POSSIBLE EDUCATIONAL USE OF FACEBOOK IN HIGHER ENVIRONMENTAL EDUCATION

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Abstract

Today Facebook is considered as one of the most popular platforms for online social networking among youth, and - as many researches show - university students. Also, the impact of Web 2.0 and social networking tools on education has been much elaborated on. Educators need to consider how to meet the needs of their students by utilizing Web 2.0 and other social networking tools. Social networking sites such as Facebook (and MySpace) have been subject to much recent debate within the educational community. Facebook has quickly become the social network site of choice by college students and an integral part of the "behind the scenes" college experience (Selwyn, 2007). Thus, it is essential to integrate social networking tools with the education. The key aspect of this paper will be focused on research of achievement levels of higher environmental education by educational use of Facebook among students of the Faculty of Organizational Science, University of Belgrade, Serbia. An analysis of the results was carried out using the SPSS software package.

Introduction

It is not necessary to explain in particular the statement that the society and technology imbues each other, that they are in mutual dependence and that they cannot survive one without the other today at the beginning of the 21st century (e.g., Petrović, 2009; Arnó-Macià & Rueda-Ramos, 2011; Išljamović et al., 2011). Technology is ubiquitous, embracing almost every part of our lives, our communities, and our homes. In the field of education, technology doesn't have a secondary role in the sole process of knowledge transferring, especially because technology is becoming increasingly integrated into the lives of learners of all age groups (e.g., Ellison, 2008).

In today's informatics era students are heavily immersed in Web 2.0 technologies (i.e., blogs, twitter, podcasts, wikis, social network sites, virtual worlds, video sharing and photo sharing) and Internet, which play an increasingly important role in their social life as well as their academic life (Lego Muñoz, & Towner, 2009). Web 2.0 technologies, and specifically social networking sites such as Facebook and MySpace, have a very strong influence on the lives of millions of students

(Thompson, 2007), leading many educators to wonder what role, if any, social networking could have in education (Joly, 2007).

Knowing all of this and having in mind the necessity of higher environmental education for sustainable development, in this paper we will examine the use of Facebook, as a contemporary educational instrument.

Background of Facebook

Facebook – The Social Network

Originally designed for college students in the United States (Harvard) in early 2004, Facebook was created as a social networking website. Facebook later expanded to different educational settings (not only institutions from the higher education sector) from other countries too, and then to the general public (Hew, 2011). Facebook allows each user to create a profile, updating it with personal information such as home address, mobile phone number, interests, religious views, and even data like relationship status. In addition to creating individual profiles, Facebook users can also "designate other users as friends, send private messages," join groups, post and/or tag pictures and leave comments on these pictures as well as on either a group's or an individual's wall (Grossecka et al., 2011).

As previously mentioned, at first Facebook was limited to college students at Harvard with a university email address (Boyd & Ellison, 2008). Later, the Facebook phenomenon spread like wildfire when it opened up to all college students. This changed again in 2005, when Facebook opened its doors to people outside the university network (Boyd & Ellison, 2008). Today with approximately 800 million subscribers worldwide (according to www.internetworldstats.com), Facebook now has a diverse community of users at all levels of education and areas of society, including companies and universities. This number of users all around the globe makes Facebook the most used social network out there.

Using Facebook in Education

Rapid development of information and communication technologies has brought changes in various pedagogical and technological applications and processes (Mazman & Usluel, 2010). Currently, 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). Studies showed that social network tools support educational activities by making interaction, collaboration, active participation, information and resource sharing, and critical thinking possible (Ajjan & Hartshorne, 2008; Mason, 2006; Selwyn, 2007a). Students today demand more autonomy, connectivity, interaction and socio-experiential learning opportunities in their learning contexts (McLoughlin & Lee, 2007). Because students complain about lacking opportunities for authentic communication due to non-personalized course content even when alternative delivery methods are employed, providing informal learning contexts by integrating emerging social networks into existing learning practices becomes

significantly important to attain more robust learning and teaching opportunities (Bartlett-Bragg, 2006).

Facebook has quickly become the social network site of choice by college students and an integral part of the "behind the scenes" college experience (Selwyn, 2007). The proliferation of social technologies has created a culture in which youth participate more in creating and sharing content, profoundly changing the way students communicate, interact, and learn. Previous papers indicated that the adoption rates of Facebook in universities and colleges are remarkable - 85% of college students that have a college network within Facebook have adopted it (Arrington, 2005; Thompson, 2007). Also, in many cases students spend as much (or more) time online in an informal learning environment - interacting with peers and receiving feedback - than they do with their teachers in the traditional classroom (Fogg Phillips et al., 2011). Furthermore, Facebook also has a growing audience in perspective high school and middle school students (e.g., Lipsman, 2007; Lenhart & Madden, 2007).

Characteristics noted in the literature which recommends Facebook as a tool that can contribute significantly to the quality of education are: fostering positive relationships among students and encompassing students' motivation and engagement (West et al., 2009; Kabilan et al., 2010); involving students in achieving the learning tasks and successful transfer of knowledge (Madge et al., 2009); developing a positive attitude towards learning and improving the quality of learning (Pasek & Hargittai, 2009; Kirschner & Karpinski, 2010); developing interpersonal intelligence, as well as critical thought (Lampe et al., 2008); developing of communications and interactions on the relationship between students and teacher outside the classes (Selwyn, 2009).

Further, Facebook enables teachers to: provide constructive educational outcomes in a variety of fields (Pempek, 2009); practice a differential pedagogy, in the best interests of the students (Hew, 2011); integrate diagnostic formative evaluation in the learning process and to calibrate didactic activities accordingly (Pasek & Hargittai, 2009); achieve a change in strategy, mentality, attitude and behaviors by using Facebook (e.g. the transfer of knowledge remains one of the functions of teaching, but it is second to organizing and managing learning situations) (Roblyer, 2010); establish efficient educational relations on a social network (Selwyn, 2009); accept the student as an interaction partner (Schwartz, 2009); analyse and compare ways of learning and the knowledge achieved by students (Roblyer, 2010); develop knowledge and skills in order to perform efficient didactic activities (Hew, 2011).

Course Delivery

The course selected for this research is Environmental Quality System, which is an obligatory course in the last year of undergraduate studies at the Faculty of Organizational Sciences, University of Belgrade. This course consists of two hours of lectures and two hours of exercises each week for a 13-week semester.

The course has sections on ecology, environmental issues and protection, environmental management, eco management systems, ISO 14000, sustainable development and practices of sustainability. The course program is based on a strong methodology, requiring participants to turn their environmental and management knowledge and understanding into appropriate environmental actions and behavior changes, as indicators of the achievement levels in action-oriented environmental education with observable and measurable results (Petrović, 2010). Facebook is being considered as an educational tool because of its beneficial qualities such as enabling peer feedback, goodness of fit with social context, and interaction tools (Mason, 2006). Because most Facebook users are between 18 and 25 years old, they mostly are university students (Bumgarner, 2007). Hence, it can easily be deduced that it can be a useful educational tool, especially by providing active participation and collaboration (Mazman & Usluel, 2010).

In the course - Environmental Quality System-- students were encouraged to create and moderate eco Facebook groups that center on environmental issues. They acquired interesting information concerning environmental and environmental protection topics and posted them on the group's wall. Thus, the valuable environmental information was easily accessible to all students, their Facebook friends and the entire Facebook community.

Results of the Statistical Analysis

During the winter semester of the 2011/2012 academic year, 68 students attended these classes. After students successfully completed the course and were graded, they took part in a survey (one month after the completion of their academic obligations). The survey was conducted at the Faculty of Organizational Sciences, University of Belgrade. The creation of this survey was based (and modified in accordance with aim of our research) on a survey conducted by UC Davis, University of California (2012). In order to evaluate the results of our survey, the statistical software package SPSS 17 was used. In the survey, 68 students participated (44 females and 24 males). Later on in our research this difference in numbers between genders didn't show statistically relevant. Students completed the survey and results for each student were calculated.

Students were asked to provide answers on 29 closed-type questions. The first five questions were general and the fifth was in relation to having a Facebook profile. Students who do not have a Facebook account were not taken into consideration for further analysis (17.6%). The following twelve questions were focused on general information about the use and activities on Facebook (number of friends, uploading files, status updating, etc.) and the last one was in relation to the creation of eco Facebook group within this course. A large number of students - 78.6% formed a group which provides us with a valid sample for further analysis of our research. The last group of questions had the task to prove the aim of this paper and examine whether educational use of Facebook had effects on

improving students' environmental information database and achievement levels of this course.

We defined two groups of students basing them on their reasons for creating an eco Facebook group. In the first group are students who gave one of the following statements "Because I thought it was an obligation" or "Because I thought I would get extra credit." While in the second group are students that gave one of the following responses "Because I liked the idea" or "Because I am interested in environmental issues." In the first group there were 53.7% of students and 46.3% were in the second group.

When asked, "How regularly do you update the content of your eco Facebook group?" students from the first group were doing it more rarely than students from the second group. The numbers are as follows: 94.7% of the first group updated it on a regular base while 72.7% answered the same from the second group (p = 0.048). Also, there are significant differences between these two groups when examined about their perceptions regarding the usefulness of the group they created, where 100% of the second group answered that they think it was useful and 77.3% from the first group thought the same and 22.7 thought it was not useful (p = 0.009). When we asked if this way of work increased their environmental knowledge, we observed no significant statistical difference among these groups, but we observed that the respondents in both groups believed that their environmental knowledge increased at least at some level - 97.7% of them gave such an answer. This is a significant number and a fact that proves that Facebook can contribute in promoting and improving achievement levels of the studied course. When we questioned whether they will continue updating eco Facebook group as the way to improve their environmental awareness, only 4.9% said that they will not continue with updating.

The key aim of this study has been to provide an idea of implementing Facebook as the contemporary educational tool. Our results pointed out that:

- 97.7% of students consider that the use of eco Facebook groups significantly increase their environmental knowledge.

- 90.9% of students have been encouraged to: change their environmental behaviour patterns and participate in future environmental actions.

- 94.7% of students were more motivated to participate in the process of learning and successfully gaining knowledge at the Environmental Quality System course.

Conclusion

In the context of a course like the one described here, our research has shown that Facebook is a possible educational tool. In addition, our research indicates that using social networking tools, such as Facebook, increases the productivity of

students and improves their interest in environmental issues, as well as increasing awareness of necessity for taking environmental actions and changing their environmental behaviour patterns.

In the same time students are more prompt for staying involved and spreading the information about environmental problems even after they pass the exam in a manner which is easily accessible and interesting to them. Their perception is that compared to other traditional methods of participating in the classroom this method is useful and has great social value.

Based on our preliminary results, we would encourage others to explore the use of Facebook groups as a supplement to traditional e-learning. The data suggests that students would use Facebook as a good medium not only for communication but for a broader engagement in the proces of learning.

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