Looking Forward:
A Better Integration of Multimedia Management and E-Learning Technology

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“Management of e-Learning and Multimedia Learning Technologies” is the main focus of this special issue. With the popularity of network technology, e-learning has become an extremely important and widely used method to deliver instruction. Ubiquitous learning related topics have also been paid much of attention lately. Therefore, IJMDEM purposed this very issue and helpfully provides some insight from the position of instructional design to more effectively utilize multimedia technology for e-learning.

In this issue, Castillo and Ayala purpose the content adaptation in mobile learning environments. The authors indicate two major parts of content adaptation, user and device adaptations. For user adaptation, based on Answer Set Programming paradigm, a system NORIKO (Non-monotonic Reasoning for Intelligent Knowledge awareness and recommendations on the move) has been developed. For device adaptation, using transcoding and transrating to adapt media content, a CARIM (Content Adapter of Resources in Mobile learning Environments) has also been built. The development of this study would apply as a server-side solution.

Chang, Wang, and Chiu report on the development of a board game to motivate students to learn the concept of minimum spanning tree algorithms. The authors describe the problems on students to learn such concept and mention the reasons and advantage to integrate graph theories in board game. The experiment results show that the learning achievement and feedback of students are quite positive which encourage the further development on this study. The benefit of integration of graph theories and board game are also discussed.

Wang and her colleagues present a usability study to examine an online education center at University of Missouri. Online education course is such popular issue in the field of education, yet, lack of studies investigated how usability related issues which effect online learning. Authors employ the Multifaceted usability evaluation methods, heuristic evaluation, focus group interview, think aloud interview, and multiple-user simultaneous testing, to analyze the MU Extension web portal and attend to explore the pros and cons of each method. The results show that the heuristic evaluation can provide quick feedback but they can only focus
on interface related problems such as use of color and layout. The focus group is able to receive feedback for multiple users at same time. It is mainly consider in design issue and good for early stage of the development. The survey is good to collect background and demographic information, but it lacks the ability to provide in-depth question such as information-seeking behavior. The think-aloud interview is good to understand individual differences during the navigation process, yet, think-aloud is not easy job for testers during tasks.

Lately, faculty is asked to integrate technology into their teaching. However, how is the performance presented and what are the critical factors to affect the performance? Based on the new human performance model Shen and Chang conduct a questionnaire-based survey to examine the factors which affect e-instructors’ performance. A total of 106 online instructors from 25 universities in Taiwan participated in the study and used correlation and multiple regression to analyze the data. The results show that advanced skill, basic skill, effort and self-efficacy are the major factors to affect the performance of e-instructors. In addition, self-efficacy has significant positive effects on all dimensions of performance except facilitating learning and the results are consistent with previous studies. Therefore, for enhance the performance of e-instructors, the training incorporated with self-efficacy is suggested.

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