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Published version

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The use of a Cyber Campus to Support Teaching and Collaboration: An Observation Approach

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Abstract. The research reported in this paper is work in progress describing the experiences of the authors while using a cyber campus to support online learning collaborative activities and investigate if a Transactive Memory System can be developed among group members, working together within a cyber campus in several pre-set tasks.

Keywords. Virtual Worlds: Cyber Campuses: Transactive Memory Systems

1   Introduction

The use of 3D virtual worlds in the form of cyber campuses for education has been introduced over the past few years, to support and enhance learning experiences. Cyber campuses enable students to access and participate in online learning activities, offering a range of educational possibilities that differ from the conventional online learning tools [1]. A cyber campus allows to immerse and feel present in the virtual world, facilitates communication and influences sociability between students, enabling them to be aware of others in the environment [2]. It also supports synchronous participation in realistic and/or abstract experiences, and preserves student anonymity; characteristics that support, enhance and make learning, engaging and enjoyable [1].

While cyber campuses are proved to benefit the individual learner, these can also be used as effective social collaboration spaces. Thus, an experiment was set up to investigate elements of collaboration within the VirtualSHU cyber campus, working together in several pre-set tasks. Organisational psychology has identified that the development of Transactive Memory System (TMS) has proven to be very promising for the functioning of teams and groups [3,4]. TM helps group members to be aware of one another's expertise and to divide responsibilities with reference to different knowledge areas. To the best of our knowledge, TMS has not been investigated in a cyber campus environment with the exception discussed in [5]. This paper is part of an extensive study of TMS in a cyber campus for task driven teams, and focuses only on discussing the students' experiences and observations of the researchers during the experiment. Hence, it is not conclusive as of the development of TMS among group members, and further work is on its way to investigate this.

2   Observations and Discussion

To conduct this investigation, the VirtualSHU cyber campus was designed to support the delivery of the Introduction to ICT module. The study participants were the 1st year Business and Enterprise students at (*name omitted for peer review*). A series of learning activities during weekly 1-hour sessions for 10 teaching weeks were performed. There were 4 classrooms with around 20 students each and they were divided in small in-class groups. Two sessions were running concurrently and students were meeting in the VirtualSHU. In order to investigate the development of TMS among teams, we are in the process of collecting data using the survey proposed by [3]. Meanwhile, observations and casual conversation methods have been employed to understand students' behaviour, collaboration efficiency and tendency to use the environment. The results are discussed below.

While conducting the activities within the VirtualSHU, it was observed that students were engaging in the environment and were actively participating in activities and tasks. Students were communicating from the real and the virtual world, and were keen on exploring the environment and communicate with their remote peers. Students found the environment as an interesting addition to the existing curriculum, allowing them to experience learning materials in different multimedia forms. Students acknowledged that they could interact with materials, their peers and the environment in dynamic ways. They also suggested that the environment helped them to feel more comfortable and develop trust between them. It was a common perception that while students were initially strangers to each other, the environment reduced the formality of the lesson, enabled socialisation and helped groups to develop into well performing teams. Further work is on its way to collect data and investigate the extent to which TMS has been developed among teams.

3   References

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