

# Editorial Preface

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Welcome to this somewhat unusual issue of the International Journal of Mobile and Blended Learning, comprising revised and extended papers from two different conferences. The first part of this issue comprises three articles developed from work presented at the 16th World Conference on Mobile and Contextual Learning (mLearn 2017), which was held in Larnaca, Cyprus, from the 30th of October to the 1<sup>st</sup> of November 2017, organised by the University of Cyprus and the Cyprus University of Technology (among others). Regular readers will know that, as the official journal of the International Association for Mobile Learning (IAMLearn), we regularly publish special issues from the annual conference.

The second part of the issue comprises three articles that were unable to be included in a previous special issue on ‘u-Learning Technologies’ (IJMBL Vol. 10 No. 3), which included research papers presented at the 2nd APAIS International Conference on Applied Science and Engineering (ASE 2017) held from April 19<sup>th</sup> to the 21<sup>st</sup>, 2017 at Namseoul University, Chungnam, Korea. Due to space constraints, this is the first opportunity we have had to finally share these remaining publications from that issue.

This issue opens with two related articles from the mLearn conference that both address the same project from the host country, Cyprus, and have one author in common. In this project, mathematics teachers were given professional development to enable them to effectively deliver mobile learning in their classrooms. These two articles deserve to be read together, since the first one outlines the specific activities that the teachers went through in their professional development, while the second takes a broader view of the process and explores the ways that the TPACK model can be extended to encompass concerns beyond the individual teacher.

The first of these contributions is “Enhancing In-service Primary Teachers’ Technological, Pedagogical and Content Knowledge on Mobile Mathematics Learning” by Loucas Tsouccas and Maria Meletiou-Mavrotheris from the European University Cyprus. The authors apply the TPACK model to examine the technological, pedagogical and content aspects of mobile learning for mathematics learning. They describe in detail how the teachers engaged in the project used the Hopscotch application running on iPads to change their mathematics teaching practice when working with primary school children in Cyprus.

The second article is “Integrating Mobile Devices in the Mathematics Curriculum: A Case Study of a Primary School in Cyprus”, by Maria Meletiou-Mavrotheris from the European University Cyprus, Efi Paparistodemou from the Cyprus Pedagogical Institute and Christiana Christou from the Cyprus Ministry of Education and Culture. This article goes above and beyond the first article by looking more deeply at how the extended TPACK model can be applied to this type of professional development that included a community of expert practitioners from outside the school as well as the teachers within it.

Our third article, and the final one from mLearn 2017, is “How Biomedical Science Students Use Their Mobile Devices for Learning”, by three academics from the School of Biomedical Sciences at the University of Queensland, Australia; Sanjay Vasudeva, Kay Colthorpe, Hardy Ernst, and Kai

Wei Lam. This article describes how a group of biomedical students were asked in meta-learning assessment tasks to report on self-initiated ways they used mobile devices for learning. The results showed that the students were confident using mobile devices in this way. Students most commonly reported using laptops for note-taking, watching lecture recordings and planning, while they used their mobile devices for looking up concepts and using applications. Students also implemented many new ways of using devices during the semester, demonstrating their adaptability but, surprisingly, they rarely reported seeking social assistance via mobile devices.

The first of the articles that were developed for the ubiquitous learning special issue is “A Meta Analysis on the Effects of Learning with Robots in Early Childhood Education in Korea” by Sung-deok Park (Korea National University of Education), Eun-Jung Kim (Ho-won University, Korea) and Kyung-Chul Kim (Korea National University of Education). This article looks at the recent focus on young children learning with robots (r-learning) in Korea by performing a meta-analysis of 27 Korean studies done between 2008 and 2016. Effect sizes were analysed and a number of relevant factors identified, including platform type, activity type and student age. Other variables examined included the period of the study and the year of publication. Findings showed that learning with robots is generally beneficial, with positive impacts on social nature, but there were less positive results in terms of language development.

The next article is “Construction of a Bi-modal Database for a Barrier-free Teaching System” by Jiling Tang and Ping Feng of Changchun University and Zhanlei Li of Dalian University of Technology, Jilin, China. This article is about the application of speech recognition (for the Chinese language) for hearing-impaired students in an educational context. Barrier-free teaching is a term used to define systems that are designed to assist deaf students, while bi-modal approaches use both audio and video to assist learning. The article comprises a case study of students learning how to use Photoshop, and explores the creation of a language corpus, dictionary and grammar network in the recognition system.

The closing article in this issue is “Impact of Metacognition on Clinical Judgment and Competence in Simulation-Based Blended Learning”, by Hye-kyung Oh, from the Department of Nursing at Daegu University, Korea. The focus of the article is simulations using blended learning for nursing students. This study used a within-subjects pre- and post-test comparison design to verify the impact of metacognition on the clinical judgment and clinical competence of the study participants, who were nursing students in their 4th year of college. The article also analyzes how metacognition, which is related to critical thinking and problem-solving skills, influences learners’ abilities, and then proposes the necessary basis for verifying the effects of simulation-based blended learning. The authors conclude that this learning experience seems to have enhanced clinical judgment, with each metacognition group improving their clinical reasoning skills after learning.

Volume 11 Issue 4 will see a return to a regular issue of articles. We look forward to sharing these with you.

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