Development of a Ubiquitous Learning Platform based on a Real-Time Help-Seeking Mechanism

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Abstract

The popularity of mobile devices has encouraged the advance of ubiquitous learning, in which students are situated in a real-world learning environment with support from the digital world via the use of mobile, wireless communications, or even sensing technologies.
Most of the ubiquitous learning systems are implemented with high-cost sensing
devices for detecting the locations or behaviours of learners; moreover, these systems mainly focus on providing learning guidance or learning materials, while facilities for supportingmutual help among students are usually ignored. In this study, we propose a context-aware ubiquitous learning platform (CULP) which uses low-cost cell phones with embedded cameras and Internet service to support ubiquitous learning. CULP is able to provide instant support for learners in the ubiquitous learning activity; that is, learners can receive help from the right people via the hints given by the learning system when they encounter problems during their learning activities. The experimental results of a Personal Computer-Assembling course show that, with the assistance of the new learning platform, both the learning efficiency and the learning achievement of the students were significantly improved.

Keyword：Ubiquitous Learning, Collaborative Learning, computer courses