Editorial: Review and trend analysis of knowledge management and e-learning research

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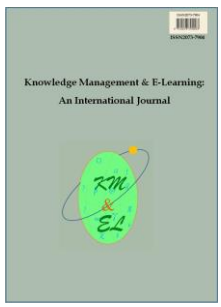

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Editorial: Review and trend analysis of knowledge management and e-learning research

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Abstract: In recent years, technology-enhanced knowledge management and learning have attracted much attention from educators and researchers. Various successful applications as well as the potential of knowledge management and e-learning have been reported. In the meantime, the fast development of technologies is affecting the way of knowledge management and learning design as well as the learning context. In this special issue, 8 papers are included to address the trends of knowledge management and e-learning and to review their impacts from different perspectives. The findings reported by these papers provided valuable references for those who intend to implement technology-enhanced learning in school settings and to conduct e-learning research from innovative perspectives.

Keywords: Knowledge management; e-Learning; Review; Trend analysis

Biographical notes: Gwo-Jen Hwang is currently a Chair Professor in the Graduate Institute of Digital Learning and Education, and Dean of the College of Liberal Arts and Social Sciences at National Taiwan University of Science and Technology. His research interests include mobile and ubiquitous learning, digital game-based learning, flipped learning, and artificial intelligence in education.

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1. Introduction

In recent years, technology-enhanced knowledge management and learning have attracted much attention from educators and researchers. Various successful applications as well as the potential of knowledge management and e-learning have been reported. In the meantime, the fast development of technologies is affecting the way of knowledge management and learning design as well as the learning context. Therefore, it is important to investigate the trends of knowledge management and e-learning and to review their impacts from different perspectives.

The aim of this special issue is to invite researchers who are engaged in knowledge management and e-learning studies to share their findings and opinions related to trend analysis from different perspectives based on literature reviews or data collected from relevant studies. Realizing research trends has been recognized as a fundamental and important requirement for being a qualified researcher (Hsu et al., 2012). In the past decade, a number of review papers have been written for reporting the trends of research in various fields of technology-enhanced learning, such as mobile learning (Chang & Hwang, 2018a; Chang, Lai, & Hwang, 2018; Fu & Hwang, 2018; Hwang & Wu, 2014), digital game-based learning (Hung, Yang, Hwang, Chu, & Wang, 2018; Hwang & Wu, 2012) and flipped classrooms (Lin & Hwang, 2018). Such review papers are very helpful to the researchers who need to know a new research domain as well as those who intend to know the research trends of the field they are studying.

After the call-for-papers process and several rounds of thorough reviews, a total of 8 papers were accepted for publication in this special issue, including 3 review papers and 5 position papers.

2. Preview of papers

In the paper titled "Impacts of mobile technologies, systems and resources on language learning: A systematic review of selected journal publications from 2007-2016," Fu (2018) reviews the mobile-assisted language learning studies published from 2007 to 2016 in selected journals from the aspects of adopted mobile devices, mobile learning systems/resources, and the benefits and challenges of utilizing mobile devices or learning systems/resources. Based on the review results, he provides several suggestions for researchers and practitioners to conduct future work.

In another review paper "Trends in smartphone-supported medical education: A review of journal publications from 2007 to 2016," Chang and Hwang (2018b) review the studies of smartphone-supported medical education published in international academic journals from 2007 to 2016 from several dimensions, such as application domains, subjects, and adopted learning strategies. In addition to presenting the statistical data, they indicate the research trends and potential research issues of integrating smartphones into medical education.

In the review paper "The evolution of open learning: A review of the transition from pre-e-learning to the era of e-learning," Li (2018) analyzes how open learning has moved through five stages, and presents the characteristics and dominant technology at each stage. He also summarizes the evolution of open learning and highlights the factors

driving the changes. Accordingly, he predicts how education will evolve with the development of e-learning.

In the position paper "Future trends and research issues of technology-enhanced language learning: A technological perspective," Zou, Xie, and Wang (2018) propose a Future Technology-Enhanced Language Learning Model from the dimensions of learning objectives, learning theories, and learning strategies based on the literature. They also discuss the future trends and research issues in technology-enhanced language learning.

In another position paper "How to advance our understanding of flipped learning: Directions and a descriptive framework for future research," Lo and Hwang (2018) propose three possible directions for future studies of flipped learning; moreover, they propose a descriptive framework for flipped classroom intervention.

In the position paper titled "Roles and strategies of learning analytics in the e-publication era," Yin and Hwang (2018) state the importance of analyzing learning logs and present the method for identifying students' learning strategies from e-book learning logs with two cases. Likewise, in the paper "Learning analytics platform in higher education in Japan," Flanagan and Ogata (2018) present a platform for accumulating educational data and providing learning analytics tools.

In the position paper "The opportunities and challenges of mobile and ubiquitous learning for future schools: A context of Thailand," Panjaburee and Srisawasdi (2018) examine the use of several novel pedagogical applications, mobile technologies and software tools to enhance students' learning at all levels of education in Thailand. Accordingly, they propose a possible direction for transforming the traditional teaching in science to mobile and ubiquitous learning.

Based on the findings and views proposed in these studies, several potential research trends of knowledge management and e-learning can be found, that is, mobile learning, flipped learning, open education, and learning analytics. In addition, language, science and medical education are potential applications that have been highlighted by these studies.

To sum up, this special issue provides a good reference for those who intend to know the trends of e-learning in the coming years. The suggestions of potential research issues provided in the papers included in the special issue further show the directions of conducting quality research to e-learning researchers.

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