

Social software: teaching tool or not?

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Summary

Social software, in means of software that enables people to connect with one another, exchange opinions and information online, has now become a recognizable phenomenon at the early stages of Internet evolution. Significant increase in use of various applications which these social services provide has been noted in the last few years. The goal of the survey was to find out how many teachers and students at universities in Croatia use social software and for what purpose. The research was also aimed at how often they use it and to check what are the advantages and flaws of social software in means of an auxiliary tool in education. Research was conducted during the spring of 2009 in form of an online survey for teachers and students at universities and academies in Croatia. The survey investigates respondent's familiarity with five types of applications: 1) social networks (Facebook, MySpace and LinkedIn); 2) media sharing site (YouTube, Flickr and SlideShare); 3) social bookmarking or tagging sites (Delicious and StumbleUpon); 4) wikis (Wikipedia); 5) blogs and microblogs (Twitter). 368 people participated, 100 teachers and 268 students.

Key words: education, social software, social networks, media sharing site, social bookmarking, tagging sites, wikis, blogs, microblogs, teaching tools.

Introduction

Our everyday lives are shaped by technology development. The flow of information and knowledge enabled by different types of media has changed throughout the history. This change was influenced by the technological progress that simultaneously reorganized the way media allowed information flow. For some time now, the networked media have been recognizable phenomenon of our society. The appearance of new forms of networked media, known as social software, can be seen as the following step in the information and knowledge exchange process.

Social software is a media with primary purpose to enable its users to connect and communicate in a networked environment. Such an environment changes the patterns of private and business communication, but also learning models and information and knowledge flow.

Universities are traditionally considered to be sources of new ideas and knowledge and places that gather unlimited potentials of young people. At the same time they are places organized on some traditional principles of sharing knowledge, and although incredibly innovative are slow to changes of any kind. It is obvious how the development of technology brings changes in media and how it influences the work of publishers, librarians, press release experts and marketing experts. The main question for us here is how this influences the work of a university. This paper will research the ways in which university teachers and students in Croatia respond to changes that social software brings regarding possible reorganization of the traditional models in the teaching process and the traditional forms of communication in that model.

Social software

In pre-technological era the vast transfer of information was possible only through oral communication. Printing press has changed all that allowing multiple copies to be easily prepared for their distribution. The next big step was made with the emergence of networked media that allowed completely new ways of information flow. This new media lets one be an information user and its creator at the same time thus changing the nature of an interaction between an information and its user.

Social media, known also as a social software, appears as a special form of networked media. It is a set of tools, applications and/or services that enables its users online interaction, information (or knowledge) sharing and exchange of opinions.

The development of social media is intertwined with the history of Internet. The first forms of social software were mailing lists, chatrooms and instant messaging that appeared in the 1970 (Boyd, 2008). However, the average user did not have an access to it until 1993 when the first browser, Mosaic, was built and the popularity of world wide web started to rise.

The peak of social software development and its broader usage happened in 2004 when the second phase of Internet development, known as web2.0, has started (O'Reilly, 2005). At that time, some new forms of social software started to appear. Among them are social networks, media sharing services, social bookmarking and tagging services, content discovery services, wikis, blogs and microblogs.

Social networks are a new genre of social software. In the past few years it has recorded a large increase in use. Its predecessors are considered to be online dating sites (Boyd, 2008). Uniqueness of this genre lies in the following properties: 1.) creation of public or semipublic user profiles within the system; 2.) creation of personal groups of contacts (one to one, one to many or many to many) with whom the user to some extent shares the same views; 3.) browsing the profiles of others within the group or within the system. This category

merges features of all the other genres of social software. Its most representative¹ examples are Facebook (2004), MySpace (2003) and LinkedIn (2003) all of which are included in this research.

Media sharing services have a primary role to enable its users exchange of different types of data. In this paper, this category is represented by the following services: Flickr² (2004), YouTube³ (2005) and SlideShare⁴ (2006).

Wikies are systems or programs with selforganized structures that allow its users to brows, create and edit different contents. The most representative example of this category is Wikipedia (2001).

Blog is a personalized network site written in the form of a magazine or journal, i.e. a system of published posts displayed in the opposite chronological order created by an author or a group of authors. This type of social software enables individuals to publicly express their opinions about certain views. It is, to some extent, identified with an amateur journalism. Collection of all the blogs makes the blogosphere which is again a type of social network.

Microblogs are a new form of blogs that enable its users to enter 140 characters long entries which are then displayed in the real time and are visible to their group of contacts. We have used Twitter (2006) as the most representative form of a microblog.

Certain shifts happened also in the area of **bookmarking, tagging and categorizing items** on the web sites. The set of key words or tags that describe each item are selected by the users in real time. In this way they themselves categorize the available contents. This procedure is known as folksonomy and it is an opposite form of a taxonomic approach to content categorization. The main representative of this category that we have included in our research is Delicious (2005).

Content discovery services allow the user to find the web content based on the given parameters. The pages that have been marked as positive by the users are the ones that are displayed. The main representative of this category is StumbleUpon (2006).

¹ In respect of its number of users.

² Flickr is a service that enables its users to store, organize, search and share photos, add comments and leave notes beside the photo.

³ YouTube is a service that enables its users to share videos ranging from educational to entertaining content.

⁴ SlideShare is a service that enables its users to share slides.

Research

Sample selection

The research was conducted during the spring of 2009. The total of 368 teachers and students of the Universities of the Republic of Croatia were included in the survey, 100 of which were teachers and 268 were students.

Age of student group ranges from 18 to 27 years. Most of them are students of technical sciences (38,43%) and social sciences (30,97%), followed by natural sciences (16,42%), humanities (12,69%), biomedical sciences (1,12%) and biotechnical sciences (0,37%). Regarding the gender, this group is made of 55% male and 45% female respondents.

The teacher group includes mostly young research and teaching assistants which leads us to conclusion that higher-ranking teachers either find the online surveys too demanding to use or not scientific enough. The respondents from this group come from the social sciences (42%), humanities (31%) and technical sciences (22%) and only small number from natural sciences (5%). In contrast to the students' group, this group is made of only 37% male and 63% female respondents.

Questionnaire

Separate online surveys were designed for teachers and students. The first set of questions were designed to investigate respondents' familiarity with different types of social software named and described in the previous chapter. The second set of questions was offered to find out how often our respondents use the social software and for what purposes. The last set of questions was to see what in their opinion would be the advantages and flaws of using social software as an auxiliary tool in education.

Results

We have divided our results in four separate sections that we will present here in the following order: familiarity, usage, social software as a teaching tool, and advantages and flaws of social software in education process. Graphical representations will be given where appropriate.

Familiarity

When asked if they are familiar with different types of social software and whether or not they use it, the answers within each group were the following: all but one student are familiar with social software and of that 86,09% actually use it while 13,53% of the students is familiar with social software but do not use it; 94% of teachers are familiar with social software, but within this group only 59% use it while even 35% although familiar with it do not use any of the above mentioned applications. Among students only one respondent (0,38%) is not familiar with social software while 6% of teachers are not familiar with it.

Usage

The most used services among the student group are YouTube (76,12%), Wikipedia (70,52%) and Facebook (64,43%). The most used applications among teachers are the same three services but in different order of popularity with Wikipedia on the first place (53%) than YouTube (42%) and Facebook (27%) followed by blogs (15%). In contrast to Facebook, usage of other two social networks is very rare among our respondents. Only 11,94% of students and 1% of teachers use MySpace and 6,34% of students and 7% of teachers use LinkedIn.

Reasons for using social software are given in Table 1 for both groups. It is very clear from the Table 1 that teachers and students both use the social software the most often for the data retrieval and information extraction and for the educational purposes. This is more popular way of researching and data extracting among students than it is among teachers.

High percentage of teachers and even higher percentage of students use the social software as a new communication tool for reconnecting with old contacts, making new contacts and maintaining the existing contacts. Students use all three types of communication more than their teachers. For reconnecting with old friends this tool is used 29,25% more by students, for maintaining the existing contacts 31,57% more and for acquiring new contacts 21,21% more.

The next reason for using social software is selfpromotion or organisation and promotion of social events. This is also more popular way of promotion among students than it is among teachers. Around 5% of participants in both group use the social software for some other purposes as well.

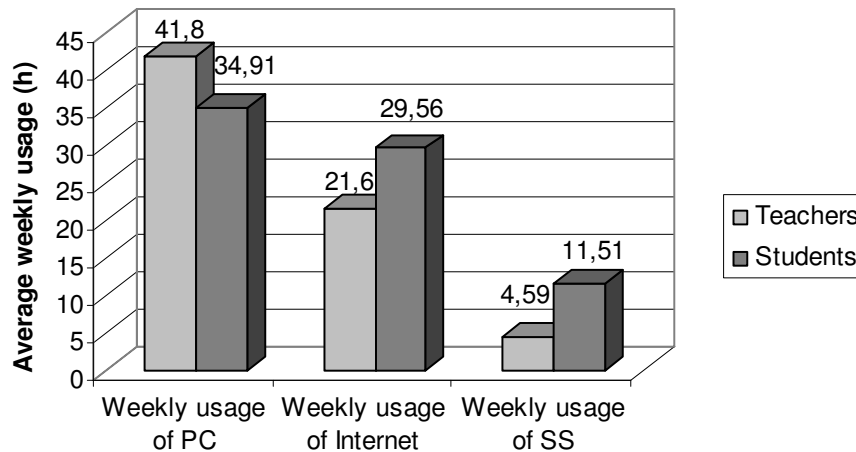
Table 1

Reason for using social softwaer	Teachers	Students
Data retrieval and information extraction	52%	70,15%
Education	36%	50,37%
Selfpromotion	4%	19,40%
Reconnecting with old contacts	20%	49,25%
Maintaining contacts	30%	61,57%
Conecting with new contacts	12%	33,21%
Organization and planning of social events	12%	34,33%
Other	4%	5,22%

Figure 1 shows the distribution of responses on the weekly usage of social software compared to the weekly usage of computers and the Internet in general. Students spend an average of 34.91 hours per week behind the computer, 29.56 hours use the Internet and 11,51 hours some social software application. Teachers on the other hand spend an average of 41,80 hours per week behind the computer, 21,60 hours use the Internet and 4,59 hours use

social software applications. Although students spend more time using the Internet and social software than their teachers, the average number of hours both groups spend behind a computer is close to the number of working hours in a week.

Figure 1



Social software as a teaching tool

96% of teachers answered the questions on possible usage of social software in teaching process. This group includes those teachers who are familiar and already use social software, and those who are familiar with it but do not use it.

18% of teachers do not consider social software to be of any use for educational purposes. Only 14% of teachers already use some social software in teaching process, mainly Wikipedia and YouTube (10%), followed by Delicious and blogs (2%), Facebook and Flickr (1%). Although 57% of teachers consider it useful, they still do not use it for educational purposes. However, they believe that online encyclopaedia Wikipedia (50%), video sharing site YouTube (31%) and blogs (16%) could be useful tools in teaching process. These types of social software are followed by Facebook (8%), Delicious (7%), MySpace (6%), Twitter and SlideShare (4%), Flickr and LinkedIn (3%) and StumbleUpon (2%). Remaining teachers did not feel comfortable at the time to answer on the questions concerning the educational usage of social software due to the lack of knowledge about these services.

Although students do not take part in creation of teaching process, we were interested to see their opinions on this subject from the user's point of view. It was interesting to notice that their answers were similar to those of their teachers. Thus, 64.02% consider possible educational usage of social software as a potentially good idea. Software that students would like to use in education

are Wikipedia (54.48%), YouTube (44.40%) and blogs (22.76%) followed by Facebook (18.66%), SlideShare (7.84%), Delicious (6.34%), Flickr, MySpace and LinkedIn (4.85%), Twitter (4.48%) and StumbleUpon (3.36%).

Surprisingly, 24.24% of students think that using social software for educational purposes is not a good idea, while 11.74% of students were unable to give an answer to this question due to the lack of knowledge about these services.

Disadvantages of social software – students

Students give six main disadvantages to using social software as a teaching tool (Table 2). The top disadvantage is further computerization of teaching process which would significantly reduce the quality of the same. In students' opinions teaching process should be as simple as possible and based on traditional teaching models without implementation of technological innovations. This way they believe that the gap between these who are computer literate and these who are not would be decreased.⁵

Some students believe that the main and only purpose of social software is entertainment and not education and as such can not be used for educational purposes. Others believe that social software would bring on further social isolation. They feel that implementing social software in teaching process would radically shift both students and teachers "from the real world to the virtual world" that would further reduce the already visibly reduced interpersonal communications between people in general.

There are also students that in social software usage recognize a problem of authorship rights and unreliable content. According to this group, problems of social software are unclear boundaries between public and private, relevant and irrelevant, visible and invisible audience, lack of temporal, spatial and social boundaries, etc. Their view can in a way be linked to the privacy issues that are seen by the next group of students as the main disadvantage to using social software. Since social networks do not allow individuals the full control over their personal information, it is only natural to ask oneself if the right of individual to protect his/hers own privacy is now dead. Or are we just embracing a more transparent society in which all aspects of privacy will no longer exist?⁶

And the last disadvantage of social software educational usage is the insufficient education of teachers about these new technologies.

Advantages of social software – students

⁵ Although, survey results for the computer literacy of working population in Croatia show that only 3% (n=631) of respondents age 17 to 24 do not use computer. (Algebra, 2009)

⁶ Visibility of personal information in certain types of social software is only partly a decision of an individual that decides which personal information will be visible to other members.

We can divide the advantages of using social software as a teaching tool, as seen by students, into three main groups of answers.

The first group is comprised of students who point out that the further computerization of teaching process will significantly improve its quality. Of course, this kind of teaching process demands good planning and understanding of possible usages of social software. It is also necessary to determine which type of social software is most appropriate for certain type of educational use. YouTube, Wikipedia and Delicious are examples of social software that students would like to use as a part of teaching process.

The second group of students indicates that information retrieval and sharing and a possibility for further discussion on given topic can only be seen as an advantage of social software in education. This would enable students to, within limited space of certain type of social software, publish student's papers, share additional educational resources that teacher has confirmed as relevant and continue discussion on given topic if such a need would present itself.

The last group of answers is given by students who believe that social software can provide them with more systematic monitoring of previously used materials but also as a motivation for learning via new networked media that puts them beyond the traditional academic methods of acquiring knowledge.

Table 2 Advantages and disadvantages of social software (students)

Disadvantages of social software (students)	Number of respondents
Further computerization significantly reduces the quality of the teaching process	26
Primary purpose of social software is entertainment and not education	19
Social isolation	16
Problem of authorship rights and unreliable content	8
Privacy problems	5
The insufficient education of teachers about new technologies	5
Advantages of social software (students)	
Further computerization significantly improves the quality of the teaching process	41
Information sharing and retrieval, discussion on a given topic as a help in learning process	19
A more systematic monitoring of previously used materials	7

Disadvantages of social software – teachers

Disadvantages of using social software in education as reported by the teacher group (Table 3) are almost identical to those reported by the student group. These are the lack of theoretical background about certain types of social software, an unreliable content, data security and authorship rights problems. Although the possibility of useful and relevant materials is not excluded, teachers strongly believe that information created in certain types of social

software (especially Wikipedia) is inaccurate, simplified, non-systematically organized and retrieved from unreliable sources.

As a disadvantage this group also notes an existence of e-learning platforms (such as Moodle) which are not too open and too wide as it is the case with the social software and thus present much safer environment to work within. Thus, they have no need for other, in their opinion, less safe and data questionable environments.

Some teachers believe that further computerization would reduce the quality of teaching process and stress out the importance of avoiding the misuse of new technology products.

Advantages of social software – teachers

Contrary to the previous group of teachers, this group indicates that further computerization would only increase the quality of teaching process (we had the same contradictory opinions in the student group as well). In their opinion some forms of social software can contribute to the dynamics of a teaching process if closely related to the course contents. They see the necessity in exploiting the new information-communication technologies in order to improve the traditional teaching and learning processes.

Some respondents have recognized social software as possible tools for information retrieval and sharing, possible discussions on given topics among teachers, among students and also among teacher-student groups.

Table 3 Advantages and disadvantages of social software (teachers)

Disadvantages of social software (teachers)	Number of respondents
Unreliable content, data security and authorship rights problems	10
Teachers lack of theoretical background about certain types of social software	10
Existence of closed e-learning platforms	8
Further computerization would only reduce the quality of teaching process	6
Advantages of social software (teachers)	
Further computerization would only increase the quality of teaching process	16
Information retrieval and sharing, possibility for further discussion on given topics	5

Conclusion

The goal of our research was to learn about Croatian University teachers' and students' attitudes towards using social software as a teaching tool. Although our respondents in both groups (teachers and students) were largely younger people, we were surprised to find out that they still do not use social software in the teaching/learning process as much as it would be expected in the present time. Our data suggests that this is mainly due to teachers' lack of knowledge about social software possibilities as a teaching tool.

Social software allows the student to be in the center of the dynamic learning process which is something that every educator should aspire to. At the moment, it is maybe the best to see it as an important enhancement to standard teaching process and to learning management systems such as Moodle, and not as their substitute. The potentials of social software in education and its benefits to both students and teachers are identical to those of the semantic web as explained by (Koper, 2004). Just by changing our view towards social software, or maybe better said, educational social software, we open up new approaches towards both teaching and learning as it can be seen in Dalsgaard (Dalsgaard, 2006).

To see only danger in reading web content and thus forbid using web as a source of information would be same as to forbid reading books since some of them may carry content that is inappropriate or even false. What we actually need and want to teach our students is how to find information and needed knowledge on the web just as we used to teach them how to find them in a library or a bookstore.

The times we live in are full of fast changes, especially changes in knowledge. What we can only hope for is that these changes are reflection of our own growth and improvement and that the tools we use will only be used to prosper.

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