

Development of a Multiplayer Online Game-based Learning System Based on
ARCS Motivation Model

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Abstract

The prominent role of e-Learning in information technology has led to advances in recent years. E-learning is an extremely efficient way to train and learn. Traditional textbook may be replaced by digital media or e-Material. Most of the e-learning system mainly teaching material includes text, picture, video, but lacked for interaction between students and vivid materials. Online games are conducive to learning because online games have greatly interaction and competitiveness among players to enhance student motivation to learn. Therefore, this work developed a multiplayer online game-based learning system (MOGLS), which based on the ARCS motivation model. The MOGLS allows learners to acquire Enterprise Resource Planning knowledge. The proposed system can raise the intrinsic motivation of students' active learning and enhancing their learning performance. The MOGLS system provides learning record, rankings record, end-of-test feedback to motivate learners to learn. By interaction and competition among students, the MOGLS system would facilitate and enhance learning.

Keyword : Game-Based Learning; ARCS Motivation Model; Fuzzy Theory