EXPLORING STUDENTS' AND TEACHERS' ATTITUDES TOWARDS USING BLOGS IN SECONDARY EDUCATION

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ABSTRACT

This paper reports on an empirical study concerning the use of Web 2.0 tools in secondary education. The study focuses on blogs and explores their potential as an educational tool. Blogs provide a space for students to reflect and publish their thoughts and understandings and through their commenting capabilities they provide opportunities for feedback and potential scaffolding of new ideas. For the purposes of the study, a digital space was created using Windows Live Spaces Service. The created space consisted mainly of a blog and RSS feeds in the subject area of "Information Technology" and was used by 75 students -aged between 12 and 18- and their instructors during the course of a semester. Students were requested to complete a questionnaire stating their opinion and feelings concerning their experience, judging the content of the site and making suggestions for its improvement. The study also recorded the instructors' views on educational blogging after applying it in their classrooms. The findings of the study are definitely positive towards the use of blogs in school settings and provide useful directions for future research.

1. INTRODUCTION

In recent years, the nature of the Internet has begun to change. The Web is no longer only a medium for transmitting information but also a platform in which content is created, remixed and distributed. This new, evolving Web is usually called Web 2.0. Although this term suggests a new version of the WWW, it does not refer to an update to any technical specifications, but rather to cumulative changes in the ways software developers and end-users use the Web (Web 2.0, 2010). Several technologies do exist that imply a significant change in Web usage: blogs, wikis, RSS feeds, podcasts, to name but a few.

Most of these technologies have caught the imagination of researchers about their potential to enhance instruction and learning. For example, Parker and Chao (2007) investigated the contribution of wikis to various learning paradigms and Cole (2009) reported on an experiment concerning the use of wiki technology to support student engagement. Williams and Jacobs (2004) explored the potential of blogs as learning spaces for students in the higher education sector and Lui et al. (2006) investigated students' perception towards the purposes of blogging. Duffy and Bruns (2006) discussed the educational possibilities of blogs, wikis and RSS feeds, Beldarrain (2006) explored the benefits of using tools such as wikis, blogs and podcasts to foster student interaction in online learning and Kamel Boulos et al. (2006) explored the use of the same tools in the education of medical/nursing students, the continuing professional development and education of healthcare professionals, and patient education and discussed some of their advantages and disadvantages.

This paper focuses on blogs and their potential as an educational tool. In particular, it describes blogs, discusses their educational use and reports on a study that was conducted to explore students' and teachers' attitudes towards this technology. Reviewing the literature on the subject of educational blogging one comes up with the finding that most of the studies concern the use of blogs in higher education and there is a serious lack of any reports on blogs utilization in schools. This is exactly what this paper investigates: the role that

blogs can play in secondary education and the degree at which this tool is accepted by both students and educators.

The paper is structured as follows: The subsequent section briefly describes blogs and reviews their educational uses and the benefits deriving from those. The conducted study in terms of its aims, settings and results is described next and the last section concludes the paper.

2. THEORETICAL FRAMEWORK

2.1 Overview of blogs

A blog, sometimes written as web log or weblog, is a website that consists of a series of dated entries arranged in reverse chronological order. Blogs provide commentary or news on a particular subject while some function as personal online diaries. As Nardi et al. (2004) point out: "Blogging is an unusually versatile medium, employed for everything from spontaneous release of emotion to archivable support of group collaboration and community" (p. 46). Most of the times a blog is the product of a single author, but multiple authorship is also a possibility. A typical blog combines text, images, and links to other blogs, web pages, and other media related to its subject. The initial page of a weblog usually contains a number of latest posts, a list of links to monthly archives or archives by posts' category and a search facility. Each entry is made up of the following: its title, the date and time that was published, the main content of the post, the categories to which this post belongs, the comments added by readers, the URL of the full entry (called permalink), and links back from other weblogs (called trackback).

Compared to traditional web sites, blogs offer unique advantages. To set up a blog one can use the blogging tools that are available free of charge by many service providers. In that way, anyone can own a personal publishing space that is easy to use, sharable and automatically archived. Furthermore, the creation and update of the blog's pages requires a minimum of technology know-how from the user/author, since in most blogging tools the new or modified data is entered into the blog through simple web forms. Moreover, the ability for readers to leave comments on a blog's entries is probably the most important attribute of blogs, because it provides the opportunity for discussion on a specific topic. In this way, blogs can be considered a part of what is called "social software" that allows interaction, collaboration, and contributions by a variety of people.

The above mentioned advantages of blogs along with several other factors -the discussion of which is out of the scope of this paper- have made blogs a very popular collaboration and personal publishing tool. In May 2007, blog search engine Technorati (www.technorati.com) was tracking more than 71 million blogs (including both active and inactive ones). Though the active blogs -or blogs that have been updated in the past 90 days- seem to be no more than 15.5 million, these figures are still very impressive. Also impressive is the number of internet users who regularly read blogs. According to a survey of blogging by the Pew Internet & American Life Project (Lenhart & Fox, 2006) 39 percent of Americans regularly read blogs.

Most of the people who do read blogs are interested in more than just one or two of them. For instance, one could have found 20 or 30 blogs that interest him/her. In addition, in most blogs the content changes on an unpredictable schedule. Repeatedly checking each weblog site to see if there is any new content can be very tedious and time consuming. The solution to this problem is offered by a technology called RSS, which stands for 'Really Simple Syndication' or 'Rich Site Summary'. RSS is a standardized XML format that allows users to subscribe to a website's content using tools called news readers or aggregators. The RSS information available from weblogs as well as other frequently updated sites is usually called "RSS feed". A feed lists the new or modified content of a website. The aggregator checks and parses the RSS feeds the user has subscribed to and collects all the new content into a folder that is just waiting for the user to come and read it. Producing an RSS feed is very simple and hundreds of thousands of websites and blogs now provide this feature.

2.2 Blogs in education

As it is the case with most of the emerging technologies, weblogs too have attracted the interest of many researchers in the field of educational technology. The internet has long been recognized by educators as a powerful research and communications tool that has greatly altered the way students find, manage, and use information. However, two of the recently emerged Internet technologies, blogs and RSS, have made the Web more interactive, turned students and teachers from mere readers into writers to the Web as well, and facilitated the tracking and filtering of the ever-growing number of information coming online each day.

Blogs are beginning to emerge in large numbers in the educational field as a means of communication, as a collaboration tool, as a digital portfolio for students' work and as a classroom portal where teachers archive handouts, post assignments, and field questions virtually. Weller et al. (2005) argue that in education, blogs have three primary (and not mutually exclusive) uses: (i) Group blogs, that are set up around specific subject areas, establishing in that way an online community, where members post articles of interest and discussion arises around these; (ii) Blogs kept by academics and subject experts that enable the dialogue and debate among them; (iii) Blogs used by students as an explicit part of the teaching and learning process: as a journal in which to demonstrate their thoughts, reflections and discussions on the subject area, as a portfolio tool for gathering evidence and demonstrating proficiency of specific skills, as a collaborative tool, whereby students working on a joint project use the blog as the medium for sharing resources and discussion or finally - combining many of the above features- as a class blog, where a community blog is used both by the educator to deliver news, resources, engender discussion and by students to collaborate and discuss. Several reasons - that will be discussed in the subsequent paragraphs- build the rationale for educational blogging.

Blogs provide a space for students to reflect and publish their thoughts and understandings and through their commenting capabilities they provide opportunities for feedback and potential scaffolding of new ideas. Blogs may be also helpful in increasing student responsibility and ownership in learning (Ferdig & Trammell, 2004). Students direct their own learning while receiving input and feedback from others and actively searching for information.

Moreover, blogging provides the possibility of connecting students with expertise not available locally. The teacher can arrange that an expert on the topic students are writing, reads and comments on their posts, thus providing them not only knowledge in the field but also an experience to remember. Blogs also feature hyperlinks, which help students understand the relational and contextual basis of knowledge, knowledge construction and meaning making and also allow them to learn about topics in more detail by reading additional articles, participating in online activities, and even watching movies.

The interactive nature of blogging motivates students to write and communicate. Kajder et al. (2004) argue that blogs have revived journaling as a way to encourage students to write more. In addition, students are much more motivated to write and do their best production work for a worldwide audience that may grade their work and provide encouragement or feedback on their writings.

According to Ferdig & Trammell (2004), the use of blogs also helps students become subject-matter experts. They base this claim on the fact that in order for the student to write his/her post, s/he should visit multiple Web sites relevant to his or her topic to find information and then filter the vast amount of results to post the "best of" content for readers. Doing this on a regular basis -at least once a week- creates a repetitive process where the blogger builds an ever-growing knowledge base on particular topics.

In a traditional classroom not every student gets to share his/her thoughts. This is mainly due to time limitations and curriculum constraints. In addition, some students often feel uncomfortable speaking up in class. Blogs give voice to those students too and also allow all students to participate in a discussion, without spending valuable classroom time.

Blogging also has the ability to empower students' voices and promote their critical and analytical thinking. As Mortensen and Walker (2002) point out: "…blogging can be an excellent method for developing and sustaining a confident and clear voice of one's own and the ability to formulate and stand by opinions", because "…Writing in a weblog one is forced to confront one's own writing and opinions and to see them reflected in the words of others." (p. 268-269).

Finally, since weblogs are quite similar to asynchronous discussion fora, they probably share some of the same advantages such as the potential to promote interactivity, provide opportunities for active learning, increase student and teacher relationships, increase higher-order thinking skills, and improve flexibility in teaching and learning (Ferdig & Roehler, 2003-2004).

As Williams and Jacobs (2004) notice, the existing literature on educational blogging reveals that most of the educational applications of blogs are in the areas of teacher training (e.g. Stiler & Philleo, 2003) and other professions where the use of reflective journals as a learning tool is accepted custom and practice, as well as in librarianship (e.g. Embrey, 2002), where information search and retrieval skills are integral to the job. However, educational blogs in other subject areas do exist that exploit several of the blogs' qualities. Maag (2005) argues for the use of blogs in Nursing Education as they 'can enhance health professional's writing, communication, collaboration, reading, and information-gathering skills'. Williams and Jacobs (2004) report on a study concerning the 'MBA blog' established at the Brisbane Graduate School of Business at Queensland University of Technology and they conclude that blogs have the potential to be a transformational technology in that they provide students with a high level of autonomy while at the same time provide the opportunity for greater interaction with peers. Huffaker (2005) explores the role of weblogs in promoting literacy in classroom settings and concludes that indeed, weblogs provide an excellent opportunity for educators to advance literacy through storytelling and dialogue.

The number of studies reported in the literature concerning educational blogging is rather small. Furthermore, these studies vary greatly in terms of their aims as varying are the objectives of each educational blog development. For example, Lui et al. (2006) studied the perception of students towards the effectiveness of weblogs. They reported on an experience of introducing blogging tasks to third year computing students and compared these students' perception to the perception of students not participating in the blogging tasks. The authors proposed a student perception model to explain the difference in the perception due to the blogging experience and concluded that the mandatory use of weblogs in a course can gradually develop educationally sound perceptions in students despite of the observed misuse.

Du and Wagner (2007) empirically examined whether the continuous use of weblogs as online learning logs would affect learning performance within the context of university senior-level business education. Their assumption was that effective use of weblogs could promote the constructivist models of learning by supporting both cognitive and social knowledge construction, and by reinforcing individual accountability in learning. The findings from their study with 31 undergraduate students enrolled in an information systems course revealed that a student's weblog performance was a significant predictor of the learning outcome, while traditional coursework was not. The authors based on the results of their study concluded that weblogs can be effective both as a knowledge construction tool and a social learning medium.

The study of Williams and Jacobs (2004) that was mentioned earlier, explored students' participation in the 'MBA Blog' as well as their views about their experience and educational blogging in general. The analysis of the collected data showed students to be broadly in favour of the continued use of blogs as an effective teaching and learning aid.

In contrast to the above mentioned studies that in general yielded positive results towards educational blogging, there are some others not very encouraging. For example, Divitini et al. (2005) reported on their experience using a blog as a communication and reflection tool to support teacher education, and as they say, this was with no doubts a fiasco: the system was not used despite its potential usefulness and its proper introduction.

As it has been already mentioned, the number of studies examining whether educational blogs manage to meet their objectives is small. Even fewer -if any, at least in the academic literature- are the studies that concern the use of blogs in secondary education. One such study that we conducted is presented in the subsequent section.

3. A CASE STUDY IN THE USE OF BLOGS IN SECONDARY EDUCATION

For the purposes of the study, a digital space was created using Windows Live Spaces service (http://home.spaces.live.com/). Begun in late 2004, Windows Live Spaces is Microsoft's social networking platform and is available free of charge.

The created space consisted mainly of a blog and RSS feeds in the subject area of "Information Technology". In addition, the site contained a list of proposed readings (mostly textbooks, some of them being available online) and a list of useful web links, both related to the topics of the blog. The RSS feeds that the site incorporated came from Greek magazines and websites dealing with information and

communications technology. The topics included in the blog at the time of the study concerned the emerging Internet Technologies, like blogs, wikis, instant messaging, etc. The initial post for each topic contained a concise description and discussion about it as well as some questions that aimed at motivating students to participate in the blog by commenting the posts. Moreover, students were encouraged by their teachers to contribute to each topic by posting their own knowledge on the subject, their point of view and/ or relevant questions.

The website that was constructed was used in secondary education during the course of a semester. The classes that were selected to participate in the study came from four different schools, all located at non-urban Greek regions: three of them are located at islands (Andros, Paros and Santorini) and one at a village of a provincial city (Valtino in Trikala). In particular, 75 students from four different high schools interacted with the environment in the context of their courses that are related to the contents of the blog, namely the courses "Internet services", "Programming tools" and "Internet". 51 of the students were attending the first grade of high school (12-13 years old), 16 of them were attending the third grade (14-15 years old) and the rest 8 were students of a technical and vocational high school following the "Information Technology" direction of study (half of them -aged between 15 and 16- being in their first year of studies and the rest -aged between 17-18- being in their third and last year). The instructors who participated in the study were five. Four of them managed to use the website in their classes (these classes that were just mentioned) and one of them did not. However, the latter trialed the system himself and submitted his views and expectations concerning these kinds of technology.

3.1 Students' views

Students were requested to complete a questionnaire stating their opinion and feelings about their experience. Their responses were used to measure their attitude towards weblogs. The first part of the questionnaire (questions 1-8) and the students' answers are presented in Table 1.

Table 1. Students' answers to the first part of the questionnaire

Questions	Strongly agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly disagree (%)
1. I liked the use of non-traditional tools for the conduction of the lesson	56	44	0	0	0
2. Participating to the blog was an interesting and useful activity	35	51	2	12	0
3. The RSS feeds were useful and interesting	6	28	55	10	1
4. The blog helped me understand the corresponding topics of the lesson	29	44	15	8	4
5. Discussing through the blog helped me clear up things that were confusing me	24	44	14	15	3
6. I think the blog was easy to use	27	51	5	11	6
7. The blogging activities made me feel more close to my classmates; we can support each other in learning	25	38	8	27	2
8. I would like to see blogging being used more widely in school as a teaching/ learning tool	43	40	7	4	6

Students' answers to the questionnaire may be summarized as follows:
- All students, regardless of age, liked the use of computer tools for the conduction of the lesson (q. 1). In addition, 83% of them stated that they would like to see blogging in particular, being used more widely as a teaching/learning tool (q. 8). These answers imply that today's students -being in their majority familiar with current technology- desire to use that technology in school too. Probably they feel that the integration of computer tools and the Internet in their classrooms will result to a more student-centered, motivating and engaging lesson.
- Concerning the tools used, 86% of the students found the activities with blogs to be interesting and useful (q. 2) and most of them (78%) did not face difficulties using them (q. 6). 73% of the students

felt that the blog helped them understand the corresponding topics of the lesson (q. 4). This probably implies that for many students blogs are seen as an additional source of information, going beyond the textbook. However, 68% of the students seem to have exploited further the capabilities of blogs and also used them in order to communicate their questions to the whole class (q. 5). On the contrary, RSS feeds, the other technology that students were exposed to, were thought to be useful and interesting only by 34% of them (q. 3). This finding may be probably attributed to the fact that this kind of technology is not as popular as blogs are, and many students, mostly the younger ones, have not even heard of it before.

- Finally, nearly 2/3 of students stated that the blogging activities made them feel closer to their classmates through supporting each other in learning (q. 7). It should be noted that the negative answers to this question came mostly from younger students (12-13 years old); older ones were more positive, possibly feeling more ready and capable of initiating a discussion or/and participating to one.

In the second part of the questionnaire students were asked to judge the content of the site and make suggestions in terms of what else could be added to it, report any difficulties they faced during their interaction with the site and generally make any comment they wished concerning their experience. In this part of the questionnaire about 36% of the students did not answer. This can probably be explained by the fact that these students who did not answer were mainly the younger ones: most children at the age of 12-13 are neither self-confident nor familiar with expressing their point of view about a software tool. In that way, these young students probably hesitated to answer with the fear that their comments could be irrelevant and thus make a bad impression to their teacher. The students who did answer this part of the questionnaire provided useful feedback. In particular, concerning the site's content some of the students mentioned that besides the existing RSS feeds and the lists of proposed readings and related web links they would like to see links to other blogs, as well as RSS feeds relating to sports, music, cinema and theatre. Moreover, some students stated that the site may have contained resources on programming, databases, web page design while some others would prefer also games and other freeware/shareware programs to download. From this students' wish list it can be inferred that although the focus of the site was the educational blog, most of the students considered the site as a class portal where they could be informed and discuss about several of their interests that do or do not relate to school.

Concerning the problems that were faced while working with the system, only five students stated that they had difficulty in creating their account in order to participate in the discussion.

3.2 Teachers' views

The study also recorded the instructors' views on educational blogging after applying it in their classrooms. One of them mentioned: *"Students enjoyed blogging and were motivated to search for more information on the topics included in the blog. However, I believe that if such methods are to be used in education, the instructors that will be using them should be properly trained, not only on the technical aspects of these tools but most importantly on the ways to integrate them in their regular teaching..."* Another one added: *"Most of the students did participate in the blog. All of them preferred to comment on the topics that they were familiar with. However, the blog managed to gain students' attention and interest for the other topics as well, since the majority of students read the corresponding posts and asked me several questions initiating valuable in-class discussions"*. The third instructor, possibly influenced by her students' answers to the questionnaire argued about the need for incorporating into the site resources (blogs and RSS feeds) dealing with the students' personal interests. She further noted that it would be useful for the site to include also examples, exercises, self-assessment quizzes and possibly multi-player online educational games. It seems that this particular instructor did not focus on the blog component of the site but rather commented on the site as a whole.

The fourth instructor wrote down the following: *"My class of first graders is familiar with using the Internet, mainly for searching for information and downloading pictures or music. Children are very positive towards using the Internet in the classroom. However, often their initial enthusiasm fades when they realize that they are not going to play or download from their favourite site but they should be involved in a more formal learning activity. Indeed, the blog allowed students to work without following specific rules. Some students were very happy with this freedom they were given: they could explore the blog's contents and*

participate to it without depending on my directions. On the other hand, some others did not feel comfortable with this and asked for my help. However, at the end everyone got used to that way of working and they were satisfied to cooperate and discuss the findings of their research. I also noticed that students that were more familiar with computers were the ones that treated the blogging activities more seriously. I certainly believe that this kind of technology can be an effective educational aid since it provides students with opportunities to collaborate and be actively involved in the learning process."

As has been already mentioned, a fifth instructor also participated in the study though he did not manage to use the site with his class. He did however, participate himself to the blog and provided his personal point of view on the use of this technology in education. He agreed on the possible benefits of educational weblogs but pointed out some issues that may hinder their integration in classroom. Serving at a school located in a remote rural area, he noted the inadequate technology resources to be a serious obstacle and argued that students there have a different lifestyle and their interests usually do not include computers and the Internet. In that way, he concluded that in cases similar to his class, the instructor should be the one to provide students the impulse and motivation to be involved in such new form of learning activities.

4. CONCLUSION

This paper reported on an empirical study concerning the use of blogs as an educational tool. For the purposes of the study, a digital space was created using Windows Live Spaces Service. The created space consisted mainly of a blog and RSS feeds in the subject area of "Information Technology" and was used by 75 students -aged between 12 and 18- and their instructors during the course of a semester. Students were requested to complete a questionnaire stating their opinion and feelings concerning their experience, judging the content of the site and making suggestions for its improvement. Instructors were also requested to state their views on educational blogging after applying it in their classrooms. The study yielded positive results. Indeed, blogging was welcomed by both students and teachers.

All students enjoyed the use of computer tools for the conduction of the lesson and most of them expressed their wish to see blogging being used more widely for their teaching. Indeed, as their instructors also pointed out, the blog managed to gain students' attention and interest and motivated them to work on the activities, ask questions and participate in both online and in-class discussions.

All of the instructors seemed to be in favour of educational blogging. They considered this kind of technology to be an effective educational aid since it provides students with opportunities to collaborate and be actively involved in the learning process. However, they stressed the importance of their own role in providing students the impulse and motivation to be seriously involved in learning activities that incorporate such kinds of technology. Moreover, in order to be successful in that role, instructors should be properly trained not only on the technical aspects of these technologies but most importantly on the ways to effectively integrate them into their teaching.

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