS-SEM) and fuzzy-set qualitative comparative analysis (fsQCA) to examine both linear relationships and configurational pathways. The findings show that perceived AI-related opportunities reduce teachers' change fatigue but do not directly decrease workload stress. In contrast, perceived AI-related challenges increase workload stress both directly and indirectly through change fatigue. Furthermore, fsQCA reveals multiple pathways leading to high workload stress, demonstrating that teacher stress emerges from the interaction of AI-related perceptions, psychological adaptation, and working conditions. This study extends research on teacher well-being and educational change by highlighting the complexity of teachers' adaptation to AI-driven transformation in East Asian contexts.

AI4PD

"Edubotics" and the shrinking human educators' workspace in education: Staying ahead of the curve

Dr Samson Mutsagondo Sorbonne University Abu Dhabi, United Arab Emirates **Presenter**

The use of robots as teachers or educators is gaining traction as artificial intelligence and robotic technology spread across all facets of human life. Leading the pack are countries such as South Korea, which introduced robot-learning initiatives around 2000; Japan, with robots such as Pepper and NAO; China, with robots such as Xiao An; India, with its IRIS teaching assistant robots; and South Africa, with its IRIS AI educational robot system. Educational robots, metaphorically referred to as "edubots" in this study, are now used in content delivery, pronunciation training, vocabulary drilling, remote teaching, anxiety reduction, among other tasks. This study also metaphorically coins the practice of using robots as teachers as "edubotics". Robot educators are used in almost all areas of education, thus creating direct competition with human educators within the educational workspace. Through the use and application of artificial intelligence technologies such as machine learning and natural language processing, "edubots" have an edge over their human counterparts as they offer more personalised adaptive learning, zero personal bias, infinite patience, perfect content mastery, reduced student anxiety, and data-driven progress tracking. While this study seeks to explore the usage of "edubots" and how they threaten to replace human educators, it also demonstrates that the degree of human educator displacement is not uniform across the spectrum. Displacement is minimal in primary education, moderate in secondary education and high in tertiary education. The study calls upon the educational field to prepare in advance by striking a balance between the use of technology and its socio-ethical implications. The study is not alarmist but a proactive call for the education fraternity to prepare and set out its priorities correctly. It proposes how human educators can remain relevant at the height of "edubotics" by collaborating, monitoring, evaluating and training "edubots". Collaboration with robots may be promoted through Human-in-the-Loop and Human-on-the-Loop, while guarding against the Human-out-of-the-Loop scenario. In Human-in-the-Loop, humans approve, reject, or modify robotic output before the system proceeds, while in Human-on-the-Loop, humans supervise the overall robotic process. In the undesirable scenario, that is, Human-out-of-the-Loop, robots make decisions on their own and act free of human interaction and intervention. The study proposes a framework for the ethical and social use of robots as educators. This interactive literature review study solicited data from books, book chapters, journal articles and conference proceedings published between 2022 and 2027. Data were analysed in accordance with the objectives of the study.

AI4PD

Beyond Learning About AI: Designing Bite-Sized, Practice-Based Professional Development for Building AI Competencies — Insights from the Development of AfterWork Bytes

Dr Tiffany Ip The Education University of Hong Kong, Hong Kong, China **Presenter**

Mr Morning Wu AfterWork Startup, Hong Kong, China

As generative AI tools continue to evolve rapidly, professional development in AI faces a practical challenge: how can learners keep developing relevant skills without relying only on one-off workshops or lengthy training programmes? Learning about AI tools is also not the same as being able to apply them confidently to real tasks. This presentation shares insights from the development of AfterWork Bytes, a digital learning platform designed to help non-technical working adults build practical AI competencies through short, self-directed learning and hands-on application. The platform is built around two main learning components: Tutorials and Quests. Tutorials provide bite-sized, practical guidance on using AI tools and approaches for different tasks, with content spanning different levels of difficulty. Learners can select topics according to their own needs and interests rather than follow a fixed learning sequence. Quests extend this learning by encouraging users to apply what they have learned to practical challenges and produce an actual output. Together, these components are intended to narrow the gap between knowing about an AI tool and being able to use it meaningfully in practice. Using AfterWork Bytes as a practice-based case, the presentation will discuss several considerations that emerged from designing professional learning for AI, including how to make learning manageable for busy professionals, how to accommodate different levels of AI experience, and how to encourage active experimentation rather than passive consumption of instructional content. Although the platform was developed for working adults across different professional contexts, the presentation will consider how the same design approach can inform continuous AI professional development for the education workforce. In particular, bite-sized learning combined with authentic application may offer educators a flexible way to develop AI competencies alongside their day-to-day professional responsibilities. The presentation will conclude with practical reflections on designing professional development that helps learners move from learning about AI to learning by using AI.

AI4PD

From Process to Product: A CAT-RAT Systematic Review of AI-Mediated EFL Reading for Professional Development

Dr Grace Zhang Presenter

Generative AI (GenAI) tools such as ChatGPT are rapidly reshaping reading education, yet the field lacks an integrated account of how AI-mediated reading unfolds from learning processes to learning products and from surface-level to deep-level engagement. This systematic review synthesizes empirical research on GenAI-mediated English as the foreign language (EFL) reading and examines its implications for professional development in AI-rich educational contexts. Guided by PRISMA 2020, we searched ERIC, Scopus, and Web of Science, identifying 5,314 records. After deduplication and two-stage screening, 66 studies met inclusion criteria. We developed an extended Technology Acceptance Model with Outcomes, TAM-O, coding framework, operationalized through our CAT-RAT framework comprising Categorization, Analysis, and Transformation for process and Representation, Assessment, and Testing for product, which integrates learners' perceptions on perceived usefulness and perceived ease of use, along with the process dimensions from surface to transitional to deep processing, and the product dimensions from surface to deep to affective outcomes Coding also captured study context, intervention type, process data availability, and effect direction. Preliminary synthesis indicates that GenAI can support both surface-level processing (e.g., vocabulary explanation, summarization) and deep-level processing (e.g., inferencing, critical evaluation, synthesis), but deep outcomes are highly conditional. They depend on instructional scaffolding, prompt quality, learner verification, metacognitive strategy use, and task design. The review also identifies a risk of cognitive offloading when AI use is unregulated. These findings reframe AI-mediated EFL reading from a question of tool adoption to a question of learning quality and professional capability. For professional development, the review suggests that educators need critical digital literacy, evaluation skills, and pedagogical strategies that scaffold learners from surface to deep processing. It also positions AI-mediated reading as a form of professional learning that develops academic literacy, metacognitive regulation, and autonomous AI use. The review contributes a process-to-product framework for designing professional development that treats AI as a complement for deep, transferable learning and a driver of professional learning rather than a substitute.

AI4PD

From Policy to Practice: Evaluating the Primary Learning Platform (PLP) for Teachers' Instructional Practices and Student Outcomes in Cambodia

Ms Navy Sin	General Secretariat, Ministry of Education, Youth and Sport, Cambodia	Presenter
Dr Sam Ath Chin	General Secretariat, Ministry of Education, Youth and Sport, Cambodia	Presenter
Mr Phyorith Tep	General Secretariat, Ministry of Education, Youth and Sport, Cambodia	Presenter

In January 2025, Cambodia's Ministry of Education, Youth and Sport launched the Primary Learning Platform (PLP) in approximately 1,500 primary schools through the World Bank-supported Basic Education Improvement Project, with nationwide scale-up planned. The PLP is intended to reduce school and teacher workloads, strengthen teaching and professional development, streamline administration, monitor student progress, and support struggling learners. However, empirical evidence regarding its implementation and educational effectiveness in Cambodia remains limited. This study examines (1) factors contributing to successful PLP implementation, (2) persistent implementation challenges, (3) areas for improvement, and (4) factors associated with student learning outcomes. An exploratory sequential mixed-methods design was employed, informed by the Technology Acceptance Model (TAM) and Technological Pedagogical Content Knowledge (TPACK) frameworks. The qualitative phase comprised focus-group discussions with high- and low-performing students, teachers, and parents, and interviews with school principals across five provinces representing urban and rural contexts (N = 170). We analyzed qualitative data thematically, and the findings informed the subsequent quantitative phase. The quantitative analysis used nationwide PLP server-log data from 332,139 students who recorded consistent examination activity across four months (April–August). Descriptive statistics, independent-samples t-tests, one-way ANOVA, and moderation analysis were conducted. Qualitative findings indicated broad stakeholder recognition of PLP's potential. Participants reported benefits including strengthened foundational literacy and numeracy, reduced administrative workload, enhanced teachers' digital competence, more efficient school management, reduced administrative costs, and improved parental monitoring of student progress. However, implementation challenges included inadequate infrastructure, particularly in remote provinces; server congestion in urban settings; system instability; and concerns regarding assessment validity during unsupervised home-based testing. Access barriers were particularly pronounced among lower-income and lower-performing students, raising concerns about widening educational inequities during large-scale implementation. Quantitative findings showed that platform engagement was positively associated with examination performance. Time spent on the platform and completion of learning activities and exercises were associated with higher scores, whereas more examination attempts were associated with lower scores, potentially reflecting greater retake needs among struggling students. Grade level demonstrated the largest association with achievement, while supplementary reading and mathematics packages were positively associated with scores. Equity-card status was consistently associated with lower achievement and significantly attenuated the positive association between engagement and performance. Sustainable and equitable scale-up of PLP will require continued investment in infrastructure and system reliability, offline functionality, teacher training, parental support, and assessment-integrity mechanisms, particularly for disadvantaged learners.

AI4PD

Pre-Service Teachers' Agency Development Through Generative AI Use for Learning and Teaching: A Systematic Review

Ms Jiaen Zhang The Education University of Hong Kong, Hong Kong, China — Presenter

Ms Ping Wu The Education University of Hong Kong, Hong Kong, China

Research on generative artificial intelligence (GenAI) in initial teacher education has centred on pre-service teachers' acceptance of these tools. Emerging work on teacher agency with GenAI (Krushinskaia et al., 2026; Lai et al., 2026; Zhai, 2024) remains fragmented, and whether GenAI supports higher forms of agency is still unclear. Drawing on Matusov et al.'s (2016) typology, which distinguishes instrumental, effortful, dynamically emergent, and authorial agency by who defines an activity's goals, this systematic review examined how agency is conceptualised and enacted in studies of pre-service teachers' GenAI use.

Following PRISMA 2020, Web of Science, Scopus, ERIC, and Education Source were searched for studies from November 2022 onwards. Of 665 records, 406 remained after de-duplication, and 131 empirical studies reporting observable pre-service teacher behaviours were included. Two reviewers independently screened all records and coded the included studies, which were analysed through thematic synthesis.

Most studies were qualitative or quasi-experimental and used GenAI, mainly ChatGPT, for lesson planning, reflection, academic writing, feedback, and simulated teaching rehearsal. Fewer than a quarter conceptualised agency explicitly, and most inferred it from self-regulation, autonomy, ownership, or critical evaluation. Instrumental agency appeared in single-turn prompting and verbatim reproduction of AI output. Effortful and dynamically emergent agency appeared in iterative prompting, verification, and revision or rejection of AI generated content, while goals stayed externally set or shifted only within the given task. Authorial agency, shown in sustained ownership of instructional decisions and principled curation of GenAI contributions, was comparatively rare. Pedagogically framed scaffolds, critical reflection, and collaborative design supported higher-order agency, whereas unscaffolded and highly prescriptive GenAI support were both associated with over-reliance.

Extending Matusov et al.'s typology to human-AI mediated learning, the review identifies ownership of pedagogical goals as what separates authorial agency from active but externally directed use. Revising AI output, often read as high agency (Krushinskaia et al., 2026), reached the authorial level only when it served pre-service teachers' own goals. The scarcity of authorial agency may partly reflect constructs that capture the management of AI output more than goal-setting. This pattern supports an ecological view of agency (Priestley et al., 2015) and locates the human-AI negotiation of control described by relational accounts (Lai et al., 2026) in the purpose of pedagogical work. Wise and responsible AI use, the aim of PD4AI, therefore depends less on access to GenAI than on tasks that leave pedagogical goals open for pre-service teachers to define and justify.

AI4PD

Pre-service Teachers' Perspectives on the Intelligent Classroom System in Teacher Education

Dr Priyadarshini Muthukrishnan	INTI International University, Malaysia	Presenter
Dr Longsheng Xiao	Hubei University of Education, China	
Ms Xiaolu Wang	Hubei University of Education, China	

The integration of artificial intelligence (AI) into teacher education is reshaping how pre-service teachers (PSTs) develop pedagogical knowledge, teaching competence, and reflective practice. Among emerging AI-enabled technologies, the Intelligent Classroom System (ICS) offers automated classroom observation and performance analytics that can provide immediate feedback during teaching practice. However, limited research has examined how PSTs perceive the educational value of ICS and how they negotiate automated feedback alongside human mentoring within authentic teacher education contexts. This study explores PSTs' perspectives on the use of ICS during micro-teaching and teaching practice at Hubei University of Education, Wuhan, China.

This research employed Q methodology to investigate the subjective viewpoints of PSTs regarding the use of ICS in teacher education. Participants sorted a set of carefully developed statements reflecting pedagogical, technological, ethical, and professional dimensions of ICS according to their level of agreement or disagreement. By combining qualitative interpretation with factor analysis, Q methodology identified clusters of shared perspectives, providing a nuanced understanding of how different groups of PSTs experience and interpret intelligent classroom technologies beyond conventional survey-based measures. The findings reveal multiple perspectives on the role of ICS in supporting teacher learning. Participants recognised the value of automated feedback in providing immediate, objective, and data-informed insights into instructional delivery, classroom interaction, engagement, and teaching performance. Many viewed ICS as a useful tool for promoting self-reflection and identifying areas for professional improvement. However, participants also emphasised that mentor and supervisor feedback remains indispensable because it provides contextual understanding, empathy, professional judgement, and personalised guidance that automated systems cannot replicate. The study highlights that PSTs perceive the greatest value when intelligent feedback complements rather than replaces human feedback within reflective teaching practice. The research also identifies significant ethical and practical concerns surrounding the implementation of ICS. Participants expressed varying levels of concern regarding data privacy, informed consent, surveillance, algorithmic transparency, ownership of teaching-performance data, potential bias in automated evaluation, and the psychological impact of continuous classroom monitoring. These concerns underscore the importance of designing AI-enabled teacher education systems that uphold trust, autonomy, fairness, dignity, and professional agency.This on-going study contributes to the growing literature on AI in teacher education by providing empirical evidence of PSTs' diverse perspectives on intelligent classroom technologies within a human-centred educational framework.

AI4PD

Preservice Teacher Professional Learning in AI-Supported Educational Game Co-Design: Translating Curriculum Content into Playable Mechanics

Miss Xin Dai Capital Normal University, China

Miss Ke Ying Zhang Beijing Normal University, Zhuhai Campus, China Presenter

Prof Xing Yue Qiu Guangdong University of Education, China

Educational game development requires translating curriculum content, learning processes, and assessment into playable mechanics. Content may remain background information, choices may lack meaningful consequences, and assessment may be disconnected from gameplay. These challenges require preservice teachers to coordinate curricular, narrative, and programming knowledge. Within AI4PD, this study examines how AI supports these teachers in addressing such challenges and what professional learning emerges through curriculum co-design.

This retrospective qualitative case study examines two preservice teachers with educational technology backgrounds co-designing Qintu, a junior secondary history web game. Guided by the Interconnected Model of Professional Growth (Clarke & Hollingsworth, 2002) and collaborative curriculum design research (Voogt et al., 2011), we analysed curriculum materials, retained prompts, scripts, supplementary participant accounts, teacher-educator discussions, game versions and change records, and playtest records compiled during research review to trace relationships among design requirements, curriculum translation, guidance, and professional change.

Guided by curriculum standards and textbooks, participants combined curricular constraints in prompts, AI-generated narratives and prototypes, and human comparison and revision. Curricular goals, character actions, and feedback rules showed initial alignment. Representative playtesting and code inspection confirmed some operational choice, feedback, and path-based assessment mechanisms, indicating partial integration of content, learning processes, and assessment. Professional learning was evident in three areas: requirements evolved from 'generate a game' into curricular, subject-specific, learner, and technical constraints; participants translated textbook questions, including why Qin collapsed rapidly, into player actions and feedback, checked historical accuracy, identified risks, and justified decisions about AI outputs; and teacher-educator discussions shifted attention from model capabilities and production speed to task appropriateness, curricular coherence, cognitive load, and the limits of the evidence.

The analysis indicates a cycle of generation, comparison, testing, and reflection. AI rapidly makes curricular ideas available for discussion as narratives, scripts, and prototypes, freeing teachers to focus on curricular judgement and instructional design rather than programming. Version comparison and playtesting make tacit decisions explicit and revisable, while process documentation enables targeted teacher-educator guidance. Future research could examine transferability across subjects and stages of teacher preparation, and investigate curriculum alignment, assessment validity, and sustained professional learning through classroom use. Incomplete interaction and reflection records limit reconstruction of revision rationales and their relationship to learning. These findings describe professional learning processes without inferring gains in teacher competence or student learning attributable to AI.

AI4PD

Beyond the Classroom Door: Evaluating an AI-Scaffolded Staffroom Simulator for Pre-Service Teacher Decision-Making

Mr Sing Tsun Derek Wong School of Education and Languages, Hong Kong Metropolitan University, Hong Kong, China **Presenter**

Initial teacher education (ITE) places substantial focus on preparing student teachers for the classroom, with micro-teaching and teaching practicums centralised on planning lessons, subject content delivery and classroom management. However, there is a relative lack of rehearsal for the institutional and administrative triage that defines a teacher's actual workday. Novice teachers rarely burn out from lesson delivery alone; they struggle to navigate the unwritten, micro-political realities of schools, managing deadlines, pastoral friction and department politics with no prior practice.

Grounded in Grossman et al.'s (2009) Approximations of Practice and Ericsson's (1993) Deliberate Practice frameworks, this paper presents the rationale and design of A Teacher's Day Simulator. This simulator is a lightweight, browser-based tool built with the assistance of generative artificial intelligence. Rather than lecturing trainees on school bureaucracy, the platform inverts standard administrative orientations by immersing users into a simulated workday shift where competing priorities collide. Trainees face immediate, zero-sum choices including enforcing strict uniform rules at the morning gate versus easing bottlenecking queues to the public pavement, maintaining school-based English-medium instruction mandates versus falling behind the syllabus, resolving errors in mark entry platforms, managing sudden duties, and handling defensive parents.

The system operationalizes deliberate practice by tracking cumulative trade-offs across three persistent metrics: Institutional Compliance, Student Trust, and Burnout Rate. Trainees cannot undo decisions, and unaddressed tasks simply accumulate as mandatory overtime "task debt" by the end of the shift. Dynamic staffroom interruptions like urgent work messages and invitations into private staff groups force participants to weigh official protocol against peer solidarity. Upon completing the "day", trainees receive an automated debriefing ledger that maps their trade-offs to an operational archetype (e.g. The Balanced Strategist, The Rigid Bureaucrat), and prompts structured reflection on their coping habits.

To examine pedagogical viability, this paper reports on exploratory implementation data from an ongoing pilot with pre-service undergraduate teachers (Year 3, n ≈ 25-30) prior to their field practicum. We evaluate trainee decision pathways across the simulator's three metrics, examine the distribution of resulting teacher archetypes, and analyze qualitative post-simulation debriefs regarding candidates' perceived vulnerability during micro-political triage. The presentation discusses how AI-scaffolded approximations of practice can move beyond purely instructional simulations to cultivate institutional resilience in early-career educators.

AI4PD

AI Enabled Coaching App for foundational literacy at scale

Mr Sourav Banerjee Room to Read, India & United States Presenter

Ms Kerri Thomsen Room to Read, India & United States Presenter

Teachers' lack of training on early grade reading pedagogy is a key reason for children's poor foundational literacy outcomes. Evidence points to instructional coaching as one of the most effective forms of professional development available to teachers. Unlike a workshop, coaching is situated in the teacher's own classroom, responsive to what happens in a lesson, and sustained over time. Yet quality coaching is the most difficult element of teacher support at scale. Coaches travel considerable distances, observation visits are often not rigorous, and costs per coaching visit are high and unsustainable. Systems are large, coaching workforces are stretched, and the gap between the support a teacher needs and the touchpoints she receives can be persistent. Given this challenge of coaching at scale, Room to Read explored the use of Artificial Intelligence (AI) to design a mobile coaching application for coaches and teachers. The app is based on two core principles of Room to Read's coaching approach, viz, 1) support teachers with data-driven and actionable observation and feedback and 2) drive teachers' uptake and continuous improvement through relational mentorship. The application comprises two interfaces. The teacher interface enables a teacher to upload a video of a lesson or respond to a brief set of reflection questions and then engage in a structured discussion about adjustments to teaching practice. The coach interface supports instructional coaches by analysing completed classroom observation forms and generating structured recommendations for discussion with the teacher. Users can also access a chatbot for additional questions, review previous sessions, and access training resources. Both interfaces were built for educators working with modest devices and intermittent connectivity. In addition, an Administrator Portal acts as the central management hub to configure and oversee the apps. The application employs a multi-tenant technical architecture, allowing adaption to different countries in different languages. The App therefore helps coaches to improve their coaching skills by providing feedback that they can use for their interaction with teachers, including prompts for an effective coaching session. For the teachers, the app provides feedback and suggest areas for improvement even when the coach is not available. The paper draws on pilot implementation data and evaluation findings to share learnings on the development, usability, and acceptance of the application. These learnings hold immense possibility of using AI to address one of the most difficult challenges to scale foundational literacy initiatives across large systems – of ensuring continuous teacher support.

AI4PD

When AI Supports or Substitutes Teachers' Thinking: A Structural Equation Model of AI Evaluation Capability, AI-Based Cognitive Offloading, Professional Agency, and Teacher Professional Learning

Dr Chunipha Poedloknimit Western University, Thailand Presenter

Asst. Prof. Dr Chonnapha Punnanan Western University, Thailand

The growing use of artificial intelligence (AI) in education is changing how teachers prepare materials, design activities, provide feedback, and assess student work. However, AI use does not necessarily enhance professional learning. Its value may depend on teachers' AI evaluation capability, defined as the ability to assess the accuracy, reliability, and appropriateness of AI-generated outputs, and the level of thinking delegated to AI. This study examined the relationships among AI evaluation capability, lower- and higher-order AI-based cognitive offloading, professional agency, and teacher professional learning.

Participants were 400 English language teachers from medium- and large-sized schools in Bangkok, Thailand, selected through stratified random sampling. Participants had experience using AI for teaching or professional tasks. English teachers were selected because their work combines routine tasks supported by AI with higher-order tasks requiring judgment and professional decision-making. The questionnaire showed high reliability (Cronbach's α = .925). Harman's single-factor test showed that the first factor explained 26.188% of the variance, suggesting no serious common method bias.

Data were analyzed using structural equation modeling with 5,000 bootstrap samples.

The model showed a good fit with the data (χ^2 = 3.133, p = .372, RMSEA = .011, CFI = 1.000, TLI = .999, SRMR = .017). AI evaluation capability was positively associated with lower-order AI-based cognitive offloading (β = .378, p < .001) but negatively associated with higher-order offloading (β = −.269, p < .001), suggesting that teachers who evaluate AI effectively delegate routine tasks while retaining complex thinking. Lower-order offloading was positively associated with professional agency (β = .175, p = .001), whereas higher-order offloading was negatively associated with it (β = −.144, p = .002). Thus, delegating routine tasks may support professional decision-making, while delegating complex thinking may reduce teachers' active professional role. AI evaluation capability was also positively associated with professional agency (β = .309, p < .001), which was positively associated with teacher professional learning (β = .395, p < .001). Significant serial indirect effects occurred through lower-order (B = .022, 95% CI [.009, .039]) and higher-order offloading (B = .013, 95% CI [.005, .026]).

The findings show that AI's professional value depends not only on its use but also on the level of thinking teachers delegate to it. Teacher development should strengthen AI evaluation capability, encourage strategic offloading of routine tasks, and preserve higher-order thinking and professional judgment.

AI4PD

When Scaling Widens the Gap: An Agent-Based Simulation of Equitable AI Professional Development Allocation for Indonesian Teachers

Mr Haemiwan Fathony UCI Foundation, Indonesia Presenter

Indonesia has committed to training at least one million teachers in artificial intelligence competencies since June 2025. Yet the country's frontier, outermost, and disadvantaged (3T) regions face persistent connectivity and infrastructure constraints, and published surveys show Indonesian teachers' AI-specific knowledge remains low (AI-Technological Knowledge: M = 2.58; AI-Ethical Knowledge: M = 2.65 on a five-point scale), significantly below their traditional pedagogical and content knowledge. Whether AI-driven professional development (PD) recommender systems, when optimized for efficiency, systematically widen or narrow the urban–rural competency gap remains under-examined, particularly in Global South contexts.

This study addresses that gap using agent-based modeling. We construct a computational model of 1,000 synthetic teacher agents stratified by location (urban vs. 3T), baseline AI-TPACK competency, digital literacy, connectivity, learning rate, and self-efficacy. Agents interact through a mediated recommender that allocates a fixed weekly pool of course slots, creating zero-sum competition; completion probability and learning rate depend on connectivity, literacy, and efficacy. All parameters are grounded in published Indonesian teacher surveys (N = 468; N = 460; N = 296). Four allocation policies are compared over 100 weekly steps across 50 replications each: greedy optimization (highest-competency first), equity-constrained allocation (minimum growth floor for the bottom quartile), 3T-priority weighting (rural teachers by location), and random assignment (control).

The results overturn the intuitive expectation. Greedy optimization widened the urban–rural gap by 57.1%. The competency-based fairness constraint — the obvious fix — produced nearly identical outcomes, widening the gap by approximately the same amount. It failed because it targets the bottom quartile by competency, and urban teachers in that quartile still learn 5.3 times faster than rural peers. Only 3T-priority weighting, which targets teachers by location, narrowed the gap, reducing it by nearly half. And even then the gap did not close: an infrastructure-driven learning-rate differential cannot be overcome by any allocation rule. Counterintuitively, random assignment produced the widest gap of all, demonstrating that equal access under unequal learning rates amplifies rather than reduces inequality.

The design lesson is direct: fairness constraints must be defined on the dimension we care about. This study contributes to PD4AI by modeling equitable teacher AI competency development under real infrastructure constraints, and to AI4PD by deriving fairness-aware design principles for PD recommender systems. The architecture is transferable to other Global South contexts with center–periphery disparities.

AI4PD

Personalising Professional Learning with Artificial Intelligence: A Framework for Self-Directed and Colleague-Mediated Growth in the Education Workforce

Prof Wei Li Wuhan Institute of Technology, China Presenter

Conventional teacher professional development (PD) remains largely standardized, episodic, and disconnected from individual classroom practice, leaving large segments of the education workforce under-served. The arrival of generative AI and adaptive analytics makes personalized, continuous, and evidence-informed professional learning feasible at scale. This conceptual paper asks: How can the education workforce use AI to personalize their own professional learning or that of their colleagues? Grounded in self-determination theory, communities of practice, and the TPACK framework, and constructed through a scoping review of 2021–2026 international and Chinese scholarship—including UNESCO's AI Competency Framework for Teachers (2024), the AI4T Erasmus+ project, Learning Forward's 2025 poll, and Chinese pilots such as the "Gaolaoshi" AI mentor and AI-enabled lesson-observation labs—we propose the AI4PD Personalization Framework (P6-AI4PD). The framework comprises a six-phase cycle (Profile, Pinpoint, Personalize, Practice, Peer, Prove), three personalization axes (career stage, role, competency dimension), and two delivery modes (self-PD for one's own learning and colleague-PD for a peer's learning), bounded by four guardrails (human agency, trust and psychological safety, data ethics, equity). Because the framework is, at this stage, conceptual, the paper further proposes a design-based research (DBR) validation study—with explicit research questions, a stratified randomized design, and measures aligned to the framework's evaluation indicators—to test its effectiveness, mechanisms, and equity effects. The contribution is a proposed, human-centred answer to the AI4PD question that translates global competency anchors into practice and clarifies how the same AI capacity serves both self and colleagues.

AI4PD

Negotiating Cultural Meaning through Generative AI: Human–AI Co-Creation and Teacher Scaffolding in Visualising Dong Grand Song

Ms Luyu Tian Guizhou University, China Presenter

Dr Ning Luo The Education University of Hong Kong, Hong Kong, China

As generative artificial intelligence (GenAI) becomes increasingly integrated into arts education, questions arise about how oral and auditory cultural traditions can be transformed into visual forms through GenAI while preserving learners' cultural agency. Using Song of the Cicada, a Dong Grand Song, as the creative material, this study explores how Dong university students negotiate cultural meaning and agency in GenAI-assisted visual creation, and how teacher scaffolding can support this cross-modal meaning-making process. Drawing on multimodality and multimodal social semiotics, the study understands visual creation as a process through which cultural meaning is transformed and reconstructed across auditory, linguistic, and visual modes.

This ongoing exploratory case study involves seven Dong university students majoring in music. Participants have completed a background questionnaire and a pre-AI visual ideation task. Preliminary responses indicate variations in Dong-language competence and familiarity with Dong culture, while all participants identified at least one challenge in translating auditory experiences into visual forms. Notably, some students with relatively rich cultural and musical experience also expressed that they had ideas but found them difficult to visualise. In the next stage, students will engage in GenAI-assisted visual creation, with teacher scaffolding introduced where needed to help them articulate their own cultural understanding through visual language without replacing their cultural judgement. Creative processes, AI-generated iterations and revisions, and semi-structured interviews will be analysed to examine how students evaluate, select, and modify AI-generated representations.

The study examines the teacher's potential role as a cross-modal pedagogical mediator between cultural meaning, visual expression, and GenAI. It seeks to inform culturally responsive GenAI-supported arts education and the development of educators' professional capacities within the contexts of AI4PD and PD4AI.

AI4PD

Professional Learning Through Human-AI Collaboration: A Roles-and-Interaction-Modes Architecture for Personalizing and Scaling PD

Dr Angela Elkordy National College of Education, National Louis University, Chicago & Online, United States

Presenter

AI is increasingly used to deliver professional development through adaptive feedback, AI-mediated mentoring, and curriculum co-design. Whether AI-delivered PD builds educators' professional capacity or quietly replaces it, however, depends not on the tool but on how educator and AI collaborate. This paper proposes that the unit of design for AI4PD is the collaboration itself: the specific role the AI plays and the design choices that shape the mode of interaction. Get the collaboration right and AI-supported professional learning personalizes and scales. Get it wrong and it produces fluent output while eroding the judgment PD exists to build. Drawing on the author's forthcoming textbook on human-AI cognition, the presentation introduces a collaboration architecture with two layers. The first is a repertoire of AI roles: more than forty functions the AI can play in an educator's professional thinking, from generator and analyzer to devil's advocate and thinking partner, each pairing what the AI does with what must remain the educator's judgment. The second is a set of interaction modes running from replacement, where the AI does the thinking, through scaffolding and enhancement to transformation, where partnership enables thinking neither party could do alone. Together, they give AI-supported PD a shared, tool-agnostic vocabulary, grounded in Salomon, Perkins, and Globerson's (1991) distinction between the effects of a tool and the effects gained through partnership with it. As an AI4PD design layer, the architecture does three things. It personalises: development sequences through the roles and modes a practitioner's growth needs, not a uniform content feed. It scales: because the vocabulary is tool-agnostic, it transfers across diverse systems without expiring with each model release, making skilled collaboration reproducible where mentoring is scarce. Importantly, it protects equity; undifferentiated AI use reduces critical engagement (Fan et al., 2025; Gerlich, 2025), making collaboration design an equity issue for any system scaling PD across unequally resourced contexts. AskMi, the author's coaching-model AI system for research mentoring and professional learning in higher education for doctoral students and faculty, encodes and enacts a productive partnership with AI in practice. The tool demonstrates the externalization of pedagogy and integration of design principles to shape learners' experiences. while building researchers' independent knowledge, skills, and judgment. The paper offers the architecture as scaffolding for designing AI-mediated mentoring, adaptive feedback, and curriculum co-design that strengthen rather than substitute for professional judgment, connecting to emerging competency frameworks (Long & Magerko, 2020; UNESCO, 2024).

AI4PD

From AI Use to Human–AI Partnership: Design Insights for Self-Regulated Professional Learning from Online Higher Education

Ms Ami Hibatul Jameel Universitas Terbuka, Indonesia Presenter

The increasing use of generative artificial intelligence (GenAI) provides new opportunities to support learning. However, the availability of AI does not necessarily mean that learners use it in ways that support meaningful learning. Recent studies suggest that the contribution of AI may depend on how learners use the technology and regulate their interaction with it (Guan et al., 2025; Molenaar, 2022). AI can be used simply to obtain information or answers, but it can also support learners in planning, understanding learning materials, checking understanding, and reflecting on their learning process. This study examines patterns of human–AI collaboration in an instructor-paced online learning environment and discusses their possible implications for AI-supported self-regulated professional learning.

The study was conducted in three asynchronous online tutorial classes at an open and distance university in Indonesia. The analysis used 301 AI learning-log entries submitted by 105 students during Sessions 2–7, together with baseline self-regulated learning (SRL) data from 96 students. Baseline SRL was relatively high in planning (M = 4.16), monitoring (M = 4.14), and reflection (M = 4.14). AI was used in 240 of 301 learning-log entries (79.7%). The most common purposes were understanding learning materials (84.6%) and generating ideas (74.2%), followed by planning (41.3%), checking answers (26.3%), and supporting assignments or discussions (17.1%).

The findings also indicate that most students did not directly accept AI-generated responses. Among the AI-use entries, 121 reported understanding and adapting the AI output, while 104 used it as a reference. Only two entries reported using the output directly without modification. Verification of AI-generated information was reported in 85.4% of the entries.

These findings suggest that the role of AI in supporting learning may depend on how learners remain involved in using and evaluating its output. AI-supported professional learning should therefore encourage purposeful use, verification, and reflection, while maintaining human agency (Miao & Cukurova, 2024). Although the study involved university students rather than practising education professionals, the findings provide initial insights that may inform the design of AI-supported professional learning in which AI supports, rather than replaces, the learner's role in regulating learning. In conclusion, meaningful human–AI collaboration requires AI to support learners in regulating their learning rather than replacing their thinking and decision-making processes.

AI4PD

Practising Leadership with Generative AI: Role-Play, Guided Reflection, and Personalised Feedback

Ms Karina Yuen	AI Centre for Educational Technologies, National University of Singapore, Singapore	Presenter
Ms Shamantha Shiya Yan	Growthbeans, Singapore	
Ms Shane Shiyan Yan	Growthbeans, Singapore	
Prof Ben Leong	AI Centre for Educational Technologies, National University of Singapore, Singapore	

Teachers and school leaders often develop skill in difficult conversations through experience, yet structured rehearsal can be limited by time and logistical constraints. Generative AI can extend these opportunities through on-demand conversational practice and personalised feedback (Daryanto et al., 2025; Shaikh et al., 2024). Practice alone, however, does not necessarily create space for learners to examine the reasoning behind their responses. Guided reflection can make this thinking explicit and prompt consideration of alternatives (Fleck & Fitzpatrick, 2010). We present a leadership development approach combining AI-supported role-play, guided reflection, and personalised feedback.

We designed four workplace role-plays for an undergraduate leadership course at the National University of Singapore using ScholAIstic, a platform for generative AI-supported learning activities. Learners practise coaching a manager who struggles to delegate, managing conflict with an employee, responding to criticism from a supervisor, and leading a team review, with the latter two added this semester. Across scenarios, AI characters respond differently to learners' approaches while learners decide what to say and how to proceed.
In two of the role-plays, we incorporated an "Inner Voice" persona to create structured opportunities for reflection around practice. The Inner Voice uses first-person questions to model reflective self-talk and prompt learners to articulate their reasoning and consider alternative approaches. Its placement differs across the two activities: midway through the coaching conversation, where learners can reconsider their approach before continuing, and before the conflict management conversation, where learners plan how they intend to respond. Both role-plays also conclude with reflection on the interaction and what learners might carry forward to future conversations.

After each role-play, learners receive a personalised, AI-generated feedback report based on course-aligned criteria and evidence from their own transcript. In one role-play, learners make a second attempt at the same conversation, then receive comparative feedback highlighting changes in their approach and areas for further development.

The coaching and conflict management role-plays were piloted with 71 participants. In the survey, 95.8% agreed that the reflection prompts helped focus their thinking. Transcript coding showed that participants often carried questions or strategies formulated during reflection into their subsequent responses. More than 90% of

AI4PD

Practising Leadership with Generative AI: Role-Play, Guided Reflection, and Personalised Feedback

respondents intended to apply feedback suggestions in future interactions.

Our approach illustrates how generative AI can integrate conversational practice, guided reflection, and personalised feedback within the same learning experience. It could be adapted beyond leadership education to support professional development for teachers and school leaders facing complex interpersonal situations.

AI4PD

Toward Valid Assessment of Teacher AI Competency: A Measurement Agenda for Professional Development

Mr Haoyu Li The Education University of Hong Kong, Hong Kong, China **Presenter**

Although the application of artificial intelligence (AI) in teacher professional development (PD) is accelerating at present, there is still a lack of a complete and unified method to determine whether such development truly enhances teachers' competencies. The existing large amount of research evidence mainly relies on self-reported perceived confidence rather than demonstrated competence, and the used measurement tools vary greatly, with inconsistent verification levels, and mostly focuses on general AI rather than generative AI (Zainal et al., 2026). Meanwhile, the "AI competency framework for teachers" proposed by UNESCO and other related articles still remain at the conceptual level, only providing standards but not establishing corresponding quantitative indicators to measure whether teachers meet the corresponding requirements (Shi, 2025; UNESCO, 2024). This paper believes that the key to promoting AI to promote teacher professional development lies in formulating a coherent measurement procedure.

In terms of methods, this study combines the description of teacher AI measurement tools and validated measurement tools to conduct multi-level comparisons of AI literacy and competency differences, thereby identifying different assessment methods (Zainal et al., 2026; Zhou et al., 2025). From an empirical perspective, this paper uses validated self-report tools, including the Teachers' Generative AI Competencies (T-GAIC) instrument and the publicly available 12-item Artificial Intelligence Literacy Scale (AILS), to determine whether the results are consistent with the performance designed in this study and have differences (Shi, 2025; Wang et al., 2023; Zainal et al., 2026).

In terms of analysis, the mediating model of this study will focus on AI-focused professional development as the independent variable. Self-reported AI-integrated teaching practice as the dependent variable, with AI literacy as the mediating variable, and the school level, subject differences, resource and institutional support as moderating variables. Using confirmatory factor analysis with five factors to summarize and analyze the results, and conducting invariance tests for measurement invariance to test the mediating path using bootstrapping.
Contributions: This paper has two main contributions. Firstly, it makes an operational and adaptive adjustment to the established and verified framework (T-GAIC framework; Shi, 2025), enabling the assessment of teachers' AI competencies from five dimensions. Secondly, this framework is used in a verifiable professional development mediating model, providing a basis for reasonable assessment.

AI4PD

AI-Augmented Professional Learning and Human-Capital Development in Resource-Constrained Economies of the Global South: Implications for Workforce Productivity and Inclusive Growth

Mr Mohammad Shahriar Azad Bhuiyan UniCap Securities Limited, Bangladesh **Presenter**

Access to structured professional development is uneven across educational systems, particularly where institutional resources and specialist expertise are constrained. At the same time, generative artificial intelligence (AI) is creating new possibilities for professionals to pursue personalised, self-directed learning beyond conventional professional development (PD) structures. This conceptual paper addresses the AI4PD theme by asking: How can AI-supported self-directed learning inform more inclusive and scalable professional learning for the education workforce in resource-constrained contexts?

Using a reflexive case-study approach, the paper examines a documented trajectory of self-directed professional learning by a knowledge professional in Bangladesh, including responsible-AI training, participation in AI-focused professional communities, engagement with international AI-and-development activities, and AI-supported research, writing, and reflective learning. The case is treated analytically rather than autobiographically, using documented learning episodes to identify mechanisms that may be transferable to other professional contexts. Building on this analysis, the paper develops a preliminary Self-Directed AI-Augmented Professional Learning (SD-AAPL) framework comprising three interacting mechanisms: personalised cognitive scaffolding, through which AI supports explanation, exploration and learning-resource curation; AI-supported knowledge production and reflection, through which generative tools assist drafting, questioning and self-assessment while human judgement remains responsible for validation; and networked professional learning, through which digital platforms and professional communities expand access to peers, expertise and learning opportunities beyond the immediate institution.

The framework also identifies contextual conditions that moderate these mechanisms, including affordability, connectivity, language, digital literacy, access to credible learning resources, and institutional recognition of informally acquired competencies. The paper argues that AI4PD should complement rather than replace institutional PD. Individually driven AI-enabled learning is most likely to contribute to equitable professional development when institutions provide appropriate recognition, ethical guidance, human mentorship, and affordable access to AI-enabled learning resources.

The framework generates three propositions for future empirical testing: AI-enabled self-directed learning may be particularly valuable where access to formal PD is constrained; the benefits of AI-supported learning depend on continued human validation and professional judgement; and institutional and contextual conditions moderate the equity and effectiveness of AI-enabled professional learning. By connecting self-directed learning with contemporary AI competency frameworks and the realities of resource-constrained professional environments, the paper offers a preliminary framework for investigating whether mechanisms observed in non-education professional learning can be adapted for teachers, teacher educators, school leaders, policymakers, and other education professionals in the Global South.

AI4PD

AI for Professional Development: How Data Helped Me See Every Student

Miss Anran Qiu The Education University of Hong Kong, Hong Kong, China Presenter

As a novice homeroom teacher of a Grade 7 class, I was buried in administrative tasks—recording behaviour, tallying scores, mediating conflicts—while no time was left for the core work of teaching: observing students, sensing the right moment, and having real conversations. The human mind cannot track dozens of students at once; noticing is inherently selective, and novice teachers tend to interpret classroom events through evaluative impressions rather than evidence (van Es & Sherin, 2002). My attention gravitated to the best and the worst; quiet, average students and those who seemed "fine" stayed outside my view, and my judgments rested on impressions that were often wrong.

This reflective case study responds to the AI4PD question: how AI can support a teacher's own professional development. To make student states visible, I built a data system with a class-management app. Students recorded their daily behaviour, learning progress, and good deeds themselves. My role was to train them, monitor fairness, and handle exceptions—I managed how students managed, not the data. The AI generated rankings, flagged unusual changes, and visualised trends, freeing me from bookkeeping to observe, judge, and talk with students.

Two cases illustrate this. A student I assumed was fine showed a steady decline in conduct scores. Because the data were systematic, I did not dismiss them but asked whether something was wrong. She told me she had quarrelled with a friend and felt lonely—a conversation my impressions alone would never have started. Another student was hardworking, helpful, good at mediating between classmates, but his academic progress was slow. Under a simple ranking, I could never justify rewarding him. The AI tracked improvement and stability alongside total scores, and his excellence became visible to everyone; by Grade 8, he had entered the top 150 of his grade. AI did not make my decisions; it made them possible. It freed my attention for a fairer evaluation system and for students I would otherwise have missed, and it embodied a value choice: effort, character, and consistency matter as much as grades. For PD, this suggests AI can serve as embedded, personalised professional learning for novice teachers—if PD builds the judgment to interpret data and act on it. What AI achieves depends on what the educator chooses to value—a dimension missing from AIEd research, where a systematic review found strikingly little involvement of educators or pedagogical theory (Zawacki-Richter et al., 2019).

AI4PD

Use of Emerging Technologies in Early Literacy Practice: Multi-Stakeholder Perspectives from Australia and the Chinese Mainland

Ms Ya Zhang The Education University of Hong Kong, Hong Kong, China

Dr Annie Yixun Li The Education University of Hong Kong, Hong Kong, China Presenter

Dr Hay Mar Myat Kyaw The Education University of Hong Kong, Hong Kong, China

Background
Emerging technologies are increasingly used in early childhood education and show potential to support children's literacy learning. However, their potential does not necessarily reflect their use in everyday early literacy practice. For young children, technology experiences are often shaped by adults who select, introduce, and support their use. Across home and kindergarten settings, parents, teachers, and directors play different but complementary roles in shaping these experiences. Understanding their perspectives can provide a fuller picture of how emerging technologies are integrated into early literacy practice and the support needed for effective use.

Purpose
This study examined how parents, teachers, and directors in Australia and the Chinese mainland use and experience emerging technologies in early literacy practice. Four research questions were addressed: (1) How are emerging technologies used in early literacy practice? (2) How do stakeholders perceive their effects on children's literacy and learning? (3) What are stakeholders' levels of acceptance and confidence in using emerging technologies? (4) What challenges and support needs do stakeholders report?

Method
A cross-sectional survey included 703 participants from Australia (n = 566) and the Chinese mainland (n = 137), comprising 284 parents, 265 teachers, and 154 directors. Participants completed role-specific questionnaires, with comparable items used where appropriate. Descriptive and inferential analyses examined patterns and differences across locations and stakeholder roles.

Results
Technology use patterns varied by location and role. Australian parents reported greater use of augmented reality and computer-assisted instruction, while Chinese mainland teachers reported greater use of artificial intelligence. Australian teachers more often reported self-directed learning and organizational support as sources of learning. For perceived effects, participants in the Chinese mainland, particularly teachers, reported more positive effects on children's literacy, motivation, and collaborative learning. For acceptance and confidence, differences were clearest in confidence, with Chinese mainland teachers reporting greater confidence in selecting and integrating appropriate technologies. For challenges and support needs, parents

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Use of Emerging Technologies in Early Literacy Practice: Multi-Stakeholder Perspectives from Australia and the Chinese Mainland

commonly emphasised resources and training, while teachers and directors more often highlighted training, funding, and organizational or policy support.

Conclusion
The findings provide insight into the use, perceptions, confidence, and support needs surrounding emerging technologies across stakeholder roles and locations. They may inform more targeted professional learning and implementation support, particularly in building capacity to select and integrate appropriate technologies and addressing training and resource needs in early literacy practice.

AI4PD

AI4PD Reimagined: Artificial Intelligence for Adaptive, Human-Centered Professional Development

Ms Deepika Sodhi Global Indian International School , Singapore Presenter

Teacher professional development (PD) has traditionally relied on generic, calendar-driven workshops that are poorly matched to individual competency gaps and constrained by the finite time of expert coaches and mentors. This paper presents a model for Artificial Intelligence for Professional Development (AI4PD), in which AI is deployed not to replace human mentorship but to personalize, extend, and continuously adapt it.

The model rests on four interlocking components. First, adaptive PD pathways generate individualized learning routes from each teacher's DigCompEdu competency profile, classroom-observation data, and stated goals, sequencing content and pacing to actual practice gaps rather than a fixed curriculum. Second, AI-mediated coaching reviews lesson artefacts and engagement signals between human-coach visits, offering micro-feedback and reflection prompts that extend the reach of a limited coaching workforce while keeping human judgment as the final authority over evaluative feedback. Third, AI-supported peer learning communities match teachers with complementary goals or strengths and surface relevant exemplars from within the school, converting informal practice-sharing into a structured, discoverable resource. Fourth, AI-assisted curriculum co-design lets teachers prototype blended lesson sequences with AI drafting tools before collaborative human review, positioning teachers as co-designers rather than end-users of AI outputs.

Implementation follows a five-phase roadmap — discovery and competency baselining, design and pilot, scale and embed, monitor and iterate, and measure and sustain — supported by a governance framework specifying data use, teacher consent for AI-mediated coaching, and periodic bias audits of pathway and recommendation logic. Evaluation uses a matched-cohort, mixed-methods design comparing teachers on AI4PD pathways with a matched comparison group, combining pathway analytics and competency-assessment scores with coach interviews and teacher focus groups.

This work contributes a practice-based framework for how AI can personalize and scale professional learning equitably while preserving teacher agency and instructional authority — directly addressing the AI4PD theme's focus on human–AI collaboration for inclusive, adaptive, and scalable professional development across diverse educational settings.

AI4PD

PACTO IA for Teacher Professional Learning through Curriculum Design with AI

Maggie Carolina Rafet Jaimes Servicio Nacional de Aprendizaje (SENA), Regional Valle - Centro de Electricidad y Automatización Industrial (CEAI), Cali, Colombia

Presenter

Generative artificial intelligence helps teachers explore pedagogical alternatives in curriculum work. Yet productive AI assistance and teacher agency do not, by themselves, constitute professional learning. This paper presents PACTO-IA as a reflective scaffold that makes AI-supported curriculum co-design a site for professional learning: an iterative, evidence-informed process in which teachers examine practice, make pedagogical reasoning explicit, and revise decisions in relation to a learning need.

The proposal draws on UNESCO guidance on generative AI and teacher competencies (Miao & Holmes, 2023; Miao & Cukurova, 2024) and a conception of professional learning where changes in knowledge, judgement, and practice require reflection, enactment, and evidence (Desimone, 2009). Its documentary basis comprises three materials developed in Colombian vocational and higher education contexts: an English learning guide, a university course on responsible AI use, and a draft PACTO-IA technical manual. A focused comparison examines how each material specifies educational purpose, human contribution, verification, transparency, and ethical conditions. These documents evidence design decisions; outcomes remain to be evaluated.

The comparison identifies three features: permissions linked to the competence being developed, documentation of human decisions, and verification tied to task requirements. PACTO-IA organises these features through five dimensions—purpose; authorship and human agency; corroboration and verification; transparency and traceability; and ethical responsibility—and a traffic-light system for permitted, conditional, and restricted uses. For example, AI feedback may support revision after an initial human draft, while independent performance remains necessary when competence must be demonstrated.

The proposed learning sequence begins when a teacher identifies a curriculum challenge and learning need. AI then generates alternatives, explanations, or counterarguments. The teacher evaluates disciplinary accuracy, accessibility, and assessment implications; records what is accepted, modified, or rejected and why; tests the revised design; and reflects on consequences for later curriculum decisions. A decision log and successive task versions turn private interaction into material for self-reflection and peer dialogue. In this account, agency concerns who retains authority and responsibility for decisions; professional learning concerns what teachers come to understand, justify, enact, and transfer through that disciplined cycle.

The contribution to AI4PD is therefore not the claim that AI interaction automatically produces learning, but an operational hypothesis about conditions under which it may do so. PACTO-IA is a design proposition, not a validated professional-development intervention. The next evaluation should examine changes in the quality of teachers' justifications, transfer to unfamiliar tasks, verification practices, and workload, alongside differences in access and prior AI experience.

AI4PD

AI as a Professional Learning Partner: Policy Opportunities for Personalised Educator Development in Vanuatu and the Pacific

Dr Deewakarsingh Authelsingh National University of Vanuatu, Vanuatu Presenter

Mrs Kushima Authelsingh National University of Vanuatu, Vanuatu

Professional learning remains a significant challenge for educators in many Pacific Island education systems. Teachers, lecturers, school leaders and technical and vocational education and training (TVET) practitioners work across geographically dispersed communities where distance, travel costs, limited connectivity, language diversity and uneven access to specialist trainers can restrict opportunities for continuing professional development. These conditions raise an important policy question: can artificial intelligence (AI) provide additional support for educators to access relevant professional learning when and where it is needed?

This paper examines that question through a comparative documentary analysis of education policies and frameworks in Vanuatu, Fiji, Solomon Islands, Samoa and Tonga, complemented by international literature on professional development, educational technology and AI. The analysis focuses on five dimensions of professional learning: continuity, personalisation, contextual relevance, human interaction and ethical governance. The findings suggest that Pacific education policy already provides an important foundation for considering AI-supported professional learning. Across the five countries, policy frameworks emphasise teacher professionalism, continuing professional development, technology-enabled learning, inclusion, community engagement and adaptation to national and local contexts. However, none of the national frameworks reviewed constitutes an AI-specific professional-learning policy. Significant differences in infrastructure, institutional capacity, language and professional-development arrangements mean that AI cannot simply be transferred from better-resourced education systems into Pacific contexts.

This study argues that AI is best understood as a professional learning partner rather than a replacement for educators, mentors or professional communities. AI may help educators identify learning needs, locate and adapt resources, rehearse teaching strategies, receive formative feedback, analyse non-sensitive evidence and structure professional reflection. These possibilities depend on human judgement, reliable resources, cultural and linguistic adaptation, data protection and sustainable infrastructure. A five-part Pacific-oriented model linking educator-defined learning needs; AI-supported inquiry, resources and feedback; human mentoring and peer relationships; cultural and contextual adaptation; and reflective continuing professional development is proposed. The conclusion is that responsible AI integration should be educator-led, low-bandwidth where possible, multilingual, locally governed, institutionally supported and evaluated according to professional and educational value rather than technology use alone.

AI4PD

Professional Judgement in the Age of AI: A Human-Centred Framework for Teacher Professional Learning

Ms Yen Nguyen Thi Hai Vinschool Primary, Secondary and High school, Vietnam

Presenter

Generative artificial intelligence (GenAI) is entering teachers' professional work, creating new possibilities for reflection and professional learning (OECD, 2026). Yet the educational value of AI cannot be assumed from efficiency alone. As AI increasingly generates interpretations and recommendations, a critical question is how it can contribute to teachers' reasoning without displacing the contextual knowledge, deliberation, and professional judgement through which educators make sense of practice. This conceptual and practice-oriented paper proposes a human-centred framework for understanding how GenAI may mediate evidence-informed teacher professional learning. Rather than treating professional learning as a linear sequence in which evidence is processed by AI and converted into action, the framework positions professional judgement at the centre of recursive professional inquiry. Teachers make sense of practice by bringing classroom and learner evidence into interaction with pedagogical knowledge, knowledge of learners and context, research-informed professional knowledge, and professional dialogue. This reflects research showing that relationships among professional learning, teachers' interpretation of new understandings, changes in practice, and learner outcomes are complex (Timperley et al., 2007). Within this process, GenAI is conceptualised not as an evaluator or decision-maker, but as a mediating resource that may help educators organise evidence, surface patterns, generate questions, examine assumptions, and consider alternative interpretations. Determining what evidence matters, weighing competing explanations, incorporating contextual knowledge, and deciding whether and how practice should change remain matters of professional judgement. This view is consistent with scholarship identifying both cognitive and socially situated dimensions of teacher judgement (Allal, 2013). The framework builds on UNESCO's emphasis on human agency and AI for teachers' professional learning (Miao & Cukurova, 2024) and OECD's distinction between replacement, complementarity, and augmentation in teacher–AI teaming (OECD, 2026). It extends these discussions by examining how AI may mediate interactions among evidence, professional knowledge, context, and dialogue through which judgement is formed. The presentation will introduce the framework and use anonymised practice scenarios to examine its application and boundaries, including decontextualisation, over-reliance, privacy, and erosion of professional agency. It argues that the promise of AI4PD lies not primarily in automating feedback, but in designing human–AI interactions that broaden what educators can notice, question, and consider while preserving human responsibility for professional judgement and pedagogical action.

Day 1: Paper Presentation Sessions

Saturday, 28 November 2026 13:45 – 17:50 | Venue: Tai Po Campus, EdUHK

Time	Session 1	Session 2	Session 3
	Room 1 [B4-LP-08] PD4AI | K12	**Room 2 [B4-LP-09]** PD4AI&AI4PD | K-12 & HE	**Room 3 [B4-LP-10]** PD4AI | HE
13:45 - 15:00	***Professional Development for Digital Transformation in Education in Latin America and the Caribbean: Where Are We and Where Are We Heading in terms of AI integration?*** Dr Carolina Duer (Fundación Ceibal) *Miss Belén Martino (Fundación Ceibal) Miss Marina Porcel (Fundación Ceibal) *Miss Jesica Pouzo (Fundación Ceibal) ***Uruguay*** ***Comparing Teacher Need and Provision of AI Professional Development across 55 Education Systems*** *Prof Zixi Chen (New York University Shanghai) Prof Huacong Liu (Shanghai Jiao Tong University) ***China*** ***AI starts with good data systems: PD4AI through the MICS-EMIS initiative*** *Miss Femke van den Bos (UNICEF) Miss Sakshi Mishra (UNICEF) Mr Luc Warde (UNICEF) Mr Nurshat Ababakirov (UNICEF) Mr Aiman Noman (UNICEF) ***Netherlands*** ***Beyond AI Literacy: Preparing Educators to Design for Cognitive Responsibility in Human–AI Learning*** Dr Quynh Dang (Hanoi University of Science and Technology, Faculty of Education) ***Vietnam***	***Conceptualising AI Bias in Visual Arts Education: A Sociomaterial Ecological Typology for Policy and Practice*** Dr Ning Luo (The Education University of Hong Kong) ***Hong Kong, China*** ***Teachers' Adaptation to AI-Driven Educational Transformation: How AI Perceptions and Change Fatigue Shape Teacher Workload Stress in East Asia*** Dr Xiaojuan Hu (Guangxi Normal University) ***China*** ***Meeting Educators Where They Work: A Practice Informed Framework for Contextually Responsive AI Professional Learning*** *Mr Brian Drake (Australian Institute of Machine Learning - Responsible Artificial Intelligence Research Centre) *Miss Ruoxin Wang (Australian Institute of Machine Learning - Responsible Artificial Intelligence Research Centre) Dr Jinan Zou (University of New South Wales) ***Australia*** ***Media and AI Literacy for Aesthetic Educators: Guiding Students' Aesthetic Experience Reconstruction in the Digital-Intelligent Media Era*** Dr Yuting Huang (Guangxi Normal University) ***China***	***From AI Literacy to Pedagogical Agency: Five Teaching Capacities for Higher Education in Human–AI Environments*** Dr Ana Maria Miralles (Institución Universitaria Digital de Antioquia (IUDigital)) ***Colombia*** ***Professional Development Needs for Responsible Generative AI Use among Educators in Infant and Toddler Care Services and Management Programmes at Higher Vocational Colleges with a Guangzhou Campus: An Exploratory Mixed-Methods Study*** Miss Runlei Yang (Guangdong Engineering Polytechnic) ***China*** ***From Answers to Understanding: Designing AI-Integrated Assignments That Promote Critical Thinking and Verification*** Prof Youqin Pan (Salem State University) ***United States*** ***Augmented and Virtual Reality Competencies for Future-Ready TVET Educators: Implications for Professional Development in the AI Era*** *Dr Nurul Hidayah Mohd Ali (Ministry of Education) Prof Ridzwan Che' Rus (Faculty of Technical & Vocational, Universiti Pendidikan Sultan Idris) Prof Azlin Iryani Mohd Noor (Faculty of Art, Sustainability & Creative Industry, Universiti Pendidikan Sultan Idris) Prof Dayang Suryati Abang Ibrahim (Ministry of Education) ***Malaysia***

15:00–15:10 **Break**

15:10 - 16:25

Session 4

Room 1 [B4-LP-08] PD4AI | K12

From Using AI Tools to Overseeing AI Agents: The Professional Development Competencies Education Workforce Now Needs

Ms Anamika Ved (Cambridge University Press & Assessment)

United Kingdom

School Digital Conditions for Delivering Professional Development for Artificial Intelligence Across 137 Education Systems

Mr Jie Wang (The Education University of Hong Kong)

Hong Kong, China

Teacher Readiness for AI and ICT Integration: Insights from a Short-Term Online Training Program

*Mr Ramesh Prasad Badoni (State Council of Educational Research and Training Uttarakhand, India)
*Ms Huong Thuy Vu (Thang Long High School for the Gifted, Vietnam)

India; Vietnam

From "AI Will Replace Us" to "AI Can Empower Us": Exploring High School Bel Canto Teachers' Attitudes Changes Toward AI Voiceprint Analysis Through PD4AI

Miss Jingqi Feng (The Education University of Hong Kong)

Hong Kong, China

Session 5

Room 2 [B4-LP-09] PD4AI | K-12

Mathematics Teachers' AI-Related Professional Development Needs: Evidence from TALIS 2024

*Miss Xiaoxia Wu (The Education University of Hong Kong)
Dr Ying Zhang (The Education University of Hong Kong)

Hong Kong, China

PD4AI in Tutoring Organisations: Pathways and Constraints of Generative AI in Hong Kong

Miss Yuyan He

Hong Kong, China

Study on the Leadership Substitution Effect of AI Digital Teaching Systems — An Empirical Analysis Based on Ten K-12 Schools in Shenzhen

Dr Xia Mei (The Education University of Hong Kong)

Hong Kong, China

How Teachers Navigate Disagreements Between AI Outputs and Professional Judgment

Mr Juyeong Lee (Seoul National University)
*Ms MinSeo Chang (Seoul National University)
Prof Young Hoan Cho (Seoul National University)

South Korea

Session 6

Room 3 [B4-LP-10] PD4AI | HE

Examining Teaching-Focused Digital Literacy among Primary and Junior Secondary School Teachers: Evidence from Southwestern China

Ms Zihan Wang (Guangxi Normal University)

China

From PD4AI to Practice: How EFL Pre-service Teachers Enact Generative AI During Teaching Practicum

*Ms Thamonthon Yordming (Phranakhon Si Ayutthaya Rajabhat University)
Ms Nanthaporn U-saard (Mahasarakham University)

Thailand

From AI Literacy to Cognitive Ownership: A Modified ICAP Framework for Professional Development on AI-Integrated Teaching

Dr Fridolin Ting (The Education University of Hong Kong)

Hong Kong, China

Pre-service Teachers' Perspectives on Feedback from Chatbots in Higher Education

*Dr Anika Saxena (The Education University of Hong Kong)
Ms Yujie Wei (The Education University of Hong Kong)

Hong Kong, China

16:25–16:35 **Break**

16:35 - 17:50

Session 7

Room 1 [B4-LP-08] PD4AI&AI4P

Building the capability of an education workforce when the only constant is change

Prof Jason Lodge (The University of Queensland)

Australia

Supporting Teachers' Interdisciplinary Professional Learning Through Multi-Agent AI: A Boundary-Crossing Case Study

*Mr Kaiheng Li (The Education University of Hong Kong, Hong Kong, China)
Mr Xingyue Qiu (Guangdong University of Education)

Hong Kong, China; China

Human–AI Advising for Equitable University Admissions: Design Implications for Counsellor and Mentor Professional Development

*Miss Kamila Kargabaeva (The Education University of Hong Kong, Hong Kong, China)
Miss Eman Qaiser Sheikh (The Education University of Hong Kong, Hong Kong, China)
Miss Tsz Ching Wong (The Education University of Hong Kong, Hong Kong, China)

Hong Kong, China

Session 8

Room 2 [B4-LP-09] AI4PD | K-12 & HE

"Edubotics" and the shrinking human educators' workspace in education: Staying ahead of the curve

Dr Samson Mutsagondo (Sorbonne University Abu Dhabi, United Arab Emirates)

United Arab Emirates

Beyond Learning About AI: Designing Bite-Sized, Practice-Based Professional Development for Building AI Competencies — Insights from the Development of AfterWork Bytes

Dr Tiffany Ip (The Education University of Hong Kong, Hong Kong, China)
Mr Morning Wu (AfterWork Startup)

Hong Kong, China

From Process to Product: A CAT-RAT Systematic Review of AI-Mediated EFL Reading for Professional Development

Dr Grace Zhang

Hong Kong, China

From Policy to Practice: Evaluating the Primary Learning Platform (PLP) for Teachers' Instructional Practices and Student Outcomes in Cambodia

*Ms Navy Sin (General Secretariat, Ministry of Education, Youth and Sport)
*Dr Sam Ath Chin (General Secretariat, Ministry of Education, Youth and Sport)
*Mr Phyorith Tep (General Secretariat, Ministry of Education, Youth and Sport)

Cambodia

Session 9

Room 3 [B4-LP-10] AI4PD | HE

Pre-Service Teachers' Agency Development Through Generative AI Use for Learning and Teaching: A Systematic Review

*Ms Jiaen Zhang (The Education University of Hong Kong, Hong Kong, China)
Ms Ping Wu (The Education University of Hong Kong, Hong Kong, China)

Hong Kong, China

Pre-service Teachers' Perspectives on the Intelligent Classroom System in Teacher Education

*Dr Priyadarshini Muthukrishnan (INTI International University)
Dr Longsheng Xiao (Hubei University of Education)
Ms Xiaolu Wang (Hubei University of Education)

Malaysia; China

Preservice Teacher Professional Learning in AI-Supported Educational Game Co-Design: Translating Curriculum Content into Playable Mechanics

Miss Xin Dai (Capital Normal University)
*Miss Ke Ying Zhang (Beijing Normal University, Zhuhai Campus)
Prof Xing Yue Qiu (Guangdong University of Education)

China

Beyond the Classroom Door: Evaluating an AI-Scaffolded Staffroom Simulator for Pre-Service Teacher Decision-Making

Mr Sing Tsun Derek Wong (School of Education and Languages, Hong Kong Metropolitan University)

Hong Kong, China

16:25–16:35 **Break**

16:35 - 17:50

Session 7

Room 1 [B4-LP-08] PD4AI&AI4P

Building the capability of an education workforce when the only constant is change

Prof Jason Lodge (The University of Queensland)

Australia

Supporting Teachers' Interdisciplinary Professional Learning Through Multi-Agent AI: A Boundary-Crossing Case Study

*Mr Kaiheng Li (The Education University of Hong Kong, Hong Kong, China)
Mr Xingyue Qiu (Guangdong University of Education)

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Hong Kong, China

Session 8

Room 2 [B4-LP-09] AI4PD | K-12 & HE

"Edubotics" and the shrinking human educators' workspace in education: Staying ahead of the curve

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Session 9

Room 3 [B4-LP-10] AI4PD | HE

Pre-Service Teachers' Agency Development Through Generative AI Use for Learning and Teaching: A Systematic Review

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Hong Kong, China

10:15–10:25 **Break**

	Session 13	Session 14	Session 15
	Room 1 [B4-LP-08] AI4PD | K12	**Room 2 [B4-LP-09]** PD4AI &AI4PD	**Room 3 [B4-LP-10]** AI4PD | HE & K12
10:25 - 11:40	***Toward Valid Assessment of Teacher AI Competency: A Measurement Agenda for Professional Development*** Mr Haoyu Li (The Education University of Hong Kong) ***Hong Kong, China***	***Configuring Institutional Support and Collegial Learning for University Teachers' PD4AI*** *Dr Boxiang Lin (Strategy and Planning Team, University of Nottingham Ningbo China) Prof Xiji Zhu (Hitotsubashi University) Mr Xiaoyu Peng (University of Nottingham) ***China; Japan; United Kingdom***	***PACTO IA for Teacher Professional Learning through Curriculum Design with AI*** Maggie Carolina Rafet Jaimes (Servicio Nacional de Aprendizaje (SENA), Regional Valle - Centro de Electricidad y Automatización Industrial (CEAI)) ***Colombia***
	AI-Augmented Professional Learning and Human-Capital Development in Resource-Constrained Economies of the Global South: Implications for Workforce Productivity and Inclusive Growth Mr Mohammad Shahriar Azad Bhuiyan (UniCap Securities Limited) ***Bangladesh***	***From AI Competence to Professional Judgement: Rethinking PD4AI*** Miss Hanwei Jin (Hong Kong Metropolitan University) ***Hong Kong, China***	***AI as a Professional Learning Partner: Policy Opportunities for Personalised Educator Development in Vanuatu and the Pacific*** *Dr Deewakarsingh Authelsingh (National University of Vanuatu) Mrs Kushima Authelsingh (National University of Vanuatu) ***Vanuatu***
	AI for Professional Development: How Data Helped Me See Every Student Miss Anran Qiu (The Education University of Hong Kong) ***Hong Kong, China***	***AI4PD Reimagined: Artificial Intelligence for Adaptive, Human-Centered Professional Development*** Ms Deepika Sodhi (Global Indian International School, Singapore) ***Singapore***	***Professional Judgement in the Age of AI: A Human-Centred Framework for Teacher Professional Learning*** Ms Yen Nguyen Thi Hai (Vinschool Primary, Secondary and High school) ***Vietnam***
	Use of Emerging Technologies in Early Literacy Practice: Multi-Stakeholder Perspectives from Australia and the Chinese Mainland Ms Ya Zhang (The Education University of Hong Kong) *Dr Annie Yixun Li (The Education University of Hong Kong) Dr Hay Mar Myat Kyaw (The Education University of Hong Kong) ***Hong Kong, China***		

07

Poster Presentations

Abstracts

Poster sessions will be held on both Day 1 and Day 2 in the common area of D1-LP-02 (the main conference venue).

PD4AI

Co-Developing AI Competency: Teacher - Student Partnership for Teaching, Learning and Assessment in a Secondary School

Ms Habibah Hanaffi Invictus International School, Horizon Hills, Malaysia **Presenter**

AI is here to stay. Teachers and students are increasingly embracing its use in the school education landscape. As Artificial Intelligence (AI) technologies become more sophisticated and accessible, it is crucial for educators to progressively acquire, deepen and create knowledge and understanding of AI tools. (UNESCO, 2023)1. This preliminary study aims to evaluate the current adoption of AI by teachers and students, its efficiency gains, and ethical concerns in the school. An open-ended questionnaire was administered to gather feedback from a total of 12 participants comprising 5 teachers and 7 students. Results showed the 'erosion of traditional boundaries between teachers and students in the era of AI integration' (Yifat Filo et al, 2024)2 as the more conversant teachers and students are capable of acquiring and using the affordances of the AI tools. Respondents agreed on the efficiency gained when deploying AI. However, teachers showed greater awareness of the ethical concerns. Additionally, they are confident of developing students' critical thinking and problem-solving skills working alongside AI. It is recommended that a teacher-student collaboration or partnership be adopted for professional development and an AI competency framework be developed for schoolwide training of teachers and students for teaching, learning and assessment purposes.

PD4AI

Policy is not pedagogy: Using course plan evidence to rethink teacher professional development for AI

Dr Louie Dasas	University of Santo Tomas, The Philippines	Presenter
Dr Kim Gerald Medallon	University of Santo Tomas, The Philippines	
Dr Ryan Lansangan	University of Santo Tomas, The Philippines	
Mr Jann Ernest Fesalbon	University of Santo Tomas, The Philippines	
Asst. Prof. Ana Ruby Paez	University of Santo Tomas, The Philippines	
Dr Cheryl Peralta	University of Santo Tomas, The Philippines	

Despite the formalization of faculty expectations for artificial intelligence (AI) in education, the translation of institutional AI guidance into course-level policies remains superficial. The mere articulation of AI use policies does not equate to substantive pedagogical integration. This study critically examined course plans from higher education faculty at a comprehensive university to determine the extent to which AI competencies are embedded in pedagogical and assessment practices, the disciplinary variations in these manifestations, and the implications for faculty professional development. Employing an unobtrusive research design and UNESCO's AI competency framework for teachers as the analytical lens, analysis of course plans (n=60) focused on learning outcomes, teaching-learning activities, assessment practices, and class expectations. Results revealed significant inconsistencies in the integration of AI competencies both within and across disciplines. Regulatory and ethical considerations were prioritized over the meaningful incorporation of AI into learning and assessment, with notable variation depending on disciplinary and pedagogical requirements. Furthermore, explicit AI policies were inconsistently reflected across other elements of course design. These findings underscore the inadequacy of generic professional development approaches for AI and highlight the urgent need for differentiated, context-responsive support that addresses faculty's specific AI competency profiles and the pedagogical realities of their disciplines.

PD4AI

Beyond AI Literacy: Understanding AI Learning Needs in Cross-Cultural Higher Education Institutions

Mr Yu Ma The Tianjin Juilliard School, China Presenter

Artificial intelligence (AI), particularly generative AI, is increasingly embedded in higher education, yet staff use it differently and bring different levels of confidence, risk awareness and learning needs. Competency frameworks, including UNESCO's AI Competency Framework for Teachers (Miao & Cukurova, 2024), offer useful reference points for what education professionals may need to know and do. Less attention has been given to how a single institution can identify those needs within its own organisational structure and translate them into role-appropriate professional development.

This practitioner-led study is situated at The Tianjin Juilliard School, a Sino-US joint-venture music institution in China. The cross-cultural and specialised setting is treated as the institutional context in which learning needs arise, rather than as a comparison of cultural groups. The school employs academic, artistic, administrative and professional staff. An institutional AI sub-committee has already developed responsible-use guidance, introduced an AI audit and a data-risk audit plan, and delivered staff training, with further training planned. The study examines whether this support matches how different staff groups actually work with AI.

Staff are the sole participant group. Three questions guide the study: (1) How do current AI use, confidence and risk awareness differ across staff roles? (2) What learning needs and forms of institutional support do staff perceive as most relevant to their roles? (3) How can these findings inform role-appropriate professional development and AI learning support?

A small-scale mixed-methods design will be used. Short surveys will capture frequency and use cases, confidence in using and evaluating AI output, awareness of privacy, integrity and other risks, and preferred support. Two or three open-ended questions will elicit challenges and learning priorities. Comparisons will be descriptive and organised by staff role, not by cultural background, and will not support causal or population-level claims.

The study does not propose a universal competency framework. It asks how situated learning needs can be identified among staff in a specialised international institution and used to design practical professional development. In doing so, it contributes a practitioner perspective to the PD4AI question of how institutions can support the education workforce to use AI wisely and responsibly.

AI4PD

Building AI-Ready Educators: A Scalable Professional Development Model

Dr Annabelle Villamarin Global Indian International School Singapore, Singapore;
Philippine Womens University, The Philippines

Presenter

Artificial intelligence is rapidly reshaping teaching, assessment and professional learning, yet many educators require structured, practical support to use it confidently and responsibly. This poster presents Building AI-Ready Educators (BARE), a scalable professional development initiative designed to build educators' capacity to integrate AI into everyday practice while preserving professional judgement, academic integrity and human-centred learning.

Designed for an initial cross-country pilot involving 50–75 educators per country, BARE provides differentiated learning pathways for beginner, intermediate and advanced users. Its self-paced, practice-oriented modules combine guided exploration, authentic classroom applications, reflection and collaborative sharing. The beginner module, "AI for Student Feedback," supports teachers in using AI to generate timely, personalised and actionable feedback while critically reviewing outputs for accuracy, bias, tone and student appropriateness.

The framework positions teachers not simply as users of AI tools, but as reflective decision-makers who evaluate when, why and how AI adds educational value. Implementation evidence is gathered through participation data, teacher reflections, practical outputs and reported changes in confidence and classroom practice.

BARE demonstrates how school-based professional development can move beyond one-off technology training towards sustained capacity-building that advances educational quality, equity and efficiency. The model offers a practical foundation for adaptation across diverse school contexts.

AI4PD

AI for Professional Development: Personalised Learning Across Education and Healthcare

Dr Emir Sopyyev Myrat Garryev State Medical University of Turkmenistan, Turkmenistan Presenter

Dr Merjen Berdiyeva Myrat Garryev State Medical University of Turkmenistan, Turkmenistan Presenter

Artificial Intelligence (AI) is transforming professional learning by enabling more personalised, adaptive, and continuous approaches to competency development. For the education workforce, AI can identify individual learning needs, recommend tailored educational pathways, facilitate peer-to-peer knowledge exchange, and provide timely feedback. These opportunities are particularly relevant to healthcare, where rapid advances in medical knowledge and technology require physicians and other health professionals to engage in lifelong learning.

Turkmenistan is actively advancing the digital transformation of education as a national priority, including the development of digital learning environments, innovative educational technologies, and digital competencies. The country's current strategic priorities for higher professional education include a 2026–2030 implementation framework supporting the integration of modern digital technologies and strengthening the quality and competitiveness of education.

Within this context, AI can serve as a bridge between education, professional development, and healthcare. In medical education, AI can support personalised continuing professional development, clinical simulations, competency assessment, evidence-based learning, and interdisciplinary collaboration. It can also help educators and healthcare professionals identify knowledge gaps and adapt learning to evolving professional requirements.

Representing Turkmenistan in the UNESCO context, this presentation advocates a human-centred approach to AI: technology should augment, rather than replace, professional expertise.

AI4PD

AI-Supported Professional Learning for Secondary Business Teachers: Preparing Locally Relevant Finance Teaching Materials in Macao

Miss Cheng Lou The University of Hong Kong, Hong Kong, China **Presenter**

Artificial intelligence (AI) offers new possibilities for teachers' professional learning and curriculum preparation, yet its value depends on locally responsive and responsible use. This poster draws on a small-scale interpretivist qualitative study of two secondary business teachers and two former secondary business students in Macao. Semi-structured interview transcripts were thematically analysed using deductive codes derived from the research questions and inductive codes emerging from participants' accounts. Participants described business subjects as a useful foundation for finance-related progression, but identified gaps in applied learning, including spreadsheet use, data analysis, real company reports and locally relevant financial contexts. They also highlighted examination pressure, uneven teacher confidence with technology, and limited shared resources and partnership support. These findings informed a proposed AI-supported professional learning framework for secondary business teachers: AI-assisted and teacher-verified local case development, differentiated materials, data- and document-analysis tasks, and shared quality-assured resource banks. The framework also incorporates AI literacy, source verification, bias awareness, privacy, copyright and teacher oversight. It is a context-responsive proposal informed by participant perspectives, rather than an evaluated AI intervention, with implications for equitable, high-quality AI-enabled professional development in small, examination-oriented education systems.

AI4PD

A qualitative report on the use of artificial intelligence tools among Chinese high school music teachers in five Chinese mainland cities

Mr Yun Long Wang The Education University of Hong Kong, Hong Kong, China Presenter

This qualitative study responded to the AI4PD theme and examines how Chinese high school music teachers use AI tools in the classroom. One research question was addressed: How do Chinese music teachers use AI tools in high school? Forty high school music teachers from five cities completed questionnaires, and five were interviewed for 25- 30 mins in formal semi-structured interviews. The questionnaire data were coded through SPSSAU; interview data were coded following Emerson et al. (2014) open-coding framework.

Three key findings to answer the research questions: 1. 85% of teachers utilized AI tools in music class. Teachers mainly used Chinese AI tools for assistance, such as Dou Bao (52.5%), DeepSeek (35%), and Yuan Bao (5%). 2. AI tools for teaching instructional needs with teachers' positive emotions. 3. Teachers sometimes face issues and challenges in class when using AI.

The discussion clarified teachers' use of AI under policy support; three elements influenced this: 1. Teachers' own knowledge and beliefs outweigh policy (Zhang et al., 2021). 2. Limitations of the AI tool's process (Wooldridge, 2021). 3. Lack of pedagogical support for using AI tools in music teaching. Future studies suggest technological pedagogy for AI in music teaching.

AI4PD

From School Data to Professional Growth: A Human–AI Framework for Personalised Professional Development in a Malaysian Private School

Dr Hien Ghim Ng Paragon Private & International School, Malaysia Presenter

Artificial intelligence (AI) is becoming part of education, but professional development (PD) is often delivered through general training that may not reflect the needs of teachers and school leaders. This study proposes a Human–AI framework for Artificial Intelligence for Professional Development (AI4PD), exploring how school data and AI-enabled technologies can support continuous, needs-based professional learning. Developed for Paragon Private School, Malaysia, the framework combines AI capabilities with human judgement to support reflection, practice, and leadership.

The study adopts a Design-Based Research approach involving four stages: needs analysis through semi-structured interviews; framework design informed by AI4PD, human–AI collaboration, professional learning, and AI-supported leadership; expert validation; and preparation for pilot implementation. The needs analysis will examine professional challenges, existing practices, AI competencies, and development priorities among teachers, heads of department, school leaders, and administrative personnel.

The proposed AI ecosystem includes AI-assisted CCTV, facial-recognition-based attendance, AI-enabled whiteboards, and AI-supported analytics and reporting. The framework connects six components: school data collection, AI-supported analysis, human judgement, targeted PD, application and reflection, and evaluation and improvement. The future pilot will evaluate relevance, feasibility, usability, AI competency, professional practice, ethical responsibility, privacy, and human oversight. As the study is pre-implementation, no empirical outcomes are claimed.

AI4PD

PI Class: AI-Based Feedback for Learner Self-Understanding and Connecting Learners, Teachers, and Caregivers

Sujin Kim Konkuk University, South Korea Presenter

Prof Sukun Jin Konkuk University, South Korea

Open-ended creative products can provide evidence of learners' creativity (Baer & McKool, 2009), while learners' strengths can be understood across multiple domains of ability (Gardner, 1983). Formative feedback can help learners use evidence to guide learning and inform teachers' instructional decisions (Black & Wiliam, 2009). AI further offers new possibilities for interpreting complex educational data (Holmes & Tuomi, 2022), while research on AI-enhanced classroom feedback continues to emphasize the importance of teachers' professional judgment (Maksimchuk et al., 2025).

From this perspective, this study developed PI Class, an AI-based educational system designed to support learner self-understanding and connect learners, teachers, and caregivers. PI Class analyzes elementary students' creative arts-integrated outputs produced after audiovisual learning activities across dimensions of creativity and multiple intelligences, transforming the analyses into explanatory learner profiles. The profiles help learners recognize their expressive characteristics and strengths, provide teachers with information to reflect on and adjust instructional practices based on student understanding, and help caregivers understand and support their children's strengths.

Rather than positioning AI as an autonomous evaluator, this study proposes AI-generated feedback as a mediator that supports learner self-understanding, teachers' reflective practice, and connections among learners, teachers, and caregivers.

AI4PD

A Competency Framework for Teachers in the AI Era: Delineating Human-AI Collaboration Boundaries in Instructional Phases

Ms Que Liu The Education University of Hong Kong, Hong Kong, China Presenter

Dr Shen Ba The Education University of Hong Kong, Hong Kong, China

As AI tools continue to expand across lesson planning, instruction, feedback, and assessment, the distinctiveness of teachers' professional roles is being redefined. The central challenge is not to compete with AI in generating visible teaching outputs, but to sustain pedagogical reasoning—the capacity to critically judge the appropriateness of AI-generated content in each instructional phase. Existing research on AI and teacher development has largely focused on AI literacy, competency models, and AI-extended TPACK. These efforts, however, remain fragmented and inconsistently categorized, leaving a unified and systematic framework for examining human-AI collaboration boundaries largely absent.

This study aims to address this gap by distilling a competency framework for teachers in the AI era. It seeks to reduce teachers' burden of learning emerging educational concepts, clarify human-AI collaboration boundaries, and support efficient, targeted adaptation to professional change. Two questions guide the inquiry: (1) What dimensions constitute the competency framework for teachers in the AI era? (2) How should the boundaries between teachers' pedagogical reasoning and AI assistance be delineated across key instructional processes?

The literature review will proceed in three cumulative steps. First, it reviews prior literature to map the composition of teachers' pedagogical and teaching competencies, breaking them down into key processes or dimensions such as curriculum understanding, curriculum development, instructional design, instructional implementation, teaching management, and teaching evaluation. Second, treating each process as a dimension, it synthesizes empirical studies on how teachers collaborate with AI at each step, focusing on what tasks teachers and AI respectively perform, how they interact, and where teachers' critical capacities or pedagogical reasoning are exercised. Third, building on this synthesis, it proposes a framework that explains how, in the AI era, teachers can collaborate with AI across concrete pedagogical processes while preserving teachers' distinctive reasoning capacity. This step also helps delineate the boundaries of human-AI collaboration and clarify where professional judgment remains indispensable.

Expected outcomes include a competency framework for teachers in the AI era and a set of boundaries for human-AI collaboration. Theoretically, the study fills the gap left by fragmented frameworks and insufficient boundary research, while deepening understanding of pedagogical reasoning as a central professional capacity. Practically, the framework can be integrated into curriculum conversations, professional learning, and workshops, helping program teams anchor GenAI-related teaching development in core pedagogical reasoning. By mapping these boundaries, the study offers a practical heuristic for educators navigating AI integration without losing professional agency.

AI4PD

AI for Professional Development: Personalised Learning Across Education and Healthcare

Dr Merjen Berdiyeva Myrat Garryev State Medical University of Turkmenistan, Turkmenistan

Presenter

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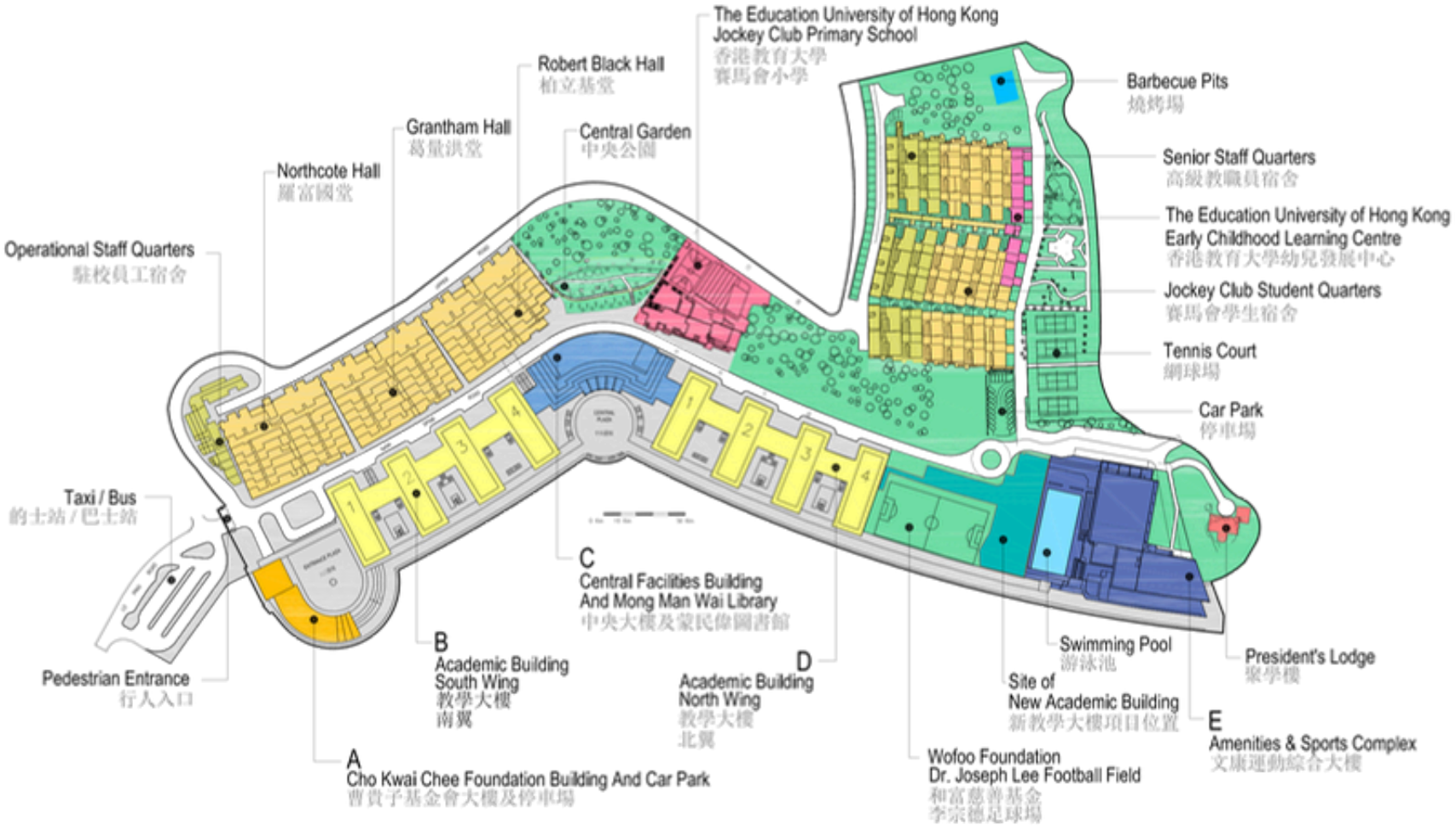
08

FAQs

Venue Floor Plan

Transportation

The Education University of Hong Kong
Tai Po Campus
香港教育大學大埔校園



Campus Map

Transportation

- **By MTR (Subway/Underground):**

  Take the East Rail Line to Tai Po Market Station, then take bus or taxi to the university.

- **By Bus/Mini Bus:**

  Regular bus / mini bus routes serve the university including KMB Bus 74K and NT Green Mini Bus 26.

- **By Taxi:**

  Taxis are readily available from various locations in Hong Kong.

- **By Car:**

  Limited parking is available on campus (advance reservation is required).



The Education University of Hong Kong

10 Lo Ping Rd, Ting Kok,
New Territories,
Hong Kong

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