

Research Issues and Applications of Mobile and Ubiquitous Learning

Gwo-Jen Hwang

Graduate Institute of Digital Learning and Education

National Taiwan University of Science and Technology, Taiwan

In recent years, the advance of wireless communication, sensing and mobile technologies has provided unprecedented opportunities to implement new learning strategies by integrating real-world learning environments and the resources of the digital world. With the help of these new technologies, individual students are able to learn in real situations with support or instructions from the computer system by using a mobile device to access the digital content via wireless communications. With such an innovative approach, the learning system is able to detect and record the learning behaviors of the students in both the real world and the digital world with the help of the sensing technology. Such a new technology-enhanced learning model has attracted the attentions of researchers from both the fields of computer science and educational technology. It not only supports learners with an alternative way to deal with problems in the real world, but also enables the learning system to more actively interact with the learners.

In this invited talk, various strategies of conducting mobile and ubiquitous learning activities in practical applications are demonstrated; moreover, several issues concerning this innovative approach, including the development of learning contents and systems, the design of learning activities, and the investigation of learning perceptions and achievements, are presented.