2019 The 3rd International Conference on Digital Technology in Education (ICDTE 2019)

2019 The 9th International Conference on Education, Research and Innovation (ICERI 2019)

October 25-27, 2019 Tsuru University, Japan

Co-sponsored by

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General Information of Conference

Welcome Remarks

We welcome you to Tsuru University, Japan to attend 2019 The 3rd International Conference on Digital Technology in Education (ICDTE 2019) and 2019 The 9th International Conference on Education, Research and Innovation (ICERI 2019). We're confident that over the next three days you'll get theoretical grounding, practical knowledge, and personal contacts that will help you build long-term, profitable and sustainable communication among researchers and practitioners working in a wide variety of scientific areas with a common interest in Advances in Digital Technology in Education, Education, Research and Innovation.

The conferences received submissions from more than 10 different countries and regions, which were reviewed by international experts. Approximately 60% papers have been selected for presentation and publication.

We hope that your work and that of your institution or company will be enhanced both by what you learn and whom you connect over the next 3 days. Our field is enriched by the dialogue among colleagues from around the world which occurs during presentation sessions as well as informal conversations. We hope this will be a memorable, valuable, and enjoyable experience!

On behalf of conference chair and all the conference committee, we would like to thank all the authors as well as the Program Committee members and reviewers. Their high competence, their enthusiasm, their time and expertise knowledge, enabled us to prepare the high-quality final program and helped make the conference a successful event. We hope that all participants and other interested readers will benefit scientifically from the proceedings and also find it stimulating in this process. Finally, we would like to wish you success in your technical presentations and social networking.

Once again, thank you for coming to this conference. We are planning more and better international conference experiences. We will sincerely listen to any suggestion and comment; we are looking forward to meeting you next time.

Conference Chair
Prof. Hywel Evans,
Tsuru University, Japan

➢ Introduction for Local Conference Chair

Prof. Hywel Evans,
Tsuru University, Japan

Hywel Evans (BA, MA, PhD) is a full professor of Theoretical Linguistics and Head of the Department of English at Tsuru University, Yamanashi Prefecture, Japan. His principal research interests relate to the nature of language acquisition in cultural activity, hostility to the concept of culture in global approaches to language learning, and World English. He has been active in developing a wide variety of online materials for content-based language learning, including those involving the use of first language. He has published scores of peer reviewed articles as well as a variety of other materials in different fields, particularly those related to the use of mobile devices in language learning, Medical English, and the history of Mount Fuji. In addition, he has been active in setting up an online journal for the English Department at Tsuru University and currently acts as editor of the Tsuru English Department online journal, Eibun Online. He also operates as Japanese-English translator at Tsuru, and is involved in the publication of valuable Japanese articles produced by Tsuru professors.

➢ Information on Publication

2019 The 3rd International Conference on Digital Technology in Education (ICDTE 2019)

All accepted papers for the ICDTE 2019 will be published in the proceedings below.

Accepted papers will be published in the International Conference Proceedings Series by ACM, which will be archived in the ACM Digital Library, and sent to be indexed by EI Compendex. The proceedings volume will also be submitted for potential indexing to SCOPUS and Thomson Reuters Conference Proceedings Citation Index (ISI Web of Science). ISBN: 978-1-4503-7220-6

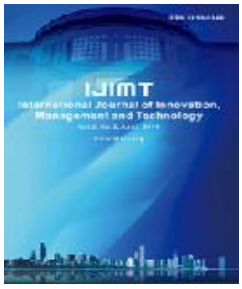
2019 The 9th International Conference on Education, Research and Innovation (ICERI 2019)

The accepted papers by ICERI 2019 will be recommended to be published by one of below journals:

Some excellent papers will be recommended to be published on special issue" Innovating Education Through Empirical Research"in International Journal of Information and Education Technology (IJIET). For more information about the special issue, please visit: http://www.ijiet.org/index.php?m=content&c=index&a=lists&catid=114

ISSN: 2010-3689

Abstracting/ Indexing: Scopus (Since 2019), EI(INSPEC, IET), Electronic Journals Library, Google Scholar, Crossref, etc.



Option B: International Journal of Innovation, Management and Technology (IJIMT, ISSN: 2010-0248, DOI: 10.18178/IJIMT) as one volume, and will be included in Google Scholar, Ulrich's Periodicals Directory, Engineering & Technology Digital Library, Crossref and ProQuest, Electronic Journals Library.

ISSN: 2010-0248.

➢ Conference Venue

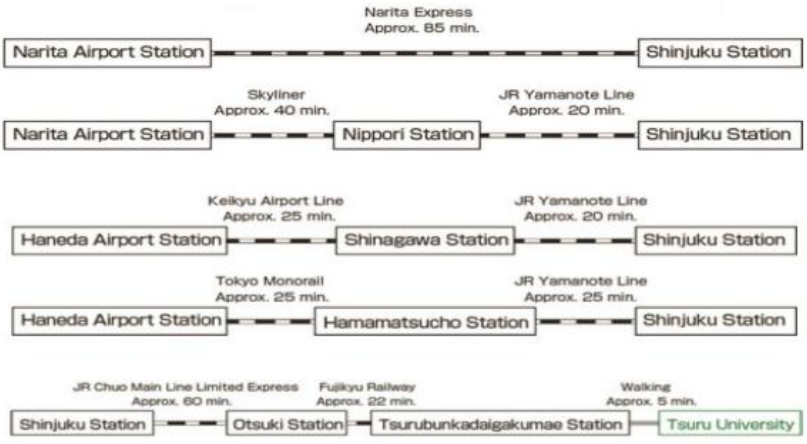
Tsuru Universtiy, Japan
https://www.tsuru.ac.jp/english/

Address: 3-8-1 Tahara, Tsuru-shi, Yamanashi, 402-0054 Japan

Tel:+81(0)554-43-4341 / Fax:+81(0)554-43-4347

Tsuru University is the nearest university to Mount Fuji. The university is located in Tsuru City, Yamanashi a one-hour bus ride from Tokyo, the capital of Japan. The location of the university provides an excellent starting point for exploration of the local area and a great base for exploring Japan as a whole. At the same time, the university offers a wonderful lifestyle balance between the countryside of Yamanashi and the big-city excitement of Tokyo. We are located in the foothills of Mount Fuji, a UNESCO World Heritage Site.

Tsuru by Train



➢ Instructions for Presenters

✧ Onsite Registration

- You can also register at any time during the conference.
- Certificate of Participation can be collected will be awarded at the end of your session.
- Your paper ID will be required for the registration.
- The organizer won't provide accommodation, and we suggest you make an early reservation.

✧ Oral Presentation

- Devices Provided by the Conference Organizer:
- Laptops (with MS-Office & Adobe Reader)
- Projectors & Screens
- Laser Sticks

Materials Provided by the Presenters:

- Power Point or PDF Files (Files should be copied to the conference laptop at the beginning of each session)
- **Duration of each Presentation (Tentatively):**
- Regular Oral Presentation: 15 Minutes of Presentation, including Q&A
- Keynote Speech: 40 Minutes of Presentation, including Q&A

✧ Poster Presentation

Materials Provided by the Conference Organizer:

- The place to put poster

Materials Provided by the Presenters:

- Home-made Posters
- Maximum poster size is A1
- Load Capacity: Holds up to 0.5 kg

✧ Best Presentation Award

- One Best Oral Presentation will be selected from each presentation session, and it will be awarded at the end of the session.

✧ Dress Code

- Please wear formal clothes or national representative clothing.

✧ Important Note:

- The time slots assigned in the schedule are only tentative. Presenters are recommended to stay for the whole session in case of any absence.
- The conference room is the public place, please be careful about your belongings, and take it with you when you left your seat; especially, the computers. If it lost, the conference won't take any responsibilities for it.
- Do not take any other persons into the conference rooms. If it's necessary, please ask for the name-tag from the staff.

➢ Introductions for Keynote Speakers

◆ *Keynote Speaker I*

Prof. Yanqing Duan,
University of Bedfordshire, UK

Yanqing Duan (BSc, MSc, PhD, SFHEA) is a full professor of Information Systems. She is also the founder and director of Business and Information Systems (BISC) at the Business School, University of Bedfordshire. Her principal research interest is the use of the emerging digital Technologies (ICT) in organisations and their impact on decision making, innovation, education and learning, and knowledge management. She has undertaken many funded research projects on the design, development and applications of various e-learning methods and tools for training and education purposes. Her recent research interest in Big Data and Analytics enables her to undertake a number of funded research projects on the use and impact of Learning Analytics in the UK Higher Education Institutions (HEIs). She has co-ordinated many research projects funded by various funding sources, such as: European Commission, UK Department For International Development (DFID), JISC, British Council, etc. She has published over 180 peer reviewed articles, including papers in European Journal of Information Systems, IEEE transaction on Engineering Management, Computers & Education, Information & Management, European Journal of Marketing, Journal of Business Research, The Information Society, Expert Systems with Applications, Information Technology & People, British Journal of Educational Technology.

Speech Title: **Learning Analytics in Higher Education Sector: Benefits and Critical Success Factors**

Abstract: Providing students with the best learning experience and ensuring their academic success throughout their university lifecycle has been a serious challenge for Higher Education Institutions (HEIs). While some HEIs are very successful in harnessing the benefits of Big Data and learning analytics, many others are still not actively engaged in making the effective use of them. It is critical for researchers and practitioners to understand the potential benefits of learning analytics and the factors affecting its success in HEIs. Based on the evidence collected from an exploratory case study and thirty interviews in the UK HEIs, this presentation will discuss the impact of using learning analytics on student experience management and the critical success factors. The presentation will also highlight the current trends and challenges in transforming High Education with the power of learning analytics and artificial intelligence.

◆ *Keynote Speaker II*

Prof. Tomokazu Nakayama,
Jissen Women's University, Japan

T. Nakayama A. was born and raised in Tokyo, Japan. Nakayama earned a bachelor degree in English Literature and Linguistics from Obirin University in 1991, and MA in TESOL at Teachers' College Columbia University in 2001 and Ph.D. at Hiroshima University in 2013. He is specialized in learning science. His current research interests are English as an International Language (EIL) and development of new learning methods to promote proficiency of EIL learners. He developed VA shadowing method to improve Japanese EIL learners' listening skills and the book on its mechanism will be released this year. Now he and his colleagues are developing the new method called Instant Translation method to promote proficiency of Japanese EIL learners. He is currently an associate professor at Jissen Women's University in Tokyo and teaches English and English teacher training courses.

Speech Title: **How Can we Explain the Mechanisms of L2 Learning based on Priming Research?**

Abstract: People are influenced by past experiences in positive or negative way. In other word, the exposure to a stimulus gives impact on the later behavior of an individual. It is known as priming effect. Priming effect is such a powerful phenomenon that it has been applied in many fields such as business. Even though priming research has shown significant insights for English Language Teaching (ELT), very few studies in our field attempt to apply those. This presentation, after sharing mechanisms and research findings in priming effects, attempts to answer the following three questions which relates to English grammar class: 1. What is the role of English teacher in English grammar class?, 2. Why is interaction with peers or teachers necessary in English grammar class? and 3. How can we promote student-centered learning in English grammar class? 4. Can we incorporate problem-based learning in English grammar class? And the implication of this presentation will be discussed.

◆ *Keynote Speaker III*

Assoc. Prof. Eric C.K. Cheng,
The Education University of Hong Kong, China

Dr. Eric Cheng is a specialist in knowledge management, educational management and Lesson Study. He is currently associate professor of the Department of Curriculum and Instruction of the Education University of Hong Kong. Eric earned his Doctor of Education in education management from the University of Leicester. He has been publishing locally and internationally, with over 50 articles in various media covering the areas of knowledge management, school management and Lesson Study. He is the author of an academic book entitled Knowledge Management for School Education published in 2015 by Springer. Eric has been successful in launching more than 10 research and development projects with external and competitive funds in the capacity of Principal Investigator (PI). He received the Knowledge Transfer Project Award from EDUHK in 2014-15, Scholarship of Teaching Award in 2013-14 and Knowledge Transfer publication Awards in 2012-13 form Faculty of Human Development of EDUHK.

Speech Title: Knowledge Management Strategies for Sustaining Lesson Study

Abstract: This study explores the strategies and practices that have been implemented by principals in Hong Kong schools for facilitating and sustaining Lesson Study for teachers' knowledge sharing and internalization. Lesson Study refers to a synergistic process of knowledge creation in which teachers share their knowledge through social interactions, and they apply and check the knowledge by practicing lesson design and teaching materials through few research lessons. Knowledge management (KM) in school context is an organization management approach that utilizes knowledge as resources for school improvement through effectively implementing their teaching and learning plans.

A cross-sectional quantitative survey was conducted to collecting data from 184 principals in Hong Kong. Confirmatory factor analysis and reliability test were utilized to examine the constructed validity and the reliability of the instrument. A structural equation model was applied to confirm the predictive effect of people-based and information technology-based knowledge management strategies on teachers' knowledge sharing and internalization through conducting Lesson Study. Results show that people-based knowledge management strategy predicts teacher's knowledge sharing and internalization. However, the information technology-based knowledge management strategies only predicts teachers' knowledge sharing, but not on their knowledge internalization.

This implication of the paper are that cultivating communities of practice, professional learning communities and mentoring schemes in schools could nurture a knowledge sharing culture for facilitating and sustaining Lesson Study for teacher learning. Institutionalizing information technology system could help teachers to retrieve, share and store the school's explicit knowledge. The paper not only contributes to school management strategies and practices to school leaders to facilitate and sustain Lesson Study, but also brings in a new research dimension, knowledge management, to the research area of Lesson Study.

➢ Conference Agenda

◆ Oct. 25, 2019 (Friday)

(Note: Oct. 25, 2019 is only for onsite Registration, but on Oct. 26, 2019, the registration is also open outside the conference room, all the conference rooms are in BUILDING #5.)

In front of Building #3	10:00-17:00	Onsite Registration and Material Collections

◆ Oct. 26, 2019 (Saturday)

Conference Host: Prof. Olagboyega Kolawole Waziri, Tsuru University, Japan		
9:30-9:40 **Venue:** **Room 5102**	**Opening Remark** **Prof. Hywel Evans, Tsuru University, Japan**	
Keynote Speeches	**Keynote Speeches** **Host:** Prof. Olagboyega Kolawole Waziri	
09:40-10:20 **Room 5102**		**Prof. Yanqing Duan,** University of Bedfordshire, UK **Speech Title**: Learning Analytics in Higher Education Sector: Benefits and Critical Success Factors
10:20-10:40	**Coffee Break & Group Photo**	
10:40-11:20 **Room 5102**		**Prof. Tomokazu Nakayama** Jissen Women's University, Japan **Speech Title**: How Can we Explain the Mechanisms of L2 Learning based on Priming Research?
11:20-12:00 **Room 5102**		**Assoc. Prof. Eric C.K. Cheng,** The Education University of Hong Kong, China **Speech Title**: Knowledge Management Strategies for Sustaining Lesson Study
12:00-13:00	**Lunch Time**	

◆ Oct. 26, 2019 (Afternoon)

Authors' Presentations **Time:** 13:00-18:00	
13:00-15:15 **Venue: Room 5201**	**Session I**: Educational Science and Research **Session Chair**: Assoc. Prof. Wei-Shuo Lo
13:00-13:15 **OC2051**	Project-Based Learning Enhances Student's ICT Competence in Tourism Knowledge Kuang-Nan Tsai, En-Pou Wang and **Wei-Shuo Lo** Meiho University, Taiwan
13:15-13:15 **OC0014**	A Study for S-generation of Children's Creative Thinking Ability Huang Yu-Che, Liu Cheng-Yu and **Chen Chia-Chi** Chaoyang University of Technology, Taiwan
13:30-13:45 **OC3024**	The Relationship between Academic Performance and Motivation Level in E-Learning among Thailand University Students Kew Si Na, **Sirirat Petsangsri**, and Zaidatun Tasir Sirirat Petsangsri King's Mongkut Institute of Technology Ladkrabang, Thailand
13:45-14:00 **OC0032**	Job Digital Storytelling Program for University Students to Develop Career Management Competencies **Rika Ikeda**, Fathima Assilmia, Elavaretta Angelina and Keiko Okawa Keio Graduate School of Media Design, Japan
14:00-14:15 **OC0034**	Effect of Parenting Styles on Vegetable Having Behavior of Small Children **Veena Chantarasompoch**, Darakorn Phuprasongkharm, Jirawat Sudsawart, Wanvisa Saisanan Na Ayudhaya, Suwanna Hadsamad and Kullaphat Pochanakul Suan Sunandha Rajabhat University, Thailand
14:15-14:30 **OC2015**	Excusatio: In Defense of Standard English Paul Alexander Joseph Beehler **Paul AJ Beehler** University of California Riverside, United States
14:30-14:45 **OC0016**	Research on Image Cognitive Learning Application - Taking Japanese Raku Ware as an example Huang Yu-Che and **Hsaio Ko-Jou** Chaoyang University of Technology, Taiwan
14:45-15:00 **OC3009-A**	Japanese Elementary Students' Hidden Biased Views toward Non-Japanese Peers **Shinji Munakata** Minamihara Elementary School, Japan
13:00-15:15 **Venue: Room 5202**	**Session II:** Learning Environment and Educational Technology **Session Chair**: Prof. Pierre Proulx
13:00-13:15 **OC0029**	Transport Phenomena Teaching: a Modern Approach Francis B. Lavoie and **Pierre Proulx** Universite de Sherbrooke, Canada

13:15-13:30 **OC0023**	An AR Puzzle Application for Improving Emotion Recognition for AS Children **Daniel Vicente Vicente Lopez Trompo**, Ting Han, Photchara Ratsamee and Haruo Takemura Shanghai Jiaotong University, China
13:30-13:45 **OC0030**	Virtual Reality as a Means of Teaching Contemporary Chemistry **Mareike Frevert** and David-Samuel Di Fuccia Universität Kassel, Germany
13:45-14:00 **OC2026-A**	The Application of Virtual Reality in Chinese Language Learning: A Project-based Approach **Leo F.H. Ma** The Chinese University of Hong Kong, Hong Kong, China
14:00-14:15 **OC0037**	Imagineering Gamification using Interactive Augmented Reality to develop Digital Literacy skills **Tunyaboon Choolarb**, Jakkrit Premsmith and Panita Wannapiroon King Mongkut's University of Technology North Bangkok, Thailand
14:15-14:30 **OC3023**	Education Technology for Effectiveness of Teaching Learning: An Exploration of Blended Courses Tanu Shukla, **Divya Dosaya**, V. S. Nirban and Mounika Prashanthi Vavilala BITS Pilani, India
14:30-14:45 **OC0022**	A Gamification Digital Storytelling Learning Based on Cooperative Social Cloud to Promote Students' Teamwork Skill in Primary School **Sujitra Matchacheep**, Sasithorn Chookeaw and Prachyanun Nilsuk King Mongkut's University of Technology North Bangkok , Thailand
14:45-15:00 **OC1021**	Educational Video Games Enhancing the Pro-Social Behaviour and Critical Thinking among Middle School Students **Dr. Vasimalairaj Muthukaman** and Dr. H. Deepa
15:00-15:15 **OC0028**	A Learning Management System for Flipped Courses **Francis B. Lavoie** and Pierre Proulx Université de Sherbrooke, Canada
13:00-15:00 **Venue: Room 5203**	**Session III**: E-learning Platform **Session Chair**: Prof. Deni Darmawan
13:00-13:15 **OC0066**	Development of Automatic System ICMLS 2.0 for Improving Educational Technology Competences in Industry 4.0 **Deni Darmawan**, Edi Suryadi and Erwin Harahap Universitas Pendidikan Indonesia, Indonesia
13:15-13:30 **OC0038**	A MOOC-Ready System for the Fundamentals of Programming Using the C Language: Development and Analysis **Cheryl Balan Pantaleon**, Larmie Santos Feliscuzo and Cherry Lyn Cando Sta. Romana Cebu Institute of Technology University, Philippines

13:30-13:45 **OC2029**	A Conceptual Framework for the Development of a MOOCs-based Knowledge Repository Using a Digital Knowledge Engineering Learning Process to Enhance Digital Entrepreneurs' Competencies **Nattaphol Thanachawengsakul** Chandrakasem Rajabhat University, Thailand
13:45-14:00 **OC0005**	An Effective Microlearning Approach Using Living Book to Promote Vocational Students' Computational Thinking **Soralak Leela**, Sasithorn Chookeaw and **Prachyanun Nilsook** King Mongkut's University of Technology North Bangkok, Thailand
14:00-14:15 **OC0012**	Effects of Augmented Reality Mobile Apps on Early Childhood Education Students' Achievement **Nurullizam Jamiat** and Noor Fatin Nadia Othman Universiti Sains Malaysia, Malaysia
14:15-14:30 **OC0050**	Application of Rain Classroom Software in Electrotechnics Course Teaching **Wang Ning** and Zhang Li Dalian University of Technology, China
14:30-14:45 **OC0042**	Educational Applications of Web 2.0: Strategies to Enrich the Teaching and Learning in the Graduate School **Mischelle Asi Esguerra** Lyceum of the Philippines University, Philippines
14:45-15:00 **OC1009**	Digital Library for Thai Astronomical History Study on French Document Resource **Papangkorn Inkeaw**, Jeerayut Chaijaruwanich and Boonrucksar Soonthornthum Chiang Mai University, Thailand
13:00-15:00 **Venue: Room 5204**	**Session IV**: Teaching Tools and Course Design **Session Chair**: Prof. Eric C. K. Cheng
13:00-13:15 **OC0026**	Design of a Reading Fluency Assist Tool based on Pause Metrics into Reading Aloud **Yuya Maruyama** and Mizue Kayama Shinshu University, Japan
13:15-13:30 **OC2034**	Leadership and School Performance in Central Colleges in the Western Province of Sri Lanka: An Exploratory Study **R. Lalitha S. Fernando**, H. D. M. Kaushalya Geethamali and E. Achini Indrachapa Kularathna University of Sri Jayewardenepura, Sri Lanka
13:30-13:45 **OC0020**	Increasing Student's Engagement towards Learning English Using Instant Messaging as a Teaching Tool in a Blended Learning Classroom **David Paul Meredith** Webster University Thailand , UK
13:45-14:00 **OC0017**	The Study of Virtual Reality Product Design in Education Learning Huang Yu-Che and **Chen Yi-Ru** Chaoyang University of Technology, Taiwan

14:00-14:15 **OC2050**	Does the Development Economics Learning Design Need to be Redesigned? **Nur Anita Yunikawati**, Prih Hardinto, Ni'matul Istiqomah and Magistyo Purboyo Priambodo Nur Anita Yunikawati Universitas Negeri Malang, Indonesia
14:15-14:30 **OC0018**	Research for QFD applied to education of cosmetics package design **Tsai Chu-Yin** and Huang Yu-Che Chaoyang University of Technology, Taiwan
14:30-14:45 **OC2028**	Scientometics and Visualization Tools for Interactive Instruction to Improve Postgraduates Research Success **Ming Wu** National Science Library, Chinese Academy of Sciences, China
14:45-15:00 **OC2047**	Digital Learning Ecosystem Involving STEAM Gamification for a Vocational Innovator **Jiraphon Kummanee**, Prachyanun Nilsook and Panita Wannapiroon King Mongkut's University of technology north Bangkok, Thailand.
15:00-15:15 **OC1022**	Attitude of Prospective Teachers towards Web-Supplemented Courseware **S. Malathi** Alagappa University, India
15:00-15:30	**Coffee Break**
15:30-17:30 **Venue: Room 5201**	**Session V**: Educational Management and Knowledge Management **Session Chair:** Prof. Tomokazu Nakayama
15:30-15:45 **OC2031**	System Design of a Student Relationship Management System Using the Internet of Things to Collect the Digital Footprint **Nualsri Songsom**, Prachyanun Nilsook, Panita Wannapiroon, Lance Chun Che Fung and Kok Wai Wong Suan Dusit University, Thailand
15:45-16:00 **OC1011-A**	CAIRNS, a Pedagogical Guidance Tool **Pascal Guy** and **Simona Antin** Université d'Orléans, France
16:00-16:15 **OC0049**	A Guideline of Performance Report by Indicators on the Requirement of Suan Sunandha Rajabhat University: Case of QS World University Rankings Napasri Suwanajote and **Atcharapun Daiporn** Suan Sunandha Rajabhat University, Thailand
16:15-16:30 **OC3015**	Technology Acceptance and the Teaching Learning Process: Bracketing ICT and Academics in the University **Divya Dosaya**, Tanu Shukla and V. S. Nirban BITS Pilani, India
16:30-16:45 **OC0031**	Short-term Effects of Herbal Steam on Cervical Rang of Motion to Reduce Stress in the Elderly **Chamiporn Kongmong**, Peerada Damapong and Pongmada Damapong Suansunandha Rajabhat University, Thailand

16:45-17:00 **OC2049**	Exploring the Antecedents of Social Capital-an Implication for Knowledge Exploration and Exploitation **Chao-Hua Li**, Kun-Shan Su, Shu-Fen Liu and Szu-Ju Lin Trans World University, Taiwan
17:00-17:15 **OC0060**	Knowledge Management of Acupuncture Treatment for Insomnia with Traditional Chinese Medicine to Case Studies Staffs in College of Allied Health Sciences, Suan Sunandha Rajabhat University **Suwanna Hadsamad**, Orawan Sinpaiboonlert, Veena Chantarasompoch and Apaporn Putake Suan Sunandha Rajabhat University, Thailand
17:15-17:30 **OC0055**	The Effectiveness of Knowledge Management on Exercise to Reduce Schmerz of Body of Elderly persons at Lardyai, Muang, Samut Songkharm Province **Phannee Rojanabenjakun**, Pongsak Jaroenngarmsamer, Tipvarin Benjanirat, Jatuporn Ounprasertsuk, Chotika Dansunandana and Yonusa Tongrit Suan Sunandha Rajabhat University, Thailand
15:30-17:45 **Venue: Room 5201**	**Session VI**: Teacher Education Research **Session Chair**: Kofi Poku Quan-Baffour
15:30-15:45 **OC3010-A**	Policy for Social Transformation: An Evaluation of Adult Basic Education Policy in South Africa **Kofi Poku Quan-Baffour** University of South Africa, South Africa
15:45-16:00 **OC3012**	World Englishes(WE)and English as Lingua Franca(ELF)Implications for English Teaching and Learning **Wei Leyi** The University of Hong Kong, China
16:00-16:15 **OC0008**	Proposal of an Instrument for Measuring Educational Quality based on the Cisco CCNA 100-101 (ICND1), 200-101 (ICND2) and 200-120 (CCNA R&S) Certifications **Carlos Alberto Baltazar Vilchis**, Yenit Mart ínez Gardu ño, Antonio S ámano Ángeles, Alberto Gardu ño Mart ínez, Francisco Gabriel Corte Herrera and Elizabeth Evangelista Nava Centro Universitario Uaem atlacomulco, Mexico
16:15-16:30 **OC0043**	The Use of Classroom Visual Learning Analytics in Professional Development: Preliminary Findings of Mathematics Teachers' Instructional Changes **Chung Kwan Lo** and Gaowei Chen University of Hong Kong, Hong Kong
16:30-16:45 **OC3004-A**	The Impact of Training on the English Teachers in the Rural Areas of Limpopo, South Africa **Masilonyana Jacob Motseke** University of South Africa, South Africa
16:45-17:00 **OC0045-A**	The Differences between Pre-service and In-service Early Childhood Teachers: Investigation into Online Academic Learning Beliefs and Strategies Tsai-Yun Mou, Hui-Min Chien and **Chia-Pin Kao** Southern Taiwan University of Science and Technology, Taiwan

17:00-17:15 **OC3008**	The Research on the Connotation and Structure of Chinese College Teachers' Psychological Capital **Wang Bin** and Lanzhen Zhu Zhejiang Normal University, China
17:15-17:30 **OC1013**	Analysis of Time Investment in Online Teaching: Log Diary Approach **Alka Dwivedi**, Anita Sengar, Manisha Solanki, Giao Reynolds and Meenakshi Sharma University of Petroleum and Energy Studies, India
17:30-17:45 **OC0044**	Thoughts on the Reform of Civil Aviation English Teaching under the Background of Big Data **Hu Bin** and Pan Fang Nanjing University of Aeronautics and Astronautics, China
15:30-17:45 **Venue: Room 5203**	**Session VII**: Training and Practice **Session Chair**: Assoc. Prof. Paul AJ Beehler
15:30-15:45 **OC0053**	An Augmented Reality based Strategy for Base Station Maintenance **ChinLun Lai** Oriental Institute of Technology, Taiwan
15:45-16:00 **OC0033**	A Study of Marketing Needs Affecting the Development for Bachelor of Science in Health Services Business Management, College of Allied Health Sciences, Suan Sunandha Rajabhat University **Jirawat Sudsawart**, Kullaphat Pochanakul, Veena Chantarasompoch, Wanvisa Saisanan Na Ayudhaya, Phannee Rojanabenjakun and Chamiporn Kongmong Suan Suanadha Rajabhat University, Thailand
16:00-16:15 **OC3007**	The Social-Emotional Learning Process to Develop Practicing Skills for Hands-on Students **Kridsanapong Lertbumroongchai**, **Kobkiat Saraubon**, and Prachyanun Nilsook King Mongkut's University of Technology North Bangkok, Thailand
16:15-16:30 **OC0013**	Research on the Application of QFD in the Merchandise Presentation of Budget Accessories in the Hypermarket Huang Yu-Che, **Chen Chia-Chi** and Hsu Chia-Cheng Chaoyang University of Technology, Taiwan
16:30-16:45 **OC3005-A**	The Impact of Arts Integration on Students' Learning in a CLIL English Course in a University in Japan through a Series of Emaki-Making Activities **Kaya Munakata** Kanda University of International Studies, Japan
16:45-17:00 **OC2044**	The Professional Experience Transfer Model from the Prediction of an Intelligent Portfolio Using Service Agents **Sittidat Kittiviriyakarn**, Prachyanum Nilsook and Panita Wannapiroon King Mongkut's University of Technology North Bangkok, Thailand.
17:00-17:15 **OC0041**	Femoral neck angle impacts hip disorder and surgical intervention: A patient-specific 3D printed analysis Katie McFarlane, Joseph Neil Dentith, **Thanapong Chaichana**, Zhonghua Sun and Philip Brown College of Maritime Studies and Management, Thailand

17:15-17:30 **OC0027**	A UML Programming Environment for ICT Related Subject at Junior High School **Shunya Hara**, Mizue Kayama, Takahisa Nakano, Takashi Nagai and Naomi Taguchi Shinshu University, Japan
17:30-17:45 **OC0021**	Course Design Oriented to the Civil Aviation Practice of Aeronautical Information Service **Wen Tian**, Ying Zhang and Yixing Guo Nanjing University of Aeronautics and Astronautics , Nanjing, China
15:30-17:30 **Venue: Room 5204**	**Session VIII**: Computer Science and Application **Session Chair**: Prof. Duan Yanqing
15:30-15:45 **OC0065**	Song Recommendation System Using Collaborative Filtering Methods **Abba Suganda Girsang** and Edwin Edwin Bina Nusantara University, Indonesia
15:45-16:00 **OC0040**	Analysis of Computing Progress in Maritime Studies **Thanapong Chaichana** College of Maritime Studies and Management, Thailand
16:00-16:15 **OC1015**	Sobel-edge Detection Algorithm in a Mobile Application for Detecting Fake Money **Roselie B. Alday** Lyceum of the Philippines University, Philippines
16:15-16:30 **OC0025**	Proposal of IoT based Learning Material and its Management System for Primary/Secondary Education **Takafumi Todoriki**, Mizue Kayama, Nobuyuki Tachi, Takashi Nagai, Takao Futagami and Takehiko Asuke Shinshu University, Japan
16:30-16:45 **OC2032**	Toward Understanding the User Behavior in Sports University Library using Hierarchical Clustering **Yu-Chia Hsu**, Yung-Che Li and Yung-Hsuan Lin National Taiwan University of Sport, Taiwan
16:45-17:00 **OC2011**	The Art of Storytelling via A Cloud Technology Model to Create An Animation Innovation Sudarat Srima and Wannaporn Chujitarom **Wannaporn Chujitarom** Rangsit University, Thailand
17:00-17:15 **OC0047**	Efficiency of Japanese-Vietnamese Translation Job Thanks to the Use of Technology in the Fourth Industrial Revolution **Hoi Tan Huynh** FPT University, Vietnam
17:15-17:30 **OC2043**	Digital Competencies for Industrial Production Managers **Manoch Suphapanworakul** Naresuan University Thailand, Thailand
18:00	**Dinner**

Authors' Presentations

◆ **Session I**
Theme: Educational Science and Research
Time: 13:00-15:00
Venue: Room 5201

Session Chair: Assoc. Prof. Wei-Shuo Lo
Meiho University, Taiwan

*The time slots assigned here are only tentative. Presenters are recommended to stay for the whole session in case of any absence.
**After the session, there will be a group photo for all presenters in this session.

13:00-13:15 Opening Speech	Project-Based Learning Enhances Student's ICT Competence in Tourism Knowledge Kuang-Nan Tsai, En-Pou Wang and Wei-Shuo Lo **Wei-Shuo Lo** Meiho University, Taiwan **Abstract:** Today education has increasing impacted on dynamic factors from fast changes of information and communication technology (ICT). Such as functions of Microsoft's Offices and social media of Facebook, Line, Instagram (IG) are all appearances in our living environment. Although those ICTs' tools have more and more convened in our life, however, they also have made students becoming laze and lack of cooperative learning attitude with others, this causes student's ICT tools look fruitful but their competence is lower than before. Therefore, how to enhance student's ICT competence has become an important issue in teaching methodology and strategy. In this paper aims to develop an effective teaching strategy on fitting this challenge. Through a way on using project-based learning in understanding the tourism knowledge, we find that student's ICT competence needs more advanced improvement on how to integrate tools of ICT, as well as how to work together with others when go through a team work project. This paper has a critical contribution on using ICT to construct an unknown industrial knowledge. And this knowledge is abstraction and difficult to understand in a traditional class teaching, but through project-based learning with ICT thus approached.
13:15-13:30 OC0014	A Study for S-generation of Children's Creative Thinking Ability Huang Yu-Che, Liu Cheng-Yu and **Chen Chia-Chi** Chaoyang University of Technology, Taiwan **Abstract:** The 21st century is a generation of the knowledge economy that emphasizes technology and creativity. "Creativity" is seen as a new direction of education (Chen Longan, 1998; Shen Zhongwei, 2004). Time is slowly advancing. Nowadays, children receive education and accept the past. Multimedia teaching has added different novel teaching methods, such as video teaching and computer software-assisted teaching. When smart products are rapidly emerging, children are affected by the way these multimedia devices are affected.This study will use the school-age children in the scientific age as the research background, with the theme of "creative thinking and research", using Williams to create a power table, showing the innovative characteristics and causes of modern education. Suitable for school-age children. You can learn more about S-generation children to develop appropriate responses, such as job ability choices, weakness education guidance, and potential issues.

13:30-13:45 **OC3024**	The Relationship between Academic Performance and Motivation Level in E-Learning among Thailand University Students Kew Si Na, **Sirirat Petsangsri**, and Zaidatun Tasir Sirirat Petsangsri King's Mongkut Institute of Technology Ladkrabang, Thailand **Abstract:** E-learning has been extensively implemented in universities and motivation is one of the important factors contributing the successful learning. However, few studies focus on the relationship between student motivation level and academic performance in e-learning. Therefore, we explored the relationship between motivation and academic achievement among students in Thai universities. 115 social science students filled in an instructional materials motivation survey and the data was analyzed by using SPSS software. The majority of students were found to have upper to medium motivation levels in e-learning. Further, there was a weak, positive correlation between motivation level and academic achievement, but it was not statistically significant. More results are discussed in this paper.
13:45-14:00 **OC0032**	Job Digital Storytelling Program for University Students to Develop Career Management Competencies **Rika Ikeda**, Fathima Assilmia, Elavaretta Angelina and Keiko Okawa Keio Graduate School of Media Design, Japan **Abstract:** As technology is rapidly evolving, we are faced with a lot more and faster changes in our everyday life, including in our career. A lot of freshly graduated students experience a shock during the transition from the academic environment to the professional world. Collaborating with IN360, a project that is working on providing career education for children aged between 9 to 12 years old, a digital storytelling workshop was designed to explore the impact of job digital storytelling activity for the development of university student's career management competencies. The workshop was conducted in Vietnam with 19 undergraduate student participants from Hutech University. The participants were assigned into three groups to create three different job storytelling videos in 360° format for children aged between 9 to 12 years old. The career management competencies in the participants are expected to be developed through (1) in-depth interview with someone who works in the field; (2) purposeful 360° video-making activity as a contribution to society; (3) collaborative environment with peers and companies. From the questionnaire, discussion, and observation of the activities, the job digital storytelling program conducted with IN360 did not only established storytelling skills and technology literacy in the university students but also develop some career management competencies in personal management, learning and work exploration, as well as career building areas.
14:00-14:15 **OC0034**	Effect of Parenting Styles on Vegetable Having Behavior of Small Children **Veena Chantarasompoch**, Darakorn Phuprasongkharm, Jirawat Sudsawart, Wanvisa Saisanan Na Ayudhaya, Suwanna Hadsamad and Kullaphat Pochanakul Suan Sunandha Rajabhat University, Thailand **Abstract:** The objectives of this research were 1) study on the parenting style effects on vegetable having behavior of small children 2) to study vegetable having behavior of small children and 3) to study the relation between parenting style and vegetable having behavior of small children. The samples used include the parents of 120 small children both male and female studying in pre-kindergarten level of preschool training center, Wat Phetsamut at Maeklong Sub-district, Mueng District, Samutsongkhram Province. Statistics used in the analysis were percentage, mean, standard deviation and the relation between parenting style and vegetable having behavior of small children by Pearson's

	coefficient. The research found that the parenting style with attention is in high level (X=4.40), the parenting style with control and the parenting style with indulgence are in the intermediate level (X=3.33) and (X= 2.56) respectively and the parenting style with abandon is in low level (=1.86).Vegetable having behavior of small children found that the most are in intermediate level (X= 3.35). The relation between parenting style of parent and vegetable having behavior of small children found that parenting style with attention and control have positive relation to vegetable having behavior of small children but parenting style with indulgence and abandon have negative relation to vegetable having of small children.
14:15-14:30 **OC2015**	Cracking the Code (meshing and switching): Standard English as a Required Ticket to Influence **Paul Alexander Joseph Beehler** University of California Riverside, United States Abstract: Scholarly debates about Standard English in the 1970's were, in part, instigated by the 1969 Task Force on Racism and Bias in the Teaching of English. Committees like this one charged by the National Council of Teachers of English (NCTE) gave rise to such scholars as Rodolfo Jacobson, Patricia Cunningham, and James Sledd – all of whom considered the role of Standard English in classrooms and possible consequences of white supremacy tethered to Standard English. The debate over Standard English and its position in composition classes has evolved over the decades since the 1970's, but the anxiety associated with Standard English has never been extinguished or even fully addressed. Recently, the 2019 College Composition and Communication Conference (CCCC) keynote address, delivered by Dr. Asao B. Inoue, served as a call to action wherein Dr. Inoue encouraged colleagues throughout rhetoric and composition to abandon Standard English. This response considers an excerpt of Dr. Inoue's speech and then ultimately refutes the argument that Standard English should be abandoned. Indeed, such a practice could very well harm first and second generation students, effectively isolating and marginalizing the most vulnerable groups in American universities. Standard English has played an historically seminal role in American universities and broader society, and that role – academically, economically, and socially – continues to reinforce the underpinnings of accurate communication in current American and international communities.
14:30-14:45 **OC0016**	Research on Image Cognitive Learning Application - Taking Japanese Raku Ware as an example Huang Yu-Che and **Hsaio Ko-Jou** Chaoyang University of Technology, Taiwan **Abstract:** Symbolic learning theory is a very important topic in the current information explosion era. The 21st century is an era of "image civilization", which is characterized by the popularity of images and penetrate deeply all aspects of life. A large number of images appear in human life through the digital network, and unconsciously humans receive many image symbols. However, symbols recognition in images is an important key. The paper through the method of image reorganization, Exploring the influence of image symbols on human cognition by using the cultural products born from traditional Japanese aesthetics. Using Saussure's (1857-1913) Semiology to illustrate image cognition, and through the questionnaire survey method, for people's past experience in aesthetics and the relationship between cultural history and image cognition, and this paper look forward to providing a reference method of learning and teaching of symbols for future.

14:45-15:00 **OC3009-A**	Japanese Elementary Students' Hidden Biased Views toward Non-Japanese Peers **Shinji Munakata** Minamihara Elementary School, Japan Abstract: This study examines how Japanese school culture led by the teacher reflected in every aspect of learning activities and styles and students' behaviors that are commonly observed in Japanese elementary schools would possibly affect the formation of Japanese students' biased views toward their peers who come from foreign backgrounds. Many elementary schools in Japan are now trying to help non-Japanese children get used to their Japanese school life by conducting research and surveys on improving curricula, employing different teaching methods or strengthening student support. However, the author, as a researcher and a teacher, points to the lack of Japanese students' willingness to understand and accept these non-Japanese students and their biased views toward them. For instance, Japanese students help or interact with their non-Japanese peers when they are guided to do so by the teacher. But otherwise they tend not to interact with them. In this study, the author tries to reveal what lies beneath Japanese students' biased views toward their non-Japanese peers.
15:00-15:30	**Coffee Break**

◆ Session II
Topic: E-learning Platform
Time: 13:00-15:15
Venue: Room 5202

Session Chair: Prof. Pierre Proulx
Universite de Sherbrooke, Canada

*The time slots assigned here are only tentative. Presenters are recommended to stay for the whole session in case of any absence.
**After the session, there will be a group photo for all presenters in this session.

13:00-13:15 Opening Speech	Transport Phenomena Teaching: a Modern Approach Francis B. Lavoie and **Pierre Proulx** Universite de Sherbrooke, Canada **Abstract:** Over the last 4 years, we have introduced in the Transport Phenomena courses the use of a flipped classroom with a novel web platform developed in our Department. This platform allows to execute Python codes directly on the website and allows to follow and to quantify the overall progress of the students in the course. The platform and the use of python notebooks (Jupyter) aims at the use of the vast python open-source libraries to diminish the level tedious mathematical manipulations. The students can use the python packages as well to evaluate transport and thermodynamical properties calculations as well as the ever present mix of imperial, CGS and S.I. system of units that puzzles even seasoned engineers, thus keeping their focus on the basic principles and physical laws.
13:15-13:30 OC0023	An AR Puzzle Application for Improving Emotion Recognition for AS Children **Daniel Vicente Vicente Lopez Trompo**, Ting Han, Photchara Ratsamee and Haruo Takemura Shanghai Jiaotong University, China **Abstract:** Affecting to around 1% of the population, Autism is sometimes described as a different approach to interacting with the world. Adapting the surrounding objects and systems can improve their experience and their relative's. This project is based on previous research where it has been shown that toys can influence positively in a child's development. Also, new technologies as Augmented Reality (AR) can be beneficial for these children in attracting and keeping their attention. The proposed game would engage the player by first creating a customized monster with the help of different AR markers. In a second stage, the player would try to guess the emotion of different monsters or virtual humans. The game will be tested in further stages to check its suitability for the AS children and the effect on their emotion recognition skills.
13:30-13:45 OC0030	Virtual Reality as a Means of Teaching Contemporary Chemistry **Mareike Frevert** and David-Samuel Di Fuccia Universität Kassel, Germany **Abstract:** The fundamental challenge for understanding and thus for teaching chemistry is that chemical processes at the atomic level are all inaccessible to sensory experience and must therefore be represented by models. For learners these models are often difficult to understand and to use, as they pose high demands regarding cognitive and spatial ability as well as abstraction. This applies especially when it comes to current developments and research topics of chemistry, like nanoscience. This leads to a situation where modern chemistry and chemical research is more and more inaccessible for learners. Using learning environments that utilize Virtual Reality may help to overcome this problematic situation as they allow new ways of visualization, a more direct interaction between learner and chemical object and are open to more game-based approaches. By using VR-technology in combination with aspects of actual

	chemical research topics, chemistry education students may gain better understanding of modern chemistry. As a result, they should be better prepared to realize modern chemistry lessons in the future, that deliver a realistic view of modern chemistry, cover topics of actual relevance and use digital methods that foster learning. In a first attempt to realize such an approach in chemistry teacher education, a virtual reality game was created and embedded in a course on chemistry education. The aim is to present the students a kind of real situation with aspects of modern chemistry, where they have to act as a forensic scientist. Additionally, they should use this VR game as basis for conceptualizing teaching materials for chemistry lessons at school and as a means to promote their digital competencies.
13:45-14:00 **OC2026-A**	The Application of Virtual Reality in Chinese Language Learning: A Project-based Approach **Leo F.H. Ma** The Chinese University of Hong Kong, China **Abstract:** Over the past two decades, the curriculum of the Chinese language education in Hong Kong secondary school has gone through a series of changes as part of the education reform started in 2000. The current literature however suggests that the Chinese language proficiency of secondary school students has been declining in recent years. In this paper, the author highlights a 3.5-year university-school partnership project for enhancing the learning and teaching of Chinse language in junior secondary schools through the use of Virtual Reality (VR) technologies. In the project, students go through virtual field trips with literature elements in the classroom setting by using an integrated virtual reality mobile educational system, EduVenture ® VR, developed by the Centre for Learning Sciences and Technologies of The Chinese University of Hong Kong. The VR technologies help break the time and location constraints and achieve better learning result. After implementing the project for the first year in 2018-2019 school year, the initial findings indicates that the participating students are able to acquire more knowledge and skills in Chinese language, develop an improved attitude in learning Chinese language, and build up a more active learning behavior in the classroom through the virtual exercise..
14:00-14:15 **OC0037**	Imagineering Gamification using Interactive Augmented Reality to develop Digital Literacy skills **Tunyaboon Choolarb**, Jakkrit Premsmith and Panita Wannapiroon King Mongkut's University of Technology North Bangkok, Thailand **Abstract:** The purpose of this research is to develop Imagineering Gamification using Interactive Augmented Reality, to be used for evaluating Digital Literacy skill of learners from their Interactive Augmented Reality learning through Imagineering Gamification model; to compare learners' learning achievements before and after learning through Imagineering Gamification using Interactive Augmented Reality with those who learn through normal classroom; and to survey learners' satisfaction of using Interactive Augmented Reality to develop Digital Literacy skills. The research composed of 80 students from Vocational Certificate of Education year 1 of Siam Business Administration Nonthaburi Technological College and were divided into two groups with a group of 40 each through simple random sampling method: experimental group and control group. The tools of the research were Imagineering Gamification model and the system of Interactive Augmented Reality for developing Digital Literacy skills, which were qualified by the field experts. The research result showed that learning through Imagineering Gamification using Interactive Augmented Reality was suitable with a very good level of overall outcome. The mean of Imagineering Gamification model was 4.96 (S.D. = 0.06) and the mean of the system of Interactive Augmented Reality for developing Digital Literacy skills was 4.98 (S.D. = 0.03). The mean of Digital Literacy skills evaluation, before and after learning, was 4.65 (S.D. = 1.57) and 17.78

	(S.D. = 1.60) respectively, and the t-test result was 36.82 with a level of statistical significance of .01. The mean of evaluation of the experimental group's learning achievements after learning was 18.43 (S.D. = 1.61); the mean of evaluation of the control group's learning achievements after learning was 14.40 (S.D. = 1.74), and the t-test result was 10.40 with a level of statistical significance of .01. The survey of students' satisfaction from using the material has a very good level of overall outcome with the mean of 4.89 (S.D. = 0.32).
14:15-14:30 **OC3023**	Education Technology for Effectiveness of Teaching Learning: An Exploration of Blended Courses Tanu Shukla, **Divya Dosaya**, V. S. Nirban and Mounika Prashanthi Vavilala BITS Pilani, India **Abstract:** Integrating technology in education through online courses can enhance the learning experience when coupled with the traditional methods of interaction. Online courses can help in providing access to education to people from remote and marginalized sections of the world. They help in developing critical thinking and increasing the capacities of students necessary for the 21st century. There has been a shift from traditional classroom teaching to teaching in a hybrid or blended manner. An online learning environment creates a potential learning space for students to use technology for effective teaching and learning process. A well-designed learning environment can blend conventional methods with technological innovations for increasing the accessibility and efficiency of the education system. The study collected data from graduate students (N=220) on various determinants of effective online courses and learning. Correlation was used to explore the relationship of the dimensions with the construct of effectiveness. Factor analysis was done and two factors were extracted, namely, student attributes, features of the platform and instructor quality. The findings of the study provide insights for measuring the effectiveness of online courses and initiate measures to handle the challenges to online education.
14:30-14:45 **OC0022**	A Gamification Digital Storytelling Learning Based on Cooperative Social Cloud to Promote Students' Teamwork Skill in Primary School **Sujitra Matchacheep**, Sasithorn Chookeaw and Prachyanun Nilsuk King Mongkut's University of Technology North Bangkok , Thailand **Abstract:** This research aims to investigate a gamification digital storytelling learning base on cooperative social cloud enhancing students' learning achievement and students' teamwork skill. The participants in this research were 60 students who were grade 3 of primary school in Thailand that divided into 2 groups consisting of an experimental group (n=30) and control group (n=30). Research tools is evaluation from teamwork skill and learning achievement test. In addition, the experimental group that used gamification digital storytelling showed significant improvement in their teamwork skill average score is 15.07 (SD = 4.83) which is higher than the control group 9.80 (SD= 2.88). There are more learning achievement results than students in the control group. Which has an average score 86.07 (SD = 7.83) and students in the control group have an average score 82.43 (SD= 10.15)
14:45-15:00 **OC1021**	Educational Video Games Enhancing the Pro-Social Behaviour and Critical Thinking among Middle School Students **Dr. Vasimalairaj Muthukaman** and Dr. H. Deepa Alagappa University, India **Abstract:** An attempt has been made to find out the effects of educational video games on the development of Pro-social behaviour and critical thinking among middle school students. The present study focus on the positive aspects of playing video games, the

	pro-social behaviour level is studied in the classroom by the students after playing it. Critical thinking skills can be improved by the use of educational video games and prepare the children to take strategic decisions that help them to succeed in the real world. As many as ninety samples were collected from the middle school students of sivagangai district in southern Tamilnadu. Tools constructed and standardized by the researcher was used for the data collection. It is interesting to know there is no significant difference in the mean scores between the experimental and control group with regard to the pro-social behaviour.
15:00-15:15 **OC0028**	A Learning Management System for Flipped Courses **Francis B. Lavoie** and Pierre Proulx Université de Sherbrooke, Canada **Abstract:** The "flipped classroom" is gaining around in engineering courses. This teaching method has many advantages, such as helping disabled students. However, we observed that many students are less up-to-date than in traditional courses. To counter this problem, we have developed a learning management system (LMS) with unique features oriented for "flipped courses". The new LMS allows students to watch videos, to interact with Jupyter Notebooks and to complete the exercises directly on the website. The LMS automatically creates progression graphics for each student and pushes automatic messages related to their progression. For instructors, the LMS automatically creates statistics about the overall class progression throughout the lessons and exercises and allows targeting students in difficulty whose can then be individually helped. The LMS was introduced in several engineering courses and helped to lower the failure rate. With machine learning algorithms, the LMS can also demonstrate the importance to keep the students continuously up-to-date in a course.
15:00-15:30	**Coffee Break**

◆ Session III
Topic: E-learning Platform
Time: 13:00-15:00
Venue: Room 5203

Session Chair: Prof. Deni Darmawan
Universitas Pendidikan Indonesia, Indonesia

*The time slots assigned here are only tentative. Presenters are recommended to stay for the whole session in case of any absence.
**After the session, there will be a group photo for all presenters in this session.

13:00-13:15 Opening Speech	Development of Automatic System ICMLS 2.0 for Improving Educational Technology Competences in Industry 4.0 **Deni Darmawan**, Edi Suryadi and Erwin Harahap Universitas Pendidikan Indonesia, Indonesia **Abstract:**The focus of this research was to develop an "ICMLS (Integrated Communication Mobile Laboratory Simulator)" in the form of mobile laboratories innovations for vocational teachers and students of Computer and Network Engineering. This was produced through the development of R & D with support from industrial partners in order to make all teachers and students in Vocational High School, West Java experiences the quality of the product. The prototype developed accommodated all practical activities for class X to XII in one integrated package for server and client functions. This research was conducted for 2 years, and in the first year, 2018, ICMLS version 1.0 was produced and 2.0 will be produced in the second year. This product can improve the competence of Educational Technology in Computer and Network Engineering Study Programs to compete in the 4.0 Industrial Revolution Era which is more characterized by Artificial Intelligence and Big Data. This was evident from the increase in the average competency test of magister students from 85.13 to 85.53 produced from the lowest initial skill average of 77.9 to the highest of 89.4.
13:15-13:30 OC0038	A MOOC-Ready System for the Fundamentals of Programming Using the C Language: Development and Analysis **Cheryl Balan Pantaleon**, Larmie Santos Feliscuzo and Cherry Lyn Cando Sta. Romana Cebu Institute of Technology University, Philippines **Abstract:** The study aimed to create a MOOC-ready system to help students learn the fundamentals of programming course using the C language for free. The student has to learn the course with less management from the instructor but with full support. Moodle was the learning management system used in the development of the course. Because of its powerful tools and extensive set of plugins, real-time teaching-learning feedback and adaptive learning method when answering programming problems were the system's distinctive features. The Moodle plugin CodeRunner was used to test the intended learning outcomes of the course. To check the efficiency and effectiveness of the system, an evaluation was conducted with the faculty members that had been teaching the course and students that had already taken up the course. There were six attributes that best describe an effective MOOC (namely: content structure, participatory, distributed, pedagogy, assessment and duration). The result was very satisfactory.
13:30-13:45 OC2029	A Conceptual Framework for the Development of a MOOCs-based Knowledge Repository Using a Digital Knowledge Engineering Learning Process to Enhance Digital Entrepreneurs' Competencies **Nattaphol Thanachawengsakul** Chandrakasem Rajabhat University, Thailand

	Abstract: A conceptual framework for the development of a MOOCs-based knowledge repository using a digital knowledge engineering learning process to enhance digital entrepreneurs' competencies as follows: (1) the digital knowledge engineering learning process was divided into six steps: (1.1) knowledge creation, (1.2) knowledge storage, (1.3) knowledge acquisition, (1.4) knowledge access, (1.5) knowledge sharing and (1.6) knowledge application; (2) the knowledge repository consisted of three subsystems: (2.1) user management system, (2.2), knowledge management system and (2.3) report management system; (3) the MOOCs-based learning management system comprised six elements: (3.1) reading material, (3.2) video lectures, (3.3) discussion forums, (3.4) quizzes, (3.5) assignment and (3.6) certificate; and (4) digital entrepreneurs' competencies comprised three levels: (4.1) use of digital technology for collaboration, (4.2) use of digital technology for work and (4.3) digital accessibility and awareness.
13:45-14:00 **OC0005**	An Effective Microlearning Approach Using Living Book to Promote Vocational Students' Computational Thinking **Soralak Leela**, Sasithorn Chookeaw and **Prachyanun Nilsook** King Mongkut's University of Technology North Bangkok, Thailand **Abstract:** The purpose of this study was to describe the effectiveness of using living books (mobile leaning and augmented reality) within the context of microlearning approach to promote vocational students' computational thinking. The participants were 97 vocational students that included experimental group (n=52) and control group (n=45) vocational college who enrolled in the basic of mathematics career in 2nd semester of academic year 2018. The instruments of this research include learning materials: mobile learning and AR book, the lesson plan of surface area and volume topic in basic mathematics career subject, pre and post-tests, and the computational thinking assessment. The results showed that the students' learning achievement of experimental group employed microlearning approach using living books, the control group employed traditional learning was statistically significant at level of .01. In addition, the result of students' computational thinking in the experimental group using of microlearning living book have been the computational thinking at the high level.
14:00-14:15 **OC0012**	Effects of Augmented Reality Mobile Apps on Early Childhood Education Students' Achievement **Nurullizam Jamiat** and Noor Fatin Nadia Othman Universiti Sains Malaysia, Malaysia **Abstract:** Research trends on augmented reality (AR) showed that limited studies have been conducted on early education. The main objective of this study was to investigate the effects of an AR mobile apps on early childhood education students' achievement of learning alphabets. In this study, a total of 60 children at the age of five and six years old from a rural kindergarten were involved. A quasi-experimental research was applied in this study. The results showed that the children in the AR mobile apps group had a statistically significant higher mean score than the regular or non-AR mobile apps group. In conclusion, children learn alphabets better by using AR mobile apps than using the regular mobile apps. Therefore, it is recommended that more studies on AR mobile apps should be conducted in early childhood education as the technology helped children to learn at the early age.
14:15-14:30 **OC0050**	Application of Rain Classroom Software in Electrotechnics Course Teaching **Wang Ning** and Zhang Li Dalian University of Technology, China **Abstract:** Rain Classroom software is introduced into the teaching process of Electrotechnics course as a teaching tool. By issuing real-time quiz in class, teachers can timely understand the

	students' learning situation, and adjust the teaching progress and teaching methods. The use of bullet screen and red envelope awards in class, pushing teaching materials after class and answering questions online at any time stimulate students' interest in learning. At the same time, the authoritative data recording function of Rain Classroom makes the formative evaluation results more convenient and fair. Practice shows that the rain classroom is simple and easy to use, but the teaching effect is excellent.
14:30-14:45 **OC0042**	Educational Applications of Web 2.0: Strategies to Enrich the Teaching and Learning in the Graduate School **Mischelle Asi Esguerra** Lyceum of the Philippines University , Philippines **Abstract:** The rapid growth of the Internet had brought several transformations in today's teaching and learning process. The use of Web 2.0 technologies and e-learning platforms are becoming popular in higher education particularly in graduate school. Educators used these tools to foster student engagement and strengthen their learning experiences. However, not all faculty members are using Web 2.0 tools. This study sought to identify the issues and concerns in the implementation of Web 2.0 on the teaching and learning process and proposes strategies to properly deploy Web 2.0 technologies. The findings of this study provide valuable insights and strategies for integrating Web 2.0 that will serve as a reference by faculty members teaching the graduate school.
14:45-15:00 **OC1009**	Digital Library for Thai Astronomical History Study on French Document Resource **Papangkorn Inkeaw**, Jeerayut Chaijaruwanich and Boonrucksar Soonthornthum Chiang Mai University, Thailand **Abstract:** The 17th-18th centuries. Huge amount of resources in form of manuscripts, books, microfilms are preserved and provided by several institutions such as Bibliot èque National de France, etc. Nowadays, the advance of digital technology allows us to access these resources publicly. Many resources were digitized in form of scanned images. This work aims to establish our own specific digital library for Thai astronomical history study. Document management system was developed. It includes data acquisition and collection management. To be able to access knowledge behind the texts, the scanned images were transformed into machine-readable format by optical characters recognition (OCR). Search engine was implemented to allow historians to find pieces of reverent information from keywords. In our circumstance, Thai historians may not have French reading skill. We integrated an automatic French to English language translation by using machine translation technique. Our system provides the historians the e-books of the French historical original documents in English. To automatically extract knowledge from texts, we perform the natural language processing to identify name-entities, such as name of person, places, events, etc., from texts. This enables the historian to explore some meaningful concepts via the indices of the texts. The indices were also automatically linked to Wikipedia as an existing knowledge pool. There are still some limitations of our project including the processes of OCR, language machine translation, name-entity recognition which remain challenged in computer science research.
15:00-15:30	**Coffee Break**

◆ Session IV

Topic: Teaching Tools and Course Design
Time: 13:00-15:00
Venue: Room 5204

Session Chair: Prof. Eric C.K. Cheng,
The Education University of Hong Kong, China

*The time slots assigned here are only tentative. Presenters are recommended to stay for the whole session in case of any absence.
**After the session, there will be a group photo for all presenters in this session.

13:00-13:15 **OC0026**	Design of a Reading Fluency Assist Tool based on Pause Metrics into Reading Aloud **Yuya Maruyama** and Mizue Kayama Shinshu University, Japan **Abstract:** The purpose of this research is to develop an assessment tool for reading aloud by pupils. We have proposed some metrics for evaluating reading fluency based on metrics of pauses in reading. In this paper, we developed a full-automated evaluation tool and a visualization method for reading using these indicators. We also propose a feedback interface based on heat-map method.
13:15-13:30 **OC2034**	Leadership and School Performance in Central Colleges in the Western Province of Sri Lanka: An Exploratory Study **R. Lalitha S. Fernando**, H. D. M. Kaushalya Geethamali and E. Achini Indrachapa Kularathna University of Sri Jayewardenepura, Sri Lanka **Abstract:** This study explores the most effective leadership style in school performances of Central Colleges in Sri Lanka and identifies problems and difficulties faced by the principles of the selected schools. This study revealed that the transformational leadership style is the most effective as it leads higher school performances. Some principals of the Central Colleges were not successful due to the lack of resources, negative attitudes of the stakeholders, inefficient government officers, unfavorable external environment and the unnecessary political interference. Policy measures are proposed towards better performance of the Central Colleges of Sri Lanka. Findings of this study will help the governing bodies to design and update policies for improving performance of the Central Colleges specifically, and school leadership of Sri Lanka in generally.
13:30-13:45 **OC0020**	Increasing Student's Engagement towards Learning English Using Instant Messaging as a Teaching Tool in a Blended Learning Classroom **David Paul Meredith** Webster University Thailand, UK **Abstract:** This study's objective was to ascertain if using instant messaging in a blended learning classroom, the engagement of Thai undergraduate students towards learning English would improve. The study used a quasi-experimental design, and included a control group who were taught in a traditional manner and compared it to an experimental group who were given discussion topics, assignments, reminders and organizational matters using instant messaging. Pre and post-test questionnaires were used to determine the student's engagement towards academic challenge, learning with peers and experience with faculty. The results were analyzed using MANOVA and follow-up ANOVAs. It was shown that the experimental group made significant improvements in engagement. This result suggests methods for teachers with large, mixed ability classes to improve engagement and for less proficient students to succeed.

13:45-14:00 **OC0017**	The Study of Virtual Reality Product Design in Education Learning Huang Yu-Che and **Chen Yi-Ru** Chaoyang University of Technology, Taiwan **Abstract:** With the advancement of global technology and technology, the popularity of 3D technology and the Internet and multimedia has shifted the number of users from the reading mode of physical books to the use of the Internet. At present, the education model is not only a lecture for classroom teachers, but also a digital learning platform for online learning, even the use of virtual reality technology, immersive exploration of knowledge, and limitations of time and space. At present, the teaching mode of the product design course of the University of Science and Technology, whether it is the product development and the demonstration of the product use process, is widely displayed in a two-dimensional plan with 3D models and animations. This model lacks a sense of scene and interactivity. It can be applied to product design and manufacturing through virtual reality technology, and can be used for product design, making operation teaching and display more interactive and learning efficiency. Therefore, this study applies virtual reality technology to product education and learning, and uses virtual reality device HTC Vive equipment, software design software (Gravity Sketch) software and hardware equipment to apply it to product design education, and through two projects: (1) Experiential value, (2) The QFD method is based on Experiential value theory. “Learning feedback”, “excellent learning effects”, “Aesthetics” and “Playfulness” are used as a quality factor to explore the application of virtual reality in education. The experiential value of the learning experience and the QFD quality function evaluation project. In summary, the study obtained the highest value in "learning feedback", the second was "Playfulness", the third was "excellent learning", and the fourth was the result of " Aesthetics ", showing that students were engaged in the process of education and learning. The time and spirit can be regarded as the enthusiasm for the course, and the sense of achievement obtained is the quality demand for the students to receive education and learning. Therefore, when students use virtual reality technology to learn product design, they can check the preliminary three-dimensional model, and then change the product shape and structure design in the virtual environment, and use the highly realistic virtual environment and parameter surface to verify the product content, This can reduce the cost of sample products for product design, making it easier for students to create and co-create products, improve their sense of accomplishment, make students more focused, and prefer product design courses.
14:00-14:15 **OC2050**	Does the Development Economics Learning Design Need to be Redesigned? **Nur Anita Yunikawati**, Prih Hardinto, Ni'matul Istiqomah and Magistyo Purboyo Priambodo Nur Anita Yunikawati Universitas Negeri Malang, Indonesia **Abstract:** The way to design good education and learning activities is learning design. The teacher is the key actor to develop interesting learning and support the learning goals of the course. The purpose of this article is to rebuild and redesign existing learning designs in compliance with the life curriculum. With the ADDIE approach (analysis, design, development, implementation and evaluation) Branch (2009). This research was conducted for one semester, in the subject of economic development. The findings of this research are a learning design that is appropriate in development economics lessons with the skills and concerns of learners. So learners can believe creatively on the basis of teaching design ADDIE approach, It is hoped that students will be more able to apply the theory of economic development into the real world by developing a new learning design.

14:15-14:30 OC0018	Research for QFD applied to education of cosmetics package design **Tsai Chu-Yin** and Huang Yu-Che Chaoyang University of Technology, Taiwan **Abstract:** In a highly commercialized and economically prosperous society, with market consumption competition and consumer needs for material desires, basic needs are no longer sufficient for consumers. Cosmetics are constantly being updated, and consumers are highly selective. In addition to the contents of the cosmetics themselves, their packaging is also a major factor for consumers to consider. The quality of packaging design may even affect the desire of consumers to buy. Demand for color cosmetics packaging can increase product satisfaction and increase sales. I hope to conduct research on consumer behavior and symbolic consumption through quality functions. Cosmetic packaging design helps designers understand the consumer's demand for color cosmetics packaging, and then design a more complete packaging design.
14:30-14:45 OC2028	Scientometics and Visualization Tools for Interactive Instruction to Improve Postgraduates Research Success **Ming Wu** National Science Library, Chinese Academy of Sciences, China **Abstract:** In this study, scientometics and visualization tools are used to facilitate interactive instruction practice of improving postgraduate research success. Through course teach and learn, overall objectives are gradually achieve for as follows: (1) to promote students' techniques and skills to search, access and evaluate and use science and technology literature, (2) to help students identify and demonstrate research progress and trends with scientometics and visualization tools, (3) to inspire students' enthusiasm to learn practical skills of information literacy for their research by interactive instruction. The results show that postgraduate students use comprehensively information skills and scientometics and visualization tools to fulfill research topic trend analysis successfully by group team. The interactive instruction practice is effectiveness to support postgraduate students' overview research progress, especially for science and engineering fields. It also could provide some useful insights in assisting librarians for designing academic library education and service.
14:45-15:00 OC2047	Digital Learning Ecosystem Involving STEAM Gamification for a Vocational Innovator **Jiraphon Kummanee**, Prachyanun Nilsook and Panita Wannapiroon King Mongkut's University of technology north Bangkok, Thailand **Abstract:** The purposes of this research were 1) to synthesize the conceptual framework of a digital learning ecosystem involving STEAM gamification to develop a vocational innovator, 2) to design and develop the model of a digital learning ecosystem involving STEAM gamification to develop a vocational innovator and 3) to evaluate the model of a digital learning ecosystem involving STEAM gamification to develop a vocational innovator. Seven experts were from purposive sampling which included two experts in STEAM Education, two experts in Creative Innovation Skills and three experts in Curriculum and Teaching. The research tools were the digital learning ecosystem involving STEAM gamification to develop a vocational innovator from the developed model. The results of the research shown that the digital learning ecosystem had three elements in the form of a digital learning ecosystem, a STEAM Education Approach, and gamification elements. The digital learning ecosystem included: 1) Biotic Components: (i) Teachers and Educational Personnel (ii) Students, Friends and Parents/Guardians, 2) Abiotic Components: (i) Hardware ii) Software (iii) Network (iv) Database and (v) Pedagogical Theories. The five steps of the STEAM education approach were: 1) Defining problems 2) Designing tools to solve problems from Mathematics and Technology 3) Producing instruments to solve problems 4) Testing, evaluating and improving

	the solutions of problems and 5) Presenting students' work or solutions to problems. The five gamification elements were: 1) Goals 2) Rules 3) Reinforcement: Rewards, Points, Achievements, Challenges, Trophies, Badges, Virtual Goods and Spaces, Levels, Leader boards 4) Times and 5) Feedback. The evaluation of the digital learning ecosystem involving STEAM gamification to develop a vocational innovator was deemed to be very much at an appropriate level.
15:00-15:15 OC1022	Attitude of Prospective Teachers towards Web-Supplemented Courseware S. Malathi Alagappa University, India **Abstract:** The main objective of the study is to find out the attitude of prospective teachers in Pudukkottai District towards web-supplemented courseware. Survey method was adopted in this study; Sample consisted of 300 B.Ed., college students in Pudukkottai and Aranthangi educational districts. Attitude scale towards web-supplemented courseware developed and validated by the experts to collect the data. The findings of the study revealed that there was no significant difference between under graduate and post graduate B.Ed., students on their attitude towards web-supplemented courseware with respect to gender, major subjects and utility of technology at school.
15:00:15:30	**Coffee Break**

◆ Session V

Topic: Educational Management and Knowledge Management
Time: 15:30-17:30
Venue: Room 5201

Session Chair: Prof. Tomokazu Nakayama,
Jissen Women's University, Japan

*The time slots assigned here are only tentative. Presenters are recommended to stay for the whole session in case of any absence.
**After the session, there will be a group photo for all presenters in this session.

15:30-15:45 OC2031	System Design of a Student Relationship Management System Using the Internet of Things to Collect the Digital Footprint **Nualsri Songsom**, Prachyanun Nilsook, Panita Wannapiroon, Lance Chun Che Fung and Kok Wai Wong Suan Dusit University, Thailand **Abstract:** Information systems plays an important role in the development of many perspectives on the part of higher education institutions, especially in the management of students' lives. Systems must be accessible and meet the needs of students, and allow higher education institutions to receive accurate and appropriate information. The purpose of this research was to design a system in the form of a student relationship management system (SRMS) using the Internet of Things (IoT) to collect digital footprint. These include the provision of an overview service station for monitoring students, the determination of relevant actors, the IoT process diagram, a sequence diagram and an entity relationship diagram. The results of the evaluation showed an overall very high level of appropriateness and a very high level in terms of the overall appropriateness of the usability of the system. All of the system design aspects for developing the system for collecting the digital footprint of higher education institutions to support student services and student behavior were shown to be appropriate.
15:45-16:00 OC1011-A	CAIRNS, a Pedagogical Guidance Tool **Pascal Guy** and **Simona Antin** Université d'Orléans, France **Abstract:** Our complex present-day society has left more and more people highly disoriented and has increased their professional uncertainty. Against this background, we propose an interactive guidance tool based on the theoretical approaches of pedagogical sciences of guidance and the high potential of digital tools. This project, named CAIRNS and developed in a network of seven French universities, is designed to create pedagogical spaces and learning situations in a blended learning approach. This digital solution aims to offer a guidance tool, supportive and educational at the same time, where the users build together their own paths through an ecosystem of sharing and collaborative learning. The blended learning program is based on the pedagogical methods of «learning situations» where the learner experiences the orientation activity through gamified tasks, organized and structured for educational purposes, and thus their experience is turned into skills. Student orientation skills, once acquired and validated by digital badges, are grouped together in a pedagogical quest. Thus they develop agency and advance towards individuation in building their personal and professional career from a perspective of lifelong guidance.
16:00-16:15 OC0049	A Guideline of Performance Report by Indicators on the Requirement of Suan Sunandha Rajabhat University: Case of QS World University Rankings Napasri Suwanajote and **Atcharapun Daiporn** Suan Sunandha Rajabhat University, Thailand

	Abstract: This research was aimed at searching for a guideline of performance report by indicators on the requirement of SSRU as the Student Development Division was assigned and to improve the efficiency and decrease the time of performance monitoring. The sample group of this study was 14 staff from 6 faculties, 7 colleges and 1 graduate school who are responsible for the performance report. The data was gathered by using the questionnaire and the statistics for data analysis were percentage (%), mean ($\bar{X}$) and standard deviation (S.D.). The findings revealed that all staff who answered the questionnaire for improving a guideline of performance report by indicators on the requirement of SSRU: case of QS world university rankings were 4 male (28.57%) and 10 female (71.43%) and most of them have been working for 1 – 5 years total 5 staff (35.72%) and 6 – 10 years total 5 staff (35.72%), the overall of understanding of performance report by indicators on the requirement of SSRU: case of QS world university rankings was in the high level ($\bar{X}$= 4.04, S.D.= 0.5669) and most of their understanding of the data gathering process of the host section was in the high level ($\bar{X}$= 4.21, S.D.= 0.4258), and the overall of satisfaction with performance report by indicators on the requirement of SSRU: case of QS world university rankings was in the high level ($\bar{X}$= 3.84, S.D.= 0.5701) and most of their satisfaction with data sending process of the host section was in the high level ($\bar{X}$= 4.21, S.D.= 0.4258).
16:15-16:30 **OC3015**	Technology Acceptance and the Teaching Learning Process: Bracketing ICT and Academics in the University **Divya Dosaya**, Tanu Shukla and V. S. Nirban BITS Pilani, India **Abstract:** The role of technology in evolving and uplifting the lifestyle of populations worldwide has been enormous since the advent of 21st Century. Education when combined with technology escalates the whole process of growth and development by making the user more and more independent in managing complex tasks in real time with less effort. This is an integrated process involving many factors to interplay. Acceptance of technology in the field of education still remains a challenge. There exist discrepancies in access and acceptance of technology among users in the academic realm, especially in the developing countries. This study attempts to gauge such discrepancies and the factors that lead to them by digging into the attitudes that urge people to accept or reject the Learning Management System (LMS) - a widely used technological intervention in the teaching learning process. The study was conducted in an engineering institute in India and data was collected from both the students and the teachers. The factors identified by the Unified Theory of Acceptance and Use of Technology (UTAUT) Model were used to design tools for data collection. Interviews were also conducted to substantiate the quantitative findings. The results indicated that acceptance of LMS was less in women as compared to their male counterparts both among the teachers and the students. The dependency on technology is influenced by factors such as the extent to which the user considers it easy to operate and, social influence from colleagues and seniors. Thus, it becomes clear that Effort Expectancy and Social Influence play an important role in the acceptance or rejection of available technology aides in education among women. Abstract:
16:30-16:45 **OC0031**	Short-term Effects of Herbal Steam on Cervical Rang of Motion to Reduce Stress in the Elderly **Chamiporn Kongmong**, Peerada Damapong and Pongmada Damapong Suansunandha Rajabhat University, Thailand **Abstract:** This study aimed to evaluate the effects of the Herbal Steam on cervical range of motion with reduce stress in the elderly. The data was compiled using the quasi-experimental research design; the populations of this research were 30 patients with stress in the elderly, the assessment was before and after receiving the a 30-minute for 3 days of Herbal Steam. The

	results were assessed short-term effects after the intervention which consisted of the increased cervical range of motion after receiving the Herbal Steam while a significant difference was occurring ($P < 0.05$). In conclusion, the effects of Herbal Steam with reduce stress in the elderly by reducing its pain and increase the cervical range of motion.
16:45-17:00 **OC2049**	Exploring the Antecedents of Social Capital-an Implication for Knowledge Exploration and Exploitation **Chao-Hua Li**, Kun-Shan Su, Shu-Fen Liu and Szu-Ju Lin Trans World University, Taiwan **Abstract:** Learning is inextricably linked to knowledge creation and competitive advantages. This study focused on the knowledge based view of the firm and the impacts of social networks on learning by using a social-capital perspective. This study takes the three-dimension approach to social capital through the cognitive, structural, and relational dimensions. This study explores the antecedents of social capital, interrelations between different facets of social capital and the links between social capital and learning effects, especially in terms of knowledge exploitation and exploration. This study applied a purposive sampling approach by targeting a community hospital that had been involved in a learning organization for over 15 years with various cross-functional teams as samples. The authors conducted 34 semi-structured interviews with 8 clinical specialists, 13 nurses, and 13 administrative staffs. Nivio 10 was applied to organize open, axial and selective codings and three themes are found, from which we induct five elements-convergence of common goals, leadership legitimacy, participation in training/meeting, willingness to communicate and coordinate and interdependence and trust—as the antecedents of social capital. The findings are (1)structural capital is the central assessment criteria in evaluating the performance of social capital; (2) high scores in three dimensions for nurses, that is, the stable social capital, facilitates knowledge exploitation (storage, transfer and application); (3) Burst-type social capital for clinical professionals and administrators have access to non-redundant information and knowledge exploration. Practical implications are that the balance between exploration and exploitation can be maneuvered by developing patterns of social capital.
17:00-17:15 **OC0060**	Knowledge Management of Acupuncture Treatment for Insomnia with Traditional Chinese Medicine to Case Studies Staffs in College of Allied Health Sciences, Suan Sunandha Rajabhat University **Suwanna Hadsamad**, Orawan Sinpaiboonlert, Veena Chantarasompoch and Apaporn Putake Suan Sunandha Rajabhat University, Thailand **Abstract:** This research aims to study the knowledge management of using acupuncture to treat insomnia among staffs in the College of Allied Health Sciences, Suan Sunandha Rajabhat University. The results of the research will be the knowledge used to help staffs in the College of Allied Health Sciences who have insomnia problems that affect work to have a better sleep quality and helps the institution to have guidelines for creating quality sleep for staffs in the future. And helps to continuously learn about The sample group are staffs in the College of Allied Health Sciences, Suan Sunandha Rajabhat University. Both male and female with insomnia by the specific selection method of 30 people. In this study samples of 30 volunteer participants that meet the criteria were measured before and after treatment with acupuncture. Tools used in data collection were the questionnaire which divided into 3 parts; the questionnaire for personal information is age, sex, marital status, education level, income sufficiency, congenital diseases, sleep history and questionnaires about condition of insomnia before and after acupuncture conducted the study by asking. The research instruments were questionnaires and acupuncture therapy equipment. The duration of acupuncture treatment is 30 minutes, once a week for 10 times, using 3 months of data collection. Survey data that were analyzed and presented with percentage statistics and average standard deviation.

	The study indicated that The knowledge of Chinese medicine for personnel has knowledge and understanding in the treatment of insomnia which can help the quality of sleep. And better quality of work An overview of the study shows that Knowledge management of traditional Chinese medicine in acupuncture to improve insomnia after the experiment Consistent with the creation of the organization's image in the management of knowledge that responds to the health problems of personnel in a sustainable.
17:15-17:30 **OC0055**	The Effectiveness of Knowledge Management on Exercise to Reduce Schmerz of Body of Elderly persons at Lardyai, Muang, Samut Songkharm Province **Phannee Rojanabenjakun**, Pongsak Jaroenngarmsamer, Tipvarin Benjanirat, Jatuporn Ounprasertsuk, Chotika Dansunandana and Yonusa Tongrit Suan Sunandha Rajabhat University, Thailand **Abstract:** This research aimed to study 1) The effectiveness of knowledge management on exercise in order to reduce a Schmerz of body of elderly persons. 2) To study the satisfaction of elderly persons of knowledge management on exercise at Lardyai, Muang, Samut Songkharm Province. This research was a Quasi – Experiment. The sample used to study was drawn by using the selection from the elderly people who live in Samut Songkhram Province with quantity 30 samples. The data were gathered by using a one group pre-test – post-test design which built by the researcher. The statistical techniques used for analyzing were, percentage, mean, standard deviation (S.D) t-test and one group pre-test – post-test design. The research findings that the elderly persons before to have knowledge had average 17 (S.D.= 1.76) , 12.70 (S.D.= 1.08) between to have knowledge and after that got 14.70 (S.D.= 2.43). Furthermore, to find that the satisfaction of the topic of the knowledge, the instructor, the process of the approach, activities, communicate of activities were in high level and the knowledge of measurement and evaluation were in high level.
18:00	**Dinner**

◆ Session VI

Topic: Teacher Education Research
Time: 15:30-17:45
Venue: Room 5202

Session Chair: Kofi Poku Quan-Baffour
University of South Africa, South Africa

*The time slots assigned here are only tentative. Presenters are recommended to stay for the whole session in case of any absence.
**After the session, there will be a group photo for all presenters in this session.

Opening Speech OC3010-A	Policy for Social Transformation: An Evaluation of Adult Basic Education Policy in South Africa **Kofi Poku Quan-Baffour** University of South Africa, South Africa **Abstract:** The democratic government that assumed power in South Africa in 1994 inherited many social-economic problems. The apartheid policy of segregation made millions of black citizens grow into adulthood as illiterate. In the contemporary knowledge economy without basic education most black adults could neither find job nor create their own and might perpetually remain in poverty. The need for a policy to address the social problem of illiteracy therefore became crucial. The new government put in place adult basic education as a social policy to equip millions of black adults with basic knowledge and skills for survival in the 'new' country. The urgent need to redress the legacy of the past led to the introduction of the basic education programme throughout the country in 2007. The objective of this study was to investigate the effect of the social transformation policy on the rural communities through an empirical study. The study employed qualitative research method of interviews to investigate the effect of the policy on three rural communities which were purposively selected because of their huge patronage of the basic education programme. The study found that the implementation of basic education policy has tremendously transformed the socio-economic lives of many black adults and their rural communities.
15:45-16:00 OC3012	World Englishes(WE) and English as Lingua Franca(ELF)Implications for English Teaching and Learning **Wei Leyi** The University of Hong Kong, China **Abstract:** The worldwide use of English nowadays has promoted the development of WE and ELF [1], [2], [3], which have brought about certain challenges to traditional concepts of English education. Although with different interpretations, WE and ELF both think highly of a variety of English around the world and effective communication in the language. In this sense, there are three measures that need to be taken. First, instead of sticking on native speaker model which merely value one variety of English, teachers should assist students achieving intelligibility among different speakers during interactions, promoting communicative approach. Second, teaching methods and contents as well as assessment are supposed to correspond to students' needs. Third, compared to native monolingual teachers of English, local bilingual teachers, who could perform better towards the two measures above due to characteristics such as local cultural insights and sympathy for students' learning problems, are probably more suitable for successful English teaching. In this essay, after characteristics of WE and ELF are synthesized, implications on English teaching and learning will be discussed. In conclusion, the target of intelligibility, contextualized teaching and the selection of local bilingual teachers, all of which result from influence of WE and ELF, should be promoted in English education.

16:00-16:15 **OC0008**	Proposal of an Instrument for Measuring Educational Quality based on the Cisco CCNA 100-101 (ICND1), 200-101 (ICND2) and 200-120 (CCNA R&S) Certifications **Carlos Alberto Baltazar Vilchis**, Yenit Martínez Garduño, Antonio Sámano Ángeles, Alberto Garduño Martínez, Francisco Gabriel Corte Herrera and Elizabeth Evangelista Nava Centro Universitario Uaem atlacomulco, Mexico **Abstract:** This article describes the construction of an instrument based on the Cisco CCNA 100-101 (ICND1), 200-101 (ICND2) and 200-120 (CCNA R & S) certifications to analyze the existing databases in the Moodle LMS system of the exams applied to the students of the Major in Business and Computer Science (LIA) of the University Center Atlacomulco (CUA) belonging to the Autonomous University of the State of Mexico (UAEM) during the school years 2016 to 2019 to the subject "Communication between Computers" through of a pretest at the beginning and a posttest at the end of each school year, which will allow to assess the degree of self-perception of competence and identify those students who could compete for a probable certification of this company. The results obtained provide evidence on the quality of the instrument that presents a structure of 11 factors. Specifically, it has an internal consistency between .883 and .947 of Cronbach´s Alpha measurement for each pre-test & post-test applied and the exploratory factor analysis, which was intended to be developed, was not necessary due to the ipsativity of the data, which means that the instrument has evidence of reliability and validity that allows exploring the competences of the students in this subject.
16:15-16:30 **OC0043**	The Use of Classroom Visual Learning Analytics in Professional Development: Preliminary Findings of Mathematics Teachers' Instructional Changes **Chung Kwan Lo** and Gaowei Chen University of Hong Kong, China **Abstract:** The use of digital technology has become increasingly widespread in the education sector. In this article, we describe how we used visual learning analytics of classroom recordings in our year-long professional development program for secondary school mathematics teachers in Shanghai, China. The program introduced the knowledge and skills of classroom talk, aiming to change the teacher-dominated classroom culture. We used our classroom discourse analyzer to facilitate teacher reflection of their classroom practice. Using this kind of digital technology, the complex data of classroom recordings became visual learning analytics and comprehensible for a review. This article focuses on the instructional changes of a novice teacher and an experienced teacher. After attending our program, the teachers changed their practice to some extent. Nevertheless, the novice teacher had a greater improvement compared with the experienced teacher in terms of the percentage of students' word contribution and the average number of words per turn in lessons. This article presents and discusses preliminary findings of our lesson analyses and teacher perceptions of our professional development program.
16:30-16:45 **OC3004-A**	The Impact of Training on the English Teachers in the Rural Areas of Limpopo, South Africa **Masilonyana Jacob Motseke** University of South Africa, South Africa **Abstract:** The teaching of English to non-English speaking learners in the rural areas of South Africa poses serious challenges for teachers. The schools in the rural areas of the Limpopo province of South Africa were visited in order to identify the challenges plaguing the teaching of English First Additional Language (EFAL) in the intermediate phase in these schools. The school visits revealed that learners were seated in the traditional rows, lecture method was mainly used in lesson presentation, learners passively listened to the teacher, and chorus responses were encouraged. In an attempt to address the challenges identified, a training

	programme for the EFAL teachers in the intermediate phase was developed and teachers were requested to undergo the training. Once teachers had completed the training, a study was conducted to determine the extent to which the training has helped them to manage the challenges they faced. The purpose of this paper is to report on the after-training study. The study was qualitative. Observations and semi-structured interviews were used to collect data from individual teachers at the various schools. A total of 24 teachers from 14 schools participated in the study. It was found that most of the participants had seated their learners in small groups and had established classroom corner libraries. However, the lecture method, passive listening and chorus responses were found to have continued with the majority of the participants. It was recommended that a follow up workshop be arranged to address the problems that were still perpetuated.
16:45-17:00 **OC0045-A**	The Differences between Pre-service and In-service Early Childhood Teachers: Investigation into Online Academic Learning Beliefs and Strategies Tsai-Yun Mou, Hui-Min Chien and **Chia-Pin Kao** Southern Taiwan University of Science and Technology, Taiwan **Abstract:** This study aimed to explore teachers' learning beliefs and strategies in online academic learning contexts. 200 pre-service and in-service teachers respectively from Taiwan participated in the survey. Four types of online academic learning beliefs were defined: Profusion, Application, Comprehension and New vision. Also, four factors (Elaboration motive, Elaboration style, Match motive, and Match style) were employed in the online academic learning strategies survey. The study results indicated that both groups were highly favored all learning beliefs, particularly the Profusion and Comprehension beliefs, while in-service teachers emphasized more sophisticated beliefs than the pre-service teachers. As for the learning strategies, both groups reported a high level of learning strategies in the Elaboration motive and Elaboration style. Regarding their online experiences, pre-service teachers who spent an appropriate amount of time (7-12 hours per week) online had more positive beliefs than those excessive users. Nevertheless, per-service teachers did not seem to apply their ICT literacy in online academic learning strategies. On the contrary, in-service teachers with more online experiences also showed higher online academic learning beliefs. They also used more deep strategies in online learning. The findings from this study may provide some implications for researchers and university administrators in preschool teacher training programs.
17:00-17:15 **OC3008**	The Research on the Connotation and Structure of Chinese College Teachers' Psychological Capital **Wang Bin** and Lanzhen Zhu Zhejiang Normal University, China **Abstract:** This paper studies the connotation and structure of Chinese college teachers' psychological capital by means of literature deductive, interview and questionnaire. The results show that the connotation of Chinese college teachers' psychological capital refers to their psychological elements and abilities that meet the standard of positive organization behavior, promote job performance and belong to the state-like. Besides, those elements are able to be developed and measured. Its structural dimension belongs to the second-order two-factor and eight dimensions. During eight dimensions interpersonal psychological capital includes four dimensions, tolerance, respect, modesty and dedication. Transactional psychological capital also includes four dimensions, confidence, hope, enterprise and resiliency. Through reliability test, the α coefficients of eight dimension are more than 0.7. Among them the α coefficient of interpersonal psychological capital is 0.842, transactional psychological capital 0.888, integral structure o.955 and content validity inspection value 8.96 which shows the good structure and content validity. The study not only establishes the foundation for the research on the

	measurement, features and influencing factors of college teachers' psychological capital and enriches the theory of psychological capital, but also provides theoretical basis and reference for human resource management and sustainable development of college physical education teachers.
17:15-17:30 **OC1013**	Analysis of Time Investment in Online Teaching: Log Diary Approach **Alka Dwivedi**, Anita Sengar, Manisha Solanki, Giao Reynolds and Meenakshi Sharma University of Petroleum and Energy Studies, India **Abstract:** The present paper aims at analysing the time investment involved in delivering blended and online courses and assess the increasing work load of faculty in online and blended teaching environment. For the study, twenty two faculty members from different departments agreed to log their daily activities related to their respective online and blended courses. The log diary data which was collected over a period of one semester shows individual variation in the performance of different activities by the instructor. However, it also reflects considerable increase in the time spent by the instructors in delivering online/blended courses. This time is over and above the contact hours scheduled for the class. Analyzing the time spent in different activities clearly shows that developing, delivering and administration of online sessions increases the workload of instructors. Inferences are also drawn regarding the changed skill set required for delivering online courses as well as the changed expectations of the online students. The paper suggests the need to review and rationalize the work load of faculty members delivering online courses.
17:30-17:45 **OC0044**	Thoughts on the Reform of Civil Aviation English Teaching under the Background of Big Data **Hu Bin** and Pan Fang Nanjing University of Aeronautics and Astronautics, China **Abstract:** The era of big data is now coming, and civil aviation English teaching is lagging behind in this background. This paper analyzes the teaching of civil aviation English and gives some coping strategies. The research results provide theoretical support for the relevant government's departments and functional departments of the university to help improve the teaching status of civil aviation English in China, and also provide ideas for professional English teaching reform in other industries.
18:00	**Dinner**

◆ Session VII
Topic: Training and Practice
Time: 15:30-17:30
Venue: Room 5203

Session Chair: Assoc. Prof. Paul AJ Beehler
University of California Riverside, USA

*The time slots assigned here are only tentative. Presenters are recommended to stay for the whole session in case of any absence.
**After the session, there will be a group photo for all presenters in this session.

15:30-15:45 OC0053	An Augmented Reality based Strategy for Base Station Maintenance **ChinLun Lai** Oriental Institute of Technology, Taiwan **Abstract:** In this paper, a skill training strategy for base station maintenance is proposed thus the engineers of telecomm operators1 can be well self-trained and solve the problems at the first line without the limitations of time, space, manpower, and other expensive equipment. From this way, the basic knowledge of maintenance skill for mobile base station can be accessed immediately in 24x7 hours thus keep the good service quality of mobile communication. This learning strategy fulfills the concept of learning by practice while reducing the related cost and effort significantly. It can be expected that the proposed system will give great benefit and help the first-line engineers to make up the shortage of manpower while provides high availability and reliability of the base stations via the good effect of self problem-solving. Furthermore, it is also easily to be applied to other skill training fields thus is practical for the future education and training purpose.
15:45-16:00 OC0033	A Study of Marketing Needs Affecting the Development for Bachelor of Science in Health Services Business Management, College of Allied Health Sciences, Suan Sunandha Rajabhat University **Jirawat Sudsawart**, Kullaphat Pochanakul, Veena Chantarasompoch, Wanvisa Saisanan Na Ayudhaya, Phannee Rojanabenjakun and Chamiporn Kongmong Suan Suanadha Rajabhat University, Thailand Abstract:This research was aimed to; 1. Study the factors of marketing mix by choosing the higher education of grade 12 students and 2. Study the need of entrepreneurs towards the curriculum. The population of this research was the grade 12 students or their parents who participated in the project of supporting the education for local students and entrepreneurs by using the two stages sampling method; stage 1 – choosing the province and stage 2 – choosing the school or enterprise, and the sample group was 289 people. The data was gathered by using the questionnaire with rating scales and the statistics for data analysis were percentage, mean (x) and standard deviation (S.D.). The findings revealed that; 1. The factors of marketing mix affected choosing the higher education of grade 12 students was in the high level (x= 4.11) in total, Product was in the high level (x = 4.14), Promotion was in the high level (x= 4.12), Price was in the high level (x= 4.10) and Place was in the high level (x= 4.07), and 2. The need of entrepreneurs of health service business towards the curriculum would consider from the transcript for 88%, the program for 76%, providing the graduate responded to the labor market for 83%, competency for 78% and experience for 84%.
16:00-16:15 OC3007	The Social-Emotional Learning Process to Develop Practicing Skills for Hands-on Students **Kridsanapong Lertbumroongchai**, **Kobkiat Saraubon**, and Prachyanun Nilsook King Mongkut's University of Technology North Bangkok, Thailand **Abstract:** The purpose of this research is to synthesize the social-emotional learning process to

	develop practicing skills for hands-on students, to develop the process, and to evaluate the process. In this study, the documentary research method and in-depth interview method were employed. The results showed that the synthesis of the social-emotional learning process to develop practicing skills for hands-on students consisted of six steps: 1) perception is divided into sensory perception and explaining perceived, 2) observation is divided into certain goals, discretion, notes, observations, and time limit, 3) analysis and brainstorming is divided into information, brainstorming, and discovering new knowledge, 4) practicing is divided into cognitive phase, associative phase, and autonomous phase, 5) checking and improvement is divided into opinion, learning exchange, and providing opportunities, and 6) action is divided into behavior changing, and application of academic knowledge. Evaluating the social-emotional learning process to develop practicing skills for hands-on students employed in-depth interview technique consisting of 21 experts in three different areas (i.e., in learning and teaching, information technology, and mass communication technology terms). The results of the suitability evaluation revealed that the social-emotional learning process model with mixed reality for the hands-on students was at the highest level.
16:15-16:30 **OC0013**	Research on the Application of QFD in the Merchandise Presentation of Budget Accessories in the Hypermarket Huang Yu-Che, **Chen Chia-Chi** and Hsu Chia-Cheng Chaoyang University of Technology, Taiwan **Abstract:** The QFD quality function is used to discuss the teaching of different courses in the display design field. Introducing the characteristics of quality function into teaching practice, emphasizing the need to consider customer needs from a professional level, transforming corresponding technological achievements, increasing understanding of consumer needs, improving design quality, achieving more realistic design practices, and replacing existing theories Courses to improve the effectiveness of the course teaching. In the Merchandising Presentation course, it is usually the theoretical design of the merchandise arrangement and display arrangement. However, there are many stores in the industry, the store style has begun to change differently, and the sales presentations have begun to have different definitions.Use the course to select your own product research. A relatively weak female accessory in the fashion industry is an example. In addition to high-priced jewelry, the accessories industry is often difficult to define value, consumers can only guess the value of goods from products and display forms. However, the display of accessories in hypermarkets, due to the variety of accessories, sales presentations often present a chaotic form, how to use sales demonstrations to stimulate the sale of budget women's accessories in hypermarkets as the focus of research.
16:30-16:45 **OC3005-A**	The Impact of Arts Integration on Students' Learning in a CLIL English Course in a University in Japan through a Series of Emaki-Making Activities **Kaya Munakata** Kanda University of International Studies, Japan **Abstract:** This study examines the effect of arts integration on students' learning in a CLIL English course in a Japanese university. According to the Kennedy Center for the Performing Arts, "arts integration is an approach to teaching in which students construct and demonstrate understanding through an art form" and "students engage in a creative process which connects an art from and another subject area." 27 English major students participated in a project of emaki making. Emaki is Japanese-style narrative handscroll painting. In the project, the students read and discussed related literature, had various hands-on artistic activities to familiarize themselves with simple lines, shapes and colors, learned the basics of emaki, and finally made group emaki paintings using only lines, shapes and colors as they worked together in English. Through close observation of the students and their written feedback, the author found that arts integration was a meaningful approach to learning as it created a positive

	learning environment. For instance, the students were able to accept different personality characteristics and skills of the others, recognize the importance of working collaboratively with the others as members of communities of practice, and affect the learning of the others positively. This study concludes that art integration has a positive impact on students' learning skills and attitudes toward their learning. Furthermore, this study is significant as it also suggests necessary skills for global citizens to take active roles and responsibilities in their lives as diverse people with different background and values are forming both local and global communities today and into the future.
16:45-17:00 **OC2044**	The Professional Experience Transfer Model from the Prediction of an Intelligent Portfolio Using Service Agents **Sittidat Kittiviriyakarn**, Prachyanum Nilsook and Panita Wannapiroon King Mongkut's University of technology north Bangkok, Thailand. **Abstract:** The purposes of this research were: 1) to analyze predictive factors for professional experience transfer and 2) to develop a professional experience transfer model from the prediction of an intelligent portfolio using service agents. This article first presents an analysis of factors predicting the transfer of professional experience, which consists of 5 main components: (1) Property, (2) Conditions, (3) Knowledge, (4) Experience, and (5) Professional Standards. The results of an assessment of the quality of professional experience transfer by a sample of 8 experts showed that the average total score for all aspects was high. In the second part of this article, a professional experience transfer model was derived from the prediction of an intelligent portfolio using service agents. This was developed by integrating intelligent portfolio predictions with the service agent into the model. This model consisted of 3 main components: (1) Import Data, (2) Process, and (3) Results. The intelligent service agent filtered and searched for information by following the criteria for professional experience transfer. The results can be applied to higher education diploma levels to enhance professional skills in advanced vocational training according to the curriculum of the Vocational Education Commission. Evaluation of the professional experience transfer model showed that the average score for all aspects was extremely high.
17:00-17:15 **OC0041**	Femoral neck angle impacts hip disorder and surgical intervention: A patient-specific 3D printed analysis Katie McFarlane, Joseph Neil Dentith, **Thanapong Chaichana**, Zhonghua Sun and Philip Brown College of Maritime Studies and Management, Thailand **Abstract:** The purpose of this study is to investigate the femoral neck angulation for prediction of the complication associated with dynamic hip screw (DHS) surgery and hip deformity. Three sample patients' MRI images were selected to calculate the femoral neck angles. A total of six femur head geometries were reconstructed and three dimensional (3D) models printed. The calculation of neck angles was done in both computer models and 3D-printed models. Our results showed that 3D-printed models achieved high accuracy and provided the physical measurements, when compared to the computer models could not confirm. Neck angulations related to uncomplicated DHS surgery ranged between 129°-139°, and non-deformity of normal neck angles ranged between 120°-135°. Our study indicated that patient-specific 3-D printed femoral head models provide useful information for medical education and assist DHS surgery. Further research based on a large sample size is necessary.
17:15-17:30 **OC0027**	A UML Programming Environment for ICT Related Subject at Junior High School **Shunya Hara**, Mizue Kayama, Takahisa Nakano, Takashi Nagai and Naomi Taguchi Shinshu University, Japan

	Abstract: The purpose of this study is to explore the educational learning environment for UML programming. We have been developing MDD based educational programming environment. In this paper, we describe the overview of our environment and a use case of 5 formal lessons at one Japanese junior high school with our environment. Then, we discuss the educational effects of our environment for the "measure and control" topics in the programming course at a junior high school level.
17:30-17:45 **OC0021**	Course Design Oriented to the Civil Aviation Practice of Aeronautical Information Service **Wen Tian**, Ying Zhang and Yixing Guo Nanjing University of Aeronautics and Astronautics, China **Abstract:** Aiming at the problem of the disconnection between theory and practice in the teaching process of civil aviation Aeronautical Information Service (AIS) course at present, we should start from the actual needs of civil aviation AIS work, and combine with the current theoretical teaching situation of the course. This paper puts forward a practice-oriented teaching mode, designs the course framework, main contents, and the teaching method under the task-driven mode. It provides suggestions and references for the follow-up improvement of the teaching effect of this course.
18:00	**Dinner**

◆ Session VIII

Topic: Computer Science and Application
Time: 15:30-17:30
Venue: Room 5204

Session Chair: Prof. Yanqing Duan
University of Bedfordshire, UK

*The time slots assigned here are only tentative. Presenters are recommended to stay for the whole session in case of any absence.
**After the session, there will be a group photo for all presenters in this session.

15:30-15:45 OC0065	Song Recommendation System Using Collaborative Filtering Methods **Abba Suganda Girsang** and Edwin Edwin Bina Nusantara University, Indonesia **Abstract:** This study examines how to implement song recommendation system using collaborative fitering method in Digital online music application. Based on the data obtained by the author, until 2017 Digital online music has provided 5,000,000 digital music content with the addition of the latest music content every month of approximately 92,000 content. Increasing the number of digital music content every month conduce a lot of song catalog data and becoming unstructured and making it difficult for users to choose the songs they want to listen to. To make it easier for users to optimize a large number of subscribed music catalogs, a user-centric music recommendation system is needed that allows users to be able to manage catalogs of digital music content according to their needs. Through the research, it is found that collaborative filtering method can be one method used to make it easier for users to compile the playlist they want. the results of the trial show that the model used has a good level of accuracy with the test result is 0.744057 for MSE and 0. 843134 for MAE.
15:45-16:00 OC0040	Analysis of Computing Progress in Maritime Studies **Thanapong Chaichana** College of Maritime Studies and Management, Thailand **Abstract:** This work analyses the growth of the usage of computers in maritime studies within five decades. Maritime studies accept to position in education and development of twenty first century. Key areas of research are environment, transport and modelling. These are criteria for analysis of maritime studies. Algorithmic search integrated with meta-analysis was developed to retrieve maritime literatures from the sources of maritime digital research databases. Analysed results showed that key areas were found in maritime studies. More than half of research was modelling. The smallest number of studies was transport, and the rest of maritime research fell into environment. Conclusion draws into account that computer usages in maritime studies were progressing to raise in 2010s. It seems that the massive number of uses of computer will appear in 2050s. Skill-set obtained from three research keys will help drive regional economics and education.
16:00-16:15 OC1015	Sobel-edge Detection Algorithm in a Mobile Application for Detecting Fake Money **Roselie B. Alday** Lyceum of the Philippines University, Philippines **Abstract:** This paper used an existing algorithm called Sobel Edge Detection through image segmentation to detect fake money using a mobile application. The most common form of detecting money if counterfeit or not, is through the use of manual inspection using touch, ocular inspection by sight, or the use of ultraviolet light. The mobile application developed used a photo taken by the cellphone camera and with the use of Sobel Edge Detection Algorithm, using image segmentation for determining counterfeit money. Images of the money

	to be tested are captured by the digital camera of the phone which is then subjected to the process of edge detection in order to determine if it is fake or not. This study will be the first to utilize the cellphone camera that will use picture to be analyzed through a mobile application to determine fake Philippine money. Java language was used in the development process.
16:15-16:30 OC0025	Proposal of IoT based Learning Material and its Management System for Primary/Secondary Education **Takafumi Todoriki**, Mizue Kayama, Nobuyuki Tachi, Takashi Nagai, Takao Futagami and Takehiko Asuke Shinshu University, Japan **Abstract:** The purpose of this study was lesson support by building a system which IoT based learning material and using it. This system is assumed to use the regular curriculum of primary and secondary education in Japan. We previously examined that apply IoT technology to learning material. That learning material use when experiment with a measurement. And, we designed its management system. Here we describe the outline of IoT based learning material and its management system. And we report about concrete IoT based learning material.
16:30-16:45 OC2032	Toward Understanding the User Behavior in Sports University Library using Hierarchical Clustering **Yu-Chia Hsu**, Yung-Che Li and Yung-Hsuan Lin National Taiwan University of Sport, Taiwan **Abstract:** The library plays an important role in higher education. the emerging electronic media and digital contents bring libraries to encounter digital innovation and changes in leadership styles. However, analysis of the behavior of book borrowing is still a way to understand the demand of users, so as to provide sufficient resources and develop customized services. The purpose of this paper is to analyze the book borrowing data of the library in order to identify the user typologies. Numerous data records were collected from a sports university library in Taiwan. Each borrowing history record contains book detail and classification number. The characteristics of user behavior were described based on these data after cleaning, aggregation, and transforming. The hierarchical clustering techniques were applied to obtain the user typologies with similar behaviors. Five clusters, the general casual reader, athletes, Art and Literature lovers, course learner, and knowledge seeker, were obtained to represent the classic user typologies of a sports university.
16:45-17:00 OC2011	The Art of Storytelling via A Cloud Technology Model to Create An Animation Innovation Sudarat Srima and Wannaporn Chujitarom **Wannaporn Chujitarom** Rangsit University, Thailand **Abstract:** The objective of this research is: (1) to develop the art of storytelling via a cloud technology model to create an animation innovation; (2) to evaluate the developed model; and (3) to study the effects of using the model. The research process is divided into 3 parts. First part is to develop the art of storytelling via a cloud technology model to create an animation innovation. Second part is to evaluate the developed model. Third part is experimenting with the sample. The sample group divided into two groups: first group is 6 experts in relate field, and second group is 20 undergraduate students. Tools are arithmetic mean, standard deviation and scoring rubric table. The results of the research showed that : (1) the model consists of 5 elements; Storyteller, Data Transfer, Story on Cloud, Animation Innovation and Audiences Feedback; (2) results from evaluation of the model is at highest appropriate (= 4.63, S.D. = 0.39); and (3) the animation innovation results from the sample group is a very good animation

	innovation level.
17:00-17:15 **OC0047**	Efficiency of Japanese-Vietnamese Translation Job Thanks to the Use of Technology in the Fourth Industrial Revolution **Hoi Tan Huynh** FPT UNIVERSITY, Vietnam **Abstract:** Vietnamese translation background is still unfamiliar with the translation support technologies that international friends have used for a long time. So, what to do to get a perfect translation is considered as an extremely important factor for anyone who has been working in the translation field. In addition to accuracy, the translation must be clear and understandable. Traditional translation methods still have their values but may not meet the ever-changing requirements of constantly moving and developing science. We need to use different technologies to suit our projects. This will help customers satisfy, trust and choose us. The article is done with the support of filling out online survey forms of FPT University students and office staffs currently working at Gifu Kogyo Software Company, Quang Trung park, District 12, Ho Chi Minh City.
17:15-17:30 **OC2043**	Digital Competencies for Industrial Production Managers **Manoch Suphapanworakul** Naresuan University Thailand, Thailand **Abstract:** This research aims to study digital competencies for industrial production managers. The sample group in this research was 68 managers from industrial production. They were chosen by purposive sampling. The research instrument used for data collection were questionnaire and interview. The statistics used for data analysis were percentage, mean, and standard deviation. The results showed that digital performance for industrial production managers consists of 1) information management, 2) digital communication management, 3) digital knowledge management, and 4) assessing and solving digital problems. From seminars by group discussions with experts in digital competencies who needed and were necessary in the performance of production managers in industrial plants, it was found that the production managers needed to have two additional digital capabilities, which are 1) digital safety and 2) digital specific operations.
18:00	**Dinner**

➢ Poster Presentations

Venue: Room 5102, Time: 13:00-14:00 on October 26, 2019)

OC1027	Research on the application of machine reading comprehension in adaptive evaluation system **Guo Jiawang** Tianjin University, China **Abstract:** The essence of "Internet plus" is the relationship and its intelligent connection mode, which promotes the cross-border integration of information communication technology with all walks of life and reduces the information asymmetry. At a time when so much new knowledge is generated every day in the form of text that no one can digest on their own, machine reading comprehension can process vast amounts of information for people to use. With the development of psychometric theory and network technology, computerized adaptive testing has more and more advantages than traditional testing. Most of the current selection strategies are designed based on project response theory and cognitive diagnosis theory, which cannot point out students' learning ability, while cognitive diagnosis can not only evaluate students' ability, but also point out the knowledge of the subjects. This article tries to explore the application of adaptive machine reading comprehension in the measurement system, and build a machine reading comprehension model, introduces the application value of the machine in reading comprehension, secondly to build an adaptive measurement system can be used to machine reading model, finally attempts to solve through the experiment measurement system of text slices and accurately identify the problem.
OC3006	Exploration on Marketing Strategy of Foreign luxury Brand in China **Lu Ge** and Chenggang Li Business School of BIFT, China **Abstract:** Since the rise of China's economy, China has become the main consumer of the luxury market, and showing a rising trend, the major luxury enterprises are also fully entering the Chinese consumer market. With the rise of "new retail" model in China and the improvement of the consumption ability of millennials, luxury enterprises are bound to make adjustments in their marketing strategies in the face of such a new market environment as China. This paper first defines the definition of luxury goods, through the analysis of the current situation of the development of luxury enterprises after entering China, summarizes the two main problems faced by enterprises: the aging of brands themselves and the single retail channel, and combined with the development strategies of some luxury brands in China, from the perspective of the development strategy of some luxury brands in China, this paper summarizes the two main problems that luxury enterprises are facing. A road suitable for the development of luxury enterprises in China has been found out, and China has been in a blank state in the luxury sector, and it also provides a realistic basis for the establishment and development of luxury brands in China.
OC1026	Research on Effective Teaching in the Vision of Virtual Reality **Pu Shi** Tianjin University, China **Abstract:** Since human beings entered the industrial society, “the concept of efficiency is regarded as the noblest moral concept.” This “highest moral concept” is also used to solve the contradiction between knowledge proliferation and inefficient teaching, effective teaching. Therefore, as an important concept throughout the teaching reform. Pursuing effectiveness has become an inherent requirement of teaching development and has guided teaching reform. In

	recent years, the rapid development of virtual reality technology has amazed the world, and this technology has been used in many industries to promote change and development, and the education field is also among them. Unlike other fields, virtual reality technology is rarely used in education. Even though a few domestic and foreign schools and educational institutions have tried to use virtual reality technology to assist teaching, this technology has not been able to study due to its shallow research and consideration. Play the expected ideal effect in education and teaching. Therefore, this paper starts from the frontier concept of virtual reality technology, combines the connotation and essence of effective teaching, analyzes the "virtual reality + augmented reality" teaching mode that can be used in current school classroom teaching, and further explains its operation outline and rationality. In order to provide a reasonable teaching mode under the vision of virtual reality for the school classroom.
OC3017	Technology for Enhancing Children's Visual Perception Tien-Chi Huang and **Yu Shu** National Taichung University of Science and Technology, Taiwan **Abstract:** Past literature shows that "visual perception" plays an extremely important role for people with learning disabilities. Therefore, most therapists in the process of using medical treatment, together with visual behavioral training therapy, with multi-pronged medical assistance, hope to gradually improve and slow down other health problems caused by visual perception disorder. In this study, we proposed a game-based training system to train learners' visual perception and be expected to alleviate visual perception disorder. The system is divided to a mobile app with a brainwave receiver and a website. Children use the App to conduct visual perception training including the combination of different colors and shapes, while parents and therapists use the website to obtain the training records and results and to make professional suggestions. This study attempts to cooperate with the professional medical organizations in the future. It is expected that the system will be applied to the treatment of children with learning disabilities.

➢ Listeners' List

Listener 1	**David-Samuel Di Fuccia**, Universität Kassel, Germany
Listener 2	**Fathima Assilmia**, Keio Graduate School of Media Design, Japan
Listener 3	**Elavaretta Angelina**, Keio Graduate School of Media Design, Japan
Listener 4	**Keiko Okawa** , Keio Graduate School of Media Design, Japan
Listener 5	**Mizue Kayajma**, Shinshu University, Japan
Listener 6	**Yixing Guo**, Nanjing University of Aeronautics and Astronautics, China
Listener 7	**Adam Garrick**, University of Canberra, Australia
Listener 8	**Aime-acha Silamut** King Mongkut's Institute of Technology Ladkrabang, Thailand

➢One Day Tour

- **08:45**-Pick up from Fuji Kawaguchiko Resort Hotel (***Address***: 4902-2, Funatsu, Mount Fuji, Fujikawaguchiko, Yamanashi, 401-0301, Japan)
- Note: The participants who enrolled city visit please arrive at Fuji Kawaguchiko Resort Hotel at 8:45 on time. The itinerary is subject to the actual schedule of the day. In addition, as the seat of the business van is full, please don't take large suitcases to travel.
- **9:00-10:30--- Lake Kawaguchiko (河口湖)**

Lake Kawaguchiko (河口湖) is the most easily accessible of the Fuji Five Lakes with train and direct bus connections to Tokyo. A hot spring resort town with various tourist attractions and views of Mount Fuji is located around the lake's eastern end, while the northern and western shores are mostly undeveloped.

The best views of Mount Fuji can be enjoyed from the lake's northern shores and are particularly breathtaking during the cherry blossom season around mid-April and the autumn colors around the first half of November. One of the nicest spots for cherry blossoms is the seaside promenade near the Kawaguchiko Music Forest, while photographers will enjoy the "Momiji Tunnel" for autumn colors, a maple tree covered road section along the lake's northern shore.

- **10:30-12:00--- Oshino Hakkai (忍野八海)**

The word Hakkai means “Eight Seas” which refers to the eight pools of water that serve as the main attraction of Oshino Hakkai. Bridges and pathways lead around and over these tranquil ponds. These eight ponds (Deguchi, Okama, Sokonashi, Choushi, Waku, Nigori, Kagami, and Shoubu) are the beautiful byproduct of historic eruptions and intense volcanic activity. Several are fed by an underground reservoir and are renowned for their mineral-rich spring water. In fact, the water in Waku Pond is so clear and clean that in 1985, the Ministry of the Environment ranked it among some of the nation’s best spring water. Go try the water and even bottle some to take home with you when you visit the area. Bottles are available at a low cost if you need one. Most of the pools are filled by melted snow that has run down from Mount Fuji and some of them are inhabited by koi fishes.

- **12:00-13:00--- Lunch Time**
- **13:00-16:00--- Arakurayama Sengen Park (富士山本宮浅間大社)**

Fujisan Sengen Shrine is located in Fujinomiya City in the southwestern foothills of Mount Fuji. Originally built over 1000 years ago for the protection from volcanic eruptions, it has become the region's most important shrine and the head shrine of over 1300 Sengen and Asama shrines nationwide. The shrine is also a traditional starting point for climbing Mount Fuji.

In the past, Fujisan Sengen Shrine was one of the largest and grandest shrines of the day. The current buildings were constructed by Tokugawa Ieyasu in the early 1600s, however many of the original structures were destroyed by earthquakes and only the Inner Shrine, Outer Shrine and Tower Gate remain. The Inner Shrine features a unique, two-story construction built in the Sengen architectural style, so named after the shrine.

- **16:00--- Back to hotel**

➢ Upcoming Conferences

The 2020 International Conference on Education Development and Studies (ICEDS 2020) will be held from the **3rd to 5th of March, 2020 in Paris, France.** The ICEDS is an international refereed conference dedicated to the advancement of the theory and practice of education. The ICEDS promotes collaborative excellence between academicians and professionals from Education, aiming to build strong networks of leading researchers and pioneers in education worldwide.

◆ Publication

The accepted papers by ICEDS 2020 published in conference proceeding, which will be sent to be indexed by **EI Compendex** and **Scopus** and submitted to be reviewed by Thomson Reuters Conference Proceedings Citation Index (ISI Web of Science).

◆ Topics

Topics of interest for submission include, but are not limited to:

Partnerships in e-Learning
Systems, Design and Technologies
e-Learning platforms
Evaluation of e-Learning
e-Learning strategies
e-Learning effectiveness and outcomes
Web-based learning
AV-communication and other media
Education and Globalization
Digital classrooms
Data envelopment analysis
Social benefits of e-learning
Technology adoption and diffusion of e-learning

◆ Submission Methods

1. E-mail: iceds@academic.net.
2. Electronic Submission System: http://confsys.iconf.org/submission/iceds2020.

◆ Important Dates

Submission Deadline	December 05, 2019
Notification Deadline	December 30, 2019
Registration Deadline	January 20, 2019
Registraiton Deadline	March 3-5, 2020

http://www.iceds.org/

2020 The 6th International Conference on Education and Training Technologies (ICETT 2020) will be held in **Macau, China** during **May 18-20, 2020**. ICETT aims to bring together researchers, scientists, engineers, and scholar students to exchange and share their experiences, new ideas, and research results about all aspects of Education and Training Technologies, and discuss the practical challenges encountered and the solutions adopted. If you want to attend the conference as authors, please submit a manuscript (Abstract or Full paper) to our conference. However, if you only want to attend the conference to meet other country fellows and exchange the experices, please just register as listeners.

◆ Publication

The accepted papers by ICETT 2020 published in conference proceeding, which will be sent to be indexed by **EI Compendex** and **Scopus** and submitted to be reviewed by Thomson Reuters Conference Proceedings Citation Index (ISI Web of Science).

◆ Topics

Topics of interest for submission include, but are not limited to:

Partnerships in e-Learning
Systems, Design and Technologies
e-Learning platforms
Evaluation of e-Learning
e-Learning strategies
e-Learning effectiveness and outcomes
Web-based learning

Partnership's in e-Learning
Systems, Design and Technologies
e-Learning platforms
Evaluation of e-Learning
e-Learning strategies
e-Learning effectiveness and outcomes
Web-based learning

◆ Submission Methods

1. E-mail: icett@academic.net.
2. Electronic Submission System: http://confsys.iconf.org/submission/icett2020

◆ Important Dates

Submission Deadline	December 05, 2019
Notification Deadline	December 30, 2019
Registration Deadline	January 20, 2019
Registration Deadline	March 3-5, 2020

http://www.icett.org/

2020 4th International Conference on Education and Multimedia Technology (ICEMT 2020)

Kyoto Japan, 19-22, July, 2020

2020 4th International Conference on Education and Multimedia Technology (ICEMT 2020) will be held in **Kyoto Japan** during **19-22, July, 2020**. ICEMT aims to bring together researchers, scientists, engineers, and scholar students to exchange and share their experiences, new ideas, and research results about all aspects of Education and Multimedia Technology, and discuss the practical challenges encountered and the solutions adopted. The conference will be held every year to make it an ideal platform for people to share views and experiences in Education, Multimedia Technology and related areas.

◆ Publication

The accepted papers by ICEMT 2020 published in conference proceeding, which will be sent to be indexed by **EI Compendex** and **Scopus** and submitted to be reviewed by Thomson Reuters Conference Proceedings Citation Index (ISI Web of Science).

◆ Topics

Topics of interest for submission include, but are not limited to:

Systems, Design and Technologies
practices and cases in e-education
systems and technologies in e-education
applications and integration of e-education
e-learning evaluation and content
campus information systems
e-learning technologies, standards and systems
Cross-cultural
education
e-Learning strategies
Social benefits of e-Learning
e-Learning effectiveness and outcomes
Web-based learning
Academic participation and freedom

◆ Submission Methods

3. E-mail: icemt@academic.net.
4. Electronic Submission System: http://confsys.iconf.org/submission/icemt2020

◆ Important Dates

Submission Deadline	March 20, 2019
Notification Deadline	April 10, 2019
Registration Deadline	April 30, 2019
Registration Deadline	July 19-22, 2020

http://www.icemt.org/

➢ Note