Editorial

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Biographical notes: Kam Cheong Li is the Dean of the School of Open Learning and the Director of the Institute for Research in Open and Innovative Education at Hong Kong Metropolitan University. He has devoted to higher education and teaching development for 30 years. He has also been appointed Visiting Professor of Middlesex University in the UK, and a number of institutions in China, such as Hebei Academy of Social Sciences and Hebei University of Economics and Business. His research interests lie in technology in education, pedagogical approaches, and educational innovation.

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Fu Lee Wang is the Professor and the Dean of the School of Science and Technology at Hong Kong Metropolitan University. He was the Vice President at the Caritas Institute of Higher Education and a faculty member at the City University of Hong Kong. He has over 200 publications in international journals and conferences and led more than 30 competitive grants. He was also the Chair of ACM Hong Kong Chapter and IEEE Hong Kong Section Computer Society.

Reggie Kwan is a Professor of Computer Science and currently the Provost of Hong Kong Metropolitan University. He served as the Chair of Computer Science at Montana Technological University, the Head of Computing and Mathematics at the Open University of Hong Kong, and the President of the Caritas Institute of Higher Education. Though trained as a computer scientist, he has been fascinated by e-learning and open and distance learning.

Advances in mobile and intelligent technologies have revolutionised pedagogical practices, providing innovative solutions to enhance learning and teaching. These applications offer personalised, flexible, and interactive learning experiences, enabling students to engage with educational content anytime and anywhere. The integration of mobile learning tools has been proven to improve learning performance, increase student engagement, and foster collaborative learning environments. Relevant mobile and intelligent technologies not only support knowledge acquisition but also help manage

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information overload, thereby enhancing overall learning experiences. The emerging use of gamification, learning analytics, and text mining techniques has proven effective in catering to diverse learner needs, promoting cognitive development, and ensuring that educational interventions are engaging and effective.

This special issue features five articles which present ideas, practices and research findings to illustrate the diverse applications and benefits of mobile and intelligent technologies in education, highlighting their potential to drive pedagogical innovation and improve learning outcomes across various contexts.

In their article, Hirata and Hirata explore the effectiveness of head mounted display (HMD) virtual reality (VR) in creating a flexible language learning environment for Japanese university students. Guided by self-determination theory, they compared students' learning experiences in an HMD avatar-enhanced VR environment to conventional in-person classrooms. The findings suggest that the proposed approach offers more engaging and flexible educational experiences, mitigating negative emotional reactions to language learning. The research indicates that HMD VR can foster more inclusive and equitable learning environments and serve as a ubiquitous tool for interactive language learning.

Hamimi et al.'s study focuses on developing the Hi Nano mobile application as an educational tool to enhance high school students' knowledge of nanotechnology and cancer treatment. Based on a mixed-method approach, the researchers conducted a gap analysis through teacher questionnaires, validated the application with experts, and evaluated its effectiveness. The findings indicate a significant need for technology in learning to improve students' understanding of nanotechnology, and that the Hi Nano application is effective in making science education more active and creative.

The article by Zhang examines the factors influencing positive learning experiences in MOOCs. By leveraging big data analytics and text mining techniques on learners' profiles and comments on the courses from a Chinese MOOC platform, the study identifies key elements such as course organisation, content design, and customisation that contribute to positive learning experiences. The findings highlight the importance of tailoring course content to meet diverse learner needs, ensuring high-quality instructional materials, and fostering interactive and supportive learning environments. These insights are crucial for MOOC developers and educators aiming to improve course completion rates and learner retention by addressing the varying preferences and motivations of MOOC participants.

Guo et al. investigated the impact of an adaptive difficulty adjustment-based gamification approach (ADA-GA) on cognitive development and enjoyment in children. Through a quasi-experimental study involving children playing games on touchscreen tablets, their results revealed that ADA-GA significantly enhanced cognitive skills but did not notably increase enjoyment levels. Interviews with teachers and parents indicated further positive perceptions of ADA-GA. The findings suggest that adaptive difficulty is crucial for engaging young learners and that touchscreen games can effectively support cognitive growth. This paper reveals the need for educators and game developers to tailor game difficulty to align with children's cognitive abilities for optimal engagement and educational benefit.

In the final paper, Lee et al. discuss three collaborative projects between students and staff aimed at developing technology-enhanced educational interventions. These projects involved creating a mobile app and interactive design research toolkit to support human-centred design education, the use of an augmented reality game to teach design

for manufacturing and assembly to enhance student motivation and performance through interactive learning, and the application of mixed reality for training in firefighting equipment. Their findings underscore the effectiveness of these digital pedagogies in fostering strong partnerships and improving collaborative learning experiences.

Overall, the studies presented in this special issue highlight the transformative potential of mobile and intelligent technologies in reshaping educational landscapes. By embracing these innovations, educators can create more engaging, personalised, and effective learning experiences that cater to the diverse needs of students. The findings from the featured research not only reveal the benefits of integrating technologies like VR, and gamification into pedagogical practices but also provide insights for future developments in educational technology. They serve to facilitate educators and researchers seeking to leverage mobile and intelligent technologies to enhance pedagogical innovation and improve educational effectiveness.