Developing the Immersive Learning Environment by Integrating the Interactive Video and Ubiquitous Technologies

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Abstract

Nowadays information technologies have becoming part of our daily life and provide lots of practical applications in various domains. E-Learning is one of the most significant IT products and brings us a flexible learning environment. But if we want to make it more practicable for people to do the learning activities anytime and anywhere, to integrate advanced ubiquitous technologies will be an essence to realize an immersive learning environment. Furthermore, with the gradual improvement of Game-Based Learning domain, it could provide more useful learning strategies with game elements in order to attract learners to enjoy the learning activities. Accordingly, in this paper, we utilized the technologies in interactive video, GPS (Global Positioning System) and GIS (Geographic Information System) to develop the Ubiquitous Video Game-Based Learning environment. Learners could utilize UMPC platform to do the game-based learning activities anytime and anywhere. And we also demonstrated an example "The historical of Tamkang University" course content to explain the gaming scenario in our learning environment. We hope the learning environment could be more practical for learners/instructors when using the game-based learning environment.

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