CONFERENCE PROGRAM

ICEMT 2025

2025 9th International Conference on
EDUCATION AND MULTIMEDIA TECHNOLOGY

ICERI 2025

2025 15th International Conference on
Education, Research, and Innovation

Osaka, Japan | July 29-August 1, 2025

The 9th International Conference on Education and Multimedia Technology (ICEMT 2025)

"Innovative Technologies in Education: Redefining the Learning Experience"

The 15th International Conference on Education, Research and Innovation (ICERI 2025)

Osaka, Japan | July 29-August 1, 2025

Organized By:

関西大学
KANSAI UNIVERSITY

Technical Supported By:

岡山大学
OKAYAMA UNIVERSITY

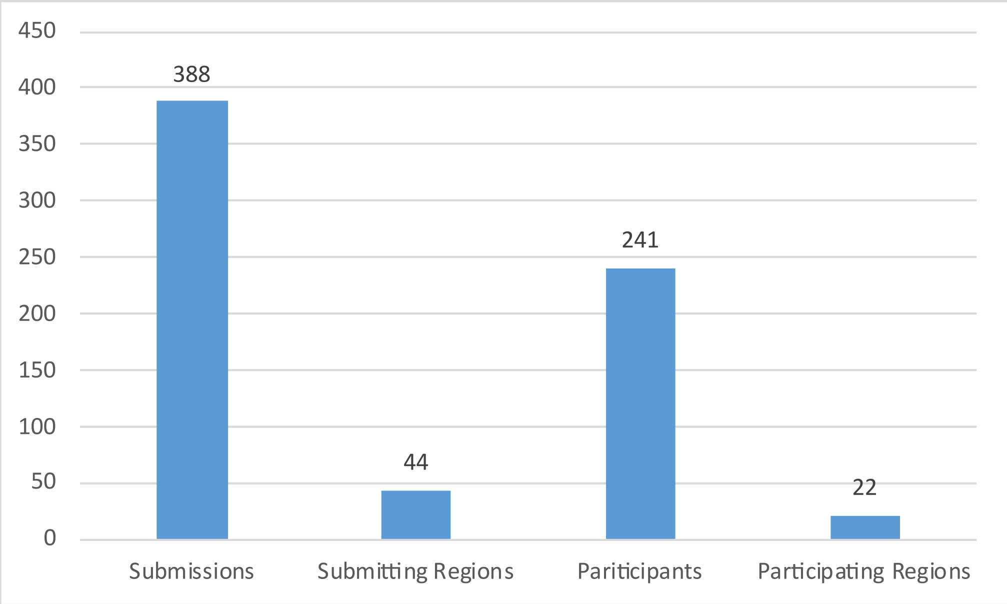
山形大学
Yamagata University

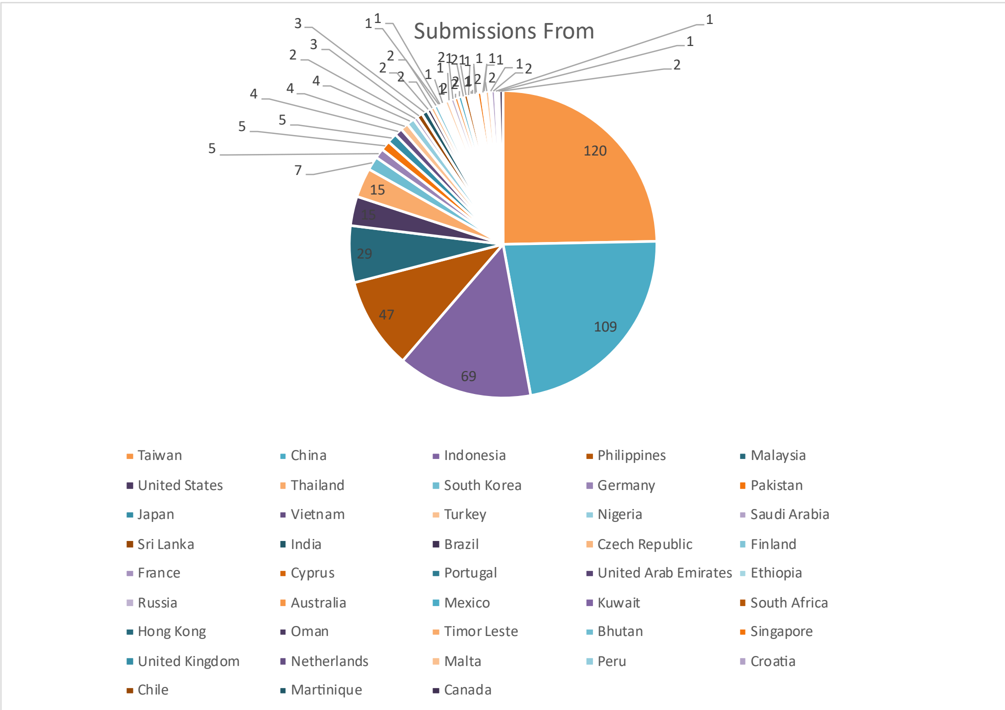
Table of Contents

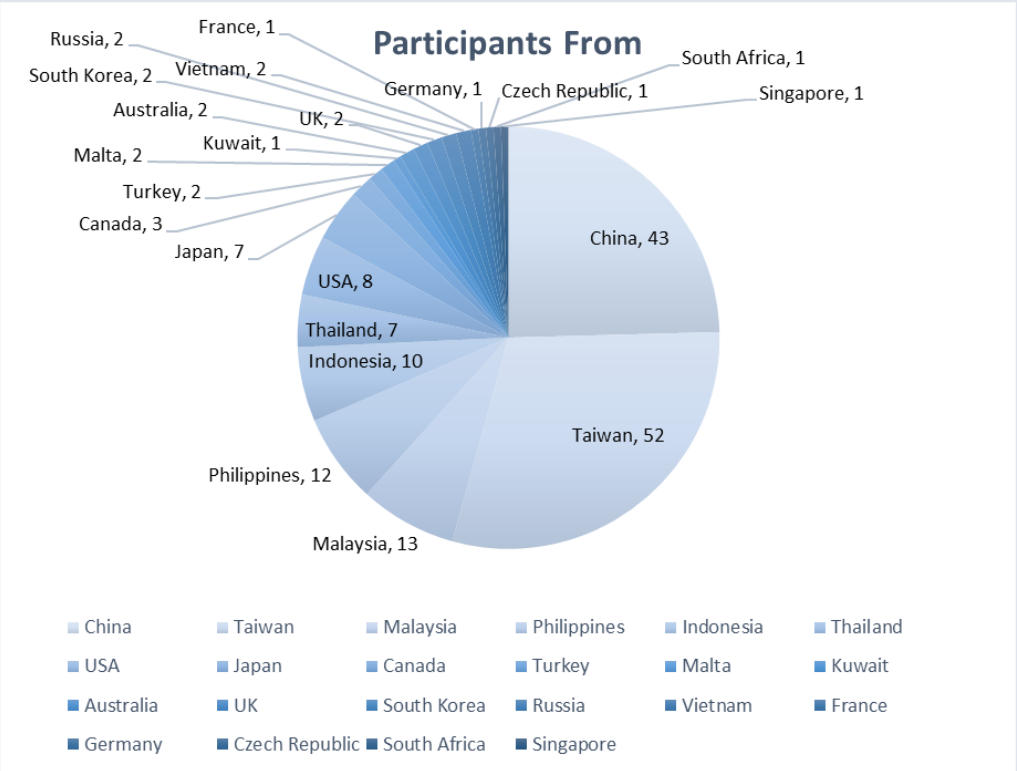
Conference Data(2025) and Historical Review

Conference Data

The 2025 Osaka Conference is set to become a global platform for knowledge exchange. To date, we have received 388 submissions from 44 regions, with participation expected from 241 delegates representing 22 regions. These numbers highlight the event's growing international reach as we finalize preparations in Osaka.






Participants From
China, 43
Taiwan, 52
Malaysia, 13
Philippines, 12
Indonesia, 10
Thailand, 7
USA, 8
Japan, 7
Canada, 3
Turkey, 2
Malta, 2
Kuwait, 1
Australia, 2
South Korea, 2
Russia, 2
France, 1
Vietnam, 2
Germany, 1
UK, 2
Czech Republic, 1
South Africa, 1
Singapore, 1
China
Taiwan
Malaysia
Philippines
Indonesia
Thailand
USA
Japan
Canada
Turkey
Malta
Kuwait
Australia
UK
South Korea
Russia
Vietnam
France
Germany
Czech Republic
South Africa
Singapore

Past ICEMTs

ICEMT 2024 - June 22-24, 2024 | Tokyo, Japan

ICEMT 2023 - August 29-31, 2023 | Tokyo, Japan

ICEMT 2022 - July 13-15, 2022 | Guangzhou, China + Online

Please click here to view more ICEMT history.

Welcome Address

It is with great enthusiasm that we welcome you to the 2025 joint international conference, which seamlessly combines elements of the 9th International Conference on Education and Multimedia Technology (ICEMT 2025) and the 15th International Conference on Education, Research, and Innovation (ICERI 2025). Taking place in the vibrant city of Osaka, Japan, from July 29 to August 1, 2025, this gathering is set to be a remarkable event.

The conference benefits from the strong support of numerous esteemed institutions. Organized by the Kansai University, Japan, and technical supported by Yamagata University, Japan, and Okayama University. This international collaboration enriches the conference with a diverse range of perspectives.

Our overarching theme, which draws from the essence of both ICEMT 2025 and ICERI 2025, focuses on Innovative Technologies in Education: Redefining the Learning Experience. We are delighted to present eight renowned keynote speakers, whose eight keynote speeches will offer profound insights into these crucial areas. In addition, 11 invited speeches by eminent professionals will further explore the intricate details of our subject matters, enhancing our collective understanding. The conference program is designed to be comprehensive and engaging. We have 20 parallel Technical Sessions, 2 Poster Sessions and 2 Online Sessions. In these sessions, we will explore the innovation-led transformations in e-education and e-business, as well as emerging marketing strategies, global business expansion, and international trade dynamics. This integrated approach allows for cross-disciplinary discussions and the exchange of ideas. To provide a more hands-on and interactive experience, we have also organized a Workshop. It will offer participants the opportunity to engage deeply in specific topics, share practical experiences, and collaborate on solutions, further enriching the conference experience.

The success of this conference is due to the hard work of our organizing committee and the commitment of our reviewers, who have maintained high academic standards. We are truly grateful to all who have contributed to making this event possible. We believe that the engaging discussions, valuable insights, and interactive sessions will inspire all attendees.

Welcome to this unified academic event. We look forward to a memorable and intellectually stimulating experience, and we hope that your exploration of our diverse topics will be highly rewarding. Thank you for being part of this academic journey.

ICEMT & ICERI 2025 Conference Committee

Conference Committee

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Qun Jin, Waseda University, Japan

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Yeong-Tae Song, Towson University, USA

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Viet Anh Nguyen, VNU University of Engineering and Technology, Vietnam

Award Chair

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Aileen P. De Leon, Don Honorio Ventura State University, Philippines

Angelo C. Arguson, FEU Institute of Technology, Philippines

Aniko Dorner, Tecnologico de Monterrey, Mexico

Ann Rosnida Md Deni, Sunway University, Malaysia

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Aryusmar, Binus University, Indonesia

Bart Andrew S. Mendoza, Mapua Malayan Colleges Laguna, Philippines

Bin He, Central China Normal University, China

Binyu Yang, Renmin University of China, China

Cao Dongyun, Jiangxi Normal University, China

Carlos Felipe Gomez Jiménez, Corporacion Universitaria Minuto de Dios, Colombia

Cheng-Kai Wang, Asia University

Chew Fong Peng, University of Malaya, Malaysia

Chih-Cheng Lin, National Kaohsiung University of Science and Technology

Chih-Hung Wu, National Taichung University of Education

Ching-Yi Liao, National Taiwan Normal University

Chu-Lung Wu, National Taichung University of Education

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Erwin C. Pagtalunan, Department of Education, Philippines

Fabiola Mary Talavera Mendoza, Universidad Nacional de San Agustin, Peru

Fahim Khan, Toyo University, Japan

Fatima Azmi, Prince Sultan University, Saudi Arabia

Felicisimo Enriquez Santiago, Southern Luzon State University, Philippines

Felipe Hernandez-Rodriguez, Tecnologico de Monterrey, Mexico

Fung Pui Yan, Clare, The Hong Kong Polytechnic University, China

Gema Garcia Piqueres, The University of Cantabria, Spain

Hailey P. Ferrer, Mapua Malayan Colleges Laguna, Philippines

Hairu Yang, China West Normal University, China

Haixia Wang, Xi'an Jiaotong Liverpool University, China

Haiyun Zeng, Xi'an Jiaotong Liverpool University, China

Hao-Chu Lin, Overseas Chinese University

Harris Shah Abd Hamid, Universiti Kuala Lumpur, Malaysia

Hector A. Barrios-Pina, Tecnologico de Monterrey, Mexico

Hong Chen, Daiichi Institute of Technology, Japan

Hsiang Ju Chen, University of Taipei

Hui-Wen Huang, Shaoguan University, China

I-Chun Tsai, National Tsing Hua University

Islamiani Safitri, Universitas Labuhanbatu, Indonesia

Jaitip Nasongkhla, Chulalongkorn University, Thailand

Jasmine Nadja Pinugu, Mapua University, Philippines

Jean Marie Daniel Cando, Cebu Institute of Technology University, Philippines

Jingfei Zhang, Xi'an Jiaotong Liverpool University, China

Jiun-De Tsao, Chaoyang University of Technology

Joanna De Torres, Laguna State Polytechnic University, Philippines

John Paul P. Miranda, Don Honorio Ventura State University, Philippines
Jon Chao Hong, National Taiwan Normal University
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Kwang Sik Chung, Korea National Open University, Korea
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Liying Li, Shanghai Zhongqiao Vocational and Technical University, China
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Qihui Hu, Zhejiang Normal University, China
Qihui Hu, Zhejiang Normal University, China
Ramachandra C. Torres, Mapua Malayan Colleges Laguna, Philippines
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Riyan Hidayat, Universiti Putra Malaysia, Malaysia
Ronel Francisco Ramos, FEU Institute of Technology, Philippines
Ronina Caoili Tayuan, University of Santo Tomas, Philippines
Ronnel dela Cruz, Laguna State Polytechnic University, Philippines
Sarimah Shamsudin, Universiti Teknologi Malaysia, Malaysia
Sawitree Promsit, Chiang Rai Rajabhat University, Thailand
Shaneth C. Ambat, FEU Institute of Technology, Philippines
Sheng Yi Wu, National Tsing Hua University

Shih-Yao Hsiung, National Defense University

Siti Nadhirah Abd Rahman, Universiti Putra Malaysia, Malaysia

Thelma V. Pagtalunan, Bulacan State University, Philippines

Tien Chi Huang, National Taichung University of Science and Technology

Ting-Fang Wu, National Taiwan Normal University

Ting-sheng Weng, National Chiayi University

Tze Jin Wong, Universiti Putra Malaysia, Malaysia

Vanessa Dennen, Florida State University, USA

Viet Anh Nguyen, VNU University of Engineering and Technology, Vietnam

Vilmante Kumpikaite, Kaunas University of Technology, Lithuania

Wai Khuen Cheng, Universiti Teknologi Petronas, Malaysia

Wang Yi Hsuan, University of Taipei

Wan-Ling Chang, Chaoyang University of Technology

Wanwan Li, University of South Florida, USA

Weerachai Anotaipaiboon, Thammasat University, Thailand

Wilber Balce Sabado, University of Makati, Philippines

Wong, Ming Har Ruth, The Education University of Hong Kong, China

Xiaohua Liu, The Chinese University of Hong Kong (Shenzhen), China

Xiaoxiao Zhang, Jinan University, China

Xie Ming, Nanyang Technological University, Singapore

Yap Teng Teng, University of Malaya, Malaysia

Ying (Joy) Zheng, Frostburg State University, USA

Yin-Yu Chou, National Taichung University of Science and Technology

Yuk Ming Tang, The Hong Kong Polytechnic University, China

Yung-Ji Sher, National Taiwan Normal University

Yusen Lin, National United University

Zarinah Hamid, International Islamic University Malaysia, Malaysia

Zeng-Wei Hong, Feng-Chia University

Zhang Hengchao, International Islamic University Malaysia, Malaysia

Zhixian Zhong, Jiangxi Normal University, China

Conference Venue

Kansai University, Umeda Campus
関西大学梅田キャンパス

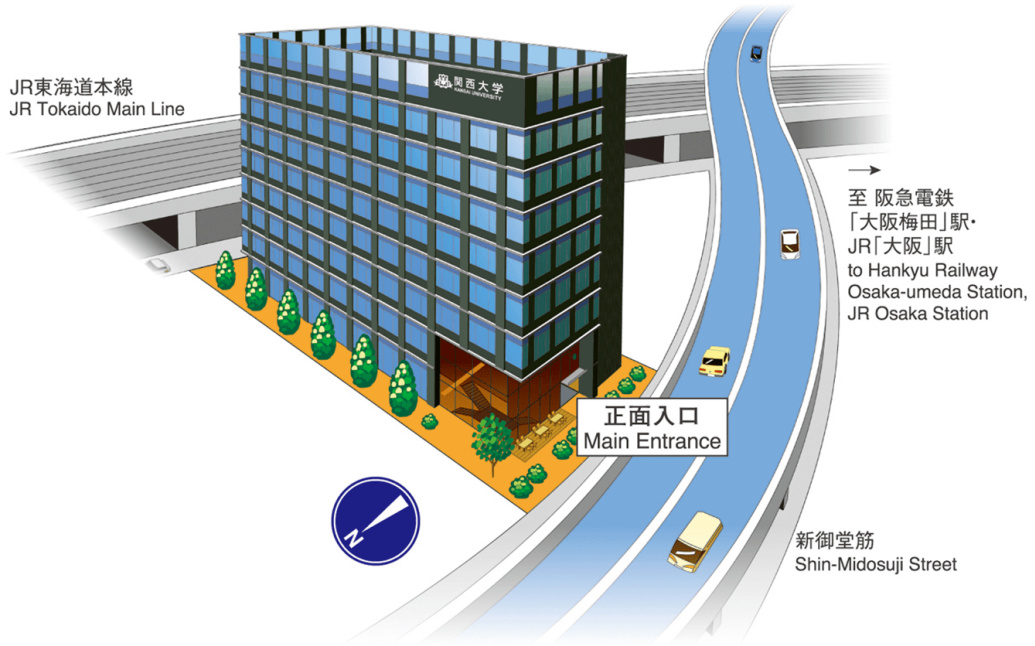
Address: 1-5 Tsuruno-cho, Kita-ku, Osaka-shi, Osaka, 530-0014

〒530-0014 大阪府大阪市北区鶴野町 1-5

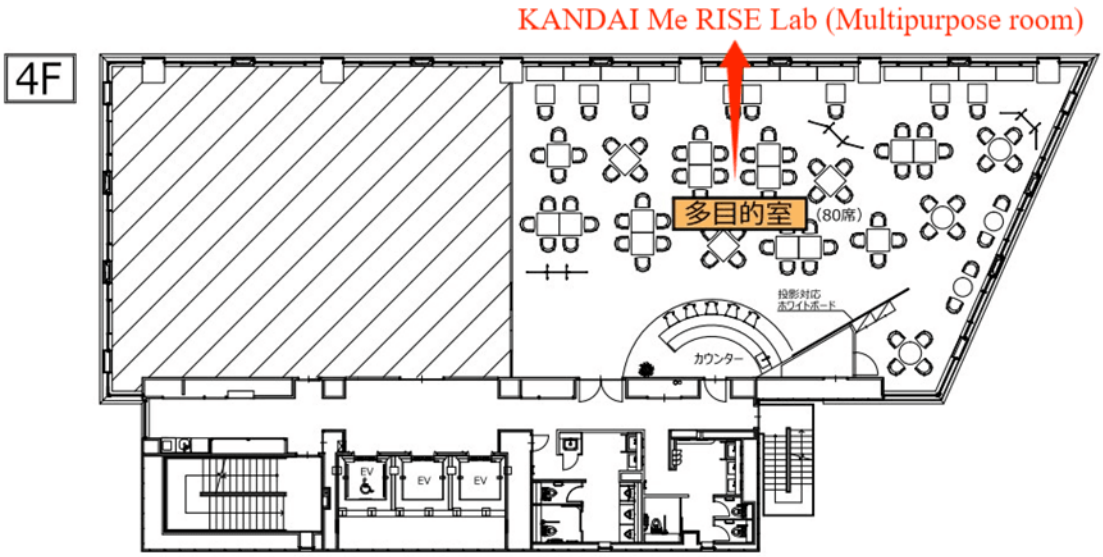
The Umeda Campus was established in October of 2016 - under the concept of providing places to think and act - to foster individuals who can lead, connect, initiate, and create. The campus takes advantage of its location in Umeda, Osaka to provide various educational and lifelong learning programs to members of society. Furthermore, training programs for innovative human resources are also offered to prospective students. The Umeda Campus utilizes the educational and research achievements of Kansai University and actively coordinates with the local community to respond to the increasingly complex and diverse needs of education aimed at future concerns. It aims to energize not only Osaka, but the whole of Japan.

Maps

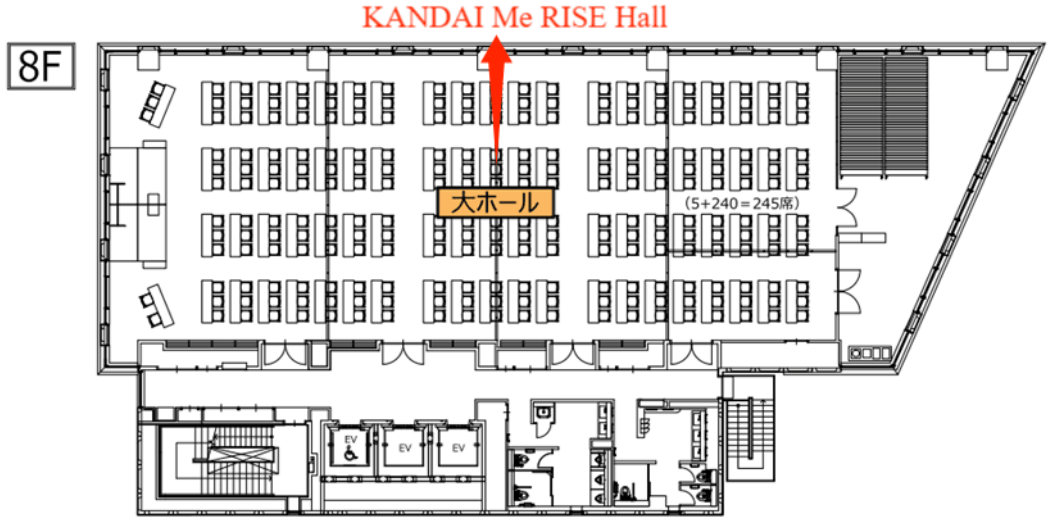
Umeda Campus Map



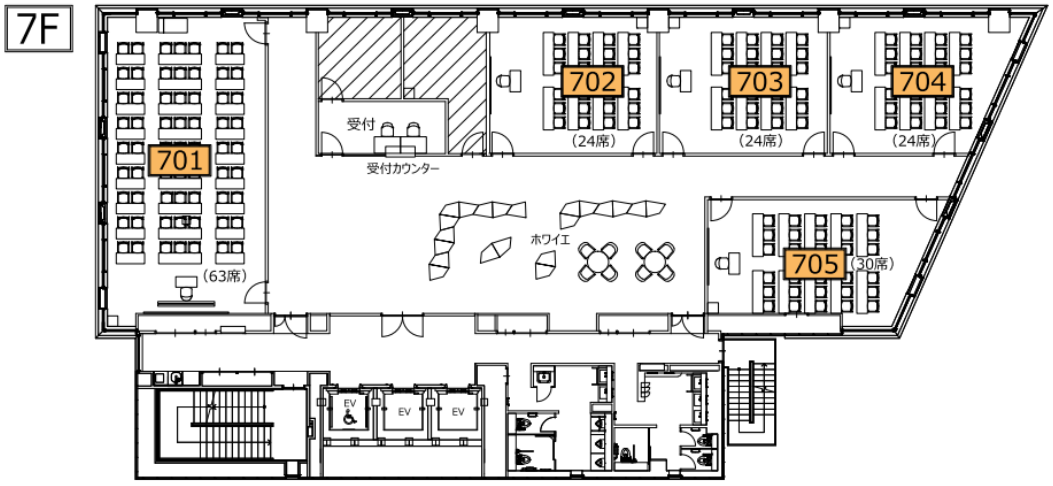
Registration Venue



Main Venue



Sub-venues



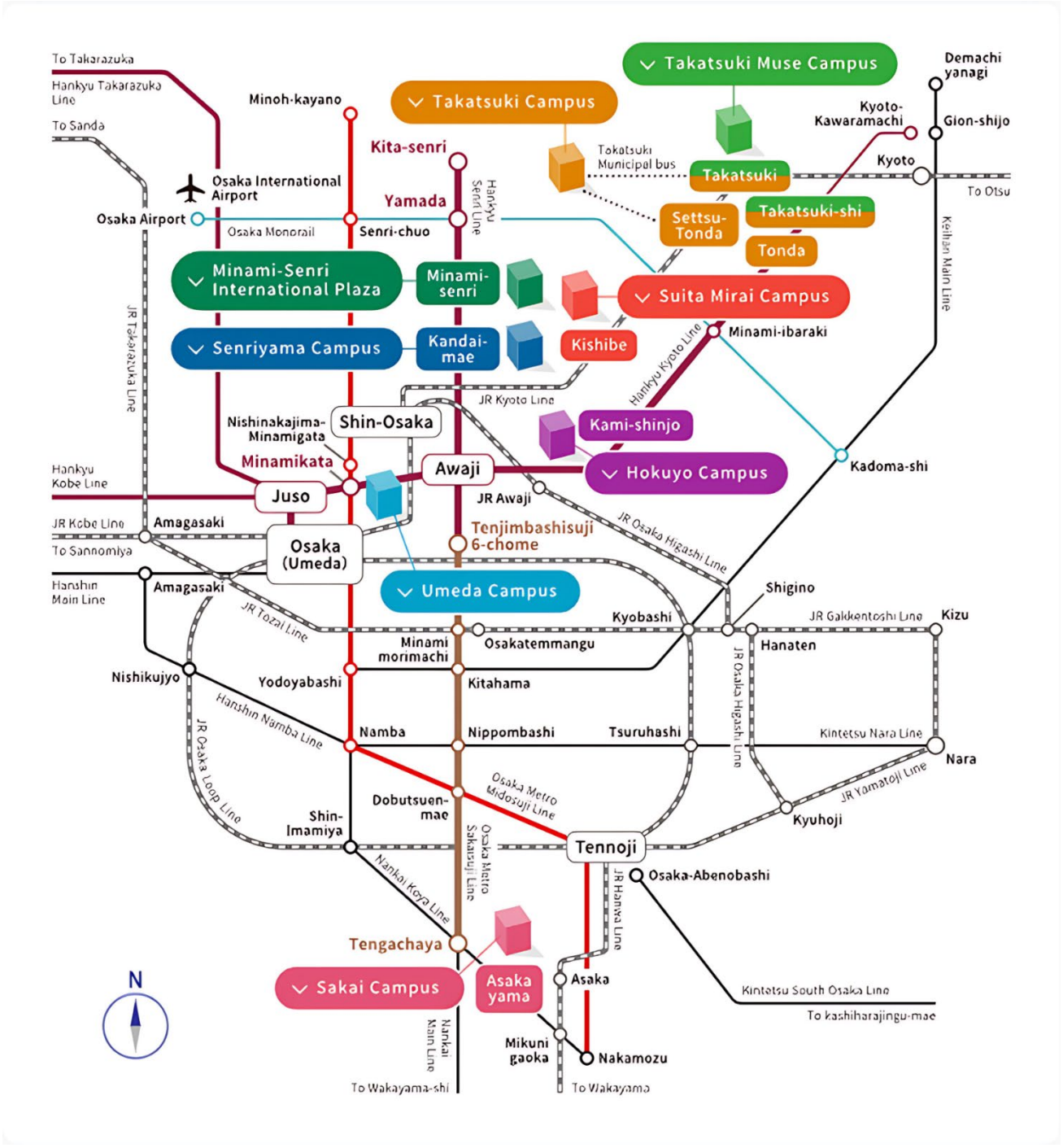
Floor Guide

1F	BOOK & CAFE	
2F	Startup Cafe OSAKA	
3F	Membership Salon	
4F	**KANDAI Me RISE Lab (Multipurpose room)**	**Registration Venue**
5F	Center for Career Development	
6/7F	**Retraining & Life-long Learning for Adults**	**Sub-venues**
8F	**KANDAI Me RISE Hall**	**Main Venue**

Room Guide

Level	Room Name	July 29, 2025	July 30, 2025	July 31, 2025
4F	KANDAI Me RISE Lab (Multipurpose room)	Registration		
8F	KANDAI Me RISE Hall		Keynote Speeches &Panel Speeches	
7F	701		Session 1 & 6	
7F	702		Session 2 & 7	
7F	703		Session 3 & 8	
7F	704		Session 4 & 9	
7F	705		Session 5 & 10	
7F	Lobby		Poster Session 1 & 2	
8F	KANDAI Me RISE Hall			Keynote Speeches &Panel Speeches
7F	701			Session 11 & 16
7F	702			Session 12 & 17
7F	703			Session 13 & 18
7F	704			Session 14 & 19
7F	705			Session 15 & 20

Traffic Guide



Nearest Stations

- JR Osaka Station (5-8 min walk)
- Hankyu Umeda Station (5-8 min walk)
- Subway Midosuji Line Umeda Station (7-10 min walk)

Click on the link and input your destination to get the real-time route:

- From **Kansai International Airport:** https://www.kansai-airport.or.jp/en/access/train
- From **Osaka International (Itami) Airport:** https://visit.jorudan.co.jp/itami/Access?lng=1

Summary & Tips

Airport	Best Route	Why
ITM	Limousine Bus to Umeda	Direct, fast, minimal walking
KIX	JR Airport Rapid to JR Osaka Station	No transfers, closest to campus
KIX	Nankai Railway + Midosuji Subway	Fastest rail option

Important Reminder:

- **Campus Access:** Enter via Grand Front Osaka North Building's south side.
- **Navigation Tip:** Umeda is a maze of underground passages – follow signs for "Grand Front Osaka" or "R Osaka Station Central North Exit".

Dinner Location

Dinner – Wednesday – July 30, 2025

Sakanaya Menoji Umeda Ten

魚屋 めのじ 梅田店

B1F

Address: Hakubasha Bldg. B1F, 4-12 Doyamacho, Kita-ku, Osaka, Osaka Prefecture

住所: 大阪府大阪市北区堂山町 4-12 白馬車 Bld. B1F

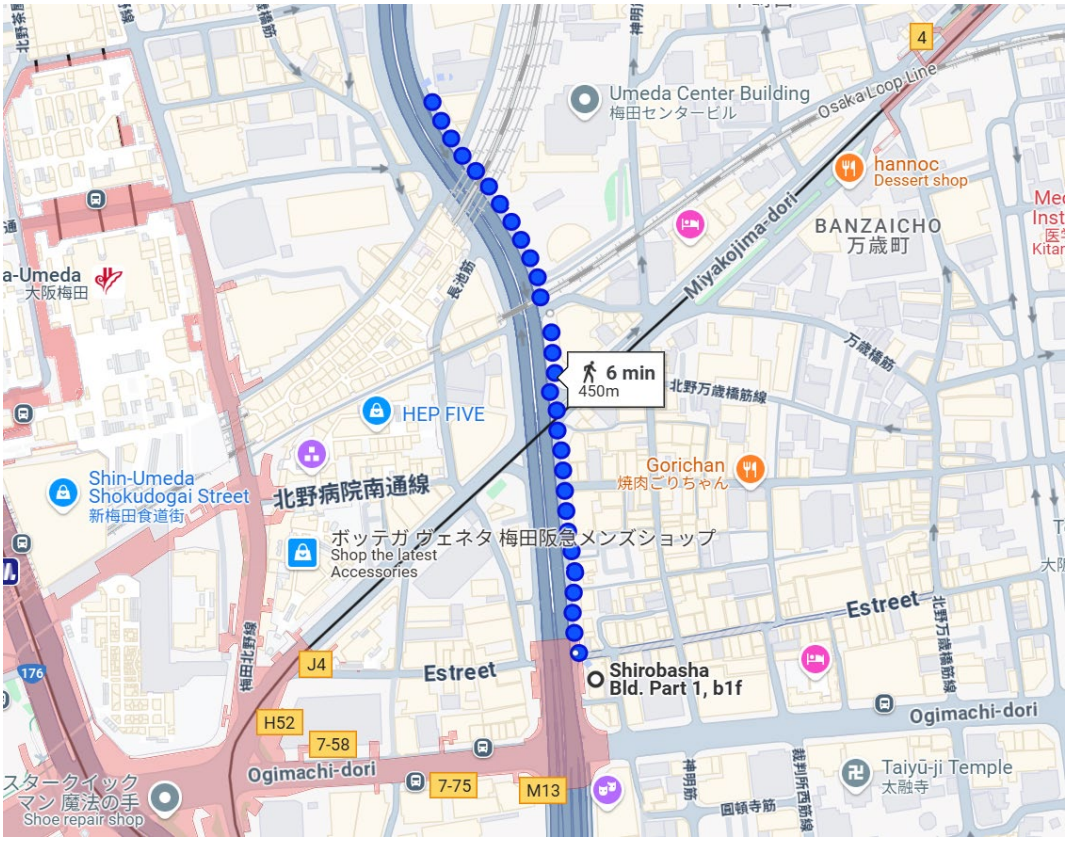
TEL: +81-5-5600-6036

Dinner type: Red Snow Crab Buffet | Time: Jul. 30, 18:30-20:30 ※120-minute system

※How to get to the dinner

After the last session (18:00), gather at the venue and **walk to the dining area.** The walk takes about **6 minutes.** If you arrive at the dining area on your own, the conference staff will be waiting for you at the entrance of the Sakanaya Menoji Umeda Ten at 18:30.

※Please click here to get the routine.



Please note: The dinner coupon collection will close at 19:00. If you choose to go to the dinner venue independently, please arrive before 19:00. Otherwise, you will need to cover the cost of the dinner yourself.

Dinner – Thursday – July 31, 2025

Yakitori Gyoza Torikin Umeda Ten

焼鳥 餃子 とり金 梅田店

8F

Address: Mr. Rin Building 8F, 1-7 Komatsubara-cho, Kita-ku, Osaka City, Osaka Prefecture

住所: 大阪府大阪市北区小松原町 1-7 ミスターりんビル 8F

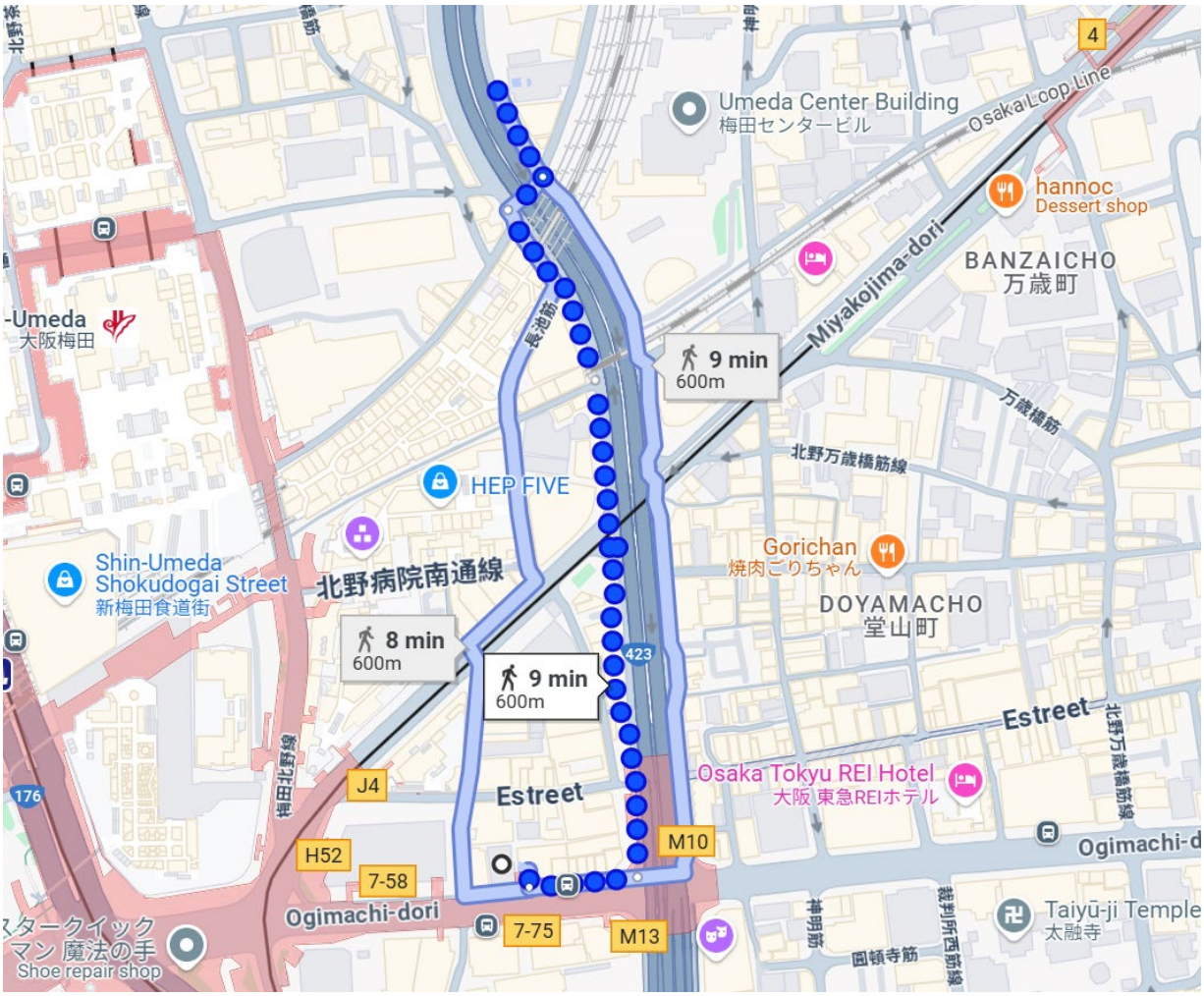
TEL: +81-5-5595-2770

Dinner type: Yakitori and Dumplings Buffet | Time: Jul. 31, 18:30-20:30 ※120-minute system

※How to get to the dinner

After the last session (18:00), gather at the venue and **walk to the dining area.** The walk takes about **9 minutes.** If you arrive at the dining area on your own, the conference staff will be waiting for you at the entrance of the Yakitori Gyoza Torikin Umeda Ten at 18:30.

※Please click here to get the routine.



Please note: The dinner coupon collection will close at 19:00. If you choose to go to the dinner venue independently, please arrive before 19:00. Otherwise, you will need to cover the cost of the dinner yourself.

Recommended Hotels

Apartment Hotel 11 Umeda ⭐ ⭐ ⭐

- **Address:** 1-23 Tsuruno-cho, Kita Ward, Osaka City, Osaka Prefecture 530-0014, Japan
- **Average room rate:** 19,000 yen per night
- **Distance to the venue:** 2 minutes' walk
- **Image:**

Hotel Hankyu RESPIRE OSAKA ⭐ ⭐ ⭐ ⭐

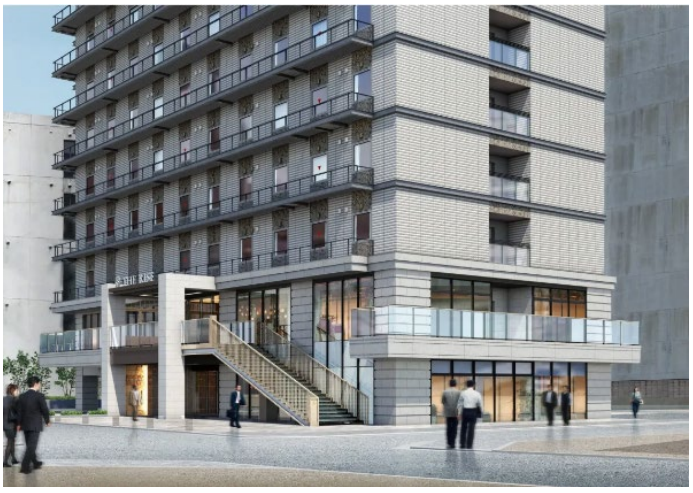
- **Address:** Ofukacho 1-1, Kita Ward, Osaka City, Osaka Prefecture 530-0011, Japan
- **Average room rate:** 35,000 yen per night
- **Distance to the venue:** 9 minutes' walk
- **Image:**

Hotel Sanrriott Osaka Hommachi ⭐ ⭐ ⭐

- **Address:** Bakuromachi 1-9-13, Chuo Ward, Osaka City, Osaka Prefecture 541-0059, Japan
- **Average room rate:** 13,000 yen per night
- **Distance to the venue:** 26 minutes by public transportation
- **Image:**

The Rise Osaka Kitashinchi ⭐ ⭐ ⭐

- **Address:** 1 Chome-1-13 Dojima, Kita Ward, Osaka City, Osaka Prefecture 530-0003, Japan
- **Average room rate:** 15,000 yen per night
- **Distance to the venue:** 18 minutes by public transportation, or 21 minutes' walk
- **Image:**

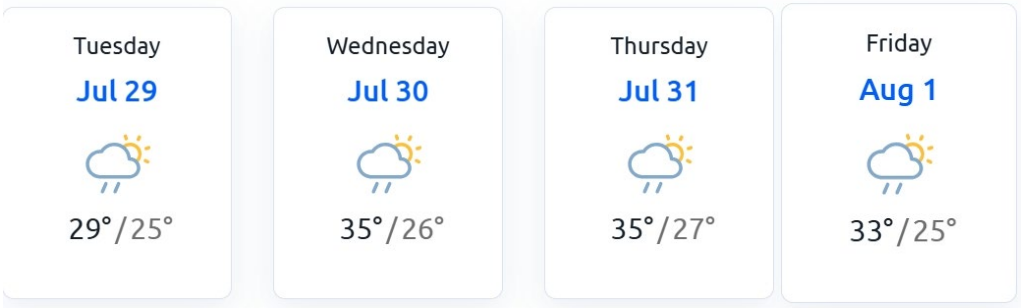


Best Western Plus Hotel Fino Osaka Kitahama ⭐ ⭐ ⭐

- **Address:** 1-7-17, Imabashi, Chuo-ku, Chuo Ward, Osaka City, Osaka Prefecture 541-0042, Japan
- **Average room rate:** 18,000 yen per night
- **Distance to the venue:** 19 minutes by public transportation, or 32 minutes' walk
- **Image:**

***The above-mentioned hotel recommendations are for reference only. The organizing committee has not agreed-upon prices or partnership with the hotels listed. Please select and book according to your needs.**

Osaka Weather in July 2025



The average weather in Osaka in July

The temperatures in Osaka in July are comfortable with **a low of 13°C and high up to 27°C.**

There's going to be **many days of rain** during the month of July in Osaka.

Osaka should expect an average of 15 to 22 days of rain, so be sure to bring along a waterproof jacket to stay dry this month!

If you're planning to visit Osaka in the near future, we highly recommend that you review the 14 day weather forecast for Osaka before you arrive.

What to pack to Osaka in July?

As you prepare for your trip to Osaka in July, it's important to consider the typical weather patterns for the time of year. Below is a carefully tailored packing list to ensure that your time in Osaka, during July, is comfortable and enjoyable, regardless of the weather conditions.

Essentials for Weather & Comfort

- **Lightweight Clothing:**

1. Quick-dry T-shirts/tanks
2. Breathable shorts/skirts
3. Light dresses or linen pants

- **Rain Gear:**

1. Compact umbrella (sturdy—sudden downpours!)
2. Packable rain jacket/windbreaker

- **Sun Protection:**

1. High-SPF sunscreen (50+)
2. Wide-brim hat & UV-blocking sunglasses

- **Footwear:**

1. Comfy walking shoes (e.g., mesh sneakers)
2. Sandals (waterproof for rain)

- **Cooling Extras:**

1. Handheld fan or portable neck fan
2. Cooling wipes/mist spray

Conference Guidelines

Onsite Presentation

About Oral Presentation

- The duration of the presentation is 15 minutes. Please target your lecture for a duration of about 13 minutes for the presentation plus about 2 minutes for questions from the audience.
  a. Each schedule of each presentation is for reference only. Authors are required to attend the whole session and enter the session room 10 minutes earlier in case there may be some changes on the conference day
  b. The certificate of oral presentations will be awarded to each presenter at the end of each session
  c. One best presenter will be selected for each session
  d. A Session group photo will be taken at the end of the session, which will be updated on the conference website after the event.
- Your punctual arrival and active involvement in each session will be highly appreciated.
- Get your presentation PPT or PDF files prepared and backed up.
- Laptops, projector & screen, and laser sticks will be provided by the conference organizer.

About Poster Presentation

- Each presentation lasts 15 minutes, including 2-3 minutes for Q&A.
- Size and Format: A1 size, portrait format
- Content: Paper ID: Display your paper ID at the top-right corner of each slide to assist organizers in managing your poster. Contact Information: Include your email address or a QR code on the poster to help attendees find your poster and reach out to you.
- Key Details: Ensure your poster covers the main points of your presentation, including the title, authors, abstract, tables and figures, methodology, results, conclusion, and references.
- Printing and Display: Authors are required to print and display the poster by themselves.
- Authors need to bring their posters to the conference and post them according to the assigned poster board
- number.
- Display Area: 7F Lobby

Dress Code

- Please wear formal clothes or national characteristics of clothing.

Important Notes

- Please take care of your belongings during the conference. The conference organizer does not assume any responsibility for the loss of personal belongings of the participants.
- Please wear your participation badge during the conference. There will be NO access for people without a badge. NEVER discard your badge at will.
- Accommodation is not provided. Delegates are suggested to make early reservations.
- Please show the badge and meal coupons when dining.

Other Notes

- To gain entry to all conference sessions and the conference room, all attendees must wear their badges, which must be visible to conference personnel.
- If you find or lose an item during the conference, please visit the registration area. We will also make every effort to notify attendees of missing items.
- Due to venue limitations, Wi-Fi will not be provided in the meeting space. Authors are advised to download their presentations in advance and save them on the conference USB drive or their own USB drives. 15 minutes before the start of each Technical Session, authors may copy their presentations into the designated session folder on the conference computer.

Online Presentation

Platform: Zoom

Download Link: https://zoom.us/download

Sign in and Join

Join a meeting without signing in.

A Zoom account is not required if you join a meeting as a participant, but you cannot change the virtual background or edit the profile picture.

Sign in with a Zoom account.

All the functions are available.

Time Zone

UTC+9; Japan Standard Time (JST)

You're suggested to set up the time on your computer in advance.

Online Room Information

Online Room	Room ID	Password
Zoom	814 7505 8504	Osaka

Please use the Password: Osaka to enter the online meeting room.

Important Notes

- Every online meeting includes a **group photo session**, especially during the morning invited speeches, requiring all online participants to attend the entire meeting and not leave the virtual room midway.
- You can download the ICEMT 2025 virtual background and PPT template here.
- You can download the ICERI 2025 virtual background and PPT template here.
- Prior to the formal conference, the presenter shall join the test room to make sure everything is on the right track
- Note: Please rename your Zoom Screen Name in the format below before entering the meeting room

Role	Format	Example
Conference Committee	Position-Name	Conference Chair-Prof. XXX
Keynote/ Invited Speaker	Position-Name	Keynote Speaker- Prof. XXX
Author	Session Number-Paper ID-Name	S1-RM1001-Name
Delegate	Delegate-Name	Delegate-Name

About Presentation

- Every presenter has **15** minutes, including Q & A. Each presentation should have at least **TEN** minutes.
- The best presentation certificate and all authors' presentation certificates will be sent after the conference by email.
- It is suggested that the presenter email a copy of his / her video presentation to the conference email box as a backup in case any technical problem occurs.

Environment & Equipment Needed

- A quiet place; Stable Internet connection; Proper lighting and background
- A computer with internet and camera; Earphone

Conference Recording

- We'll record the whole conference. If you do mind, please inform us in advance. We will stop recording when it is your turn to do the presentation.
- The whole conference will be recorded. It is suggested that you should dress formally, and we appreciate your proper behavior.

Program Overview

Time Zone: UTC+9

Day 1 – Tuesday – July 29, 2025

Time	Activity	Venue
10:00-12:00	Online Test	Room ID: 814 7505 8504 Password: Osaka
11:00-16:00	Sign in and Materials Collection	4F-KANDAI Me RISE Lab (Multipurpose room)

Day 2 – Wednesday – July 30, 2025

Venue: 8F-KANDAI Me RISE Hall
Room ID: 814 7505 8504 Password: Osaka

Host: Prof. Xiaokang Zhou, Kansai University, Japan		
9:00-9:05	Opening Remarks	**Chair Prof. Qing Li,** Hong Kong Polytechnic University, China
9:05-9:10	Welcome Address	**Prof. Katsutoshi Yada,** Kansai University, Japan
9:10-9:50	Keynote Speech 1	**Prof. Takashi Washio**, Kansai University, Japan Title: Cyber-Physical Oriented AI for Science and Industry
9:50-10:30	Keynote Speech 2	**Chair Prof. Yunhao Liu**, Tsinghua University, China Title: Embodied AI: From Digital-follow-up to Digital-Leadoff
10:30-10:50	Coffee Break & Group Photo	
10:50-11:30	Keynote Speech 3	**Chair Prof. Yi Pan,** Shenzhen University of Advanced Technology, China Title: AI LLMs Empower Biomedical Applications
11:30-12:10	Keynote Speech 4	**Prof. Bin Hu**, Lanzhou University, China Title: Computational Psychophysiology and Mental Health

12:10-13:30	Lunch Break	
13:30-15:30	Panel 1: Innovative Pedagogies and Systemic Frameworks Moderator: Prof. Fahim Khan, Toyo University, Japan	
13:30-13:50	Panel Speech 1	**Prof. Sheng Yi Wu**, National Tsing Hua University Title: The Development of Immersive Education in Taiwan
13:50-14:10	Panel Speech 2	**Prof. Jie Liu**, Western Oregon University, US Title: Spurring Creative Thinking Using Problem-Based Learning with Students as PRAM Processors
14:10-14:30	Panel Speech 3	**Prof. Tzai-Hung Wen**, National Taiwan University Title: Multiplayer Online Game-Based Framework for Exploring Human Contact Behavior and Adaptive Decision-Making During Pandemics
14:30-14:50	Panel Speech 4	**Asst. Prof. Orawit Thinnukool**, Chiang Mai University, Thailand Title: Enhancing Inclusive and Sustainable Higher Education through EU Funding and Digital Innovation: Insights from the INNO4Tourism Project in Thailand and Lao PDR
14:50-15:30	Free Talk	
15:30-16:00	Coffee Break	
16:00-18:00	Panel 2: AI in Education: Tools and Ethical Integration Moderator: Prof. Xinguo Yu, Central China Normal University, China	
16:00-16:20	Panel Speech 5	**Prof. Nobuo Funabiki**, Okayama University, Japan Title: PDLAS: A Portrait Drawing Learning Assistant System for Novices
16:20-16:40	Panel Speech 6	**Prof. Fahim Khan**, Toyo University, Japan Title: The AI Revolution in Code: Pedagogical Shifts for Programming Education
16:40-17:00	Panel Speech 7	**Prof. Joseline M. Santos**, Bulacan State University, Philippines Title: The Artificial Intelligence Utilization Scale (AIUS): A Framework for Ethical AI Integration in Academic Research Writing

17:00-17:20	Panel Speech 8 (Online)	**Assoc. Prof. Abu Bakar Mohamed Razali**, Universiti Putra Malaysia, Malaysia Title: Reviewing the Roles of AI Tools in English Academic Writing: Of Hope and Help to Hold and Hinder
17:20-18:00	Free Talk	

Parallel Technical Sessions

13:30-15:30	**Session 1**: Gamification in Education and Game-Based Learning Session Chair: **Assoc. Prof. Jeffrey Mok,** Rikkyo University, Japan	7F-701
	Session 2: Information Technology-Enabled Learning and Skills Training for Special Needs Session Chair: **Prof. Ming-Chung Chen,** National Chiayi University	7F-702
	Session 3: AI-Driven Innovation in Language Learning Session Chair: **Assoc. Prof. Sarimah binti Shamsudin,** Universiti Teknologi Malaysia, Malaysia	7F-703
	Session 4: Early Childhood Education and the Cognitive Behavioral Development Session Chair: **Assoc. Prof. Luke Gunnarson,** Baker Web Academy, US	7F-704
	Session 5: Social-Emotional Learning (SEL) and Lifelong Development Session Chair: **Asst. Prof. Chao-Feng Lai,** Asia University	7F-705
13:30-15:45	**Poster Session 1**: Artificial Intelligence and XR Technology-Enabled Educational Innovation Session Chair: **Lecturer Rod Rothwell,** George Mason University, South Korea	7F-Lobby
15:30-16:00	Coffee Break	
16:00-18:00	**Session 6**: Digital Learning and Multimedia-Based Learning Session Chair: **Prof. Yi Hsuan Wang,** University of Taipei	7F-701

	Session 7: Innovation and Practice in STEM Education Session Chair: **Lecturer Haixia Wang,** Xi'an Jiaotong Liverpool University, China	7F-702
	Session 8: Teacher Professional Development and Competency Assessment Session Chair: **Prof. Tzai-Hung Wen,** National Taiwan University	7F-703
	Session 9: Pedagogical Innovation and Competency Development Session Chair: **Prof. Angelo C. Arguson,** FEU Institute of Technology, Philippines	7F-704
	Session 10: Multimodal Language Education and Learning Session Chair: **Lecturer Worapon Toopmongkol,** Chiang Rai Rajabhat University, Thailand	7F-705
16:00-18:15	**Poster Session 2**: Innovation in Educational Practice and the Related Learning Outcomes Session Chair: **Prof. Jie Liu,** Western Oregon University, US	7F-Lobby
18:30-20:30	Dinner (Red Snow Crab Buffet-紅ズワイガニビュッフェ)	Sakanaya Menoji Umeda Ten 魚屋 めのじ 梅田店

Day 3 – Thursday – July 31, 2025

Venue: 8F-KANDAI Me RISE Hall
Room ID: 814 7505 8504 Password: Osaka

9:10-9:50	Keynote Speech 5	**Prof. Laurence T. Yang**, Zhengzhou University, China Title: Cyber-Physical-Social Intelligence
9:50-10:30	Keynote Speech 6	**Chair Prof. Qing Li**, Hong Kong Polytechnic University, China Title: PolyRAG: a Multi-level Querying Method for an Indoor Robot Smart Space
10:30-10:50	Coffee Break & Group Photo	
10:50-11:30	Keynote Speech 7 (Online)	**Distinguished Prof. Mark Warschauer**, University of California, USA Title: Talking with AI: Exploring Young Children's Learning through Conversational Media
11:30-12:10	Keynote Speech 8 (Online)	**Prof. Malissa Maria Mahmud**, Sunway University, Malaysia Title: AI in Education: Are We Optimizing or Over-Engineering Learning?
12:10-13:30	Lunch Break	
13:30-15:30	Panel 3: Assistive Learning Technologies for Specialized Domains Moderator: Prof. Jie Liu, Western Oregon University, US	
13:30-13:50	Panel Speech 9	**Prof. Xinguo Yu**, Central China Normal University, China Title: Towards a Solving Brain: Rethinking Intelligent Mathematics Education Systems
13:50-14:10	Panel Speech 10	**Prof. Min Chen**, University of Washington Bothell, United States Title: MeTILDA - A Multimedia Toolset for Endangered Language Documentation and Education
14:10-14:30	Panel Speech 11 (Online)	**Senior Lecturer Mariam Mohamad**, Universiti Sains Malaysia, Malaysia Title: A Bibliometric Review of Mobile Assistive Technology Research for Dyslexic Children: Mapping the Landscape of a Decade
14:30-15:30	Free Talk	
15:30-16:00	Coffee Break	

Parallel Technical Sessions

13:30-15:30	**Session 11**: Generative Artificial Intelligence and Large Language Models in Education Session Chair: **Prof. Edward Jay M. Quinto,** Mapúa University, Philippines	7F-701
	Session 12: Computational Intelligence in Educational Data: From Multimodal Analytics to Personalized Learning Decisions Session Chair: **Asst. Prof. Ken Fong,** Lingnan University, China	7F-702
	Session 13: Blended Learning and Technology-Enabled Teaching Innovation Session Chair: **Asst. Prof. Jomar Adams Ganding,** Mapua University, Philippines	7F-703
	Session 14: Educational Policy Innovation and the Social Impact Session Chair: **Assoc. Prof. Zeng-Wei Hong,** Feng Chia University	7F-704
	Session 15: Educational Equity and Inclusive Practices Session Chair: **Assoc. Prof. Manu Sharma,** Thompson Rivers University, Canada	7F-705
15:30-16:00	Coffee Break	
16:00-17:45	**Session 16**: Immersive Technologies in Education: Cross-Disciplinary Applications and Future Trajectories Session Chair: **Prof. Chih-Hung Wu,** National Taichung University of Education	7F-701
	Session 17: Design and Application of Educational Information System Session Chair: **Prof. John Christopher D. Castillo,** Mapua University, Philippines	7F-702
	Session 18: Artificial Intelligence-Assisted Teaching and Learning Session Chair: **Dr. Meijie Bi,** Zhejiang Normal University, China	7F-703

	Session 19: AI Literacy and the Adoption of AI Educational Tools by Teachers and Students Session Chair: **Assoc. Prof. Ai-Hua Chen,** Providence University	7F-704
	Session 20: Innovation in Mathematics and Physics Education Session Chair: **Asst. Prof. Chen, Hsiang Ju,** University of Taipei	7F-705
18:30-20:30	Dinner (Yakitori and Dumplings Buffet-焼き鳥と餃子のビュッフェ)	Yakitori Gyoza Torikin Umeda Ten 焼鳥 餃子 とり金 梅田店

Day 4 – Friday – August 1, 2025

Onsite

Time	Activity	Assembly Point
09:00-19:00	Osaka One Day Tour	The Main Entrance of Starbucks Coffee in Kansai University, Umeda Campus
08:30	Assembly Time	
09:00	Departure Time	

Online

Time	Activity	Zoom
10:00-11:45	**Online Session 1:** Intelligent Technology-Driven Educational Tools and Teaching Innovation Session Chair: **Assoc. Prof. Ramachandra C. Torres**, Mapua Malayan Colleges Laguna, Philippines	Room ID: 814 7505 8504 Password: Osaka
11:00-13:30	Break	
13:30-15:00	**Online Session 2:** Gamification in Education and Pedagogical Innovation Session Chair: **Prof. Yudong Li,** Nankai Univesity, China	Room ID: 814 7505 8504 Password: Osaka

Keynote Speech 1

Prof. Takashi Washio

Kansai University, Japan

Dean, Faculty of Business Data Science

Speech time: 09:10-09:50, Wednesday, Jul. 30, 2025 (UTC+9)
Venue: 8F-KANDAI Me RISE Hall

Takashi Washio received the ME and PhD degrees in Nuclear Engineering from Tohoku University, Miyagi, Japan, in 1985 and 1988, respectively. He is currently a Full Professor of the Faculty of Business Data Science, Kansai University, and Professor Emeritus at Osaka University. He was a Visiting Researcher in the Nuclear Reactor Laboratory at the Massachusetts Institute of Technology (MIT), USA, from 1988 to 1990; a Senior Researcher at Mitsubishi Research Institute (MRI) from 1990 to 1996; an Associate Professor at Osaka University from 1996 to 2006; and a Full Professor at Osaka University from 2006 to 2024. He has been studying fundamental and application research on AI since the 1980s. Currently, he works on the application of AI to science and industry. He has many collaborations with industries, including NEC Corporation and Kobe Steel, Ltd.

Title: Cyber-Physical Oriented AI for Science and Industry

Abstract: Along with the development of IoT and AI technologies, now we can easily convert information from the real world into data in scientific and industrial fields, and process it through various algorithms in cyberspace to solve a wide range of problems. In this lecture, I will introduce research and development examples such as the advancement of scientific measurements and the optimization of manufacturing processes using AI technologies.

Keynote Speech 2

Chair Prof. Yunhao Liu

Tsinghua University, China

Dean of School of Software, ACM Fellow, IEEE Fellow, CCF Fellow, h-index 106

Speech time: 09:50-10:30, Wednesday, Jul. 30, 2025 (UTC+9)
Venue: 8F-KANDAI Me RISE Hall

Yunhao Liu, ACM Fellow, IEEE Fellow, Chair Professor at Tsinghua University. He also served as the Dean of School of Software in Tsinghua, and the MSU Foundation Professor and the Chairperson of Department of Computer Science and Engineering in Michigan State University. Yunhao received his B.S. degree in the Department of Automation at Tsinghua University, and an M.A. degree at Beijing Foreign Studies University, China. He received an M.S. and a Ph.D. degree in Computer Science and Engineering at Michigan State University, USA. Yunhao received Hong Kong ICT Best Innovation and Research Award Grand Prize 2007, China Ministry of Education First Class Natural Science Award 2010, Second Class National Natural Science Award 2011, ACM Presidential Award 2013, CCF Wang Xuan Award 2022, CCF First Class Natural Science Award 2024, CIE First Class Natural Science Award 2024 as well as many best paper awards including ACM MobiCom 2014 best paper award, SIGCOMM 2021 Best Student Paper Award, and ACM SenSys 2023 Test of Time Award.

Title: Embodied AI: From Digital-follow-up to Digital-Leadoff

Abstract: We have passed the period of Digital-Follow-up, and now we are in Digital Twin, and trying to enter Digital-lead-off of Industrial Internet of Things. I will share lessons learned from our recent implementations of AIOT systems in oil refinery and glass factories in Middle East, United States, and China.

Keynote Speech 3

Chair Prof. Yi Pan

Shenzhen University of Advanced Technology, China

AIMBE Fellow, IET Fellow, h-index 102

Speech time: 10:50-11:30, Wednesday, Jul. 30, 2025 (UTC+9)
Venue: 8F-KANDAI Me RISE Hall

Dr. Yi Pan is currently a Chair Professor and the Dean of College of Computer Science and Control Engineering at Shenzhen Institue of Advanced Technology, Chinese Academy of Sciences, China and a Regents' Professor Emeritus at Georgia State University, USA. He served as Chair of Computer Science Department at Georgia State University from 2005 to 2020. He has also served as an Interim Associate Dean and Chair of Biology Department during 2013-2017. Dr. Pan joined Georgia State University in 2000, was promoted to full professor in 2004, named a Distinguished University Professor in 2013 and designated a Regents' Professor (the highest recognition given to a faculty member by the University System of Georgia) in 2015.

Dr. Yi Pan is Fellow of American Institute for Medical and Biological Engineering, Foreign Member of Russian Academy of Engineering, Foreign member of Ukrainian Academy of Engineering Science, Member of European Academy of Sciences and Arts, Fellow of the Royal Society for Public Health, Fellow of the Institute of Engineering and Technology, and Fellow of the Japan Society for the Promotion of Science.

Dr. Pan received his B.Eng. and M.Eng. degrees in computer engineering from Tsinghua University, China, in 1982 and 1984, respectively, and his Ph.D. degree in computer science from the University of Pittsburgh, USA, in 1991.

Dr. Pan has published more than 450 papers including over 250 journal papers with more than 100 papers published in IEEE/ACM Transactions/Journals. In addition, he has edited/authored 43 books. His work has been cited more than 30000 times based on Google Scholar and his current h-index is 102. Dr. Pan is currently serving as Editor-in-Chief of Big Data Mining and Analytics (a top 3% journal), Associate

Editor-in-Chief of Journal of Computer Science and Technology (JCST), and Chinese Journal of Electronics (CJE). Dr. Pan has served as an editor-in-chief or editorial board member for 20 journals including 7 IEEE Transactions.

Title: AI LLMs Empower Biomedical Applications

Abstract: Starting from the current state of generative artificial intelligence (AIGC) and large language models (LLMs), I will first discuss the basic principles and shortcomings of the latest AIGC products, such as ChatGPT and Sora, along with their future improvements and development trends. I will mainly elaborate on the important roles and value of AIGC in the biopharmaceutical field. Recently, ChatGPT outperformed 17 doctors by accurately diagnosing a rare disease in a 4-year-old boy. This demonstrates that, when applied appropriately, AI can indeed become an assistant in diagnosing and treating diseases. However, a study published in JAMA by Brigham and Women's Hospital, affiliated with Harvard University, showed that ChatGPT's cancer treatment recommendations were only completely accurate in 62% of cases, indicating that its results should be applied cautiously. One solution to this issue is the use of content detection tools, such as AIGC-X and ZeroGPT. The vast information behind ChatGPT is an advantage, but in specialized fields, it also brings the downside of excessive interference information. To address this, our team has developed a large language model knowledge vector library system for autism that reduces training time and achieves similar objectives using only a small amount of training data. This lecture will also introduce the use of AIGC in designing new drug molecules. By inputting numerous small drug molecules related to the treatment of a particular disease into the AIGC system, new drug molecules can be generated. Coupled with our powerful AI drug screening capabilities, we have the potential to design new drugs suitable for specific targets.

Keynote Speech 4

Prof. Bin Hu

Lanzhou University, China

Dean of the School of Information Science and Engineering, IEEE Fellow, IET Fellow, AAIA Fellow

Speech time: 11:30-12:10, Wednesday, Jul. 30, 2025 (UTC+9)
Venue: 8F-KANDAI Me RISE Hall

Bin Hu is a (Full) Professor and the Dean of the School of Medical Technology at Beijing Institute of Technology, China. He is a National Distinguished Expert, Chief Scientist of 973 as well as National Advanced Worker in 2020. He is a Fellow of IEEE/IET/AAIA and IET Fellow Assessor & Fellowship Advisor. He serves as the Editor-in-Chief for the IEEE Transactions on Computational Social Systems and an Associate Editor for IEEE Transactions on Affective Computing. He is one of Clarivate Highly Cited Researchers, World's Top 2% Scientists and 0.05% Highly Ranked Scholar from ScholarGPS.

Title: Computational Psychophysiology and Mental Health

Abstract: In recent years, mental health issues have become increasingly prominent worldwide. According to a report from the World Health Organization, approximately 970 million people suffer from mental disorders, accounting for 13% of the global population. Currently, the diagnosis of mental illnesses primarily relies on physician interviews and the Brief Psychiatric Rating Scale (BPRS), lacking objective and quantifiable diagnostic indicators. Additionally, the common treatment for mental disorders is pharmacotherapy, which is often associated with significant side effects. The rapid advancement of cutting-edge artificial intelligence and big data technologies offers new opportunities for the diagnosis and treatment of mental disorders. These technologies are transforming the approach to data-driven screening and treatment, providing more precise, personalized, and effective solutions. This report will introduce the opportunities and challenges in the field of medical electronics and computational methodologies for the diagnosis and treatment of mental disorders.

Keynote Speech 5

Prof. Laurence T. Yang

Zhengzhou University, China

Vice-President, CAE Fellow, EIC Fellow, MAE Fellow, IEEE Fellow, IET Fellow, Member of RAE, Member of NAAI, h-index 105

Speech time: 09:10-09:50, Thursday, Jul. 31, 2025 (UTC+9)
Venue: 8F-KANDAI Me RISE Hall

Laurence T. Yang got his BE in Computer Science and Technology and BSc in Applied Physics both from Tsinghua University, China and Ph.D in Computer Science from University of Victoria, Canada. He is the Academic Vice-President and Dean of School of Computer Science and Artificial Intelligence, Zhengzhou University, China. His research includes Cyber-Physical-Social Intelligence. He has published 400+ papers in the above area on top IEEE/ACM Transactions with total citations of 44000+ and H-index of 105 including 8 and 44 papers as top 0.1% and top 1% highly cited ESI papers, respectively.

His recent honors and awards include the member of US National Academy of Artificial Intelligence (2025), a foreign member of Russian Academy of Engineering (2024) and a member of Academia Europaea, the Academy of Europe (2021), the John B. Stirling Medal (2021) from Engineering Institute of Canada, IEEE Sensor Council Technical Achievement Award (2020), IEEE Canada C. C. Gotlieb Computer Medal (2020), Clarivate Analytics (Web of Science Group) Highly Cited Researcher (2019, 2020, 2022, 2023, 2024), Fellow of Institution of Engineering and Technology (2020), Fellow of Institute of Electrical and Electronics Engineers (2020), Fellow of Engineering Institute of Canada (2019), Fellow of Canadian Academy of Engineering (2017), etc.

Title: Cyber-Physical-Social Intelligence

Abstract: The booming growth and rapid development in embedded systems, wireless communications, sensing techniques and emerging support for cloud computing and social networks have enabled researchers and practitioners to create a wide variety of Cyber-Physical-Social Systems (CPSS) that reason intelligently, act autonomously, and respond to the users' needs in a context and situation-aware manner,

namely Cyber-Physical-Social Intelligence. It is the integration of computation, communication and control with the physical world, human knowledge and sociocultural elements. It is a novel emerging computing paradigm and has attracted wide concerns from both industry and academia in recent years. This talk will present our latest research on Cyber-Physical-Social Intelligence. Corresponding case studies in some typical applications will be shown to demonstrate the feasibility and flexibility.

Keynote Speech 6

Chair Prof. Qing Li

Hong Kong Polytechnic University, China

Head of the Department of Computing, IEEE Fellow,

h-index 92

Speech time: 09:50-10:30, Thursday, Jul. 31, 2025 (UTC+9)
Venue: 8F-KANDAI Me RISE Hall

Qing Li is a Chair Professor and Head of the Department of Computing, the Hong Kong Polytechnic University. He received his B.Eng. from Hunan University (Changsha), and M.Sc. and Ph.D. degrees from the University of Southern California (Los Angeles), all in computer science. His research interests include multi-modal data management, conceptual data modeling, social media, Web services, and e-learning systems. He has authored/co-authored over 500 publications in these areas, with over 51,000 citations and H-index of 92 (source: Google Scholars). He is actively involved in the research community and has served as an Editor-in-Chief of Computer & Education: X Reality (CEXR) by Elsevier, an associate editor of IEEE Transactions on Artificial Intelligence (TAI), IEEE Transactions on Cognitive and Developmental Systems (TCDS), IEEE Transactions on Knowledge and Data Engineering (TKDE), ACM Transactions on Internet Technology (TOIT), Data Science and Engineering (DSE), and World Wide Web (WWW) Journal. He also sits/sat in the Steering Committees of ACM RecSys, IEEE U-MEDIA and ICWL. Prof. Li is a Fellow of IEEE.

Title: PolyRAG: A Multi-level Querying Method for an Indoor Robot Smart Space

Abstract: Smart Space denotes dynamic, adaptive environments enhanced with robotics and AI technologies. Examples include smart homes/offices/cafes. By leveraging and integrating Computer Vision, Natural Language Processing, AIoT, Data Mining, Recommender Systems, and Sympathetic Computing, Smart Space can help improve efficiency, personalization, and user satisfactions with seamless interactions. In this talk, we introduce PolyRAG, a multi-level knowledge QA framework supporting multi-level querying for an indoor robot application system.

Building on top of a naive RAG layer, we build a knowledge pyramid by adding a knowledge graph layer and an ontology schema, so as to obtain a good balance of recall and precision when applied to a specific domain such as coffee robot interactions. We employ cross-layer augmentation techniques for comprehensive knowledge coverage and dynamic updates of the Ontology scheme and instances. To ensure compactness, we utilize cross-layer filtering methods for knowledge condensation in KGs. An experimental coffee robot prototype is constructed, and preliminary empirical studies are conducted to show the effectiveness of our PolyRAG supporting a waterfall model for querying from ontology to KG to chunk-based raw text.

Keynote Speech 7 (Online)

Distinguished Prof. Mark Warschauer

University of California, USA

Director of the Digital Learning Lab, Fellow of AERA,

Member of NAEd, h-index 104

Speech time: 10:50-11:30, Thursday, Jul. 31, 2025 (UTC+9)
Venue: 8F-KANDAI Me RISE Hall
Room ID: 814 7505 8504 (Password: Osaka)

Mark Warschauer is a Distinguished Professor of Education at the University of California, Irvine with affiliated appointments in Informatics, Language Science, and Psychological Science, and Director of the Digital Learning Lab. With more than 58,000 citations, he is one of the most widely cited scholars in the world on digital learning and artificial intelligence in education. Dr. Warschauer has previously taught and conducted research in Japan, China, Egypt, Singapore, the Czech Republic, Russia, Mexico, and Brazil. He has served as founding editor of both Language Learning & Technology journal and AERA Open, and he currently edits the Cambridge Elements series, Generative AI in Education, for Cambridge University Press. He is a former Fulbright Scholar, a Fellow of the American Education Research Association, and a Member of the National Academy of Education.

Title: Talking with AI: Exploring Young Children's Learning through Conversational Media

Abstract: One of the most powerful ways to support young children's learning is through rich, dialogic interaction with an adult mentor–whether through shared reading of a favorite book or co-viewing educational media. At the University of California, Irvine, our Converse to Learn project has, over the past five years, explored whether AI-powered conversation with characters from books and television can replicate these learning benefits. In this keynote, I will showcase the conversational media we have developed, share empirical findings on children's engagement and learning outcomes, and reflect on what we know–and still need to learn–about how generative AI can support young children's learning through dialogue.

Keynote Speech 8 (Online)

Prof. Malissa Maria Mahmud

Sunway University, Malaysia

Dean, School of Education

Speech time: 11:30-12:10, Thursday, Jul. 31, 2025 (UTC+9)
Venue: 8F-KANDAI Me RISE Hall
Room ID: 814 7505 8504 (Password: Osaka)

Malissa Maria Mahmud is the Dean and Professor of Educational Technology at the School of Education, Sunway University, where she is dedicated to making education more accessible, inclusive, and impactful through innovation. Her work explores how digital learning and emerging technologies can transform teaching, engagement, and learner outcomes in an evolving educational landscape. A recognized expert in educational technology, she has shared her insights at international conferences and published in leading academic journals, earning recognition for her contributions to teaching excellence and research in digital education.

Title: AI in Education: Are We Optimizing or Over-Engineering Learning?

Abstract: The rapid advancement of AI and adaptive learning technologies has transformed digital education, promising greater personalization and efficiency. However, despite widespread adoption, there remains a critical gap in understanding how AI-driven learning impacts cognitive processing, engagement, and long-term knowledge retention. While AI can optimize content delivery and automate assessments, its role in enhancing deep learning, critical thinking, and problem-solving skills remains underexplored. This keynote examines the intersection of AI-driven instructional design, cognitive learning theories, and learning analytics, addressing key challenges and opportunities in leveraging AI for meaningful, pedagogically sound learning experiences. The session will explore: The limitations of current AI-based learning models, particularly their reliance on engagement metacognition. The discussion will highlight how institutions and educators can move beyond automation to develop AI-powered learning ecosystems that truly enhance learning outcomes.

Panel Speech 1

Prof. Sheng Yi Wu

National Tsing Hua University

Speech time: 13:30-13:50, Wednesday, Jul. 30, 2025 (UTC+9)
Venue: 8F-KANDAI Me RISE Hall

Sheng-Yi Wu received his Ph.D. from the Graduate Institute of Network Learning Technology at National Central University. During his tenure at National Pingtung University, he served as the Director of the International Master Program in STEM Education. He is currently a professor at the Center for Teacher Education, National Tsing Hua University, Taiwan. His research interests include STEM education, AI education, immersive education, and computational thinking. In recent years, in addition to leading several research projects on STEM and AI, he has served as the principal investigator (PI) for projects promoting immersive education in primary and secondary schools. Academically, he has been honored with the Wu Ta-You Memorial Award and was recognized among the World's Top 2% Scientists in 2023-2024.

Title: The Development of Immersive Education in Taiwan

Abstract: In recent years, Taiwan has actively promoted the development of immersive education, aiming to enhance learning experiences through the integration of digital technologies such as Virtual Reality (VR). By embedding immersive content into well-designed teaching plans, students are no longer limited to traditional textbooks or videos. Instead, they are immersed in highly contextualized learning environments that stimulate engagement, foster interest, and strengthen skills in problem-solving and interdisciplinary thinking.

With strong support from government policies, Taiwan launched a national initiative eight years ago to develop immersive educational content. At the heart of this effort is the “5G Innovative Learning Demonstration School” project, which brings together universities, primary and secondary schools, and

industry partners to build a cross-disciplinary and future-oriented learning ecosystem. The development of immersive education has gone through four key phases, each deepening the integration of technology and pedagogical practice.

In the first phase, the focus was on developing and piloting VR teaching materials to lay the foundation for immersive learning content and instructional models. As 5G infrastructure became more widespread, the second phase emphasized the practical application of VR in the classroom, enabling smooth, real-time interaction in high-speed, low-latency network environments for both teachers and students.

Building on these initial phases, the third phase introduced XR (Extended Reality) technologies and the concept of the educational metaverse. These advancements opened up new possibilities for collaborative learning that blends virtual and physical spaces, offering students richer and more interactive digital learning experiences. In the fourth and most recent phase, the focus shifted to deeper implementation and broad dissemination. This includes expanding teacher communities, encouraging cross-school collaboration, and systematically evaluating and refining curriculum design and learning outcomes—all aimed at promoting sustainable educational innovation.

In this talk, the speaker will share firsthand experiences from participating in all four phases of development. The presentation will detail the strategies, implementation milestones, and key elements that have shaped Taiwan's immersive education journey—from its beginnings to its current achievements. Topics such as instructional design, teacher support systems, professional learning communities, and student learning effectiveness will be explored. Through this presentation, the audience is invited to reflect on the future of immersive learning and consider how emerging technologies can continue to energize and transform educational practices.

Panel Speech 2

Prof. Jie Liu

Western Oregon University, US

Speech time: 13:50-14:10, Wednesday, Jul. 30, 2025 (UTC+9)
Venue: 8F-KANDAI Me RISE Hall

Dr. Jie Liu is a tenured full professor in the Computer Science Division at Western Oregon University (WOU), with nearly four decades of experience spanning academia and industry. He earned his Ph.D. in Computer Science from Oregon State University in 1993, specializing in parallel processing.

In addition to his academic work, Dr. Liu has collaborated extensively with government agencies and leading companies such as Microsoft, HP, and HollySys, serving in roles including consultants, senior software engineer, data engineer, and web architect. His recent projects at HPI have focused on data science and artificial intelligence (Agentic AI), underscoring his expertise in emerging technologies.

A prolific researcher, Dr. Liu has published over 50 peer-reviewed papers on topics including big data security, networking, data processing, parallel computing, and computer science education. He is well known for his work in blockchain and big data, having contributed a series of invited articles to China Financial News and delivered specialized training in blockchain and AI for HollySys. His current research interests center on computer science education, particularly the integration and impact of generative AI. Dr. Liu has delivered more than 200 invited talks at universities and institutions across the United States and China. He also serves as a visiting professor at Beijing Jiaotong University and Xuchang University in China.

Title: Spurring Creative Thinking Using Problem-Based Learning with Students as PRAM Processors

Abstract: In this talk, we introduce a newly launched research initiative that investigates Problem-Based Learning (PBL) as a transformative pedagogical approach for teaching parallel computation to undergraduate and graduate students in computer science and software engineering. The project focuses on

a carefully selected set of elegant Parallel Random-Access Machine (PRAM) algorithms—not merely for their computational efficiency, but for their potential to spark creativity by encouraging students to re-examine and contrast these algorithms with their sequential counterparts.

Central to our approach are immersive, role-playing activities in which students take on the roles of PRAM processors. This hands-on framework fosters experiential learning and promotes a deeper, more intuitive understanding of parallel algorithms. We detail a series of structured instructional activities and share findings from our preliminary evaluation framework, which includes data gathered from diverse classroom settings—including those where, due to external constraints, students did not participate in the PBL activities. These incidental control groups have provided valuable comparative insights into the effectiveness of the method.

This work contributes to the evolving landscape of computer science education by offering an innovative strategy for teaching complex theoretical material, particularly in parallel algorithm design. We argue that embedding PBL into the curriculum not only helps demystify challenging concepts but also nurtures creative problem-solving skills. Our results suggest that reframing problems from multiple perspectives often leads students to discover novel and inherently parallelizable solutions—demonstrating the value of encouraging non-linear, exploratory thinking.

By reimagining how we teach foundational but abstract topics such as PRAM algorithms, this research seeks to broaden the impact and accessibility of computer science education in an era increasingly defined by multicore and parallel processing.

Panel Speech 3

Prof. Tzai-Hung Wen

National Taiwan University

Speech time: 14:10-14:30, Wednesday, Jul. 30, 2025 (UTC+9)
Venue: 8F-KANDAI Me RISE Hall

Tzai-Hung Wen received his B.S., M.S., and Ph.D. degrees in Bioenvironmental Systems Engineering from National Taiwan University in 1996, 1998, and 2006, respectively. He subsequently served as a postdoctoral fellow at the Center for Geographic Information Science, Academia Sinica, from 2007 to 2008. In 2009, he joined the faculty of the Department of Geography at National Taiwan University, where he served as department chair from 2018 to 2021. He also holds joint appointments as a professor in the Institute of Epidemiology and Preventive Medicine and the Graduate Institute of Public Affairs. His research primarily focuses on modeling geospatial processes in human environments, with an emphasis on the spatial diffusion of epidemics, population mobility structures, and human-environment interactions. His recent significant research has been published in IEEE Transactions on Computational Social Systems, International Journal of Health Geographics, and Applied Geography.

Title: Multiplayer Online Game-Based Framework for Exploring Human Contact Behavior and Adaptive Decision-Making During Pandemics

Abstract: Game-based environments provide rich, interactive spaces for learning and behavioral adaptation, making them valuable tools for studying decision-making under uncertainty. This study built a multiplayer simulation based on the Minecraft platform to explore how players learn and adapt to a disease outbreak within a dynamic gaming environment. Unlike traditional models with predefined behavioral rules, this framework allows players to experience real-time epidemic progression, adjust strategies dynamically, and make vaccination decisions based on network effects and evolving risk perception. The study tracks 18 participants over 34 in-game days, capturing player interactions, risk exposure, and

vaccination uptake. Results indicate that players progressively adapted their behavior, with early vaccine adopters relying on intrinsic risk perception, while later adopters learned through social observation and epidemic trends. Network structures influenced decision-making, as highly connected players vaccinated earlier, whereas others exhibited free-riding behavior, delaying vaccination when surrounded by immunized peers. Additionally, players adjusted movement patterns and risk-taking behavior as they gained experience within the simulation. These findings demonstrate the effectiveness of game-based simulations for studying adaptive learning. They highlight how players actively engage with risk, experiment with strategies, and refine their decision-making over time. This research contributes to game-based learning, computational epidemiology, and public health education, suggesting that interactive simulations can enhance epidemic preparedness and vaccine adoption strategies. Future research should explore how digital environments can further optimize adaptive learning in public health contexts.

Panel Speech 4

Asst. Prof. Orawit Thinnukool

Chiang Mai University, Thailand

Speech time: 14:30-14:50, Wednesday, Jul. 30, 2025 (UTC+9)
Venue: 8F-KANDAI Me RISE Hall

Assistant Professor Dr. Orawit Thinnukool received his Ph.D. in Research Methodology, specializing in statistical modeling and data analytics, in 2014 from Prince of Songkla University, Thailand. At Chiang Mai University, Dr. Orawit served as the Head of the Innovative Research and Computational Science Lab, conducting interdisciplinary research in fields such as informatics, computational science, and cybersecurity. He has collaborated with leading international institutions, including the Centre for Transport Studies at Imperial College London, the Jameel Clinic at the Massachusetts Institute of Technology (MIT), USA, Kristiania University College in Oslo, Norway, and the Indian Institute of Technology Roorkee. His projects have focused on the integration of information technology in education, particularly in the areas of educational technology, innovative curriculum development in tourism, and sustainability-oriented education. Currently, he is serving as the Project Coordinator for an EU-funded initiative, and position of Acting Dean for International Collaboration and Fundraising at CAMT, CMU. In addition to his academic roles, Dr. Orawit serves on the editorial boards of several international journals, including: PLOS ONE (California, USA), BMC Digital Health, BMC Medical Informatics and Decision Making (BioMed Central, UK) His ongoing work not only focuses on publishing high-impact research but also on securing international research funding to advance academic innovation and development. In this invited speech, Dr. Orawit will share his expertise on accessing EU funding opportunities and discuss the role of information technology in enhancing education, particularly in resource-constrained contexts. His aim is to promote future-ready, inclusive, and sustainable education systems through international collaboration and resource-constrained contexts. His aim is to promote future-ready, inclusive, and sustainable education systems through international collaboration and innovation.

Title: Enhancing Inclusive and Sustainable Higher Education through EU Funding and Digital Innovation: Insights from the INNO4Tourism Project in Thailand and Lao PDR

Abstract: In the evolving landscape of higher education and workforce development, access to international funding and the strategic integration of information technology play critical roles in fostering inclusive and future-ready education systems. Access to funding opportunities is especially important, as research fellows need adequate resources to support the development of related innovations or technologies. However, access to research funding remains quite limited in many regions, particularly in Asia, which poses challenges for advancing educational and technological progress. In this context, European Union (EU) funding opportunities, particularly under programs such as Erasmus+, are vital for enhancing educational innovation and capacity building within resource-constrained settings.

The recent INNO4Tourism project, funded by the European Commission, illustrates mechanisms for aligning higher education institutions (HEIs) in Thailand and Lao PDR with the contemporary labor market demands of the hospitality and tourism sectors. This alignment is pursued through university-business cooperation, innovative curriculum development, and targeted capacity-building initiatives that leverage digital solutions and holistic career services.

The research emphasizes how information technology acts as a catalyst to bridge skill gaps, expand access to quality education, and support sustainable, lifelong learning. By fostering partnerships between academia and industry and utilizing EU funding frameworks, HEIs can pilot novel curricula—such as those on sustainable tourism—while also establishing structures that promote employability and adaptability among students and staff. Ultimately, these efforts contribute to building resilient, inclusive, and sustainable education systems that respond to both local needs and global trends, showcasing the transformative potential of international collaboration and digital innovation in higher education.

Keyword: Higher education institutions (HEIs); Capacity building; Lifelong learning; Information technology in education

Panel Speech 5

Prof. Nobuo Funabiki

Okayama University, Japan

Speech time: 16:00-16:20, Wednesday, Jul. 30, 2025 (UTC+9)
Venue: 8F-KANDAI Me RISE Hall

Nobuo Funabiki received the B.S. and Ph.D. degrees in mathematical engineering and information physics from the University of Tokyo, Japan, in 1984 and 1993, respectively. He received the M.S. degree in electrical engineering from Case Western Reserve University, USA, in 1991. From 1984 to 1994, he was with the System Engineering Division, Sumitomo Metal Industries, Ltd., Japan. In 1994, he joined the Department of Information and Computer Sciences at Osaka University, Japan, as an assistant professor, and became an associate professor in 1995. He stayed at University of California, Santa Barbara, in 2000-2001, as a visiting researcher. In 2001, he moved to the Department of Information and Communication Systems at Okayama University as a professor. His research interests include computer networks, IoT, optimization algorithms, educational technology, and web application systems. He is a member of IEEE, IEICE, and IPSJ. He was a vice president for conferences at IEEE Consumer Technology Society (CTSoC) in 2023 and 2024, and the chairman at IEEE Hiroshima Section in 2015 and 2016.

Title: PDLAS: A Portrait Drawing Learning Assistant System for Novices

Abstract: Nowadays, portrait drawing has become increasingly popular as a means of developing artistic skills and nurturing emotional expression. However, it is still challenging for novices to start learning it, as they usually lack a solid grasp of proportions and structural foundations of the five senses. On the other hand, with advancements of digital technologies, there are growing interests in developing computer-assisted systems to help beginners learn and improve their portrait drawing skills.

Under the motivations, we have studied Portrait Drawing Learning Assistant System (PDLAS) for guiding novices by providing auxiliary lines of facial features. A novice can draw a portrait on iPad without

difficulty by referring to auxiliary lines. The auxiliary line generation algorithm was presented to extract the lines from a given face photo running on a PC. To relax limitations, such as variations in lighting conditions, this algorithm adopts OpenPose to extract necessary facial feature points called keypoints. Besides, for the hair or the eyeglass, OpenCV library functions are used together.

In addition, we have presented the exactness assessment method to evaluate drawing accuracy using the Normalized Cross-Correlation (NCC) algorithm. It calculates the similarity score between the drawing result and the initial portrait photo. To extract a face part, the rectangular bounding box around the part is found using key points provided in OpenPose. This accuracy feedback is expected not only to enhance the interactivity and efficiency of portrait drawing learning but also offers valuable suggestions for novices.

Panel Speech 6

Prof. Fahim Khan

Toyo University, Japan

Speech time: 16:20-16:40, Wednesday, Jul. 30, 2025 (UTC+9)
Venue: 8F-KANDAI Me RISE Hall

Dr. Fahim Khan is a Professor at the Department of Information Networking for Innovation and Design (INIAD) in Toyo University, Tokyo, Japan. Prior to joining Toyo University, he served as a faculty member at the University of Tokyo, from where he also obtained his MS and PhD in Applied Computer Science. His recent research encompasses several avenues of applied computing, including: developing security measures for IoT and smart spaces; designing distributed systems using machine learning, generative AI, and blockchain; and leveraging EdTech and learning sciences for CS, STEM and SDGs education. His research publications have won multiple best paper awards at IEEE conferences. He actively serves as a committee member at numerous IEEE and ACM conferences. A Senior Member of IEEE, Khan is a recipient of IEEE Japan Medal. He is also a globally selected member of ACM Future of Computing Academy (ACM-FCA), an initiative that brings together next-generation leaders in computing to carry the computing community into the future.

Title: The AI Revolution in Code: Pedagogical Shifts for Programming Education

The rapid advancement of generative AI (GenAI), particularly its unprecedented ability to produce sophisticated content including program code, is reshaping various industries. While these powerful tools offer significant productivity boosts for seasoned software developers, their integration into academic environments presents both profound opportunities and considerable challenges for programming education. Specifically, in introductory programming courses, a critical concern emerges: students may gravitate towards using GenAI for assignment solutions, potentially circumventing the crucial process of understanding fundamental programming concepts and developing problem-solving skills independently.

This over-reliance risks undermining the very learning objectives that programming education aims to achieve.

This talk argues for a proactive and reimagined approach to programming pedagogy that strategically integrates GenAI. Our goal is not to suppress these tools, but to harness their power in a way that genuinely enhances learning, rather than hindering it. We will begin by examining the current landscape of programming education, highlighting existing pedagogical strengths and limitations. Following this, we will investigate the promises and perils associated with incorporating GenAI into the curriculum. This includes considering emerging practices like vibe coding, where users interact with AI to generate code through natural language prompts, often with less emphasis on deeply understanding the underlying syntax. Furthermore, we will present innovative pedagogical strategies that are already being explored and implemented globally. These approaches are not merely incremental changes; they are ushering in a potential paradigm shift for programming education, preparing students to thrive as critical thinkers and effective problem-solvers in this evolving, GenAI-driven era.

Panel Speech 7

Prof. Joseline M. Santos

Bulacan State University, Philippines

Speech time: 16:40-17:00, Wednesday, Jul. 30, 2025 (UTC+9)
Venue: 8F-KANDAI Me RISE Hall

Dr. Joseline M. Santos holds a Doctorate in Education major in Educational Leadership and Management. Currently, she is enrolled at the UP Open University, taking up a Graduate Certificate in Distance Education. Her extensive professional background encompasses teaching a diverse range of subjects, including technology for teaching and learning and research. Currently serving as a full-time Professor IV at the Bulacan State University College of Education, Dr. Santos also serves as an adjunct faculty member in the Graduate School. In addition to her teaching roles, she holds the positions of OIC-Director of the Research Management Office and concurrently serves as the Graduate School Head for Publications. Dr. Santos has also conducted a pioneering study that led to the development of the Artificial Intelligence Utilization Scale (AIUS) Framework for Research Writing, which became the basis for the Policy-Guidelines on AI Utilization in Research Writing at Bulacan State University.

Title: The Artificial Intelligence Utilization Scale (AIUS): A Framework for Ethical AI Integration in Academic Research Writing

Abstract: The Artificial Intelligence Utilization Scale (AIUS) is an innovative framework developed by Bulacan State University to guide the ethical, transparent, and responsible use of generative AI tools in academic research writing. The scale identifies five levels of AI integration—from non-use to fully AI-assisted—allowing students, faculty, and researchers to self-assess and disclose their level of AI involvement. Grounded in principles of academic integrity and aligned with both institutional and global standards, the AIUS provides a structured basis for monitoring and managing AI use in scholarly outputs.

It has been institutionalized at Bulacan State University as a required component in research documentation through the AI Utilization Declaration. The AIUS also supports digital literacy efforts by serving as a core tool in research capability trainings and workshops. This scalable and adaptable model ensures the preservation of originality, promotes ethical research practices, and enhances scholarly rigor in the rapidly evolving landscape of AI-assisted academic work.

Panel Speech 8 (Online)

Assoc. Prof. Abu Bakar Mohamed Razali

Universiti Putra Malaysia, Malaysia

Speech time: 17:00-17:20, Wednesday, Jul. 30, 2025 (UTC+9)
Venue: 8F-KANDAI Me RISE Hall
Room ID: 814 7505 8504 (Password: Osaka)

Abu Bakar Razali graduated from the Department of Teacher Education, College of Education, Michigan State University. Abu Bakar graduated with a doctoral degree of philosophy in Curriculum, Instruction, and Teacher Education, with graduate specialization on Language and Literacy Education. Abu Bakar currently works as an associate professor at the Department of Language and Humanities Education at Faculty of Educational Studies, University Putra of Malaysia. Abu Bakar's research interests are on the teaching and learning of English as a second language. He is particularly interested in reading and writing instruction and digital technology in the teaching and learning of English as a second language. He hopes to delve more deeply into the field of English language writing instruction and digital technology especially in the teaching and learning of English as a second language.

Title: Reviewing the Roles of AI Tools in English Academic Writing: Of Hope and Help to Hold and Hinder

The use of Artificial Intelligence (AI) writing tools in English academic writing has gained increasing attention due to its potential to improve writing skills, especially in the field of English as a second/foreign language (ESL/EFL). The widespread use of Artificial Intelligence (AI) tools, such as ChatGPT, DeepSeek, Gemini, Grammarly, and QuillBot, has also transformed how English as a second/foreign (ESL/EFL) students approach English academic writing. While these AI tools offer benefits in improving academic writing skills of ESL/EFL students and should be carefully considered in the teaching and learning of English in the digital age, English instructors and education providers worry if these students really are able to develop their English academic writing skills or not. There is also concern that they might rely too much on these AI tools and not be personally equipped to practice English academic writing in tertiary

Panel Speech 9

Prof. Xinguo Yu

Central China Normal University, China

Speech time: 13:30-13:50, Thursday, Jul. 31, 2025 (UTC+9)
Venue: 8F-KANDAI Me RISE Hall

Prof. Yu Xinguo is Professor at the National Engineering Research Center for E-Learning, Central China Normal University, Wuhan, China. He also holds an adjunct professorship at the University of Wollongong, Australia. He is the Chair of the Hubei Society of Artificial Intelligence in Research and Education. Prof. Yu's research primarily focuses on HI-AI collaboration, intelligent education, intelligent research, educational robotics, multimedia analysis, computer vision, and machine learning. With over 200 published research papers including over 30 SCI papers. Prof. Yu serves as an Associate Editor and Guest Editor for several international journals and has contributed significantly to the global academic community by serving as General Chair, Keynote Speaker, and Program Chair for more than 30 international conferences. Since 2021, he has pioneered and led the annual International Conference on Intelligent Education and Intelligent Research.

Title: Towards a Solving Brain: Rethinking Intelligent Mathematics Education Systems

Abstract: The development of computational devices capable of solving mathematical exercises has spanned more than sixty years. Despite significant progress through various approaches, we have yet to achieve a truly satisfactory solution. This research history suggests that pursuing algorithms designed solely to solve numerous exercise problems may represent a misguided objective. Instead, we propose that developing a “solving brain” offers a more promising direction, as such systems can incorporate internal inference mechanisms that complement algorithmic processing power. Crucially, a solving brain architecture can generate valuable cognitive and inferential materials to support intelligent mathematics education. The fundamental structure of this solving brain is conceptualized as a state-transform graph,

where states represent abstract classes of intermediate problem-solving results and transforms function as morphisms between these states. This framework enables the solving brain to produce rich educational materials by leveraging its structural properties and transformation capabilities.

Panel Speech 10

Prof. Min Chen

University of Washington Bothell, United States

Speech time: 13:50-14:10, Thursday, Jul. 31, 2025 (UTC+9)
Venue: 8F-KANDAI Me RISE Hall

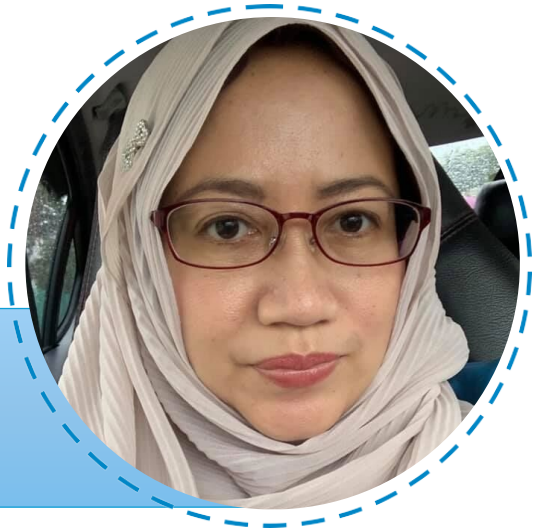
Min Chen, Ph.D., is a Professor in Computing and Software Systems Division, School of STEM at University of Washington Bothell. Prior to coming to UW Bothell, she was an Associate Professor at the Department of Computer Science, University of Montana. Her research interests include multimedia big data analytics, multimedia data mining, machine learning, and their applications on interdisciplinary projects. She received the Best Demo Award from the 2021 IEEE International Conference on Multimedia Information Processing and Retrieval, the Best Paper Award from the 15th IEEE International Conference on Information Reuse and Integration, and 2015 IGI Global Annual Excellence in Research Journal Award. Dr. Chen is currently serving as the Chair of the IEEE Computer Society Technical Community on IEEE TCMC, the Associate Editor of IEEE Transactions on Multimedia (TMM) and IJMDEM. She was the TPC co-chair of 9 international conferences, a steering committee member of 2 international conferences, and a key organizer of another 12 international conferences.

Title: MeTILDA - A Multimedia Toolset for Endangered Language Documentation and Education

Nearly half of the world's languages are endangered, and their preservation demands innovative approaches to documentation, analysis, and revitalization. This is especially challenging for pitch-accented languages, where identical words can convey different meanings depending on subtle variations in pitch. In this talk, we introduce the MeT perceptual scale, a novel method that adopts and extends the equal temperament scale from Western music to represent pitch changes as they are perceived in spoken languages. We also present our early-stage exploration of fuzzy inferencing techniques, which support nuanced pattern recognition in pitch and rhythm and show promise for future development.

Building on these innovations, we then demonstrate MeTILDA (Melodic Transcription in Language Documentation and Analysis), a cloud-based multimedia platform that integrates audio visualization and linguistic analysis tools. MeTILDA supports collaborative research, educational use, and community-led language revitalization efforts. It offers five major components as modular web services: Creation, Learning, ELAN/Praat Integration, Converter, and User/Content Management. All components are deployed on the Heroku cloud platform and are publicly available for developers to adopt and extend in their own applications. We highlight how MeTILDA leverages multimedia technologies to enhance prosodic analysis, promote interdisciplinary research, and foster inclusive, community-based learning environments for endangered language education.

Panel Speech 11 (Online)



Senior Lecturer Mariam Mohamad

Universiti Sains Malaysia, Malaysia

Speech time: 14:10-14:30, Thursday, Jul. 31, 2025 (UTC+9)
Venue: 8F-KANDAI Me RISE Hall
Room ID: 814 7505 8504 (Password: Osaka)

Dr. Mariam Mohamad is a Senior Lecturer at Universiti Sains Malaysia with research interests in mobile learning and mobile assistive technology. Recognized as a pioneer in mobile learning in Malaysia, her work has been cited by UNESCO and featured in Mobile Learning in Higher Education in the Asia-Pacific Region (Springer). She has presented her research widely at international conferences, including: UNESCO Mobile Learning Week 2014, Paris (Invited Speaker) ICEMT 2018, Okinawa, Japan (Invited Speaker) IMLF 2018, Singapore (Invited Speaker) ICEDU 2019, Kuala Lumpur (Plenary Speaker & Forum Panelist) ICEMT 2019, Nagoya, Japan (Plenary Speaker) IMRC 2020 and Education Science & Technology Conference 2020, Philippines (Keynote Speaker) TEL 2021, ICSE 2021, ICEEL 2021 (Keynote/Plenary/Invited Speaker) ICEPS 2023, ICLLL 2023, AETS 2024, ICETM 2024, ICLLL 2024 (Invited Speaker) She is also active in innovation, winning multiple awards for assistive learning tools, including gold medals at iCompEx 2016, IUCEL 2018, and IIDEA 2018, among others. Her research is supported by international grants from the Sumitomo Foundation and Japan Foundation. Dr. Mariam serves as an executive committee member of the Mobile Learning Association Malaysia, President of the Dyslexia Association (Penang), Advisor to the Special Needs Students Association (USM), and committee member of the R&D Unit at the Malaysian Association for the Blind.

Title: A Bibliometric Review of Mobile Assistive Technology Research for Dyslexic Children: Mapping the Landscape of a Decade

Abstract: Dyslexia, a prevalent neurodevelopmental disorder affecting reading and writing skills, poses significant challenges to educational attainment. In recent years, mobile assistive technologies have mobile

emerged as promising tools to support dyslexic children in their journey. Despite the increasing focus on mobile assistive technology for dyslexic children, a comprehensive overview of the research landscape is lacking. The field is characterized by a proliferation of studies, diverse methodologies, and an expanding knowledge base. This bibliometric review leverages advanced analytical tools, with a primary focus on the VOS viewer software, to conduct a comprehensive analysis of the literature spanning from 2014 to 2024. A carefully curated dataset, comprising research articles sourced from reputable databases, forms the basis of the analysis. Anticipated outcomes include visually rich maps depicting the citation networks and keyword co-occurrence patterns within the realm of mobile assistive technology for dyslexic children. We expect to identify key articles shaping the field, prominent clusters of research, and evolving trends. This bibliometric review aspires to contribute a panoramic view of the last decade's research landscape in mobile assistive technology for dyslexic children. The anticipated insights hold the potential to guide future research directions, technological innovations, and educational interventions, ultimately enhancing the support available to dyslexic children through mobile assistive technologies.

Technical Session 1

"Gamification in Education and Game-Based Learning"

Session Chair: Assoc. Prof. Jeffrey Mok, Rikkyo University, Japan

Venue: 7F-701	Time: 13:30-15:30, Jul. 30, Wednesday
RM3071 13:30-13:45	Game-Based Learning in Early Childhood: A Study on Emotional and Scientific Inquiry **Presenter: Jiun De Tsao, Chaoyang University of Technology** Author(s): Jiun De Tsao, Yung Chiau Tsao, Li-Ying Liu, Jia-Xuan Lin **Abstract:** This study examines the impact of game-based learning (GBL) on young children's emotional development and scientific inquiry skills, integrating Scratch-based digital games and STEM inquiry-based learning. A 16-week GBL intervention was implemented in two preschools in Taiwan with 52 children aged 4–6, employing an action research approach. A mixed-methods research design was applied, incorporating pre- and post-tests, behavioral observations, and semi-structured interviews to assess learning outcomes.
RM2081 13:45-14:00	Application and Effectiveness Analysis of Digital Learning Environments in Early Childhood Education and Care (ECEC) Professional Courses **Presenter: Ching-Min Chang, Fooyin University** Author(s): Ching-Min Chang **Abstract:** This study investigates the impact of technology-assisted learning on self-regulated learning (SRL) and academic performance in early childhood education and care (ECEC) courses. Given the increasing emphasis on digital learning and sustainable education—aligned with the United Nations Sustainable Development Goals (SDGs)—this study examines how digital learning platforms can enhance students' engagement, learning behaviors, and motivation.
RM3140 14:00-14:15	Needs Analysis in Designing a Multimodal Gamified AI-Integrated Platform for Enhancing EFL Students' Speaking Skills and Self-Regulated Learning **Presenter: Yazid Basthomi, Universitas Negeri Malang, Indonesia** Author(s): Yazid Basthomi, Maria Hidayati, Evynurul Laily Zen, Zuliati Rohmah, Mala Rovikasari, Carolin Fuchs

	Abstract: The demand for effective English speaking skills and self-regulated learning (SRL) in EFL contexts continues to grow, yet current instructional approaches often fall short in promoting learner engagement, autonomy, and meaningful digital integration. Prior studies have largely overlooked the potential of multimodal, gamified, and AI-integrated platforms to address these challenges, resulting in tools that do not fully align with learners' specific needs, preferences, and learning behaviors.
RM3006 **14:15-14:30**	Gempi App: A Digital-Based Learning Application to Support Number Pattern Learning Outcomes **Presenter: Wirayoga Abdillah Kurnianto, Yogyakarta State University, Indonesia** Author(s): Wirayoga Abdillah Kurnianto, Haryanto, Nadhira Fasya Salsabila, Siti Mualiyah **Abstract:** This study focuses on the development and evaluation of a digital learning platform designed to improve students' understanding of number patterns using Kodu Game Lab. The research followed a systematic approach through the 4D model, encompassing Define, Design, Develop, and Disseminate phases. Validation tests were conducted with educational experts, and trials involved 26 eighth-grade students from a junior high school in Jember.
RM3197-A **14:30-14:45**	Play with Purpose: Exploring the Educational Impact of Technology-Enhanced Play-Based Learning **Presenter: Jiaying Yao, University of Manchester, UK** Author(s): Jiaying Yao **Abstract:** Play-based learning (PBL) has become an essential component of modern pedagogy, especially in early and primary education. With the increasing presence of digital tools in classrooms, educators are rethinking how technology can meaningfully enhance play-based approaches. This paper examines the educational impact of integrating technology into play, with a focus on cognitive engagement, social-emotional development, and learning motivation.
	A Preliminary Study on Designing Contextual Game-Based Interactive Chinese Language Learning Materials **Presenter: Yi Hsuan Wang, University of Taipei**

RM3198 **14:45-15:00**	Author(s): Yi Hsuan Wang, Hwei Hsuan Wang **Abstract:** This study integrates game-based elements with contextual learning design to develop a situated game-based interactive Chinese language learning material for five-year junior college students. This paper primarily focuses on the development and design process of the learning material, introducing key features embedded within the game-based instructional content. Additionally, the study explores how the developed material is incorporated into the curriculum to support students' classical Chinese learning.
RM2120 **15:00-15:15**	Evaluating the Impact of Roblox-Based Interactive Media on English Learning Outcomes and Engagement at Chiang Rai Rajabhat University **Presenter: Worapon Toopmongkol, Chiang Rai Rajabhat University, Thailand** Author(s): Worapon Toopmongkol, Seatachai Jaihuek, Natchanon C. Saiyee **Abstract:** The research highlights an innovative approach to English learning by integrating interactive media through the Roblox gaming platform. It addresses the challenge of low student participation in traditional learning environments. The study aims to collect data from the King Rama IX Philosophy Hall, develop interactive media tailored for GEN2002, Communicative English 2, and assess the efficiency of this media quality assessment among students as key players.
RM3004 **15:15-15:30**	Motivations to Play Edutainment Games: Reconceiving the Uses and Gratifications Theory **Presenter: Adriana Caterina Camilleri, Malta College of Arts, Science and Technology, Malta** Author(s): Mark Anthony Camilleri, Adriana Caterina Camilleri **Abstract:** Edutainment applications (apps) that merge educational content with entertaining aesthetics and narratives are becoming very popular among gamers. Yet, for the time being, limited research has been conducted on the edutainment games' attributes that could influence the players' engagement with these learning technologies in a higher educational context. This research addresses this knowledge gap. It builds on the uses and gratifications theory, as it explores the individuals' personal gratifications, as well as the gaming dynamics as antecedents of their perceived enjoyment and emotional attachment.

Technical Session 2

"Information Technology-Enabled Learning and Skills Training for Special Needs"

Session Chair: Prof. Ming-Chung Chen, National Chiayi University

Venue: 7F-702	Time: 13:30-15:30, Jul. 30, Wednesday
RM3089 13:30-13:45	Developing an Immersive Augmented Reality-Based Coffee-Making skills Training System for Individuals with Intellectual Disabilities **Presenter: Hui Shan Lo, National Pingtung University** Author(s): Ting Fang Wu, Hui Shan Lo, Tien Chi Huang, Jon Chao Hong **Abstract:** This study presents the development of an Immersive Augmented Reality-Based Coffee-Making Training System, designed to enhance vocational training for individuals with intellectual disabilities (ID). Grounded in scaffolding theory, the system integrates immersive technology, gamification, and a multi-level prompting mechanism to facilitate structured skill acquisition. The system features two training modes—practice mode and test mode—allowing learners to develop coffee-making skills through progressive learning and real-time feedback.
RM3175 13:45-14:00	Effects of Mixed Reality and Video Modeling on Fraction Solving and Self-Regulation Learning in Students with Cognitive Disabilities **Presenter: Chu-Lung Wu, National Taichung University of Education** Author(s): Chu-Lung Wu, Tien-Chi Huang, Shin-Ruei Chou **Abstract:** This study explored the effectiveness of a self-regulated learning strategy that integrated mixed reality and video demonstrations in enhancing fraction problem-solving skills among elementary students with cognitive developmental disabilities. Two participants, Andy (mild intellectual disability) and Ben (learning disability), engaged in an intervention that utilized Microsoft HoloLens 2 for interactive fraction learning.
RM3112 14:00-14:15	Developing a Generative AI Interview Skills Training System for Individuals with Disabilities **Presenter: Ting-Fang Wu, National Taiwan Normal University** Author(s): Ting Fang Wu, Hui Shan Lo, Tien Chi Huang, Jon Chao Hong

	Abstract: This study proposes a Generative Artificial Intelligence (GenAI) interview skills training system aimed at enhancing the employability of individuals with disabilities through improved interview skills. Compared to traditional methods such as mixed-reality simulations and robotic role-playing, this system offers enhanced personalization, realism, and adaptability.
RM3159 **14:15-14:30**	Using Educational Robots to Enhance Oral Expression in Junior High School Students with Mild Intellectual Disabilities During Mandarin Instruction **Presenter: Pei-Ju Lin, National Taitung University** Author(s): Pei-Ju Lin, Shang-Yun Yu **Abstract:** Having sufficient language skills is essential for effectively communicating with others and expressing one's opinions and emotions. Individuals with intellectual disabilities typically have difficulties developing their language abilities; they may not be able to clearly express themselves, construct complex sentences, or use a wide range of vocabulary. Robots can be used in educational settings, particularly special education, to assist students in their learning.
RM2135 **14:30-14:45**	The Critical Thinking Abilities in Solving Cubes and Cuboid problems based on Van Hiele's Level of Thinking **Presenter: Siti Nafiah, Universitas Pendidikan Indonesia, Indonesia** Author(s): Siti Nafiah, Yaya S Kusumah, Monica Priska Aprilia Winardi **Abstract:** This research is a descriptive qualitative study that aims to describe students' critical thinking abilities in solving cube and cuboid problems based on Van Hiele's level of thinking. This research instrument consists of a Van Hiele geometry test, a Cube and Cuboid problem-solving test, and an interview guide. The research subjects consisted of three students of class VIII at junior high schools in Pamekasan, East Java. The subjects selected were based on Van Hiele's level of thinking categories: subject level 0 (visualization), subject level 1 (analysis), and subject level 2 (abstraction).
	Enhancing Learning for Blind Children Through Accessible Educational Games and a Custom Refreshable Braille Display **Presenter: Maryam Etezad, Chapman University, United States** Author(s): Maryam Etezad, Daniel Tsivkovski

RM2099-A **14:45-15:00**	**Abstract:** Enhancing Learning for Blind Children Through Accessible Educational Games and a Custom Refreshable Braille Display Ensuring equitable access to interactive learning tools for blind children is essential for fostering inclusive education. While sighted students benefit from visually engaging digital content, their blind peers often lack access to comparable educational reinforcement. To address this disparity, we have developed a series of educational games that integrate with refreshable Braille displays, providing blind students with interactive and engaging learning experiences.
RM3015 **15:00-15:15**	Exploring Barriers to Inclusive Multimedia Adoption among Filipino Special Education Teachers using the ADKAR Framework **Presenter: Edward Jay M. Quinto, Mapua University, Philippines** Author(s): Angelie R Bete, Edward Jay Mansarate Quinto **Abstract:** Integration of multimedia tools in inclusive education has been known to redefine the teaching and learning experiences, most particularly to students with special educational needs (SEN). However, the specific challenges encountered by special education (SPED) teachers in embracing these tools continue to pose a significant challenge. This study examines the barriers faced by eleven (11) special education (SPED) teachers by utilizing the ADKAR framework as a guide for analysis.
RM3127-A **15:15-15:30**	Web-Based Multimodal Expressive Communication System for Individuals with Complex Communication Needs **Presenter: Ming-Chung Chen, National Chiayi University** Author(s): Ming-Chung Chen, Yi-Shan Yeh, Long-Sheng Li **Abstract:** Communication is one of the fundamental human rights emphasized by the Convention on the Rights of Persons with Disabilities (CRPD). Augmentative and alternative communication (AAC) systems are regarded as effective solutions to assist the persons with the difficulties of expressive communication, e.g diagnosed as cerebral palsy, autism, or dysphasia. Currently, many AAC systems are developed as mobile applications, limiting users to specific operating systems (OS) or hardware devices, such as tablets or laptops.

Technical Session 3

"AI-Driven Innovation in Language Learning"

Session Chair: Assoc. Prof. Sarimah binti Shamsudin, Universiti Teknologi Malaysia, Malaysia

Venue: 7F-703	Time: 13:30-15:30, Jul. 30, Wednesday
RM3145 13:30-13:45	Challenges Faced by EFL Students in Using AI for English Language Learning **Presenter: Nguyen Thi My Kim, FPT University, Vietnam** Author(s): Kim Thi My Nguyen **Abstract:** The use of artificial intelligence (AI) has increasingly changed how English is taught and learned by EFL students. While AI offers many advantages, a number of learners still encounter difficulties in applying these tools effectively. This study explores the main challenges faced by Vietnamese EFL students when using AI during their learning process. Based on a modified Technology Acceptance Model (TAM), the research uses Structural Equation Modeling (SEM) to analyze six independent variables, one mediating variable (Attitude toward AI), and three dependent variables (Learning Effectiveness, Induced Intention, and Negative Experience-based Intention).
RM3111 13:45-14:00	Exploring the Psychological and Motivational Factors in AI-Assisted Language Learning among Filipino young adults **Presenter: Edward Jay M. Quinto, Mapua University, Philippines** Author(s): Christian Jared F Cruz, Edward Jay M Quinto **Abstract:** Artificial Intelligence (AI) has emerged as a transformative tool in language education, offering innovative methods for personalized and interactive learning. This study explores the psychological and motivational factors influencing AI-assisted language learning (AI-ALL) among young Filipino adults. Using a phenomenological qualitative approach, semi-structured interviews were conducted with eight participants (ages 20-22) who have engaged in AI-based language learning for at least six months.
	Understanding AI-Propelled Self-Regulated Language Learning: Development and Validation of a Strategy Inventory **Presenter: Xiaohua Liu, The Chinese University of Hong Kong (Shenzhen), China** Author(s): Xiaohua Liu, Yangyu Xiao

RM3048-A **14:00-14:15**	**Abstract:** As AI technologies become increasingly integrated into students' self-regulated learning practices globally, there is a growing need for pedagogical and research tools to assess students' strategic use of those technologies. However, rigorously validated instruments measuring AI-integrated self-regulatory learning strategies are limited. Drawing upon existing empirical evidence about learner practices involving AI, this pioneering study developed an inventory of AI strategies focusing on performing pedagogical tasks, general language learning, and self-regulated used of AI respectively.
RM3139 **14:15-14:30**	The Effects of AI-assisted Teachers Designing Adaptive Teaching Programs on Reading Comprehension of Senior High School Students **Presenter: Chih-Jung, Chang, National Taiwan Normal University** Author(s): Chih-Jung Chang, Yung-Ji Sher **Abstract:** The main purpose of this research was to investigate the effects of "AI-assisted Adaptive Teaching Programs" on reading comprehension of autism students in senior high school. An experimental design was adopted. The subjects were over 180 first grade autism students in senior high school selected from senior high schools in Taoyuan of Taiwan. Through Holland Vocational Aptitude Test, the subjects were divided into six type groups. Six type groups, namely, investigative type group, artistic type group, social type group, enterprising type group, conventional type group, and realistic type group, would individually receive the adaptive teaching program in which designed by artificial intelligence.
RM3188 **14:30-14:45**	Exploring Beginner Chinese Learners' Attitudes Towards AI-Driven Conversations: A Case Study **Presenter: Haixia Wang, Xi'an Jiaotong Liverpool University, China** Author(s): Haixia Wang, Haiyun Zeng, Jia Yu, Ka Du **Abstract:** This study explores beginner-level Chinese learners' attitudes toward the integration of artificial intelligence (AI) chatbot in language education, utilizing the Cognitive-Affective-Conative (CAC) Model as a framework for analysis. The origins of AI can be traced back to 1956, with a resurgence in interest during the 2000s, leading to significant advancements in machine learning and the development of large language models like ChatGPT.

RM2076 **14:45-15:00**	Study On Language and Book Environment Rating of Daycare Center in Central and Southern Region of Taiwan **Presenter: Nine-Ping Chang, Min-Hwei College of Health Care Management** Author(s): Yu-Mei Fan, Shu-Chu Sylvia Yang, Chun-Yen Liao, Nine-Ping Chang, Shu-Jung Lin **Abstract:** This study aims to explore the current status of "language" and "book" environment quality in daycare centers. The research primarily adopts a survey method, utilizing ITERS-3 as the research tool, with the study subjects being ten daycare centers in central and southern Taiwan. The conclusions of this study are as follows: 1. The " Staff use of book with children "subscale scored the highest average of 3.2 points, corresponding to Level 3 on the ITERS-3 scale, indicating that caregivers meet the minimum behavioral performance requirements for this subscale. 2. The "Encouraging vocabulary development" subscale scored the lowest average of 1.6 points among the six subscales, corresponding to Level 1 on the ITERS-3 scale, indicating inappropriate behaviors by caregivers in this subscale. 3. The performance of the ten infant care centers across the six subscales of language and books varied, but none achieved the maximum score of 7 points.
RM3146 **15:00-15:15**	AI in the Classroom: How Students Use ChatGPT to Enhance Their Writing **Presenter: Thuy Thi Thanh Nguyen, FPT University, Vietnam** Author(s): Thuy Thi Thanh Nguyen; Kim Thi My Nguyen **Abstract:** The integration of artificial intelligence (AI) tools such as ChatGPT into higher education has opened new avenues for supporting academic writing. This study investigates university students' perceptions of using ChatGPT to improve English writing skills in the context of Can Tho, Vietnam. A mixed-methods approach was adopted, including a qualitative phase for survey development and a quantitative phase involving 300 students. The proposed research model examined the effects of Perceived Usefulness (PU), Perceived Ease of Use (PEU), Learning Goal Orientation (LGO), and Perceived Risks or Concerns (PRC) on Actual Usage Patterns (AUP), and their subsequent influence on Writing Engagement (WE) and Writing Outcomes (WO).
	Speaking Practice: The Positive Psychological Experiences of LOTE Learners on Using

RM3125 **15:15-15:30**	AI-Driven Voice Interactive DB-CALL **Presenter: Edward Jay M. Quinto, Mapua University, Philippines** Author(s): Jade Vincent Bautista Raymundo, Edward Jay Masarate Quinto **Abstract:** Incorporating artificial intelligence (AI) among the tools of students when learning a language can greatly enhance their experiences, especially when using a voice-interactive AI-driven dialogue-based computer-assisted language learning (DB-CALL) tool. This study explores the psychological experiences of learners studying languages other than English (LOTE) who utilize AI-driven voice-interactive DB-CALL systems for conversational practice.

Technical Session 4

"Early Childhood Education and the Cognitive Behavioral Development"

Session Chair: Assoc. Prof. Luke Gunnarson, Baker Web Academy, US

Venue: 7F-704	Time: 13:30-15:15, Jul. 30, Wednesday
RM2044-A 13:30-13:45	A Preliminary Exploration of Different Types of Music and Young Children's Play Behavior and Emotional Expressions **Presenter: Feng-Chu Lin, National Chiayi University** Author(s): Feng-Chu Lin **Abstract:** This study aims to explore the differences in play behaviors and emotional expressions among young children in various musical contexts. The research subjects consisted of 38 children aged 5 to 6 years from a private kindergarten in Taoyuan City of Taiwan. The study primarily employed an observational method, using the Parten's Social Play Behavior Scale and Smilansky's Cognitive Play Behavior Scale as the research instruments.
RM2014-A 13:45-14:00	The Relationship of Parental Stress, Parental Worry, and Punitive Discipline **Presenter: Min-Ju Tsai, National University of Tainan** Author(s): Min-Ju Tsai **Abstract:** Nowadays parents face many challenges because of parenting environment full of rising cost of living, virus threat, high working hour issues which make parents easily felt stressed, worried, and influenced their parenting behaviors. The purpose of the study was to exam the relationship among parental stress, punitive discipline, and parental worry.
RM2026-A 14:00-14:15	The Study of the Children's Play Behavior on Inclusive Playground **Presenter: Shu Jung Lin, Nanhua University** Author(s): Shu Jung Lin, Chia Yen Li **Abstract:** Playgrounds are designed for children to practice motor coordination, and develop social skills through playing and interacting with others, their problem-solving skills, physical abilities and enrich their experience. The purpose of this study is to explore the children's play behavior on inclusive playground. This study adopts observational time

	sampling, and the sampling method adopts purposive sampling. A total of 91 children aged 3 to 6 years old who play in the Zhuluo Treefrog Communal Playground in Chiayi City Cultural Park are selected as the research subjects. There are 52 boys and 39 girls.
RM2112-A **14:15-14:30**	Perception of Preschool Educators on Outdoor Risky Play in Preschools **Presenter: Chia-Yen Tsai, National Dong Hwa University** Author(s): Chia-Yen Tsai **Abstract:** When the general public pays more and more attention to children's play rights, the importance of risky play so as to providing children with play property, and challenging and adventurous outdoor play spaces to meet the needs of children's physical and mental development, thus cannot be ignored. It is because the risky play allow children to challenge themselves, beat their limits, and learn to assess risks and protect themselves during the process of play exploration, which is different from other play. However, it is crucial that young whether children have the opportunity to engage in risky play or not, the thoughts and attitudes of adults are the key.
RM2114-A **14:30-14:45**	Enhancing Children's Social and Emotional Intelligence: Insights from Taiwan's Experience with Social and Emotional Learning **Presenter: Ming-Hsiu Huang, National Kaohsiung Normal University** Author(s): Ming-Hsiu Huang **Abstract:** In recent years, Taiwan has made significant efforts to integrate Social and Emotional Learning (SEL) into its educational system. Educational policies in many Western countries, particularly in Europe and North America, have increasingly encouraged educators and researchers to design programs aimed at enhancing children's social and emotional competencies. This study employs a literature analysis approach to examine empirical journal articles published in recent years that focus on children's emotional intelligence.
RM2052-A **14:45-15:00**	Bridging between Kindergarten and Primary School: Teachers' Perspectives on Ensuring Smooth Transitions for Children furing Curriculum Reform in the Czech Republic **Presenter: Tomáš Horčička, Masaryk University, Czech Republic** Author(s): Tomáš Horčička **Abstract:** The transition from kindergarten to primary school is a key stage in a child's

	education, shaped by institutional differences, teaching methods, and individual needs. In the Czech Republic, the final year of kindergarten is compulsory, so nearly all children undergo this shift. Research points to key differences between different stages of education, including discontinuities in school organisation (Nicholson, 2018; Einarsdóttir, 2003), the increased structure and demands of primary education (Lappalainen, 2008), and the stressors children face during adaptation (Correia&Marques-Pinto, 2016).
RM2056-A **15:00-15:15**	Checking the Art Elements of Activity room in Daycare Center by Using Infant/Toddler Environment Rating Scale (ITERS-3) **Presenter: Shu-Chu Sylvia Yang, National Chiayi University** Author(s): Shu-Chu Sylvia Yang, Hsin-Ying Chang, Chun-Yen Liao **Abstract:** This study examines the current status of two subscales, “Display for Children” and “Art,” in daycare centers using the Infant/Toddler Environment Rating Scale (ITERS-3). Additionally, interviews were conducted to understand how daycare providers incorporate art elements into their teaching within activity rooms. The study targeted four classrooms from three daycare centers in the Chiayi area of Taiwan.

Technical Session 5

"Social-Emotional Learning (SEL) and Lifelong Development"

Session Chair: Asst. Prof. Chao-Feng Lai, Asia University

Venue: 7F-705	Time: 13:30-15:30, Jul. 30, Wednesday
RM2032-A 13:30-13:45	"Do Whatever Makes One Happy": "Laid-Back Parenting" in Urban Middle-Class Single-Child Households - A Case Study Based on Oral History **Presenter: Keyi Ren, Tongji University, China** Author(s): Keyi Ren **Abstract:** Addressing educational anxiety, implementing effective family education strategies, and fostering individual development are pertinent topics deserving of scholarly attention. This study examines the experience of an only child from an urban middle-class family through a case study utilizing oral history interviews. The findings indicate that families which do not excessively engage in competitive education adopt a parenting style characterized by the principle of "doing whatever makes one happy," embodying a continuum of "strictness-indulgence."
RM2035 13:45-14:00	The Effect of Autonomous Learning on Learning Motivation and English Learning Achievement of Grade Sixth Students **Presenter: Shou-Chieh Cheng, National Kaohsiung Normal University** Author(s): Shou-Chieh Cheng, Huei-mei Wei **Abstract:** With the advent of the digital era and evolving educational frameworks, autonomous learning has become an essential skill for lifelong learning. Drawing on the OECD Learning Framework 2030 and Taiwan's 12-Year Basic Education Curriculum Guidelines, this study investigates how autonomous English learning influences both learning motivation and English achievement among sixth-grade students. Nineteen students from a primary school in Kaohsiung City participated in an 11-week intervention. Pre-test and post-test measures were obtained using a validated learning motivation scale and an English achievement test.
	Higher Education and Environmental Threats: A Sensemaking Perspective on Academics' Perceptions

RM2042-A **14:00-14:15**	**Presenter: Olivier Guyottot, INSEEC Business School, France** Author(s): Olivier Guyottot **Abstract:** Climate change has emerged as one of the most pressing challenges of our time, posing a significant threat to the stability of modern society and its economic systems (IPCC, 2022; Richardson et al., 2023). In this context, management science professors find themselves on the front lines, navigating between an economic model traditionally based on growth (Meadows et al., 1972; Barry, 2012) and the urgent need for a profound transition toward greater sustainability, which demands a reevaluation of priorities (Parrique et al., 2019; Hickel, 2020).
RM2043-A **14:15-14:30**	Bridging Research, Education, and Practice: A Project on the Technology of Political Entrepreneurship **Presenter: Pamela Nwakanma, University of California, United States** Author(s): Pamela Nwakanma **Abstract:** This project advances a theoretically grounded model of research-based education that integrates principles of critical pedagogy, experiential learning, and intersectional analysis to train students as active participants in public scholarship. As part of a broader project on political entrepreneurship and technological innovation across various cultural contexts, I am developing an interdisciplinary research lab that focuses on historically underrepresented students in the study of political power, technology, entrepreneurship, and social impact.
RM2128 **14:30-14:45**	Measuring the Role of Gender, Emotional Characteristics, and Family Support in Students' Reading Performance: Evidence from PISA 2022 Indonesia **Presenter: Syaiful, The University of Adelaide, Australia** Author(s): Syaiful **Abstract:** Reading literacy is a foundational skill that plays a crucial role in students' academic success and lifelong learning. Drawing data from 13,439 Indonesian students who participated in PISA 2022, this study examines how gender, emotional characteristics, and family support interact to influence students' reading performance. This study employed a quantitative research design using Structural Equation Modelling (SEM) to examine the relationships between variables. This study found that all factors significantly

	predicted reading outcomes, with emotional characteristics, such as perseverance and self-control, being the strongest direct predictor (b=0.258).
RM2138-A **14:45-15:00**	Retirement Preparation and Transformative Learning Among Pre-Retirees in Taiwan: A Qualitative Study **Presenter: Ya-Hui Lee, National Chung Cheng University** Author(s): Ya-Hui Lee, Hsien-Ta Cha **Abstract:** As of April 2025, Taiwan's older adult population has reached 19.5%, and it is projected to surpass 20% within the year, officially designating Taiwan as a super-aged society. With the baby boomers entering mass retirement, the topic of retirement preparation has gained increasing global significance in the context of population aging. Many middle-aged and older adults have begun to take retirement planning seriously, actively engaging in preparatory actions to ensure a smooth transition into post-retirement life.
RM2082-A **15:00-15:15**	Rethinking Career Paths: The Role of Internships in Shaping Hospitality Students' Industry Intentions **Presenter: Pui Yan Fung, The Hong Kong Polytechnic University, China** Author(s): Pui Yan Fung **Abstract:** Internship experiences are widely recognized as a crucial component of higher education, providing students with practical experience, enhancing employability, and bridging the gap between theory and practice (Silva et al., 2018; Tran & Soejatminah, 2019). Similar to other disciplines, internship is a compulsory requirement for hospitality and tourism management undergraduate programmes in higher education institutions worldwide. The industry organizations highly recognized the importance of internship for future talents. However, the impacts of internship experiences on the students' intention are questionable.
RM2070 **15:15-15:30**	The Relationship between Psychological Capital, Well-being, and Teaching Efficiency among Preschool Educators in Chiayi City of Taiwan **Presenter: Chun-Yen Liao, National Chiayi University** Author(s): Chun-Yen Liao, Kuang-Ming Wu **Abstract:** This study aimed to understand the relationships between psychological capital,

	well-being, and teaching efficiency among early childhood educators, verify the theoretical model hypotheses of psychological capital, well-being, and teaching efficiency, and explore whether psychological capital positively influenced well-being and teaching efficiency, and whether well-being positively affected teaching efficiency. Finally, it further investigated whether well-being mediated the relationship between psychological capital and teaching efficiency. The study employed a questionnaire survey method, with 148 early childhood educators from public kindergartens in Chiayi City as participants. The data analysis method used was the partial least squares approach of structural equation modeling.

Technical Session 6

"Digital Learning and Multimedia-Based Learning"

Session Chair: Prof. Yi Hsuan Wang, University of Taipei

Venue: 7F-701	Time: 16:00-18:00, Jul. 30, Wednesday
RM3049 16:00-16:15	Multiplayer Online Game-Based Framework for Exploring Human Contact Behaviors and Adaptive Decision-Making During Pandemics **Presenter: Tzai-Hung Wen, National Taiwan University** Author(s): Tzai-Hung WEN, Hui-Chun LEE **Abstract:** Game-based environments provide rich, interactive spaces for learning and behavioral adaptation, making them valuable tools for studying decision-making under uncertainty. This study built a multiplayer simulation based on the Minecraft platform to explore how players learn and adapt to a disease outbreak within a dynamic gaming environment. Unlike traditional models with predefined behavioral rules, this framework allows players to experience real-time epidemic progression, adjust strategies dynamically, and make vaccination decisions based on network effects and evolving risk perception.
RM3036 16:15-16:30	Chinese Parents' Interaction Styles and Language Use in Dialogic Reading with Digital English Storybooks **Presenter: Sarimah Shamsudin, Universiti Teknologi Malaysia, Malaysia** Author(s): Sarimah Shamsudin, Zhao Lili **Abstract:** This study explores how Chinese parents implement dialogic reading strategies with digital English storybooks, with a focus on their interaction styles and language use patterns. Through parent-child reading recordings and semi-structured interviews with 20 Chinese parents of children aged 4-6 years, the result revealed that parents employed language skill-focused style and interest-focused style.
	The Concept of Using Engineering Design Process via Digital Storytelling to Enhance the Teaching Experience for Pre-service Engineering Teachers **Presenter: Kanitta Hinon, King Mongkut's University of Technology North Bangkok, Thailand**

RM3104 **16:30-16:45**	Author(s): Kanitta Hinon, Phuchit Satitpong, Jiraphat Promsuraphat **Abstract:** The professional teaching practicum for vocational teachers is crucial in enhancing the quality of educators in Thailand's vocational education sector. Unlike general education, vocational education in Thailand requires teachers to be proficient in both theoretical knowledge and practical skills, ensuring that they can effectively transfer knowledge and competencies aligned with labor market demands. The vocational teaching practicum plays a central role in preparing pre-service vocational teachers, with faculties of technical education serving as key institutions responsible for organizing and managing these training programs.
RM3080-A **16:45-17:00**	A Case Study of Experienced and Novice Middle School Mathematics Teachers' Noticing in Viewing a 360-Degree Classroom Video: Using Eye-Tracking Technology **Presenter: Yung-Chi Lin, National Tsing Hua University** Author(s): Yung-Chi Lin **Abstract:** Teacher noticing is considered an important teaching competence. It involves teachers' ability to attend to and make sense of critical classroom instances (van Es & Sherin, 2021). It is also key to effective teaching. Compared to traditional classroom videos, researchers suggested that 360-degree classroom videos are a more immersive and better approach to developing teachers' noticing skills (Kosko et al., 2021). However, little is known about how teachers perceive and interpret the information when viewing 360-degree classroom videos.
RM3114-A **17:00-17:15**	Are You Still There? Students' Online Listening Behavior Patterns and Academic Achievement: Basis for a Framework in Designing an Effective Online Learning Setup **Presenter: Rainilyn L. Duque, Bulacan State University, Philippines** Author(s): Rainilyn Leonardo Duque **Abstract:** The study analyzed the listening behavior patterns of students in an online learning setup using their online interaction and listening strategies in terms of the following aspects: metacognitive, cognitive and socio-affective. This aims to understand how student adjust in an online learning setup and what specific scenarios do maximize students' effective participation and achievement. The study used descriptive research design to analyze students' online listening strategies and interaction analysis to

	understand how they listen, engage and learn in an online learning setup.
RM3123-A **17:15-17:30**	Modelling for Secondary Mathematics Teacher: Insight from Expert **Presenter: Riyan Hidayat, Universiti Putra Malaysia, Malaysia** Author(s): Riyan Hidayat, Ahmad Fauzi Mohd Ayub, Mohd Afifi bin Bahurudin Setambah, Nurul Hijja Mazlan, Kayshalini S Balachandran **Abstract:** There has been significant research interest over the years in evaluating instructors' self-efficacy. Teacher self-efficacy reflects the confidence teachers have in their capacity to positively impact student achievement. This study seeks to develop a reliable and valid scale specifically designed to measure the modelling self-efficacy of mathematics teachers (MSES). We chose a mixed methods approach to harness the benefits of both qualitative and quantitative research techniques.
RM3216-A **17:30-17:45**	Total Recall: Boosting Learning Memory and Engagement with Digital Tools **Presenter: Luke Gunnarson, Baker Web Academy, US** Author(s): Luke Gunnarson **Abstract:** Recent reports, including Rose Horowitch's October 2024 Atlantic article, highlight a troubling trend: students are arriving at college with lower vocabulary and less experience in sustained deep learning, particularly in reading novels. While concerns of literacy decline for "the scroll generation" are widespread, there is also an urgent need for students to comprehend and create within digital mediums; the jobs of tomorrow demand content creation, UX design, and online communication. As a course designer for asynchronous digital classrooms, I encounter this issue with my students.
RM3077 **17:45-18:00**	TikTok-Based Learning via Move Analysis: Implications for Teaching, Learning, and Digital Entrepreneurship **Presenter: Suhaila Abdullah, Universiti Teknologi Malaysia, Malaysia** Author(s): Suhaila Abdullah, Sarimah Shamsudin **Abstract:** The rise of short-form videos on TikTok has revolutionised digital entrepreneurship, creating a dynamic landscape of brand interaction and customer engagement. This study seeks to investigate TikTok's effectiveness as an educational instrument by analysing the rhetorical moves employed by Malaysian entrepreneurial influencers to convince audiences and promote products.

Technical Session 7

"Innovation and Practice in STEM Education"

Session Chair: Lecturer Haixia Wang, Xi'an Jiaotong Liverpool University, China

Venue: 7F-702	Time: 16:00-18:00, Jul. 30, Wednesday
RM3109 16:00-16:15	Development Low-Cost of a Semi-Automatic Accurate Guide Cane for the Visually Impaired **Presenter: Orawit Thinnukool, Chiang Mai Univeristy, Thailand** Author(s): Orawit Thinnukool **Abstract:** This research focuses on the development of a low-cost, semi-automatic guide cane for visually impaired individuals, integrating advanced deep learning techniques, specifically the Faster R-CNN model, for obstacle detection. Traditional guide canes lack the ability to detect and interpret obstacles dynamically, limiting their usability in complex environments.
RM2015-A 16:15-16:30	Implementing Embodied Learning Activities Supported by Technology Tools and Translanguaging for Hispanic Elementary Students' STEM Learning and Motivation **Presenter: Seokmin Kang, The University of Texas Rio Grande Valley, United States** Author(s): Seokmin Kang, Jair J Aguilar, Leslie Garrido, MyongHee Yang **Abstract:** The theory of embodied cognition suggests that physical interaction with the environment influences thought processes and shapes cognition. Active learning, which engages students in meaningful experiences, is believed to enhance learning outcomes. However, not all physical movements contribute to improved learning. To examine the effect of embodied learning activities supported by technology tools and translanguaging, we designed and implemented embodied learning activities for Hispanic elementary students through an afterschool program.
RM2084 16:30-16:45	Evaluation of a Virtual Laboratory Platform in General Education on Quantum Information Science **Presenter: Hongbin Song, The Chinese University of Hong Kong, Shenzhen, China** Author(s): Hongbin Song **Abstract:** Quantum information science and technology has been revolutionizing our

	daily life, which attracts the curiosity of young generations from diverse backgrounds. While it is quite challenging to teach and learn quantum information science for non-physics majors due to the abstract and counter intuitive nature of quantum mechanics. To address such challenges, virtual laboratories offer an effective solution. This paper presents the pedagogical research results on the effectiveness of a virtual laboratory platform in general education courses on quantum information science.
RM2057-A **16:45-17:00**	Creating Makers?: Makerspaces, Maker Education, and the Maker Spirit in Kaohsiung High Schools under Taiwan's Educational Reform **Presenter: Shih-Hsiang Sung, National Sun Yat-Sen University** Author(s): Shih-Hsiang Sung **Abstract:** With the gradual popularization of the maker movement and its associated culture in Taiwan, maker education has started to be integrated into the Taiwanese primary and secondary educational systems, aiming to foster students' interest in DIY activities and interdisciplinary innovation—referred to as the "maker spirit." Following the implementation of Taiwan's 108 curriculum guidelines, high schools not only execute mandatory "Living Technology" courses but also offer elective courses for deeper exploration and teachers often supervise related extracurricular clubs, guiding students through creative projects. Ideally, Living Technology courses and associated activities should serve as essential pathways for high school students to become makers or cultivate the maker spirit.
RM3115-A **17:00-17:15**	Beyond Modality Difference: Students' Learning Strategies and Academic Performance in Online and Onsite Mathematics Courses in Higher Education **Presenter: Maria Cecilia E. Martin, Bulacan State University, Philippines** Author(s): Maria Cecilia E. Martin **Abstract:** This study compares students' mathematics performance upon exposure to online or onsite teaching modalities. By analyzing their learning strategies in both the online and onsite set up, we discovered that students employ different effective strategies in both modalities. When students are in an online learning setup, particularly when learning mathematics, students use more complex cognitive strategies. On the other hand, when students are in an onsite learning environment, they tend to use simple cognitive

	strategies to adapt and adjust.
RM2010-A **17:15-17:30**	Cross-Species Perception in the Animal Science Classroom Promotes Children's Empathy: Evidence from a Hyper-Scanning EEG Study **Presenter: Chenglu Bao, Southeast University, China** Author(s): Chenglu Bao, Yue Leng **Abstract:** In the current study, we established a quasi-natural animal science classroom for ordinary children, integrating animal-assisted activities. This educational setting encompassed two pedagogical approaches, i.e., traditional lecturing and video-based learning. The activities were categorized into three types including individual, couple, and family activities. We utilized electroencephalogram (EEG) hyper-scanning technology to synchronously collect brain activity data from 21 first-grade students at a primary school in Nanjing who participated in the aforementioned classroom activities. Specifically, we calculated the ratio of the mu wave amplitude while the children were watching videos of the three distinct types of activities to that recorded during their resting state.
RM3117 **17:30-17:45**	Maker-centered Learning and Knowledge Construction in University-Based Innovation Space **Presenter: Georgy Laptev, Lomonosov Moscow State University, Russia** Author(s): Georgy Laptev, Dmitry Shaytan **Abstract:** Digital, AI, and SMAC technologies significantly changed the educational environment, redefining the learning experience, and greatly expanded opportunities for learning through making. The research aims to get better understanding of a university-based innovation space, includes digital, physical and social facilities, in education context, i.e. how this contributes to maker-centered exploratory learning of tomorrow's innovation managers, what knowledge construction process takes place in innovation space, and lead to innovative solutions.
RM2136 **17:45-18:00**	The Effectiveness of YouTube as a Resource for Independent Learning to Improve Students' Algebraic Thinking Skills **Presenter: Monica Priska Aprilia Winardi, Universitas Pendidikan Indonesia, Indonesia** Author(s): Monica Priska Aprilia Winardi, Al Jupri, Siti Nafiah

Abstract: This study aims to determine the extent to which the effectiveness of using YouTube as a source of independent learning in improving students' algebraic thinking skills. The method used in this study is a qualitative method, with data presented descriptively. This study was conducted on junior high school students who had studied algebraic forms of material and were assumed to have adequate algebraic thinking skills, and were not active users of the YouTube platform as a learning resource. The data in this study were obtained by comparing the results of students' algebraic thinking ability tests, before and after independent learning assisted by YouTube.

Technical Session 8

"Teacher Professional Development and Competency Assessment"

Session Chair: Prof. Tzai-Hung Wen, National Taiwan University

Venue: 7F-703	Time: 16:00-17:45, Jul. 30, Wednesday
RM2041-A 16:00-16:15	Factors Impacting on the Long-Term Outcomes of a Mentoring Training Program for Teachers **Presenter: Denise Beutel, Queensland University of Technology, Australia** Author(s): Denise Beutel, Donna Tangen, Chrystal Whiteford, Leanne Crosswell **Abstract:** Mentoring is a well-recognised strategy to support the development of beginning teachers, While the benefits of mentoring for mentors and mentees are espoused in the literature, it is acknowledged that teaching expertise is insufficient alone to become an effective mentor. Formal training that includes the development of mentoring capabilities such as relationship building, working collaboratively; and encouraging critical reflection are requisite to effective mentor preparation. The context for the paper is a mentor preparation program designed to develop the mentoring capacities of experienced teachers to become mentors to beginning teachers.
RM2060-A 16:15-16:30	Facilitating Interdisciplinary Curriculum Design through Course Leadership: A Design-Based Learning Approach in a Teacher Professional Learning Community **Presenter: Chia-Chi Wang, National Kaohsiung Normal University** Author(s): Chia-Chi Wang **Abstract:** This study aims to investigate how a university professor employs course leadership to establish and lead a teacher professional learning community (PLC) for elementary school teachers, providing them with support and guidance to foster their professional development. The PLC activities encompass curriculum design, implementation, and evaluation while integrating self-regulated learning principles, enabling teachers to become autonomous curriculum designers. This approach ultimately enhances instructional effectiveness and improves student learning outcomes. A case study methodology was adopted to explore how design-based learning (DBL) facilitates teachers' interdisciplinary curriculum design and pedagogical growth within the PLC.

RM3150 **16:30-16:45**	Navigating Research Identity and Professional Development of Teacher Educators in the Digital Age **Presenter: Sri Wahyuningsih, Universitas Negeri Malang, Indonesia** Author(s): Sri Wahyuningsih, Yazid Basthomi, Nunung Suryati, Maria Hidayati, Mohd Nazri Latiff Azmi **Abstract:** Despite the growing emphasis on research productivity in higher education, limited attention has been given to how EFL teacher educators in developing countries, particularly in Indonesia, perceive and construct their research identity within the context of digital transformation. This study addresses this gap by exploring Indonesian EFL teacher educators' perceptions of their research identity in the digital age.
RM2123-A **16:45-17:00**	Navigating Self-Regulated Learning in the Cloud: The Role of Regulatory Focus in Learning and Knowledge Sharing Among Middle School Teachers **Presenter: Jing-Wen Huang, National Pingtung University** Author(s): Jing-Wen Huang, Shan-Lin Yang, Shao-Lan Chang **Abstract:** With the advent of the digital era, cloud-based educational platforms have become a vital tool for the professional development of middle school teachers. Through self-regulated learning in cloud environments, teachers can not only enhance their instructional competencies but also facilitate knowledge sharing and exchange effectively. Furthermore, regulatory focus serves as a crucial determinant influencing individual behavior and decision-making, shaping teachers' goal-setting strategies and resource utilization in autonomous learning processes, which in turn affect their willingness and effectiveness in knowledge sharing. Regulatory focus is primarily categorized into two orientations: promotion focus and prevention focus.
RM2007-A **17:00-17:15**	Understanding the Role of School Culture in Shaping Teachers' Assessment Beliefs **Presenter: Coşkun Erdağ, Aksaray University, Türkiye** Author(s): Özgür Ercek, Coşkun Erdağ **Abstract:** School culture plays a pivotal role in shaping the educational environment, influencing teacher experiences and overall school effectiveness. However, school cultures are not monolithic; distinct profiles or typologies of school culture likely exist within an educational system. Understanding these varying cultural profiles is crucial for

	targeted improvements and for gaining deeper insights into school dynamics, particularly within specific national contexts such as Turkish elementary education. This research aims to explore different "profiles" of school cultures in Turkish elementary schools and their relationship to teachers' conceptions of assessment.
RM2019-A **17:15-17:30**	Closing The Gap: The Heart of a Teacher **Presenter: Simene' Walden, Pretty Healed Enterprises, USA** Author(s): Simene' Walden **Abstract:** This presentation focuses on creating a school experience that transcends labels, titles, and stigmas to ensure that all students, educators, and families feel welcomed and included. The session begins with a deep introspection on the role of educators, leaders, and policymakers in either perpetuating or overcoming societal inequities. Participants will explore how literacy is a key factor in either pushing students into failure or propelling them toward success on their own terms. By examining the principles of collaboration, equity, and inclusion, attendees will gain insight into how to foster an environment of belonging. Additionally, strategies to overcome "burnout care" will be discussed, ensuring that educators and leaders can approach their work with renewed energy and a clear sense of purpose.
RM3087 **17:30-17:45**	Online Learning Patterns Unveiled: A Cluster Analysis across Primary and Secondary Schools **Presenter: Qianru Liang, Jinan University, China** Author(s): Qianru Liang, Jingping Du, Laure Lu Chen **Abstract:** The COVID-19 pandemic has accelerated the global transition to online learning, effectively mitigating educational disruptions while simultaneously exposing various challenges. This study aims to identify and compare online learning patterns across different educational levels. A total of 4,794,740 valid survey responses collected from primary to secondary school (including junior and senior high schools) students in 2020 in Guangdong Province, China, were analyzed using the K-modes clustering method.

Technical Session 9

"Pedagogical Innovation and Competency Development"

Session Chair: Prof. Angelo C. Arguson, FEU Institute of Technology, Philippines

Venue: 7F-704	Time: 16:00-18:00, Jul. 30, Wednesday
RM3029-A **16:00-16:15**	Disentangling Teaching Strategies of Complex Systems Thinking: The Effects of Collaboration, Simulations, and Knowledge Maps **Presenter: Yi-Chen Lin, National Taiwan Normal University** Author(s): Yi-Chen Lin, Ting-Kuang Yeh, Pei-Jung Lin, Chun-Yen Chang **Abstract:** Thinking about complex systems is crucial in addressing contemporary issues in science-in-context fields, which often comprise hierarchical and emergent phenomena. Previous studies have suggested that student collaboration, computer simulations, and conceptual scaffolding can facilitate complex systems thinking. However, these teaching strategies are often combined into a single intervention, which obscures their specific benefits and challenges to student learning.
RM3099 **16:15-16:30**	Machine vs. Students: Non-Designer Evaluation of Interior Renders **Presenter: Chao-Feng Lai, Asia University** Author(s): Chao-Feng Lai, Cheng-Kai Weng **Abstract:** Artificial intelligence (AI) advancements have enabled tools like Midjourney, Stable Diffusion and ReRoom AI to produce architectural and interior renders in seconds, prompting comparisons with human creativity, including that of emerging designers. This study examines how non-designers—individuals untrained in architecture, interior design, or graphic arts—perceive and prefer AI-generated renders versus those created by interior design students. In an experiment, 77 participants evaluated 10 renders in random order: 5 generated by AI and 5 by students from Asia University's interior design program, balanced for style, complexity, and theme (e.g., interiors and exteriors).
RM2051-A **16:30-16:45**	Co-teaching in Primary Education: Insights from Empathy-Based Narrativess **Presenter: Alžběta Jurasová, Masaryk University, Czech Republic** Author(s): Alžběta Jurasová **Abstract:** This study investigates the meaningfulness of co-teaching in primary

	education through the lens of empathy-based narratives. Recognizing that co-teaching presents both advantages and challenges to education, the research aims to understand co-teachers' perceptions, identify positive and problematic scenarios, and analyze factors contributing to successful co-teaching practices. Utilizing the Method of Empathy-Based Stories (MEBS), co-teachers wrote their lived experiences in contrasting narratives, highlighting both the value and limitations of co-teaching amidst various contextual challenges.
RM3156 **16:45-17:00**	Unpacking Students' Feedback Literacy in Research Writing **Presenter: Mala Rovikasari, Universitas Negeri Malang, Indonesia** Author(s): Mala Rovikasari, Yazid Basthomi, Anik Nunuk Wulyani, Evynurul Laily Zen, Budi Waluyo **Abstract:** This study explores the interplay among teachers' feedback, students' growth mindset, and metacognitive awareness in shaping feedback literacy among Indonesian EFL graduate students in research writing contexts. Feedback literacy, the ability to interpret, utilize, and act upon feedback, is critical for academic writing development, particularly in EFL settings. Using Partial Least Squares Structural Equation Modeling (PLS-SEM), data from 205 graduate students across 12 universities were analyzed.
RM2116 **17:00-17:15**	Development of Core Indicators for Health Education Materials for Preschool Children: A Case Study of the 'My e-Plate' Teaching Platform **Presenter: Li-Chu Chen, University of Kang-Ning** Author(s): Li-Chu Chen **Abstract:** This study focuses on the development and implementation of a digital teaching platform, "My e-Plate," designed to enhance nutrition education for preschool children in Taiwan. The platform integrates gamification, repeated exposure, and food-themed pictures to create an engaging and developmentally appropriate learning experience. A mixed-method approach was employed to validate the platform's content, beginning with expert review and followed by the Fuzzy Delphi Method to gather insights from preschool caregivers in Taipei City and New Taipei City.
	From Concept to Practice: The Effectiveness and Study of Problem-Based Learning (PBL) in Higher Education Design Courses

RM2034 **17:15-17:30**	**Presenter: Ming-Feng Wang, National Pingtung University of Science and Technology** Author(s): Sen-Chi Yu, Yu-Chen, Hsu, Yu-Tung, Hsiao, Zhi-Fang Sung, Tsai-Ying Yu **Abstract:** Over the years, Hakka culture in Taiwan has evolved into a globally recognized cultural phenomenon, with Taiwan at its core—thanks to active government promotion and collaboration with local communities. However, due to the geographic concentration of Hakka populations in both northern and southern Taiwan, variations in floral symbols and their associated meanings have emerged, sometimes leading to confusion in cultural identity.
RM3310 **17:30-17:45**	From Self-Efficacy to Tech Intervention: Exploring the Mediating Roles of Digital Health Perception and Product Involvement in Purchase Intention **Presenter: Jui Hsiu Chang, Chaoyang University of Technology** Author(s): Wan-Ling Chang, Yu-Jing Chuang, Jain-Shing Liu, Jui-Hsiu Chang **Abstract:** With the rise of innovative insurance, spillover policies that emphasize prevention over compensation are gaining attention. This study examines how digital technologies influence consumers' willingness to purchase walker's spillover insurance. Using a quantitative survey of 303 participants, the study tests how health behavior self-efficacy affects purchase intention through digital health management perception and product involvement.
RM2142-A **17:45-18:00**	The role of Electronic Control in Supporting Reform in public Education Schools in the State of Kuwait **Presenter: Maryam A Abdulmutalab, Ministry of Education, Kuwait** Author(s): Maryam A Abdulmutalab **Abstract:** The study aimed to identify the role of electronic control in reforming administrative work in public schools in Kuwait, and to reveal differences in the study sample according to the variables (career, years of service, educational region, academic qualification). To achieve the objectives of the study, the descriptive, correlational, and inferential approach was used. The questionnaire was applied as a study tool and distributed to (713) male and female teachers in all governorates of the State of Kuwait, who were chosen using a simple random sampling method.

Technical Session 10

"Multimodal Language Education and Learning"

Session Chair: Lecturer Worapon Toopmongkol, Chiang Rai Rajabhat University, Thailand

Venue: 7F-705	Time: 16:00-17:45, Jul. 30, Wednesday
RM2066-A 16:00-16:15	The Analysis of Lexical Bundles in Culture Corpus: Application of a Corpus-driven Analysis **Presenter: Hsin-Yi Lien, Ming Chuan University** Author(s): Hsin-Yi Lien **Abstract:** Lexical bundles (LBs) perform specific discourse functions and can be used to measure variability in a given genre; however, there has been relatively little research on the occurrence and nature of LBs in cultural discourse. In the current study, we examined the structural and functional taxonomies employed in the culture corpus of Taiwan as well as the embodiment of rhetorical moves in general and technical lexical bundles. We compiled a corpus of cultural texts containing four sub-corpora: Heritage Sub-corpus, Social Structures Sub-corpus, Expressions Sub-corpus, and Traditionality Sub-corpus.
RM2008-A 16:15-16:30	Breaking Barriers in EMI: What Helps and What Hinders Learning? **Presenter: Hui-Ju Wu, Cheng Shiu University** Author(s): Hui-Ju Wu **Abstract:** Although English as a Medium of Instruction (EMI) offers benefits such as educational internationalization, enhanced English learning opportunities, and greater global competitiveness, it also presents notable challenges. The shift from the first language (L1) to English instruction often creates difficulties for both teachers and students, particularly in effective pedagogical strategies to enhance comprehension, understanding lectures and materials, and classroom assessments and participation. Addressing these challenges requires instructors to attend closely to students' feedback. By actively listening to students' EMI experiences, educators can better understand what facilitates or hinders learning, thereby informing pedagogical adjustments and improving teaching effectiveness.
	The End of English Language Learning: Genai as a Tool for Counter Productivity

RM2100-A **16:30-16:45**	**Presenter: Sar-Ana Misuari Abdurasul, Basilan State College, Philippines; Rasmil Tundanan Abdurasul, Sulu State College, Philippines** Author(s): Sar-Ana Misuari Abdurasul, Rasmil Tundanan Abdurasul **Abstract:** The emergence of GenAI marks a transformative phase in technology, characterized by its ability to create content, simulate human-like responses, and adapt to various contexts. This innovation, fueled by advances in machine learning and natural language processing, has significantly impacted English education. However, there is a need to explore the impacts of GenAI in English language learning among students. This paper was conducted to determine how do GenAI promotes counterproductive learning behaviors among college students. College students (n=15) were purposively selected based on their responses to a preliminary open-ended questionnaire. Individual narratives were gathered through one-on-one interviews using semi-structured interview questions.
RM2103-A **16:45-17:00**	A Transition from EFL to ELF to Promote English Confidence and Classroom Inclusion **Presenter: Wei-Yu Liu, National Dong Hwa University; Thi-Gam Phan, National Dong Hwa University** Author(s): Wei-Yu Liu, Thi-Gam Phan **Abstract:** EMI courses are defined as a flexible combination of Mandarin-Chinese and English, where at least 70% of class communication occurs in English in Taiwan (Macaro 2018). International students in Taiwan's EMI classrooms reported perceived exclusion (Liu et al., 2021; Lin, 2022), whereas Taiwanese students perceived a high-level of English-language anxiety (Lin, 2017; Tien, 2018). This implies that language barriers play a significant role in EMI classrooms, in which English is regarded as a lingua franca. Previous studies have attempted to overcome international students' exclusion and language barriers via methods such as translanguaging or cooperative learning with peers/instructors operating as translators (Lin, 2022; Liu et al., 2021). However, the question remains as to whether such solutions fit into the varying structures of Taiwan's EMI classrooms.
RM2038-A **17:15-17:30**	Diaspora Education and Community Building: Ukrainian Saturday Schools in Türkiye **Presenter: Ayla Deniz, Ankara University, Turkey & The George Washington University, US**

	Author(s): Ayla Deniz, E. Murat Özgür **Abstract:** Increasing global human mobility has made diaspora education both a state-driven strategy for engaging transnational populations and a grassroots concern for migrant communities seeking cultural continuity. While some states actively support educational initiatives to maintain ties with their diasporas, communities themselves mobilize around education for various reasons, ranging from linguistic preservation to social integration. The ways in which diaspora education takes shape are deeply influenced by distinct socio-spatial contexts, reflecting the political, cultural, and institutional environments in which they operate.This study examines the role of Ukrainian Saturday Schools as sites of informal learning, identity formation, and community building.
RM3161 **17:30-17:45**	How Does Artificial Intelligence (AI) Change in Nursing Education? **Presenter: Mei Hua Kerry Hsu, Macao Polytechnic University, China** Author(s): Mei Hua Kerry Hsu, Hong Xia Dai, Ming Liu **Abstract:** The use of artificial intelligence (AI) in health education has a significant impact on clinical practice, research, and policy. The integration of artificial intelligence (AI) technology including the natural language processing (NLP), machine learning (ML) and generative pre-trained transformers (GPT), have the potential to advance nursing education content sand processes.

Technical Session 11

"Generative Artificial Intelligence and Large Language Models in Education"

Session Chair: Prof. Edward Jay M. Quinto, Mapúa University, Philippines

Venue: 7F-701	Time: 13:30-15:30, Jul. 31, Thursday
RM3320 13:30-13:45	I'poyít – Blackfoot Language Learning Application **Presenter: Min Chen, University of Washington Bothell, USA** Author(s): Aishwarya Pani, Harika Chadalavada, Min Chen **Abstract:** This paper introduces I'poyít ("let's speak"), a mobile application designed to support Blackfoot language learners through culturally grounded and interactive digital activities. Developed in response to community-identified needs, the app was co-designed with Blackfoot educators and provides modular lessons focusing on vocabulary development, pronunciation practice, and context-aware exercises. The system emphasizes cultural relevance and learner engagement by drawing on Indigenous pedagogies and linguistic documentation. I'poyít is cross-platform, supports dynamic content updates, and includes learner progress tracking.
RM3135 13:45-14:00	Student Motivation as a Predictor of Self-Directed Learning with Chatgpt **Presenter: John Christopher D. Castillo, Mapua University, Philippines** Author(s): Louie Giray, John Christopher Castillo **Abstract:** This study aimed to explore the role of student motivation in predicting self-directed learning with ChatGPT, specifically focusing on self-management and intentional learning behaviors. A total of 576 college students participated. The study revealed that students predominantly exhibited intrinsic and identified motivations, using ChatGPT because it was enjoyable and personally valuable, while external and introjected motivations played a minimal role.
RM3185-A 14:00-14:15	Generative AI Drives Educational Transformation **Presenter: Yudong Li, Nankai Univesity, China** Author(s): Yudong Li, Jing Chen, Zongqiang Chen, Yongfa Kong **Abstract:** Generative Artificial Intelligence (GenAI) technology refers to models and

	technologies with the ability to generate content such as text, images, sounds, videos, and code. Starting from the breakthrough of the Large Language Model ChatGPT based on natural language processing, generative artificial intelligence has been widely applied in many fields, marking the arrival of a new era of AI. The emergence of large reasoning models (such as DeepSeek R series, GPT o series) has opened up their applications in the field of education.
RM3176 **14:15-14:30**	Augmenting the Creative Process: Integrating Generative AI into Design Thinking for Education and Media Design Innovation **Presenter: Sawitree Promsit, Chiang Rai Rajabhat University, Thailand** Author(s): Sawitree Promsit **Abstract:** This paper presents a case study in multimedia education where students applied generative AI tools within a Design Thinking framework to create visual media that communicates Thai soft power. The project aimed to enhance students' creative capabilities while demonstrating that effective design requires human insight and cultural understanding—factors that AI cannot independently produce or interpret. Through hands-on exploration, students learned to navigate the intersection of creativity and technology, gaining clarity on the role of human contribution in AI-supported design.
RM3153 **14:30-14:45**	Writing Blog Articles using Generative AI: Quantitative Modelling of College Students' Attitude and Intention to Use **Presenter: Bart Andrews S. Mendoza, Mapua Malayan Colleges Laguna, Philippines** Author(s): Bart Andrew Sadsad Mendoza, Hailey Pasal Ferrer, Ramachandra Castro Torres **Abstract:** Artificial Intelligence (AI) has reshaped the landscape of various sectors, including education and content creation. Understanding human and AI interactions has never been more important. This study investigates the behavioral factors influencing college multimedia arts students' acceptance and attitude in integrating generative AI tools in their writing process for blog article writing. Using the Technology Acceptance Model (TAM), the research examines the connection among knowledge, perceived usefulness, perceived ease of use, attitude, and intention to use generative AI.
	Virtual Reality in Primary Education: Analyzing Subject Focus, Emerging Challenges, and

RM3116 **14:45-15:00**	Research Approaches – A Systematic Review **Presenter: Cheng Lin, Universiti Putra Malaysia, Malaysia** Author(s): Lin Cheng, Riyan Hidayat, Jazihan Mahat **Abstract:** Virtual reality (VR) is a technology that creates a simulated environment, allowing users to interact with it. Most studies on VR in primary education highlight its benefits, particularly in STEM disciplines. This paper reviews 39 studies from 16 countries (2018-2024) using Web of Science and Scopus databases and applies the PRISMA framework for systematic analysis. The findings show that VR is most used in STEM (42%), Physical education (9%), biology, and 3D modeling (4%).
RM2131-A **15:00-15:15**	A Preliminary Study on the Construction of Higher Education Students' Learning Effectiveness Evaluation Indicators under the Impact of Generative AI **Presenter: Chi-Hsiu Gabriel Lu, National Kaohsiung Normal University** Author(s): Chi-Hsiu, Gabriel, Lu **Abstract:** Higher education evaluation is a review of the setting of educational goals, the implementation process and the achievement of results to ensure the quality of higher education. All countries in the world have established higher education evaluation mechanisms that keep pace with the times according to the needs of national development. Since 2023, generative AI has been widely valued and used, which has had a concrete impact on the learning and academic research model of higher education students, and whether the current education model will change as a result of this has been discussed a lot.
RM3132 **15:15-15:30**	The Influence of Chatgpt Acceptance on Academic Image among College Students **Presenter: John Christopher D. Castillo, Mapua University, Philippines** Author(s): Louie Giray, John Christopher Castillo **Abstract:** This study strives to explore the influence of ChatGPT acceptance on academic image. Data were collected from 576 college students via an online questionnaire using a non-experimental, cross-sectional quantitative design. The findings show that while students generally perceive ChatGPT as useful and easy to use, their satisfaction is only moderate.

Technical Session 12

"Computational Intelligence in Educational Data: From Multimodal Analytics to Personalized Learning Decisions"

Session Chair: Asst. Prof. Ken Fong, Lingnan University, China

Venue: 7F-702	Time: 13:30-15:15, Jul. 31, Thursday
RM3187-A 13:30-13:45	An Exploratory Study of LSTM-based Text Sentiment Analysis for Educational Applications **Presenter: Chih-Hung Wu, National Taichung University of Education** Author(s): Chih-Hung Wu, Yi-Ting Lin, Jun-Kai Wang **Abstract:** This study aims to explore the development and application of text emotion analysis within artificial intelligence technology, with a particular focus on its potential in the field of education. Initially, through a comprehensive literature review, this research systematically analyzes the current state of text emotion analysis applications in education, the characteristics of various technical approaches, and the currently available emotion-labeled datasets for training purposes.
RM3155 13:45-14:00	A Study on the Effectiveness of Using Text-to-Image Tools to Enhance Self-Awareness in Taiwanese Junior High School Students with Intellectual Disabilities **Presenter: Tzu-Yin Weng, Department of Special Education, National Taitung University** Author(s): Ju Pei Lin, Tzu-Yin Weng **Abstract:** The emotional awareness and expression of individuals with intellectual disabilities have long been key focuses in both the instruction and counseling efforts of special education teachers. This study adopted a case study approach to explore the impact of incorporating text-to-image generation tools into a social skills curriculum based on the concept of Social Emotional Learning (SEL) on the self-awareness and emotional expression abilities of a junior high school student with intellectual disabilities in a self-contained special education class.
	Learning from Bad or Good? Gamified Inoculation Interventions in Enhancing Abilities to Detect Fake News and Discern between True and Fake News

RM3172-A **14:00-14:15**	**Presenter: Sarawut Kankham, National Chung Cheng University** Author(s): Sarawut Kankham, Jian-Ren Hou **Abstract:** The spread of fake news presents an escalating challenge in the digital era, highlighting the need for strategies that build individuals' resistance to misinformation. One effective strategy is prebunking, derived from cognitive inoculation, which exposes users to weakened misinformation to build cognitive immunity and enhance digital media literacy. When combined with gamification—using game elements to boost engagement—this leads to gamified inoculation interventions, or counter-fake news games that educate players to detect misinformation.
RM3304-A **14:15-14:30**	Pathologizing Digital Leisure? A Topic Modeling Analysis of South Korean Adolescent Leisure Research **Presenter: Hyungjoo Yoon, Myongji University, South Korea** Author(s): Hyungjoo Yoon **Abstract:** This study investigates how digital leisure among adolescents has been portrayed in Korean academic research, testing the hypothesis that such portrayals are predominantly negative. Using topic modeling and semantic analysis, we examined the titles, keywords, and abstracts of 3,447 journal articles from the Korean Citation Index. Our analysis identified "internet game addiction" as the most frequently studied topic in adolescent leisure research.
RM3164 **14:30-14:45**	Bibliometric Mapping of AI-Supported Social Presence in Online Learning Environments: Trends, Collaboration, and Thematic Directions **Presenter: John Paul P. Miranda, Pampanga State University, Philippines** Author(s): Almer B. Gamboa, Erika M. Pineda, Rhiziel P. Manalese, Aileen P. De Leon, Vernon Grace M. Maniago, Jan Henry B. Sunga, Agnes R. Regala, Roque Francis B. Dianelo, John Paul P. Miranda **Abstract:** This study examines the development, influence, and collaboration patterns in AI-supported social presence research within online learning environments. Utilizing 59 open-access empirical studies from Scopus, the study applies citation analysis, co-authorship mapping, institutional analysis, and keyword clustering using Python-based bibliometric tools. Findings reveal an upward trend in publications since 2020, with

	research focusing on engagement, AI tools, instructional design, and ethical issues.
RM3325-A **14:45-15:00**	Graduate Competencies as Predictors of the Pre-Service English Teachers' Work-Readiness **Presenter: Cristie Ann L. Jaca, Cebu Technological University, Philippines** Author(s): Cristie Ann L. Jaca **Abstract:** The study of graduate competencies as predictors of pre-service English work-readiness is crucial in understanding how educational frameworks can be aligned with the demands of the job market. This study analyzes the acquired competencies of the pioneering pre-service English graduates based on their curricular program that predicts their work-readiness. This will address the need for determining the relevance of the curricular program to the present needs of the teaching profession.
RM3212 **15:00-15:15**	Exploring Female University Students' Acceptance of AI-Generated Mathematics Songs: An Application of the Technology Acceptance Model **Presenter: Ting-Sheng Weng, National Chiayi University** Author(s): Ting-Sheng Weng, Chien-Kuo Li, Yu-Chi Liou **Abstract:** This study investigates the impact of using generative artificial intelligence (Generative AI) to transform mathematical concepts into song-based learning materials on female university students' acceptance of such instructional methods. Grounded in the Technology Acceptance Model (TAM), the study employs Partial Least Squares Structural Equation Modeling (PLS-SEM) for data analysis. The participants consisted of 81 female university students.

Technical Session 13

"Blended Learning and Technology-Enabled Teaching Innovation"

Session Chair: Asst. Prof. Jomar Adams Ganding, Mapua University, Philippines

Venue: 7F-703	Time: 13:30-15:30, Jul. 31, Thursday
RM3056-A 13:30-13:45	Enhancing Japanese Language Learning: The Impact of Duolingo on Japanese Language Year 2 Students **Presenter: Siti Rehana Isnin, Smk Iskandar Shah, Malaysia; Hafiza Tajudin, Sekolah Dato' Abdul Razak, Malaysia** Author(s): Siti Rehana Isnin, Hafiza Tajudin **Abstract:** Japanese is a language offered as one of the foreign language elective subjects in secondary schools in Malaysia. It is taught from Year 1 to Year 5. However, some students struggle with this language, particularly in reading and mastering Japanese characters. This study aims to examine the impact of integrating the Duolingo application in enhancing the learning experience of Year 2 Japanese language students at SMK Iskandar Shah, Melaka. Additionally, the study seeks to identify elements that can be adapted for use in Japanese language classes. This research is conducted using Jean McNiff's (1988) adaptation study model.
RM3121-A 13:45-14:00	Implementation Effect of Integrating Case Teaching and Design Practice into Blended Learning: Analysis of Students' Learning Well-Being, Engagement, and Performance **Presenter: Ju-Chieh Huang, Tamkang University** Author(s): Ju-Chieh Huang **Abstract:** While teaching, the researcher observed that graduate students had three learning problems: a lack of understanding of the core idea of a competency-based curriculum and instruction, a lack of practical design that integrates theory and practice, and a lack of implementation effect analysis and reflection. Therefore, this study combined online case teaching and classroom design practice to implement blended learning activities. It is expected that students were able to combine theory and practice to implement a competency-based instruction in primary and secondary schools and conduct academic research with teaching practice.

RM3158 **14:00-14:15**	Design and Evaluation of a Dual-Track Blended Learning Model for Classical Chinese Poetry Instruction **Presenter: Yu-Hui Lin, Huanggang Normal University, China** Author(s): Yuhui Lin **Abstract:** Against the backdrop of educational digital transformation, this study investigates innovative approaches to teaching classical Chinese poetry, aiming to enhance normal students' cultural literacy and digital instructional competence. The study was based on blended learning theory and adopted action research methods. The researcher invited 438 third-year teacher training students from a teacher training university to become research participants. Each group shall consist of four members engaging in collaborative teamwork, with each individual responsible for developing a five-minute micro-course on classical Chinese poetry.
RM3137 **14:15-14:30**	A Study on the Differential Impact of Technical Tools' Functional Features on Chinese Students' Oral English Fluency Improvement: An Empirical Analysis Based on Age Groups and English Proficiency Levels **Presenter: Zhiqiang Yan, Universiti Putra Malaysia Bintulu Sarawak Campus, Malaysia** Author(s): Zhiqiang Yan, Juniza Md Saad, Tze Jin Wong **Abstract:** This study focuses on AI-driven English learning tools, taking three mainstream products—iFLYTEK English Pass, AI Foreign Teacher, and TALK AI—as objects to systematically explore how their functional features affect the oral fluency of learners of different age groups (children, adolescents, adults) and English proficiency levels (beginner, intermediate, advanced). Based on the Second Language Acquisition (SLA) theory and the technical education application framework, mixed research methods including functional feature scoring, market data crawling, and user experiments reveal that instant feedback mechanisms, contextualized practice, personalized learning paths, and social interaction functions are core effective features.
	Current Status and Prospects of Research on Flipped Classroom in English Language Teaching in China and in the World: A Bibliometric Analysis Based on CiteSpace **Presenter: Ziling Gao, East China University of Science and Technology, China; Ying**

RM3054 **14:30-14:45**	**Yin, East China University of Science and Technology, China; Zhishuang Liu, East China University of Science and Technology, China** Author(s): Ziling Gao, Biyu Wu, Letian Wang, Ying Yin, Zhishuang Liu **Abstract:** Since the flipped classroom's introduction to English language teaching, it has become a significant topic in the field of English education. This innovative teaching model has provided a new direction for the reform of English teaching, with many teachers actively exploring and applying it in practice. In this study, we use CiteSpace to analysis 255 papers of high quality from the CNKI and 321 papers from Web of Science Core Colletcion.
RM3119 **14:45-15:00**	Innovative Pedagogy for Enhancing Facilitator Adaptability: Practices of Scenario Simulation and Role-Playing in Immersive Learning **Presenter: Huang-Liang Lee, Chaoyang University of Technology** Author(s): Wei-Chieh Yeh, Huang-Liang Lee **Abstract:** This study is grounded in the theory of Deliberative Democracy and practical experiences, aiming to explore how innovative teaching methods can enhance the adaptability of facilitators. The research focuses on the "Facilitator Training System," employing immersive learning strategies that integrate scenario simulation and role-playing techniques to comprehensively improve trainees' responsiveness and adaptability in dynamic deliberative settings.
RM3028 **15:00-15:15**	AI Adoption Among Teachers: Insights on Concerns, Support, Confidence, and Attitudes **Presenter: Vanessa B. Sibug, Pampanga State University, Philippines** Author(s): Vanessa B. Sibug, Maria Anna D. Cruz, Vicky P. Vital, Juvy C. Grume, Almer B. Gamboa, Emerson Q. Fernando, Lloyd D. Feliciano, Jordan L. Salenga, John Paul P. Miranda **Abstract:** This study aimed to examine the role of institutional support, teacher confidence, and concerns in shaping teachers' attitudes toward AI adoption in education. The study employed a quantitative research design using the moderated multiple regression approach to analyze data from 260 purposively sampled non-licensed and licensed teachers across elementary, secondary, and college levels, with analysis all conducted in Python using Jupyter Notebook.

RM3134 **15:15-15:30**	Automated Generation and Dynamic Testing of OOP Practice Problems using Javadoc and Reflection **Presenter: Weerachai Anotaipaiboon, Thammasat University, Thailand** Author(s): Weerachai Anotaipaiboon **Abstract:** This paper presents an automated system for gen-erating and dynamically testing Object-Oriented Programming (OOP) practice problems. Our approach employs a four-stage pipeline that leverages Javadoc annotations within a reference solution, the JavaParser library for specification extraction, and Java Reflection for runtime evaluation of student code. Instructors define problem requirements and test cases directly within the reference solution using both standard and custom Javadoc tags.

Technical Session 14

"Educational Policy Innovation and the Social Impact"

Session Chair: Assoc. Prof. Zeng-Wei Hong, Feng Chia University

Venue: 7F-704	Time: 13:30-15:30, Jul. 31, Thursday
RM2005-A 13:30-13:45	Educational Diversity in Higher Education: Student-Made Courses **Presenter: Anastasiia Belova, ITMO University, Russia** Author(s): Anastasiia Belova **Abstract:** The current turbulent and fast changing world forces higher education institutions to foster holistic development in their students to make them equipped with every possible skill that might be useful in their professional and personal lives. To achieve this, universities seek to adopt new teaching approaches and methods of instruction. The presentation describes the educational initiative on open-enrollment optional students-for-students courses based on the case of ITMO University, St Petersburg, Russia.
RM2069 13:45-14:00	Navigation in the Dynamic Internationalization Landscape of Post-COVID-19 Higher Education to Improve Institutional Reputation in Service Delivery **Presenter: Lizl Steynberg, Tshwane University of Technology, South Africa** Author(s): Lizl Steynberg **Abstract:** This study investigates the concept of "institutional way power" and its significance in guiding higher education institutions (HEIs) through the challenges posed by the COVID-19 pandemic. The research emphasizes the necessity for HEIs to enhance their capabilities, activities, and engagements to effectively navigate the internationalization landscape of higher education. Employing a comprehensive qualitative documentary approach, the study utilizes constructivist grounded theory to develop a crisis-ready model for institutional way power in higher education internationalization.
RM3051-A 14:00-14:15	Intergenerational Learning in Aging Societies: A Comparative Study of the Healthcare and Education Sectors **Presenter: Chen, Hsiang Ju, University of Taipei** Author(s): Hsiang Ju Chen

	Abstract: In Taiwan, medical and education professionals undergo pre-service training, internships, and national exams to obtain licenses, followed by continuous on-the-job training. Due to population aging and declining birthrates, these sectors now feature multigenerational workforces, making intergenerational learning increasingly vital. This study explores intergenerational learning in healthcare and education workplaces and seeks strategies to facilitate effective knowledge transfer.
RM3113-A **14:15-14:30**	The Relationship between Educational Attainment and Climate Change Mitigation Actions **Presenter: I-Chun Tsai, National Tsing Hua University** Author(s): I-Chun Tsai **Abstract:** This paper examines the relationship between educational attainment and support for actions to mitigate climate change using data from a U.S. questionnaire survey. Previous studies have found that a person's education level affects his or her attitude toward public policy participation as an urban citizen and his or her awareness of being a global citizen, which in turn affects his or her environmental awareness. There are also studies suggesting that higher education should be used to enhance students' awareness of the Sustainable Development Goals.
RM2006-A **14:30-14:45**	Exploring Teachers' Perceptions of Principals' Innovative Leadership, Marketing Strategy, and School Effectiveness: Evidence from Elementary Schools **Presenter: Wen-Chen Chen, National Kaohsiung Normal University** Author(s): Wen-Chen Chen, Jing-Wen Huang **Abstract:** In the context of rapid global changes in the 21st century, technological advancements, democratic ideals, and diverse value systems have become increasingly prevalent. Developed nations generally advocate for a high quality of life; however, these advancements have also given rise to various social and educational issues. In the current educational landscape, schools face significant challenges including declining birth rates, intensified competition for survival, and an increase in parental choice regarding education. As a result, school principals are required to demonstrate innovative leadership and employ effective marketing strategies to enhance school effectiveness and maintain stable student enrollment.

RM3210-A **14:45-15:00**	Learning by Serving: Enhancing Competence and Social Responsibility through English Teaching Service-Learning **Presenter: Ai-Hua Chen, Providence University** Author(s): Ai-Hua Chen **Abstract:** This study aims to explore the effects of teaching English in primary schools as a part of the professional service-learning course in developing university students' learning efficacy, professional knowledge and social responsibility. It also explores the process of students' service experience and learning transformation. The subjects were second-year university students enrolled in a semester-long professional service learning course. The service-learning process consisted of four main stages: investigation and preparation, service action, reflection and evaluation, and sharing and new application, with an emphasis on continuous reflection. Multiple assessment methods were used to evaluate students' learning process and efficacy. Data were collected both quantitatively and qualitatively, which include pre-test and post-test of service-learning questionnaires, students' self-reflective journals, and the assessments from the supervisors of the community. Data were triangulated and analyzed to explore insight into the transformation of service-learning experiences and their learning outcomes among university students. The results showed that students' overall learning outcomes, professional competence and sense of social responsibility were significantly enhanced after the course. The process also confirms that students transformed their new learning and applications through reflection on their service experiences. Reflective learning during the service process can help individuals and enhance their interpersonal growth, professional learning, and altruistic mindset. Based on the results, relevant suggestions are provided for the planning and implementation of professional service learning courses, school-community partnerships, and future research directions.
RM2071-A **15:00-15:15**	Mapping Assessment Literacy: Exploring Pre-Service Teachers' Knowledge and Understanding of Learning Assessment **Presenter: Yun-Ruei Ku, National Taichung University of Education** Author(s): Yun-Ruei Ku **Abstract:** Learning assessment competency is a crucial component of teacher education.

	In this study, we used concept mapping, a visual tool designed to organize and represent knowledge, and open-ended questionnaires to explore the knowledge, understanding, and attitudes of elementary school pre-service teachers regarding learning assessment. One hundred pre-service teachers participated in group activities to create concept maps over the course of a semester. The findings indicate that although most students could identify relevant concepts, their understanding was often limited to simplistic definitions, which hindered deeper comprehension.
RM2117 **15:15-15:30**	Educational Challenges for Technology Adoption among Rural MSMEs in Thailand's Hospitality Sector **Presenter: Ajjaree Limpamont, Sukhothai Thammathirat Open University, Thailand** Author(s): Ajjaree Limpamont, Pichawadee Kittipanyangam **Abstract:** While digitalization has addressed many challenges and enhanced value creation in the hospitality sector, rural Micro, Small, and Medium Enterprises (MSMEs) continue to face significant barriers in adopting digital technologies. This paper explores the key educational challenges and opportunities for training rural Thai entrepreneurs in the hospitality sector on adopting frontier technologies. It also examines how education and training initiatives can create an enabling ecosystem through mobile and frontier technologies, improving the performance and resilience of rural MSMEs in hospitality sector.

Technical Session 15

"Educational Equity and Inclusive Practices"

Session Chair: Assoc. Prof. Manu Sharma, Thompson Rivers University, Canada

Venue: 7F-705	Time: 13:30-15:30, Jul. 31, Thursday
RM2049-A 13:30-13:45	The Role of Needs Analysis in Advancing Diversity and Inclusion in Higher Education Across Europe: Insights from the European Universities Alliance NEOLAiA **Presenter: Amelie Labusch, Bielefeld University, Germany** Author(s): Amelie Labusch, Michaela Vogt **Abstract:** Higher education institutions worldwide, particularly across Europe, increasingly recognize the importance of diversity and inclusion as fundamental principles for fostering equitable and innovative academic environments. However, the implementation of effective diversity and inclusion strategies requires a comprehensive understanding of the specific needs and barriers experienced by different university communities. Needs analysis is a critical tool in this process, as it provides evidence-based insights that inform policy and practice. Research has demonstrated that institutions employing structured needs analyses are better equipped to develop sustainable and targeted diversity and inclusion policies.
RM3037 13:45-14:00	Exploration of Students' Higher-Order Thinking Skills in Physics Learning: Gender Analysis Using the Rasch Model **Presenter: Fian Rifqi Irsalina, Universitas Pendidikan Indonesia, Indonesia** Author(s): Fian Rifqi Irsalina, Lina Aviyanti, Beata Graceshela Muki, Mimin Iryanti **Abstract:** The purpose of this study is to investigate the higher-order thinking skills (HOTS) of high school students in the physics of heat, with a focus on gender differences. HOTS, which includes analysis, evaluation, and creation, is essential to help students understand complex physics concepts and apply them in real-world contexts. This study uses a descriptive quantitative approach with an essay question instrument referencing the Revised Bloom's Taxonomy.
	A Study on Reflective Teaching in Early Childhood Inclusive Education among Preschool Caregivers

RM2133 **14:00-14:15**	**Presenter: Hsiou-Wen Yang, University of Kang Ning** Author(s): Li-Zhu Chen, Hsiou-Wen Yang **Abstract:** This study investigated the effect of reflective teaching on the inclusive professional competence of in-service preschool educators. Utilizing a quasi-experimental design, 44 participants enrolled in a "Preschool Inclusive Education" course at a private university in northern Taiwan were examined. Reflective teaching was implemented as the primary instructional approach throughout the course. Data was collected through structured questionnaires and semi-structured interviews to assess changes in participants' professional competencies. The results indicated statistically significant improvements across six dimensions: attitudes toward inclusion, curriculum and instructional design, classroom management, work-related stress, access to teaching resources, and self-efficacy.
RM2058-A **14:15-14:30**	Innovation in Training against Sexual Misconduct in Healthcare **Presenter: Homa Arshad, NHS, UK** Author(s): Homa Arshad **Abstract:** The UK Orthopaedic Trauma Society commissioned an interactive session for education in the challenging subject of sexual misconduct. This originated from the British Journal of Surgery publication of a survey of the UK surgical workforce and the collaborative 2023 Breaking the Silence report. These articles were published by the Working Party on Sexual Misconduct in Surgery, which has participated in a movement towards changing culture and regulation in healthcare. The session aimed to engage participants by promoting curiosity and preparedness, equipping participants with familiarity around common areas of fearfulness and misinformation.
RM3124-A **14:30-14:45**	Examining the Complex Connections between Teachers' ICT Competence, Acceptance of Technology, Attitudes, and their Inclusive Practices **Presenter: Meijie Bi, Zhejiang Normal University, China** Author(s): Meijie Bi **Abstract:** Currently, student diversity is pervasive in global classrooms and schools (OECD, 2010). In this context, the United Nations have set a sustainable development goal that aims to provide students with inclusive, equitable and high-quality education,

	thus reducing social inequalities. The efficient use of information and communication technology (ICT) in classrooms enables educators to integrate technology with contemporary pedagogies to address students' learning differences, which offers a channel for schools and teachers to facilitate the transformation of established traditional teaching practices.
RM3186 **14:45-15:00**	Construction and Practice of an Artificial Intelligence-Empowered Training Model for Physics Experiments from the Perspective of Interdisciplinary Integration **Presenter: Jing Chen, Nankai Univesity, China** Author(s): Jing Chen, Yudong Li, Yongfa Kong, Zongqiang Chen, Hongwei Zhou **Abstract:** Against the backdrop of the accelerating new round of global scientific and technological revolution and industrial transformation, cultivating compound talents with interdisciplinary innovative capabilities has become a core proposition for higher education to serve technological development. With the deep integration of artificial intelligence (AI) technology and education, physics experiment teaching—acting as a key hub connecting natural science theory and engineering practice—is undergoing a paradigm shift from "knowledge transfer" to "intelligent empowerment + capability construction."
RM3063-A **15:00-15:15**	A Study on the Social Benefits of Applying 5G Metaverse to Professional Skills Training **Presenter: Hao-Chu Lin, Overseas Chinese University** Author(s): Hao-Chu Lin, Wen-Ching Lu **Abstract:** In the wake of the COVID-19 pandemic, global investments in remote, virtual, and contactless technologies have transformed traditional work practices, particularly in education and professional development. This study explores the integration of 5G and metaverse technologies to create a 5G Metaverse Professional Skills Training System.
RM2088 **15:15-15:30**	What Does Defragmenting Research Reveal about Solving Mathematical Problems? A Systhematic Literature Review **Presenter: Abdul Wahab A, Universitas Pendidikan Indonesia, Indonesia** Author(s): Abdul Wahab A, Jarnawi Afghani Dahlan, Yaya S Kusuma, Syaiful, Mirza Aulia **Abstract:** Mathematical problem-solving requires various cognitive skills, including

	conceptual understanding, procedural knowledge, and reasoning abilities. However, fragmented cognitive structures often lead to difficulties in solving problems efficiently. This systematic literature review (SLR) explores the role of defragmentation in reorganizing students' thinking structures to enhance mathematical problem-solving abilities. Following PRISMA guidelines, 17 peer-reviewed studies published between 2019 and 2024 were analyzed.

Technical Session 16

"Immersive Technologies in Education: Cross-Disciplinary Applications and Future Trajectories"

Session Chair: Prof. Chih-Hung Wu, National Taichung University of Education

Venue: 7F-701	Time: 16:00-17:30, Jul. 31, Thursday
RM3191 16:00-16:15	Artificial Intelligence and Gen Z: Cognitive Shifts in a Tech- Savvy Generation **Presenter: Jasmine Nadja J. Pinugu, Mapua University, Philippines** Author(s): Myrrh Dorothy Alan Villanueva, Jessica Du Nazareth, Jyrh Alexia Babor Liwanag, Jamal Silas Field Alvarez, Lu Aleckxa Lindzae Espinosa Atendido, Bless Novela Domael, Alanisse Klaudette Miranda Moral, Jasmine Nadja Junghan Pinugu **Abstract:** In recent years, digital learning has revolutionized educational environments, replacing traditional methods of resource acquisition and course delivery with advanced, technology-driven alternatives. Once reliant on extensive physical searches through libraries, students can now access vast educational resources with ease, thanks to rapid technological advancements. This transformation, accelerated by the COVID-19 pandemic, has brought forth new platforms for online learning, collaborative tools, and interactive multimedia networks, including mobile and instant communication tools.
RM3302 16:15-16:30	Innovative Applications of Virtual Reality in Education: A Study on Creativity Development through the Integration of Educational Metaverse in STEAM Instruction **Presenter: Cheng-Hung Wang, National University of Kaohsiung; Nien-En Wu, National University of Kaohsiung** Author(s): Cheng-Hung Wang, Chih-Yi Lin, Nien-En Wu **Abstract:** This study aims to explore the impact of integrating Virtual Reality (VR) and an educational metaverse platform into STEAM (Science, Technology, Engineering, Arts, and Mathematics) instruction on the creativity development of elementary school students. As the integration of digital technology and education becomes increasingly prominent, immersive learning environments are regarded as promising tools for cultivating students' creativity and interdisciplinary thinking.
	Metaverse Acceptance Study for Hong Kong University Students

RM3094 **16:30-16:45**	**Presenter: Justin Lau, The Hong Kong Polytechnic University, Technological and Higher Education Institute of Hong Kong, China** Author(s): Justin Lau, Yuk Ming Tang **Abstract:** Metaverse defines a mixture of interactions between physical and digital realms. This application holds transformative potential to enhance students' learning for higher education. However, understanding the factors influencing university students' acceptance of this technology remains underexplored. This study presents a revised Technology Acceptance Model to examine how Perceived Ease of Use, Intention, Accessibility, and Perceived Innovative Usefulness influence students' Intention to Use the Metaverse in the educational setting and the Metaverse acceptance for university students in Hong Kong.
RM3169-A **16:45-17:00**	Immersive AR Design for Agricultural Skill Training in Smart Farming Contexts: A Review Approach **Presenter: Phantipa Amornrit, Sukhothai Thammathirat Open University, Thailand** Author(s): Phantipa Amornrit, Patthanan Bootchuy **Abstract:** This paper presents a conceptual design review of immersive Augmented Reality (AR) applications aimed at enhancing practical skill training within agricultural higher education, specifically tailored for smart farming contexts such as smart greenhouses and plant factories. As agricultural practices rapidly evolve towards greater technological integration, traditional instructional methods face critical limitations in providing safe, realistic, and cost-effective experiential learning environments. Immersive AR technology emerges as an innovative solution that bridges this experiential gap by enabling interactive, real-time simulations closely aligned with industry standards and educational objectives.
RM3316 **17:00-17:15**	Nusantara Folklore Reimagined: AR as a Tool for Bilingual Communication Development in Generation Alpha **Presenter: Ana Humardhiana, UIN Siber Syekh Nurjati Cirebon, Indonesia** Author(s): Ana Humardhiana, Tamsik Udin, Nur Atikoh **Abstract:** Generation Alpha, born and raised in the digital era, requires an innovative learning approach to develop bilingual communication skills. This research aims to

	analyze the needs of Generation Alpha for Augmented Reality (AR)-based learning media in improving bilingual communication skills. The research method needed analysis through surveys, interviews, and observations of students, teachers, and parents.
RM3303 **17:15-17:30**	AI in Education: From an Extended Unified Theory of Acceptance and Use of Technology (UTAUT2) Perspective **Presenter: Annabel Hui Callos Choy, Mapua University, Philippines** Author(s): Jasmine Nadja Junghan Pinugu, Annabel H Choy **Abstract:** This exposition paper explains the impactful role of artificial intelligence in education, using the lens of the extended Unified Theory of Acceptance and Use of Technology (UTAUT2). This extended model highlights the factors that predict behavioral intention to use technology, from a consumer use perspective. Thus, the goal of this paper is to explain why students adopt artificial intelligence in accomplishing academic tasks and how its utility contribute to their positive learning experiences.

Technical Session 17

"Design and Application of Educational Information System"

Session Chair: Prof. John Christopher D. Castillo, Mapua University, Philippines

Venue: 7F-702	Time: 16:00-17:30, Jul. 31, Thursday
RM3040 16:00-16:15	Smart Learning: Android-Based Electronic Physics Pocket Book for Circular Motion in High School **Presenter: Abd Aziz Ardiansyah, Universitas Pendidikan Indonesia, Indonesia** Author(s): Abd Aziz Ardiansyah, Hera Novia, Dadi Rusdiana **Abstract:** The Electronic Physics Pocket Book is an Android application designed to teach high school students about circular motion. To improve students' motivation and comprehension of the subject matter, this educational resource is presented in an appealing manner. Determining the degree of validity and usefulness of an electronic physics pocket book based on an Android application on circular motion materials was the aim of this study. Research and Development (R&D) research employing the ADDIE development paradigm is the type of study.
RM3084 16:15-16:30	Harnessing SQL for Automated Web Development: An Interactive Learning Platform for Database Students **Presenter: Ken Fong, Lingnan University, China** Author(s): Ken Fong, Kenneth Cheung, Billy Chiu **Abstract:** The study of database systems encompasses both strong theoretical foundations and practical applications. Students must develop a solid understanding of theoretical concepts while also acquiring robust practical skills. However, traditional teaching methods, characterized by a" Chalk and Talk" approach, often hinder this dual development. Without a comprehensive narrative to contextualize the material, students may struggle to grasp the abstract concepts inherent in database systems.
RM2062 16:30-16:45	An Instructional Home Network Testbed for Undergraduate Networking Education **Presenter: Adam Beauchaine, Worcester Polytechnic Institute, United States** Author(s): Andy Zheng, Adam Beauchaine, Mira Yun **Abstract:** Teaching undergraduates about home networking challenges is difficult, as

	applied networking concepts are often complex to demonstrate in a classroom setting. Many existing simulations lack fidelity, transparency, or require costly software and hardware. Additionally, industry and research tools are often too intricate for undergraduates, making them difficult to grasp and time-consuming to teach effectively. To address these challenges, this paper presents an instructional home network testbed built with affordable Raspberry Pi 4Bs, enabling hands- on learning.
RM3147 **16:45-17:00**	Designing an AI-Integrated Academic Writing Platform for Enhancing EFL Students' Writing Self-Efficacy and Metacognitive Awareness: A Needs Analysis **Presenter: Falentinus Ndruru, Universitas Negeri Malang, Indonesia** Author(s): Yazid Basthomi, Maria Hidayati, Evynurul Laily Zen, Falentinus Ndruru, Carolin Fuchs **Abstract:** Academic writing is increasingly essential in EFL contexts, yet students continue to face difficulties in developing writing self-efficacy and metacognitive awareness, especially in digital learning environments. Existing research largely emphasizes traditional instruction and general writing challenges, with minimal focus on AI's role in academic writing. Limited insights into students' experiences and readiness highlight the urgent need for learner-centered AI innovations. This study addresses these concerns through a needs analysis, aiming to design an AI-integrated academic writing platform that meets the specific needs of EFL students.
RM3192 **17:00-17:15**	Technology-Driven Assessment Reform in Philippine Education: A Historical and Policy-Based Evaluation of Sustainable Innovations **Presenter: Jasmine Nadja J. Pinugu, Mapua University, Philippines** Author(s): Bea Genny Tatad Estabaya, Mary Joy Cuballo Cabangunay, Therese Angeli Mindaro Manalo, Jasmine Nadja Junghan Pinugu **Abstract:** This article maps the development of assessment practice in the Philippine education system across four critical junctures: the pre-2000s dominance of summative, standardized testing; the 2000–2019 shift to K–12 and outcomes-based education; the pandemic-driven uptake of modular and online assessments (2020–2022); and the post-pandemic experimentation with hybrid, AI-supported, and competency-based practices.
	Developing an Adaptive Personalized Learning System to Enhance English Shadowing

RM3035 **17:15-17:30**	and Listening Comprehension **Presenter: Zeng-Wei Hong, Feng Chia University** Author(s): Zeng-Wei Hong, Ming-Hsiu Michelle Tsai, Wai Khuen Cheng, Shi-En Li **Abstract:** Research in language learning has confirmed that shadowing is an effective method for improving second language listening and speaking skills. Shadowing is a language learning technique where learners listen to audio in a target language and simultaneously repeat what they hear, thereby enhancing learners' listening and speaking abilities. However, learning systems that specifically support personalized English shadowing training are still rare.

Technical Session 18

"Artificial Intelligence-Assisted Teaching and Learning"

Session Chair: Dr. Meijie Bi, Zhejiang Normal University, China

Venue: 7F-703	Time: 16:00-17:45, Jul. 31, Thursday
RM3322-A 16:00-16:15	Assessing Attention Levels During AI-Guided Logical Reasoning Training: EEG Brainwave Insights from Female College Students **Presenter: Lihuan Zhu, Shaoguan University, China** Author(s): Hui-Wen Huang, Lihuan Zhu, Daniel Dusza, Dong-Meau Chang, Ho-Shan Huang **Abstract:** Developing logical reasoning skills plays a crucial role in fostering effective learning. This study investigated attention-related brainwave activity during AI-guided logical reasoning training among female students majoring in STEM (Science, Technology, Engineering, and Mathematics) and non-STEM disciplines in China. Electroencephalogram (EEG) data were collected from 20 female participants (10 STEM majors and 10 non-STEM majors), aged 19–21, as they engaged in an AI chatbot-supported logical reasoning intervention.
RM3064 16:15-16:30	AI Tutoring Assistant for E-Learning: Basic Requirements and Framework **Presenter: Qingchun Bai, Shanghai Open University, China** Author(s): Qingchun Bai, Lamei Wang, Jun Xiao **Abstract:** Powered by artificial intelligence (AI), AI Tutoring Assistant held significant potential in simulating human tutors' instructional behaviors and mentoring functions, particularly driven by generative AI technologies. To explore the practical demands of AI teaching assistants in online learning scenarios, this study analyzed social platform user reviews and questionnaire data to evaluate their acceptance of online learning tools and influencing factors.
RM3108 16:30-16:45	Maximizing Learning Outcomes Through Tutorials with AI Engagement using SmartBooks **Presenter: Jomar Adams Ganding, Mapua University, Philippines** Author(s): Charliemaign Stanley S Cruz, Jhoanne Mae C Toriaga, Jomar Adams Ganding,

	Shealtiel William S Chan, Lance Austin G Elizaga, Marlou Del N. Tarranco **Abstract:** The integration of artificial intelligence (AI) into education presents a transformative approach in enhancing student learning outcomes. This study examines the use of AI-powered tools, specifically SmartBooks, in enhancing student engagement in higher education. SmartBooks leverage adaptive learning technology to personalize content delivery and data-driven experiences that support knowledge acquisition and critical thinking.
RM3327 **16:45-17:00**	AI-Assisted Teaching and Learning: A Real Application Of Course Design, Assessment and Evaluation in Higher Education **Presenter: Jinpeng Wang, Guangzhou City University of Technology, China** Author(s): Jinpeng Wang, Yiying Li, Yihe Qian **Abstract:** In the rapidly evolving field of educational technology, the potential for integrating Artificial Intelligence (AI) tools like ChatGPT into teaching and learning processes remains untapped and ripe for exploration. This study aims to address the gaps in this field by proposing a framework of AI-assisted teaching and Learning, namely Decompose-Ask-Response (AI-DAR). We compare the learning outcomes of students exposed to AI-assisted teaching with those in a traditional setting.
RM3311 **17:00-17:15**	Leveraging AIoT Technology in Badminton Instruction: Effects on Badminton Skills learning and Sports Motivation in Junior High School Students **Presenter: Hsiao-Hsuan Chang, National Cheng Kung University** Author(s): Ya-Ting C. Yang, Hsiao-Hsuan Chang, Yi-Zhe Gan, Jeen-Shing Wang **Abstract:** This quasi-experimental study investigated the effects of AI-integrated badminton instruction on junior high school students' badminton skills and sport motivation. Fifty-six first-year junior high school students from southern Taiwan were randomly assigned to a control group receiving traditional instruction or an experimental group receiving AI-enhanced blended learning. Both groups practiced badminton skills over a seven-week period. Pre- and post-tests assessed shot placement accuracy and sport motivation.
	Development and Evaluation of an Enterprise-Level Information System for Digital Governance in Philippine SUCs using Agile Software Methodology and ISO/IEC 25010

RM3148 **17:15-17:30**	Software Quality Model **Presenter: Ronel F. Ramos, FEU Institute of Technology, Philippines** Author(s): Ronel Francisco Ramos, Allen Paul Layos Esteban, Ace Carpio Lagman **Abstract:** This study focuses on the evaluation of the develop enterprise-level information system that focuses on research, instruction and extension integration for State Universities and Colleges (SUCs) in the Philippines. The researcher used the descriptive- developmental type of research. Using the system, the leaders of the school will have a real-time overview of the status of the performance and accomplishment.
RM3102 **17:30-17:45**	Profiles of AI Dependency: A Latent Class Analysis of Filipino Students' Academic Competencies **Presenter: Emerson Q. Fernando, Pampanga State University, Philippines** Author(s): Emerson Q. Fernando, Julius Ceazar G. Tolentino, Maria Anna D. Cruz, Jordan L. Salenga, Vernon Grace M. Maniago, Juvy C. Grume, Erika M. Pineda, Aileen P. De Leon, John Paul P. Miranda **Abstract:** The increasing reliance among Filipino college students on artificial intelligence (AI) poses concerns about the potential decline of fundamental academic competencies. This study examines the extent of AI dependency and its perceived effects on students' critical thinking, writing skills, learning independence, research skills, and academic engagement. Using a cross-sectional research design, data was collected from 800 students enrolled in higher education institutions (HEIs) in Pampanga, Philippines accredited by the Commission on Higher Education. Employing the use of a 24-item instrument, data was analyzed using Latent Class Analysis (LCA) to identify AI dependency patterns.

Technical Session 19

"AI Literacy and the Adoption of AI Educational Tools by Teachers and Students"

Session Chair: Assoc. Prof. Ai-Hua Chen, Providence University

Venue: 7F-704	Time: 16:00-17:30, Jul. 31, Thursday
RM3126 16:00-16:15	Factors Influencing C/C++ Intelligent Tutoring System Adoption: An Analysis of Modified Technology Acceptance Model Using Structural Equation Modeling **Presenter: Angelo C. Arguson, FEU Institute of Technology, Philippines** Author(s): Angelo Condol Arguson, Shaneth Cueno Ambat, Elisa Villamor Malasaga, Fanny Cabiso Almeniana, Marilyn Mamansag Sanchez **Abstract:** This study extended a previous paper that focuses on the acceptability of selected Bachelor of in Computer Science (BSCS) and Information Technology (BSIT) students on the use of Intelligent Tutoring System (ITS) for C/C++ Programming. A one-shot case study research design was carried out in 5 programming classes taught by the author. A Slovin's formula computation from the population was 35.54. Voluntary response sampling method was observed during the meeting with the students. The study involved 39 participants, out of which 74.36% were male and 25.64% were female computer science and IT students.
RM3165 16:15-16:30	Exploring the Adoption Intention in Using AI-Enabled Educational Tools Among Preservice Teachers in the Philippines: A Partial-Least Square Modeling **Presenter: Joseph Alexander Bansil, Pampanga State University, Philippines** Author(s): Vanessa B. Sibug, Emerson Q. Fernando, Almer B. Gamboa, Roque Francis B. Dianelo, Agnes R. Regala, Joseph Alexander Bansil, Jan Henry B. Sunga, Vernon Grace M. Maniago, John Paul P. Miranda **Abstract:** This study examines the factors influencing pre-service teachers' behavioral intention to use AI-enabled educational tools during their practicum, using the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) as the theoretical framework. The model includes the core UTAUT2 constructs such as performance expectancy, effort expectancy, hedonic motivation, social influence, facilitating conditions, price value, and

	habit. It also incorporates additional predictors including computer self-efficacy, computer anxiety, and computer playfulness.
RM3174 **16:30-16:45**	AI Literacy in Marketing Education: Insights from Thai University Students and Implications for Digital Pedagogy **Presenter: Aphiradee Saranrom, Sukhothai Thammathirat Open University, Thailand** Author(s): Aphiradee Saranrom **Abstract:** The rapid integration of artificial intelligence (AI) into marketing practices has transformed the skills required for future marketing professionals. AI literacy defined as the ability to understand, evaluate, and ethically apply AI tools is emerging as an essential competency for students preparing for marketing careers. This study investigates the AI literacy levels among Thai university students enrolled in marketing programs, based on survey data collected from 324 participants.
RM3066-A **16:45-17:00**	AI Literacy Scales for Civil Servants **Presenter: Wen-Ching Lu, National Taiwan Normal University** Author(s): Wen-Ching Lu **Abstract:** This study aimed to develop and validate a scale for assessing civil servants' AI literacy. To address the unique characteristics of public sectors, such as non-profit performance evaluation and bureaucratic operational structures, this study integrated competency-based and psychological cognition component to tailor an AI literacy scale specifically for civil servants. Based on the literature, the initial version of the scale included eight constructs with 40 items: Understand AI, Apply AI, AI Ethics, Detect AI, Assistance, Anthropomorphic Interaction, Comfort with AI, and Technological Skills. After validation with 99 samples, the constructs Detect AI and Anthropomorphic Interaction were removed, resulting in a final scale with six constructs which are Understand AI, Apply AI, AI Ethics, Assistance, Comfort with AI, and Technological Skills and 20 items.
	The Role of Effort Expectancy, Performance Expectancy, and Social Influence in Using Artificial Intelligence among Undergraduate Students **Presenter: Suriani Ismail, Universiti Putra Malaysia, Malaysia**

RM3318-A **17:00-17:15**	Author(s): Suriani Ismail, Abu Bakar **Abstract:** The expansion of artificial intelligence has been occurring rapidly in recent years, encompassing various regions across the globe. In the education realm, the anticipation of artificial intelligence (AI) playing a transformative role, poised to revolutionize learning processes, cannot be denied. This global trend is influenced by several factors, prompting higher education students to utilize AI platforms.
RM3214 **17:15-17:30**	Reframing AI Literacy: Epistemic Injustice, Generational Concerns, and Perceived Well-Being **Presenter: Hiroko Kanoh, Yamagata University, Japan** Author(s): Hiroko Kanoh **Abstract:** The expansion of generative AI and algorithm-driven social media has intensified concerns about epistemic injustice, particularly among younger generations. Exposure to biased information, algorithmic stereotyping, and hallucinated content has contributed to a growing sense of disorientation, mistrust, and diminished well-being. In response, this paper proposes a reframing of AI literacy—not merely as a technical skillset but as a framework for restoring epistemic balance and supporting subjective well-being.

Technical Session 20

"Innovation in Mathematics and Physics Education"

Session Chair: Asst. Prof. Chen, Hsiang Ju, University of Taipei

Venue: 7F-705	Time: 16:00-17:30, Jul. 31, Thursday
RM3085 **16:00-16:15**	Web-Based Physics Education: Leveraging Google Sites for Teaching Parabolic Motion **Presenter: Ihsan Hijria Putra, Universitas Pendidikan Indonesia, Indonesia** Author(s): Ihsan Hijria Putra, Raihanati, Riser Fahdiran, Hera Novia, Muslim **Abstract:** The limited time students have to understand parabolic motion material in school with their teachers necessitates the development of enrichment learning media. Such learning media should be accessible anytime and anywhere via the internet to facilitate a deeper understanding of parabolic motion concepts. This study aims to develop a learning website that is suitable for student use. The research method employed is Research and Development (R&D) using the ADDIE model.
RM2064-A **16:15-16:30**	Exploring Asynchronous Open Learning Programs at a British Columbia University: A Case Study of Ten Students with Disabilities **Presenter: Manu Sharma, Thompson Rivers University, Canada** Author(s): Manu Sharma, Warren Haydock **Abstract:** This qualitative research study explores the following question: how, if at all, does online open learning support students with disabilities? Post-secondary institutions, which can be known to be bureaucratic and are slow to evolve, may create unpleasant and damaging learning experiences for students who do not fit the 'traditional' student mold. One particular group who regularly grapples with these harsh realities are students with disabilities. As a result, this study questions the inclusiveness of instructional design of assignments and pedagogy used in online environments.
RM3183-A **16:30-16:45**	Physics Demonstration Teaching in TEAL Clasroom **Presenter: Yongfa Kong, Nankai University, China; Zongqiang Chen, Nankai University, China** Author(s): Zongqiang Chen, Yudong Li, Jing Chen, Yongfa Kong **Abstract:** Based on the teaching reform project of modern technology of TEAL

	(Technology Enabled Active Learning), we use specially designed classroom to realize interactive, intelligent and physical image visualization of physics teaching. In the TEAL classroom, the optical demonstration experiment and the optical course teaching are organically integrated. We have introduced the use of physical demonstration experimental instruments in teaching.
RM3141 **16:45-17:00**	Research and Application of Mathematics Experimental Teaching Mode Based on Dynamic Mathematical Systems and OBE Concept **Presenter: Jintao Shao, Guangzhou University, China** Author(s): Jintao Shao, Ruxian Chen, Yuanyuan Jin, En Zhang, Jing Zhang, YongSheng Rao **Abstract:** Mathematics experiment is a mathematical inquiry activity aiming at exploring mathematical phenomena, discovering mathematical laws, verifying mathematical conclusions and solving mathematical problems. In the face of traditional mathematics laboratory teaching problems such as traditional teaching tools, single teaching method and lack of teaching interaction, this paper builds a mathematics laboratory teaching mode based on dynamic mathematical systems and Outcome-Based Education teaching concept, which transforms the traditional mathematical experimental process into a dynamic visualization and operable teaching process, and carries out teaching design and teaching practice with the quadratic function as a case study, and the results show that the mode is conducive to Promote students' learning interest and enhance teacher-student interaction.
RM3041 **17:00-17:15**	Empowering Small Schools in Malaysia with 21st-Century Skills in Mathematics Education: A Framework based on Differentiated Instruction Model **Presenter: Mohd Afifi Bahurudin Setambah, Universiti Pendidikan Sultan Idris, Malaysia** Author(s): Sarah Yusoff, Mohd Afifi Bahurudin Setambah, Nor Hasnida Che Md Ghazali, Riyan Hidayat, Alfira Mulya Astuti **Abstract:** Small schools in Malaysia, especially those in rural areas, face challenges such as multigrade classes, diverse learning abilities, and limited resources, which hinder effective mathematics instruction. This study develops a model of differentiated pedagogy based on Differentiated Instruction to enhance the teaching of Basic

	Mathematical Operations and foster 21st-century skills, including critical thinking, problem-solving, and collaboration.
RM3306 **17:15-17:30**	Designing a Digital Storybook about Hearing Impairment Using High Contrast Colors to Inform Filipino Kindergarten Students of Sta. Rosa City, Laguna, Philippines **Presenter: Hailey Pasal Ferrer, Mapua Malayan Colleges Laguna, Philippines** Author(s): Hailey Pasal Ferrer, Yrrah. Chua, Richeljoice Parado Orbeta, Joshua Patrick Parado Lagrimas, Bart Andrew Sadsad Mendoza **Abstract:** This study developed and evaluated "Miggy", an illustrated digital storybook designed to introduce the concept of hearing impairment to Filipino kindergarten students. Utilizing a qualitative research design, the project examined how young learners understand and engage with disability-related content presented through visual storytelling.

Poster Session 1

"Artificial Intelligence and XR Technology-Enabled Educational Innovation"

Session Chair: Lecturer Rod Rothwell, George Mason University, South Korea

Venue: 7F-Lobby	Time: 13:30-15:45, Jul. 30, Wednesday
RM3090-A **13:30-13:45**	Transforming Dyslexia Care: AI-Powered Diagnosis and Personalized Intervention for Early Learning Success **Presenter: Chit Wong, St. Margaret's Co-educational English Secondary and Primary School, China; Leo Matthias Sturm, The Hong Kong Polytechnic University, China; Yin Zifu, The Hong Kong Polytechnic University, China** Author(s): Leo Matthias Sturm, Zi Fu YIN, Jianing MAO, Chit Wong, Hoi Sze Chan, Chi Pong Tsui, Wai Kit Wong **Abstract:** Dyslexia is a common learning impairment which affects reading and writing skills (Zoccolotti & Friedmann, 2010). Usually, this learning disability remains undiagnosed until the age of eight, where it has severly affected the child's academic achievements, self-develoment, and self-esteem (Zuppardo et al., 2023). Early detection and treatment are crucial to mitigate long-term academic and emotional impact.
RM2028-A **13:45-14:00**	Exploring the Association between College Students' ChatGPT Attitudes and Addiction: A Study of Taiwanese University Students **Presenter: Sen-Chi Yu, National Taichung University of Education** Author(s): Sen-Chi Yu, Yu-Chen, Hsu, Yu-Tung, Hsiao, Zhi-Fang Sung, Tsai-Ying Yu **Abstract:** The purposes of this study are to investigate college students' attitudes toward ChatGPT and ChatGPT addiction. The research instruments include the ChatGPT Attitude Scale (CAS), which consists of five subscales: Tool, Threaten, Tutor, Talk, and Trend, and the Problematic ChatGPT Use Scale (PCUS). The sample consists of 510 Taiwanese college students. The study found that the correlation between PCUS and the overall CAS scale is .495. The correlations between PCUS and the CAS subscales are as follows: Tool (.419), Threaten (.370), Tutor (.317), Talk

	(.493), and Trend (.075).
RM3091-A **14:00-14:15**	Revolutionizing Sign Language Education: A Metaverse-Based Sign Language Education Platform Powered by AI **Presenter: Hei Yunjie, SKH Lam Kau Mow Secondary School, China; Chun Hin Choi, SKH Lam Kau Mow Secondary School, China; Pan Yi Lam, SKH Lam Kau Mow Secondary school, China** Author(s): Suet Yi Tse, Hoi Sze Chan, Yun Jie Hei, Chun Hin Choi, Chit Wong, Pan Yi Lam, Chi Pong Tsui, WaiKitWong **Abstract:** According to the Census and Statistics Department, there were approximately 47 900 persons with hearing difficulty (with a rate of 0.6% among the total population) in Hong Kong in 2022 [1]. This significant data highlights the importance of sign language as a vital communication medium. Sign language is an essential communication medium for those hearing-impaired and those who have speech difficulties. By employing visual gestures such as hand shapes and movements, a variety of meanings can be expressed including alphabets, words, and phrases.
RM3167 **14:15-14:30**	Employing Artificial Intelligence for Ideation and Concept Generation: An Empirical Investigation in the Realm of Industrial Design Education **Presenter: Tsai, Wei-Te, National Yunlin University of Science and Technology** Author(s): Wei-Te Tsai **Abstract:** This study investigates the effectiveness of integrating Artificial Intelligence (AI) into industrial design education for enhancing ideation and concept generation. Employing a mixed-method approach, the research includes classroom experiments with basic and UI design, alongside questionnaire surveys to gather quantitative and qualitative data. The study explores how AI supports design processes, the benefits and challenges of its integration, and its impact on teaching outcomes and student learning.
	The Impact of a Bilingual AR Photosynthesis Learning System on Middle School Students' Science Achievement, Science Learning Motivation, and English Vocabulary Ability

RM3130-A **14:30-14:45**	**Presenter: Tzu-Ling Wang, National Tsing Hua University** Author(s): Tzu-Ling Wang, Chia-Li Lee, Yi-Kuan Tseng **Abstract:** In response to globalization and the growing demand for international competitiveness, Taiwan has actively incorporated bilingual education into its educational system. This study developed the bilingual AR photosynthesis learning system based on the Content and Language Integrated Learning (CLIL) approach and augmented reality (AR) technology. The system aligns with the scientific concepts and instructional objectives of the junior high school photosynthesis unit.
RM3118-A **14:45-15:00**	Developing a VR-Based Awe Emotion Scale to Enhance Mindfulness through Technology-Enhanced Learning **Presenter: Shao Jyun Huang, National Defense University** Author(s): Shao Jyun Huang, Shih Yao Hsiung **Abstract:** Awe is a complex emotion with both positive and negative valences, known for enhancing individuals' mindfulness and emotional regulation. However, existing tools, such as the Awe Experience Scale (AWE-S) and the General Awe Scale (GAS) mainly use natural scenery as elicitor and lack items reflecting the negative dimension of awe. To address this gap, we developed a comprehensive 87-item Awe Emotion Scale based on Keltner's eight-dimension framework, reorganized into six domains suitable for educational and technological applications.
RM3131-A **15:00-15:15**	The Impact of a Bilingual VR Human Digestive System Learning System on Middle School Students' Science Achievement, English Vocabulary Ability, and Learning Engagement **Presenter: Yi-Kuan Tseng, National Central University** Author(s): Yi-Kuan Tseng, Ruo-Shuei Lee, Tzu-Ling Wang **Abstract:** Bilingual education has gradually gained attention in Taiwan as a means to enhance students' language proficiency and international competitiveness. This study integrates the Content and Language Integrated Learning (CLIL) approach with virtual reality (VR) technology to develop a bilingual VR human digestive system learning system. The system is designed based on the scientific concepts and instructional objectives of the junior high school human digestive system unit.

RM3193-A **15:15-15:30**	Development of Game-based Collaborative Learning Tools for Biochemistry and Biosafety Education Using Virtual Reality Technologies **Presenter: Patrick HK Ngai, The Chinese University of Hong Kong, China** Author(s): Patrick HK Ngai **Abstract:** Gamification refers to the use of game design elements for non-game applications such as the teaching and learning of basic sciences. In recently years, it has also been used in the tertiary education sector to enhance students' motivation of learning through online games. The teaching of biosafety concepts and animal ethics in large biochemistry classes is traditionally conducted through lectures. Game-based collaborative learning is often difficult to be implemented in lecture theatres.
RM3106-A **15:30-15:45**	Bibliometric Analysis of Research Trends on Awe Responses to Virtual Reality **Presenter: Shih Yao Hsiung, National Defense University** Author(s): Shih-Yao Hsiung **Abstract:** Awe is a complex, high-level emotional experience that arises from an individual's perception of vast phenomena, such as magnificent natural landscapes, profound knowledge, or extraordinary social events (Keltner & Haidt, 2003). This perception challenges existing cognitive frameworks, initiating psychological transformation. Research has indicated that positive peak emotions, such as awe and wonder, enhance well-being (Quesnel et al., 2018).

Poster Session 2

"Innovation in Educational Practice and the Related Learning Outcomes"

Session Chair: Prof. Jie Liu, Western Oregon University, US

Venue: 7F-Lobby	Time: 16:00-18:15, Jul. 30, Wednesday
RM2063-A 16:00-16:15	Learning Satisfaction of Nursing Students in EMI Cooperative Teaching with Industry Experts: A University Experience in Taiwan **Presenter: Jing-Shia Tang, Chung Hwa University of Medical Technology** Author(s): Jing-Shia Tang, Mei-Chin Wang, Mei-Li Tsai, Chien-Liang Chen **Abstract:** English as a Medium of Instruction (EMI) courses have become a key policy in Taiwan's higher education. Integrating industry experts with faculty in cooperative teaching enhances practical instruction, strengthens academia-industry connections, enriches course content, and fosters innovative teaching. This approach aims to improve student learning outcomes, enhance employability, and develop practical skills. To examines nursing students' satisfaction with industry experts' involvement in cooperative teaching within an elective first aid and health EMI course.
RM2065-A 16:15-16:30	A Study of Effects on Adopting the SECI Model as an Approach to Implement Aesthetic-Experience Oriented Visual Arts Instruction **Presenter: Yu-pei Hu, Shandong Vocational and Technical University of International Studies, China** Author(s): Yu-pei Hu **Abstract:** The purpose of this research is to study the effects on integrating the SECI model (socialization, externalization, combination, and internalization) and literature appreciation as an approach toward visual arts instruction of elementary school students. The aim of aesthetic education is to foster the student aesthetic literacy, which encompasses both aesthetic intellect and emotions. In this respect, aesthetic literacy can be perceived as an interactive learning process of converting the tacit and explicit knowledge of aesthetics. In order to fulfill the purpose of aesthetic literacy, both the intellectual and emotional activities are needed.

RM2067-A **16:30-16:45**	The Study on the Relationship between Teachers' Professional Capital and Well-being **Presenter: Chih-Feng Lai, National Taichung University of Education** Author(s): Chia-Chung Hsu **Abstract:** This study aims to understand the current status of teachers' professional capital and well-being, analyze the differences in professional capital and well-being among teachers based on different background variables, and explore the relationship and predictive power between the two factors. This study adopted a questionnaire survey method, with scales developed based on relevant literature and research serving as research tools. The participants were selected from twenty public municipal elementary schools of the 2022 academic year in Taichung City in Taiwan. 522 paper questionnaires were distributed, and 518 valid responses were collected.
RM3152-A **16:45-17:00**	Effectiveness of an ABA-Based Telehealth Parent Coaching Intervention to Reduce Inappropriate Touching Behaviors in Children with Autism Spectrum Disorder **Presenter: Ching-Yi Liao, National Taiwan Normal University** Author(s): Ching-Yi Liao, Pei-Hsin Wu, Yue-Yu Liao **Abstract:** Globally, approximately 1 in 100 children are diagnosed with autism spectrum disorder (ASD), and this prevalence has been steadily increasing over the years (Zeidan et al., 2022). In Taiwan, the number of individuals diagnosed with ASD has risen to 19,078, representing 1.6% of the total population of individuals with disabilities (Ministry of Health and Welfare, 2023; Ministry of Education, 2023).
RM2130-A **17:00-17:15**	Text-to-Image Prompting Practices in Design Education: A Study of Engagement, Strategy, and Domain Context **Presenter: Hsiao-Ping Chiu, Tunghai University** Author(s): Hsiao-Ping Chiu **Abstract:** The rapid advancement of generative AI (GAI) technologies has created new possibilities for design education, particularly in facilitating ideation and visual communication through text-to-image generation. This study investigates how undergraduate design students interact with GAI tools, focusing on their use of the Midjourney platform across two task domains: an electric bicycle and a monkey. Employing a mixed-methods approach comprising behavioral observations, think-

	aloud protocols, semi-structured interviews, and questionnaires, the study analyzes prompting strategies, engagement patterns, and perceptions of usability. Thirty undergraduate design students participated (11 male, 19 female; mean age: 22.25 ± 0.85 years), reporting an average of 1.50 ± 0.79 years of prior experience with GAI tools.
RM2146-A **17:15-17:30**	Enhancing Fashion Literacy and Digital Marketing Competence through Generative AI-Powered Virtual Influencers in Professional Higher Education **Presenter: Wen-Chin Yeh, Ling Tung University** Author(s): Wen-Chin Yeh, Meng-Jun Hsu **Abstract:** This study investigates the integration of generative AI (GAI) technologies and virtual influencers into professional higher education courses in fashion and digital marketing. The research is grounded in a teaching practice framework that emphasizes hands-on, project-based learning in courses such as Digital Marketing Practice and Fashion Retail Management. By incorporating GAI tools to design and simulate virtual influencer campaigns, students gained practical experience in AI-generated content creation, digital strategy planning, and market analytics.
RM3170-A **17:30-17:45**	Integrating the TPSR Model into a Learning Assessment Course for Teacher Education Students **Presenter: Wei-Ting Hsu, National Dong Hwa University** Author(s): Weiting Hsu, MIn Pan **Abstract:** “Learning Assessment” is a compulsory course within the teacher education program at the university. In previous iterations, the instructor encountered several challenges, including a weak connection between course content and students' prior experiences, students' deviation from classroom norms and disrespect toward peers, insufficient student effort, and a lack of collaboration among students. In response, this study applied the Teaching Personal and Social Responsibility (TPSR) model to the “Learning Assessment” course and examined its outcomes through field practice.
	Analyzing and Visualizing Interactive Processes in Virtual Reality-Based Learning Environments

RM3171-A **17:45-18:00**	**Presenter: Sheng Yi Wu, National Tsing Hua University** Author(s): Sheng Yi Wu, Owen H.T. Lu **Abstract:** The integration of emerging technologies such as virtual reality (VR) and the metaverse has demonstrated significant potential in enhancing student immersion, promoting deeper engagement in targeted learning units, and facilitating the comprehension of abstract concepts through experiential learning. Although prior research evaluating the pedagogical effectiveness of VR and metaverse-based instruction predominantly relies on assessments such as quizzes, surveys, and interviews, these methods primarily capture learning outcomes and perceptions, offering limited insights into the dynamic behavioral processes that occur during interaction with VR learning materials.
RM3182 **18:00-18:15**	Evaluating the Implementation of Instructional Design in Teaching Practice: An Evaluation Framework Based on Large Language Models **Presenter: Zengzhao Chen, Central China Normal University, China** Author(s): Rui-Qing Du, Zeng-Zhao Chen, Zhi-Feng Wang **Abstract:** Instructional design plays a critical role in guiding classroom instruction and evaluating teaching quality. The effective implementation of preset teaching objectives within classroom activities presents significant challenges. However, traditional manual methods for assessing classroom implementation are often cumbersome and time-consuming. Moreover, evaluator individual differences and inconsistent evaluation criteria can compromise the reliability of classroom assessment results.

Online Session 1

"Intelligent Technology-Driven Educational Tools and Teaching Innovation"

Session Chair: Assoc. Prof. Ramachandra C. Torres, Mapua Malayan Colleges Laguna, Philippines

Room ID: 814 7505 8504 Password: Osaka | Time: 10:00-11:45, Aug. 1, Friday (UTC+9)

RM2009 **10:00-10:15**	Empowering Education with AI: Automating Content Generation through Large Language Models **Presenter: Andrew Emanuel Attard, University of Malta, Malta** Author(s): Alexiei Dingli, Andrew Emanuel Attard **Abstract:** In the context of globalization, proficiency in English has become an essential skill for effective communication in both daily life and professional environments. However, English language education in Thailand still faces challenges, particularly regarding students' self-confidence and the absence of interactive learning environments. This research aims to investigate the effectiveness of using interactive English learning media through the Roblox gaming platform to enhance engagement among higher education students.
RM3163 **10:15-10:30**	ETalk: An Intelligent Assessment System for Degree of Course Objectives Achievement in Medical Universities **Presenter: Huaze Xie, Ningxia Medical University, China** Author(s): Huaze Xie, Yupeng Ma, Yuanyuan Wang, Liu Yang, Wei Ge, Yukiko Kawai **Abstract:** The development of artificial intelligence provides the possibility to solve the problems of single dimensions and lagging feedback in medical education quality assessment. This work proposed ETalk, an intelligent assessment system based on generative dialog model. The system constructs a curriculum knowledge map by multimodal fusion technology, extracts three-dimensional feature vectors of teaching objectives, knowledge density, and teaching methods with hierarchical Transformer model.
	Research on Intelligent Teaching of Engineering Equipment Based on CATIA 3D Modeling and Virtual Simulation Technology **Presenter: Xiaolu Su, Aviation Maintenance NCO School of Air Force Engineering**

RM3138 **10:30-10:45**	**University, China** Author(s): Xiaolu Su, Jiapeng Liu, Jianxun Liu, Juanjuan Jia **Abstract:** Aiming at the problem of difficult understanding of complex equipment caused by spatial cognitive impairment in traditional equipment construction course, this study integrates 3D modeling and virtual simulation technology to construct an intelligent teaching scene based on CATIA platform. In the teaching practice, CATIA-Part module is used to realize the dynamic display of the structural features of the parts. CATIA-Assembly module is used to realize the efficient display of the assembly features of the structural parts.
RM3136 **10:45-11:00**	The Construction of a Newly Developed Measure of Vocational Skill of Store: Feasibility Study of Vocational Training through Virtual Reality with Head-Mounted Displays (HMD) for Students with Intellectual Disability (ID) in Senior High School **Presenter: Chih-Hsuan, Chen, National Taiwan Normal University** Author(s): Chih-Hsuan Chen, Yung-Ji Sher, Hsin-Jung Ting **Abstract:** Independent employment for individuals with intellectual disabilities (ID) is crucial. Virtual reality technology (VRT) offers a controlled and safe training environment, and its psychometric properties need to be well-established if it is used as an educational tool. However, research on educational head-mounted displays (HMDs) as VRT tools for people with intellectual disabilities (ID) remains limited.
RM3323 **11:00-11:15**	Current Situation Investigation and Strategy Research of Primary and Secondary School Teachers' Digital Literacy under the Background of Digitalization **Presenter: Feifan Wu, China West Normal University, China** Author(s): Feifan Wu, Qing Xu, Zhiming Zhou, Hairu Yang, Hongmei Wei **Abstract:** In recent years, with the rapid development of digital technology, it has penetrated into all aspects of production, life, and social governance. The teaching model of teachers has gradually shifted from traditional teaching to digital teaching, and digital literacy has become an essential comprehensive ability for teachers. In order to accurately understand the digital literacy situation of teachers in underdeveloped areas, the research team adopted survey research and interview methods, took the Yi ethnic primary and secondary school teachers in Liangshan Prefecture, western China as the evaluation

	sample, and conducted a questionnaire survey, and finally obtained 100 valid questionnaires.
RM3168 **11:15-11:30**	Phplearn: A Web Application for Learning Php Programming **Presenter: Aaron Paul M. Dela Rosa, Bulacan State University, Philippines** Author(s): Aaron Paul M. Dela Rosa **Abstract:** With the post-pandemic effect of COVID-19, utilizing e-learning systems has been significant to higher education institutions, aiding pedagogical approaches in teaching and learning. This study focused on developing a PHP programming language e-learning web application for the Bachelor of Science in Information Technology (BSIT) students of Bulacan State University – College of Information and Communications Technology. A descriptive research design was used in the study to describe and interpret the results from the targeted respondents. The Rapid Application Development model was implemented to develop the web application and deliver quick development.
RM3022 **11:30-11:45**	Design and Implementation of Multi-Agent Learning Algorithms for Adaptive **Presenter: Xin Wang, The Open University of China, China** Author(s): Xin Wang, Hongxin Shi **Abstract:** This paper presents a multi-agent system (MAS)-based adaptive learning environment designed to overcome the limitations of current personalized learning systems. The system integrates three key agents: a learner modeling agent, a knowledge construction agent, and a learning path agent, all coordinated through a centralized scheduling module. It leverages deep reinforcement learning for adaptive learning path optimization and attention-based mechanisms for real-time dynamic updates of the knowledge graph.

Online Session 2

"Gamification in Education and Pedagogical Innovation"

Session Chair: Prof. Yudong Li, Nankai Univesity, China

Room ID: 814 7505 8504 Password: Osaka | Time: 13:30-15:00, Aug. 1, Friday (UTC+9)

RM3101 **13:30-13:45**	Exploring the Design and Implementation of Situational Digital Games in Elementary School Health Education Curriculum **Presenter: Chunyen Huang, National Museum of Natural Science** Author(s): Yin-Yu Chou, Chun-Yen Huang, Shu-Han Lin, Chia-Wei Liu, Pei-You Lin, Ting-Yu Huang **Abstract:** This study explores the effectiveness of game-based learning in elementary school health education through the digital game "Forest of Growth." The game integrates situational learning and interactive mechanisms into eight core topics, such as body awareness, emotional management, and online safety. Results showed that 78.4% of students found the game helpful for learning, while 56.9% reported high enjoyment, indicating enhanced learning motivation and knowledge comprehension.
RM3177 **13:45-14:00**	Innovative Application of Gamification Teaching in High School Information Technology Courses **Presenter: Yuguo Li, Henan University, China** Author(s): Yuguo Li, Yize Liu **Abstract:** In order to explore the effective path to improve the teaching effect of high school information technology courses, the study focuses on the integration mode of gamified teaching and flipped classroom, taking 'Using Loop Structure to Describe the Problem Solving Process' as a case study, and selecting the two classes of the first year of senior high school in Z Middle School to conduct a comparative experiment.
RM3315 **14:00-14:15**	Badui Traditional Weaving Digital Archive as a Cultural Preservation Strategy: A Conceptual Paper **Presenter: Adi Dharma Wirayudha, Bina Nusantara University, Indonesia** Author(s): Adi Dharma Wirayudha, Mita Purbasari Wahidiyat **Abstract:** Local cultural preservation faces significant challenges amidst the strean of

	digitalization and globalization. Badui weaving, as a textile heritage that is broad with philosophical meaning and the identity of the indigenous community, is threatened by finite documentation and regeneration. This article develops a conceptual framework for a local cultural innovation ecosystem based on digital archiving as a strategic effort to preserve and revitalize Badui weaving.
RM3329-A **14:15-14:30**	The Effects of Integrating SEL into Language Arts Instruction on the Learning Outcomes and Language Performance of Underachieving Students **Presenter: Yi-An Chen, National Tsing Hua University** Author(s): Yian Chen, Yiju Lin **Abstract:** This study aims to explore how students practice social-emotional learning (SEL) through language within a collaborative learning context by analyzing textual corpora. Adopting a qualitative analytical approach, the research uses reflection texts from collaborative tasks completed by junior high school students in Taiwan as data. Thematic analysis and micro-level discourse analysis were conducted based on CASEL's Social Emotional Learning framework and Bourdieu's theory of cultural capital.
RM3194 **14:30-14:45**	Prediction of Educational Resource Label Association Based on Interpretable Deep Learning: Reshaping Personalized Learning **Presenter: Jingru Lu, Nanjing University of Posts & Telecommunications, China** Author(s): Jingru Lu, Pan Wang, Mengyi Fu, Honglei Fu, Qi Liu, XueJiao Chen **Abstract:** With the rapid development of digital education, how to effectively connect educational resources with learners' needs has become an important topic in current educational tech-nology research. This article proposes an educational resource recommendation method based on interpretable deep learning models, aiming to improve the resource matching efficiency and personalized experience of online learning platforms by predicting the correlation between items and labels.
RM3195-A **14:45-15:00**	All the Ways We Shine: Fostering Inclusivity and Positive Self-Perception Through Diverse Children's Picture Books **Presenter: Erin Phoebe N. Abu, Angeles University Foundation, Philippines** Author(s): Erin Phoebe Nagai Abu, Louis Sebastian Gutierrez Amanonce, Kirsten Pamela Baluyut Malit, Maria Joyce Valencia Macaspac

Abstract: Despite growing awareness of diversity and inclusion, children's literature continues to lack authentic representation of marginalized communities, particularly in terms of race, gender identity, and disability. The Cooperative Children's Book Center (2018), as cited by Dahlen (2020), reported that while white characters accounted for 50% of children's books, representation of African/African American (10%), Asian Pacific Islander/Asian Pacific American (7%), Latinx (5%), and American Indian/First Nations (1%) characters remained low, with 27% of books featuring animals or non-human characters instead.

Delegates

ID	Name	Affiliation
RM2035-D	Huei-Mei Wei	National Kaohsiung Normal University
RM2062-D	Mira Yun	Boston College, United States
RM2063-A-D	Chien-Liang Chen	I-Shou University
RM2076-D	Yu-Mei Fan	Chia Nan University of Pharmacy and Science
RM3029-A-D	Ting-Kuang Yeh	National Taiwan Normal University
RM3029-A-D	Pei-Jung Lin	National Taiwan Normal University
RM3064-D	Lamei Wang	Shanghai Open University, China
RM3090-A-D	Hoi Sze Chan	The Hong Kong Polytechnic University, China
RM3091-A-D	Suet Yi Tse	The Hong Kong Polytechnic University, China
RM3137-D	Juniza Md Saad	Universiti Putra Malaysia, Malaysia
RM3140-D	Joko Slamet	Universitas Negeri Malang, Indonesia
RM3159-D	Shang-Yun Yu	National Taitung University
RM3311-D	Ya-Ting C. Yang	National Cheng Kung University
RM3316-D	Tamsik Udin	UIN Siber Syekh Nurjati Cirebon, Indonesia
RM3316-D	Nur Atikoh	UIN Siber Syekh Nurjati Cirebon, Indonesia
D2001	Rod Rothwell	George Mason University, South Korea
D2002	Jeffrey Mok	Rikkyo University, Japan
D2003	Emi Itoi	Bunkyo University, Japan
D3001	Yuk Ming Tang	The Hong Kong Polytechnic University, China

D3002	Haiyang Du	The Open University of China, China
D3003	Yuanyuan Gao	The Open University of China, China
D3004	Lu Zhu	The Open University of China, China
D3005	See Hui Chen	Ministry of Education (MOE), Singapore
D3006	Narine Grigoryan	Camosun College, Canada
D3007	Andrea Leeks	British Columbia Teachers' Federation, Canada
D3008	Hanrick Kumar	British Columbia Teachers' Federation, Canada
D3009	Chi-kin Lai	Education Bureau, HKSAR, China
D3010	Jackie Ying-chi Lee	Education Bureau, HKSAR, China
D3011	Kun Chang Lee	Sungkyunbkwan University, South Korea

One Day Tour in Osaka

Friday – August 1, 2025

This one-day Osaka tour included a total of eight places of interest: Osaka Castle Park, Shitennoji, Tsūtenkaku, Namba Yasaka Shrine, Kuromon Market, Dōtonbori, Shinsaibashi, Hep Five Ferris wheel. Below is a rough description of these eight sites.

Osaka Castle Park

Osaka Castle Park is a large urban park located in the center of Osaka, Japan, centered around its historic Osaka Castle Keep. With green spaces, sports facilities, a multi-purpose gymnasium (Osaka Castle Hall), and a shrine, the park is a popular recreational spot for locals and tourists alike.

Shitennoji

Shitennoji Temple, is one of Japan's oldest temples and the first ever to be built by the state. It was founded in 593 by Prince Shotoku, who supported the introduction of Buddhism into Japan. Although the temple's buildings burned down several times over the centuries, they were always carefully reconstructed to reflect the original 6th century design.

Tsūtenkaku

Tsūtenkaku is a tower and landmark of Osaka, Japan, and advertises the Hitachi company. It is located in the Shinsekai district of Naniwa-ku, Osaka. Its total height is 103 metres (338 ft); the main observation deck is at a height of 91 metres (299 ft). It is owned by Tsūtenkaku Kanko Co., Ltd.

Namba Yasaka Shrine

Namba Yasaka Shrine, also known as Namba Shimousha, is a shrine located in Naniwa-ku, Osaka, Japan. It is the most distinctive shrine due to its shishi-den and the cherry blossom trees surrounding the shrine, and is a famous tourist attraction in Osaka.

Kuromon Market

Kuromon Market is a traditional market in Osaka's Namba Ward, with narrow passageways lined with vendors selling fresh fish and agricultural products. Visitors to the market can carefully select the products as the fishmongers shout.

Dōtonbori

Dotombori is a canal in Osaka City, Osaka Prefecture, Japan, known for its proximity to theaters, businesses and entertainment venues. Dotombori is connected to the Kizuna River and the Higashi-Yokobori River and is about 2.5 kilometers long, and its name has become the name of a town in the Chuo-ku district of Osaka City.

Shinsaibashi

Shinsaibashi, Osaka's largest shopping district, is a concentration of boutique houses and specialty stores, bustling with crowds of citizens and tourists from morning to night. Shinsaibashi was developed around the Shinsaibashisuji shopping street with its arcade facilities. It is lined with large department stores, century-old stores, and a variety of small stores catering to the general public. The stone-paved sidewalks, English-style street lamps, and rows of brick buildings in the perimeter of Shinsaibashisuji are elegant, and the area is known as a European village.

NOTE:

The following attractions & sights are for reference; detailed arrangements are depending on the conditions on the day.

Osaka Tour

- **Duration: 09:00 AM - 7:00 PM, 10 hours**
- **Date: August 1st**
- **Assembly Point: The Main Entrance of Starbucks Coffee in Kansai University, Umeda Campus**
- **Cost: 85USD or 620 CNY per person**
- **Transport: Business car**

Payment can be made at the time of registration. An invoice will be provided along with the paper registration fee.

Your tour includes:

What is **included**?

●Fuel ●Tolls ●City entry fee ●Empty driving fare ●Driver ●Vehicle ●Driver meal allowance ●Basic parking fee

What is **excluded**?

●Lunch and dinner ●Entrance tickets ●Personal expenses ●Overtime fee or all items not listed in the “Price includes” section

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