

Chapter 6

Modeling the Use of Facebook in Environmental Higher Education

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ABSTRACT

Many authors agree that it is essential to integrate social networking tools and sites with education. On the other hand, environmental education represents an umbrella for many forms of education that already exist and new ones that remain to be created. Bearing this in mind as well as the increasing use of Facebook in education, the key aspect of this chapter focuses on scientific research about modeling the use of Facebook in environmental education among students of the University of Belgrade – Faculty of Organizational Sciences, Serbia. The research clearly points out the educational benefits of implementing Facebook with, subsequently, a significant improvement of students' environmental awareness. The investigated model of using Facebook, presented in the chapter, could be useful to other educators, giving them suitable information about the possible ways to improve students' achievements in environmental and other kinds of higher education.

INTRODUCTION

Education is the most powerful weapon you can use to change the world. - Nelson Mandela

In today's informatics era students are heavily immersed in Web 2.0 technologies and the Internet, which play an important role in their social

life as well as their academic life (e.g., Petrovic, 2009; Lego Muñoz, & Towner, 2009; Isljamovic, Petrovic & Jeremic, 2011). Social networking sites such as Facebook and MySpace, have a very strong influence on the lives of millions of students (Thompson, 2007). This leads to many educators wondering what role social networking could have in education (Joly, 2007; Petrovic, Petrovic,

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Jeremic, Milenkovic & Cirovic, 2012a). Also, due to the high number of social network users, attention is drawn to the necessity for educators to use these tools for communicating with their students and to the usefulness of students' participation in this communication (Grant, 2008).

Furthermore, social networks are being adopted rapidly by millions of users, most of whom are students, with a great number of purposes in mind (Lenhart & Madden, 2007; Selwyn, 2007; Mazman & Usluel, 2010). Facebook has very quickly become the college students' favorite social network and an integral part of the "behind the scenes" college experience (Selwyn, 2007; Lego Muñoz, & Towner, 2009). Previous papers have indicated that the adoption rates of Facebook in universities and colleges are remarkable – 85% of college students that have a college network in Facebook have adopted it (Arrington, 2005; Thompson, 2007; Lego Muñoz, & Towner, 2009). Also, research by Fogg Phillips, Baird and Fogg (2011) shows that in many cases students spend more time online in an informal learning environment, than they do with teachers in the traditional classroom.

On the other hand, fast technological development and industrialization have resulted in an increased level of negligence and behavior that lead to the desolation of the environmental balance (Cetin & Nisanci, 2010; Slovic & Petrovic 2011). Many authors agree that good environmental education is crucial for achieving sustainable development that would enable the necessary way of life for human inhabitants within nature's capacity (e.g., McCormick *et al.*, 2005; UNESCO, 2012).

Given the need to develop new approaches to improve students' environmental awareness, knowledge and understanding of environmental and sustainable development issues, we conducted a study on a group of undergraduate students of University of Belgrade - Faculty of Organizational Science, enrolled in the Environmental Quality System course. This is especially important because the data about environmental educational

curriculum and programs in Serbia have shown that there is an evident lack of formal and permanent environmental education at all levels of formal education (Klemenovic, 2004; Trumic, Petrovic & Radojicic, 2009; Petrovic, 2010; Pavlovic, 2011; Sakac, Cveticanin & Sucevic, 2012). This chapter discusses modeling the use of Facebook, as a contemporary educational instrument for improving environmental higher education. It should be noted that in the previous years, there has not been a lot of research in this field, not only about the improved communication between professors and students, but also on Facebook's potential as an educational tool, used as a means of studying in a faculty course.

This scientific research is the initial stage of a larger project to innovate, and to improve environmental education of undergraduates. Our research, which had 138 students participating in it, has shown that a relatively good model of using Facebook for educational and pedagogical purposes is the following: the use of Facebook for interacting with the educator by creating a Facebook group dedicated to the course; the use of Facebook by students who are encouraged to create their own Facebook groups about a specific environmental issue; the use of Facebook for easy access to an application called Flashcards stash (as game based learning).

BACKGROUND

Using Facebook in Education

Originally designed for college students in the United States (Harvard) in early 2004, Facebook was created as a social networking website; then the phenomenon of Facebook rapidly spread when it opened up to all college students (Petrovic *et al.*, 2012a). Facebook opened its doors to people outside the university network in 2005 (Boyd & Ellison, 2008). Today with approximately 800 million users worldwide (World Internet Users and

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