Experiences Complementing Classroom Teaching With Distance Seminars in Metaverses and Videos

Javier Ángel Ramírez Masferrer, Civil Engineering: Construction Technology, Polytechnic University of Madrid, Madrid, Spain

Felix Escolano Sánchez, Civil Engineering: Construction Technology, Polytechnic University of Madrid, Madrid, Spain

David Fernández-Ordoñez Hernández, Civil Engineering: Construction Technology, Polytechnic University of Madrid, Madrid, Spain

ABSTRACT

As a way of reinforcing classroom-based lessons, especially for continuous evaluation, the authors experimented with remote conferences and tutoring. These seminars were directed at three different groups of students: those who are struggling with the subject, those who were unable to attend all the lessons, and those seeking deeper insight. The authors experimented with different platforms for computer-assisted learning and with teaching through metaverses (Second Life and Open Sims). The authors experienced better results with the latter rather than with the platforms specially designed for computer-assisted learning. The metaverse sessions were also used as videos, recording the screen to later become part of the videos used for remote teaching. The sessions were also used to broadcast live conferences to people who were unable to attend them in person. A brief analysis was made of the videos' usefulness for teaching, combined with conferences, seminars through metaverses, etc.

Keywords: Continuous Evaluation, Educational Videos, Metaverses, Open Sims, Second Life, Seminars

1. INTRODUCTION

In European Union countries, teaching methods based on continuous evaluation are now mandatory, in accordance with the Bologna Plan developed by the European Higher Education Area (Bologna Follow Up Group, 2013) which applies to European universities. The Polytechnic University of Madrid adopted the Bologna Plan in the 2010-2011 academic year.

With this methodology, teaching takes place both in and out of the classroom, either

DOI: 10.4018/jcit.2014100101

with or without the teacher. The teacher is responsible for planning the activities to be undertaken in and out of the classroom to ensure the student learns the subject matter.

In terms of the teaching activities that do not take place in the classroom, it has been found that it is good practice to hold seminars in the following cases:

- For students who are aware of the importance of the subject in question for their future professional development and want to broaden their knowledge.
- For students who are struggling. These difficulties tend to occur either because the student is insufficiently prepared, or because they cannot follow the course as recommended, or because they do not attend enough lessons.
- For students who have problems attending classroom-based lessons.
- When some courses (or parts of courses) take place completely online.

There are some preliminary studies on teaching through metaverses, such as the use of Second Life as a complementary tool in the field of education, its advantages and disadvantages, potential uses, etc. (Zhu, Wang and Jia, 2007) (Zhao and Wu, 2009) (Tsiatsos, Konstantinidis, Ioannidis and Tseloudi, 2009) (Burkle and Kinshuk, 2009) (Jianhai and Xiaozhao, 2009).

The last study pointed out the considerable amount of time necessary to learn how to use the interface. Experimental studies have also been done on their application (Cliburn and Gross, 2009) and even other applications such as conducting quick questionnaires or HUD quizzes on the platform (Bloomfield and Livingstone, 2009) or evaluations from the virtual world (Wei, Cheny Doong, 2009). Other more in-depth studies have also analysed the study methods of volunteer students through these platforms (Zhang, Marksbury and Heim, 2010).

This publication is closely related to another entitled "Use of 3D World in Teaching. Teaching in Metaverse" (Ramírez, Cruz, Jarillo, Moraño, Fernández-Ordoñez, Castejón, Herrera, Velázquez and Domingo, 2011a) which studied the advantages of teaching in Second Life-type metaverses, and with another one which examined potential group continuous evaluation activities, entitled "Continuous Evaluation in Numerous Groups (more than 200 students)" (Ramírez, Fernández-Ordoñez, Castejón, Herrera, Jarillo, Moraño, Domingo and Velázquez, 2011b), which studied continuous evaluation activities designed for students' education, analysing the efficacy of each of them.

The video is very important in continuous evaluation because it offers students the information they need, at the time they need it, to do their activities.

Teaching in seminars that take place in metaverses is the ideal support for continuous evaluation; if these are well spaced it avoids the student having the feeling of being 'abandoned', and the student has direct contact with the teacher at strategic points through these metaverse sessions.

This article focuses on distance-learning seminars and also studies further education by means of vídeos. Therefore the context, the description of the methodology used and the results are as follows.

2. CONTEXT

Various techniques for teaching outside the classroom were studied, adapting them to the continuous evaluation targets of the new study plans adopted by the European Higher Education Area (EHEA). The aim was to determine which methods achieve the best learning results for students using the least possible time. The following distance learning techniques were used to give the seminars:

- Recording videos and conducting activities associated with them. In this case, we experimented with the possibility of sharing them via podcasts and also posting them on educational websites, for which different platforms were compared.