

INTRODUCTION

Research shows that students have problems in learning and remembering historical events due to the teaching methods in history classes. The main purpose of this Project was to design a 3D Virtual Campus by applying the 3D learning environment design principles to support the history education of students. Students, by interacting with each other in the virtual environment, would create activity scenarios at the end of the education.

Research Question: What are the effects of online distance learning methods in virtual environments on a large number of students.

The hypothesis here is that a large number of students can be effectively educated with online distance learning methods in virtual environments.

BACKGROUND

Ulusoy's (2009) endeavour to investigate what students think about history classes showed that 94% of the students would prefer critically analyze and comment on the historical events instead of memorizing, and gain benefits from historical resources as well as documentary videos. Another significant result is that no visual materials such as photos, videos, documentaries, memoirs, diaries, novels were used in the history class, which was among the compulsory courses. 90% of the students also indicated that they would like to see the places with historical value by taking field trips.

METHODOLOGY

The target audience was the freshman students in the universities in a country in Europe for this project. Universities from each region were supposed to be selected across the country and 35 freshmen students to be offered 11 days of education in the 3D virtual learning environments. The aim of the study was to increase the awareness and knowledge of the students in their history classes by using and improving the skills of Comprehension, Application, Analysis, Synthesis and Evaluation. Students, by reflecting their identities to avatars and interacting with each other in the virtual environment, would create activity scenarios at the end of instruction. Online interaction and applications, collaborative group studies were among the techniques to be used in activities.

Research Design: Experimental research design with the purposive sampling.

TITLE

Designing and Developing a 3D Virtual Learning Environment: History Education

ABSTRACT

The aim of this study is to develop a Three Dimensional (3D) Virtual World "History Education in a 3D Virtual World" using OpenSimulator, which will be offered to freshman students at universities located in the capital of the country. The use of interactive material will ensure that history education skills will be gained through virtual worlds.

The Project targets are:

- 1) Design and development of the three dimensional open virtual world environment on the OpenSim platform by the Project team,
- 2) Content design and development of the "3D education" to be given in this environment,
- 3) Creation of scenarios of interactive education to be used in history education in the practice section of the education and to develop sample materials.

Keywords: Three Dimensional Virtual World, Design Principles, Presence and Interaction, History Education

RESULTS / DISCUSSION

This study suggested that the virtual environment helps students understand abstract concepts about history education better. We, as a team, suggested that using virtual environment can significantly improve students' learning process of understanding history information instead using of traditional learning methods. The 3D virtual environment has the potential to bring significant improvement in learning process when students have to apply history education to solve problems. It is also suggested that both the experimental and control groups experience the 3D virtual environment but only the experimental group students manipulate their avatar to go wherever they wanted to explore. The learner-centered learning environment encourage students to construct the knowledge and understanding and interact more with the learning environment. It is also believed that the use of such virtual environments like OpenSim is interesting, interactive, fun and more flexible for students (Chau, Wong, Wang, Lai, Chan, Li, Chu, Chan, Sung, 2013).

FUTURE WORK

Based on this study, further investigations on the effectiveness of online learning methods in virtual learning environments can contribute to the field. With better autonomy, communication, collaboration and the flexibility of the learning environment, students' learning process can be enhanced.

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