

Chapter 22

Promoting Virtual Collaborative Learning with the Use of Mobile Devices

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ABSTRACT

With the ubiquity and rapidly expanding functionality of mobile technologies, educational institutions have the potential to improve and facilitate learning. More and more educators are employing communication, collaboration and sharing tools and resources to make learning more accessible, equitable, personalized and flexible for students everywhere. This study investigates the implementation of Cloud-Based Student-Centered Learning (CBSCL) environment with the use of mobile devices in an MIS course. For the purpose of the study, the data were elicited through students' focus groups and the lecturer's notes on CBSCL as a virtual learning environment. The data were examined based on content analysis. The results indicate that CBSCL can be a challenging collaborative learning experience and a motivating approach to teaching and learning; consequently, the students become responsible for their own learning and problem solving process.

INTRODUCTION

Eteokleous and Ktoridou (2011) state that the shift towards a technology-oriented, interconnected and complex environment, enables students to work together, socialize and learn more effectively. Therefore, educators are continuously seeking ways to bring current technological advances into the classroom. Academic institutions could take advantage of technology advancements to successfully balance their infrastructure and technology resources in order to teach students with the advanced technology they really need. A way to shift from the traditional Teacher-Centered Learning (TCL) to a Student-Centered Learning (SCL) environment is the use of Cloud Applications (Ktoridou, Eteokleous, & Dionysiou,

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2013). SCL environments aim to develop a range of higher-order skills and expose students to processes that help them take responsibility for their own learning. Thus, they become active participants in the learning process. In addition, if SCL is implemented in a cloud-based learning environment using mobile devices, it could be a strong motivation tool to promote classroom involvement and participation.

This chapter explores the development of a Cloud-based Student-Centered Learning (CBSCL) environment with students accessing the educational material and communicating through the use of their mobile devices. The study examines how Google Applications for Education are implemented in the required undergraduate MIS-151 Business Software Applications course, offered at the University of Nicosia. More specifically, the study examines how students communicate, collaborate and learn through a CBSCL environment by using their mobile devices. The following issues are taken into consideration: students' and educator's roles; their involvement in the teaching and learning process; students' views on mobile devices utilization in CBSCL; knowledge acquisition; and higher order skills development. For the purpose of the study, the authors employ a qualitative approach as a methodology based on content analysis. Students' views expressed through focus groups, and the lecturer's written notes on CBSCL based on her online and in-class observations, serve as data.

BACKGROUND

Web 2.0 Technologies for Education

The evolution of the Web started with Web 1.0, the so-called Static Web, where users could only read online-posted information. In 1999, the lack of active interaction among common users of the web, led to the birth of Web 2.0– the Read-Write-Publish era. Web 2.0– the dynamic, writing and participating Web– encourages and enables educators and learners to share ideas and collaborate in innovative ways. Educators are now forced to re-evaluate their teaching and learning methods in order to transform education practices into more active and meaningful forms of learning that involve “learning to be” and “learning about” (An, Aworuwa, Ballard & Williams, 2009). The writing and participating characteristics of Web 2.0 offer opportunities to create more interactive and powerful learning environments in which learners become knowledge creators, producers, editors, and evaluators (Richardson, 2009). Web 2.0 involves various new forms of online communication: between two or more people; between two or more online services; and between individual users and software applications. Such services and applications are blogs, wikis, content syndication, multimedia sharing services, podcasting and content tagging service. Web 2.0 allows users to access and add content, leave messages with comments and exchange digital media. The aforementioned services and applications provide new opportunities and change the role of the user (learner) transforming social networking into educational networking. As Eteokleous and Ktoridou (2011) report, the Web 2.0 tools can be applied for teaching and learning purposes towards achieving educational objectives.

Many researchers have predicted that Web 2.0 will change the education of the 21st century dramatically. That is, it will alter the ways in which teachers and students interact, communicate and learn from each other. Therefore, new approaches to teaching and learning will emerge (Ala-Mutka, Punie, & Ferrari, 2009; Hargadon, 2009; Murugesan, 2009; Richardson, 2009). Several companies are continuously working on the development and promotion of new tools, services and applications, with some of them

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