Editorial

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Biographical notes: Fu Lee Wang is the Dean of the School of Science and Technology at the Open University of Hong Kong and was the Vice President of Research and Technology at the Caritas Institute of Higher Education and faculty member at the City University of Hong Kong. He received his PhD from the Chinese University of Hong Kong. He has over 250 publications in international journals and conferences and led more than 20 competitive grants with a total greater than HK$20 million. He is a Fellow of BCS, past Chair of ACM Hong Kong Chapter and IEEE Hong Kong Section Computer Chapter.

Kam Cheong Li founded the Institute for Research in Open and Innovation at the OUHK. He is the Director overseeing research at the university, as well as a Visiting Professor in a number of institutions in UK and China. Besides having a PhD from the University of Hong Kong, he has obtained four Master's degrees and three Bachelor's degrees. Besides serving as the editor for *Asian Association of Open Universities Journal*, he is an editorial board member for the academic journals: *Higher Education Quarterly and Interactive Technology and Smart Education*. His research interests lie in e-learning and technology in education.

Simon K.S. Cheung is currently the Director of Information Technology from the Open University of Hong Kong, and was the Director of Information Technology Services in SPACE, the University of Hong Kong. He received his BSc and PhD in Computer Science from the City University of Hong Kong, and Master's of Public Administration from the University of Hong Kong. He is a Chartered Engineer, Chartered Scientist, and Fellow of BCS, IET, IMA, HKIE and HKCS. He has served as an editorial board member or guest editor of international journals, guest editor of book series, and conference chair, technical chair and program chair of international conferences. His publications include one research monograph, 20 edited books or volumes in book series, and 150 refereed journal articles, book chapters and conference papers, mainly in two distinct areas, namely, software and system engineering, and technology in education.

Steven Kwan Keung Ng received his BBA from the University of Hawaii, MBA from the Chaminade University of Honolulu, and DBA from the University of South Australia. He is currently the Campus Director of the University of Sunderland in Hong Kong, and was the Head of the Department of Business and Hospitality Management cum Associate Professor in Caritas Bianchi College of Careers and Caritas Institute of Higher Education respectively. He has served as an editorial board member, Organising Co-Chair, Registration Chair, Finance Chair of international conferences. He has published over 40 research papers in peer-reviewed journals and international conferences.

Technology has become an integral part in virtually all aspects of education, broadly covering curriculum planning, content development and delivery, communication among learners, instructors and institution, assessment and program evaluation. This special issue aims to serve as a platform for relevant academic exchanges across higher education institutions, focusing especially on sharing good practices and results from studies on emerging learning tools and approaches.

This special issue on 'Emerging learning tools and approaches' includes five of the best papers from the International Conference on Technology in Education 2018. The first two papers are examples demonstrating how emerging technology facilitates learning. It is essential to evaluate the effectiveness of emerging learning tools and approaches. The second and third papers investigate factors influencing the application of emerging learning tools and approaches. The fourth paper extends the discussion to guiding principles based on a case study. Nowadays, learning analytics has become one of the most critical issues in emerging learning tools and approaches. The last paper assesses the implementation of learning analytics in Asia.

The first paper, 'Examining a WeChat-supported 5E-flipped classroom pedagogical approach' by Hew, Tang, Lo and Zhu, proposes a flipped learning approach based on a mobile instant messaging software. The results show such approach is more engaging than the traditional face-to-face lecture method. This study provides important direction for future research.

The second paper, 'Using wine appreciation apps for students to study wines' by Ng, Ng and Lai, introduces a mobile application to support education of wine appreciation. The study has identified factors that influence students' intention towards mobile learning application, including flexibility, performance expectancy, social influence, and facilitating conditions. This study provides a model for future investigation on mobile education and ubiquitous learning.

The third paper, 'Technological, institutional and situational influences on student persistence' by Sembiring, investigates the factors that affect persistence in open distance learning. The study confirmed that the prominent influence on persistence was the technological factor followed by the institutional and situational ones. On the contrary, persistence was insignificantly affected by epistemological and dispositional factors.

The fourth paper, 'Guiding principles of visual-based programming for children's English learning and computational thinking development' by Weng, Xie and Wong, presents a case study on using visual programming language for second language learning among K-12 students. The paper also discusses the guiding principles for application of visual-based programming language to improve second language acquisition and computational thinking.

The fifth paper, 'Implementing learning analytics in higher education: the case of Asia' by Li, Wong and Ye, conducts a survey on the implementation of learning analytics in Asia. Learning analytics are typically utilised for academic planning and enhancing student retention. However, there are general concerns about additional workload and technical difficulties. This paper provides useful information for implementation of learning analytics systems.

Sincerely, we wish to thank the authors and the anonymous reviewers for their effort. We hope that readers will share our excitement on the techniques and findings presented in this special issue. Any comments to this issue would be greatly appreciated.