

Design of a Personalized Navigation Support System for Context-aware
Ubiquitous Learning Environment

邱創楷, 曾秋蓉

Computer Science & Information Engineering

Computer Science and Informatics

judyCRT@chu.edu.tw

Abstract

In context-aware ubiquitous learning environment, finding out an optimal learning path for each student in real time to maximize the learning performance is important. In addition, many studies also indicated and confirmed that personalization is effective in improving the learning efficacy of students. Although the issue of personalized navigation support has been widely discussed in elearning, it is still under investigated in ubiquitous learning environment. This paper proposes a personalized navigation strategy based on the Learning Orientation Theory. The strategy will guide the learners in context-aware ubiquitous learning environment by their learning orientation. To fulfill the proposed strategy, three navigation modes, namely Hyper-linear Navigation, Semi-linear Navigation, and Linear Navigation are developed for Transforming, Performing and Conforming learners respectively. A personalized navigation support system that includes the three navigation modes is also implemented. A preliminary experiment is conducted and the survey shows that most of the students are satisfied by our proposed system.

Keyword : Computer-assisted instruction