

Utilization of Learning Management Systems & Social Networking Systems not only in the Process of Education

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Abstract: - Social software applications such as Facebook, Youtube, sharing photos on the web, on-line computer games, blogs, learning management systems have received a widespread attention. Social software has quickly become an inseparable part of a daily life not only of young people. It has been implemented in higher and further education to support teaching and learning processes. Strength of these applications lies in their possibilities in the area of social and cognitive stimulation of students. We investigated utilization of social applications and user's satisfaction with them. The two main areas surveyed in this paper were awareness of social networking systems among university students and the other rate of satisfaction with them. The aspect of education was intentionally incorporated. Social applications used in the higher and further education were surveyed. The contribution is one of the outcomes of Specific research no. 2145/2010 – “Construction of Identity and Contemporary Adolescent's Identity Experiments within the Framework of Social Networks”. This work was also supported by the project GAČR 406/09/0669 “Evaluation of the modern technologies contributing towards forming and development university students' competences. These researches have been run for two years by a team of researchers from two faculties - Faculty of Informatics and Management and Faculty of Education, University of Hradec Kralove. Data presented in this contribution were gained from 272 respondents. We believe the outcomes will provide readers with a general view of utilization of social networking systems including learning management systems in both the process of education and just in daily life as a common current activity. The findings relating to the evaluation - rate of satisfaction with these applications will be a significant contribution to research in the area, and provide us with a better understanding of online consumer behavior which will be beneficial to a suitable approach in further implementation of these applications into the process of education.

Key-Words: - education; eLearning; Learning Management System; research; university education; social network

1 Introduction

Social software applications such as Facebook, Youtube, sharing photos on the web, on-line computer games, blogs, learning management systems have received a widespread attention. Social software has quickly become an inseparable part of a daily life not only of young people. It has been implemented in higher and further education to support teaching and learning processes. Strength of these applications lies in their possibilities in the area of social and cognitive stimulation of students.

The contribution brings latest findings from the survey on social software applications and their satisfaction with them with special focus on their potential in the process of education.

The survey was conducted at the University of Hradec Králové, at its two faculties in the framework of large projects which will be described in the methodological section of this paper. Data from 272

respondents were collected and processed. Findings were accompanied by graphs which enable forming the idea of the described situation easier.

The organization of the contribution is as follows. In the next section we provide a theoretical framework into which we include a review of the literature. We report on research methodology in the following section consisting of several subsections: a research problem, research goals and a research tool. Then we provide results and findings, followed by conclusion.

2 Theoretical Framework

Since 2009 the research team of the University of Hradec Kralove has been solving the GAČR Project “Evaluation of the modern technologies contributing towards forming and development university students' competences”. The project focuses on researching the problem whether the appropriate implementation of eLearning into university education provides a positive

contribution to students' attitudes towards the process of instruction, influences developing students' key competences, and whether it leads to comparable students' achievements in the area of the cognitive process.

The objective of this paper is to present the research on utilization of social software applications and user's satisfaction with them.

In respect to the area we are exploring in this paper one influential issue is worth remarking. In the fast development of information technologies utilized on the Internet there can be observed a shift from one distinctive web application to a mosaic of social software applications. Two decades ago we experienced fascination with advances in new information technologies and development of the Internet and the World Wide Web. The computing environment got changed for both individuals and businesses. An invention of one web application became a distinctive milestone; the application was a search engine which was a smart solution how to cope with the enormous increase of web sites and information available [1]. Since that time there has been a considerable shift to quantity.

Currently plenty of web-applications are being developed and utilized; recent developments on the Internet manifest a significant social turn, a new concern with the social lives of users. Some oppose the opinion that social aspect is new; they argue that the Internet has always been a social space just now we are more aware of this social trait and options it entails, it is just a more trendy issue [2].

This paper deals with the technical innovations which are summed up under the terms 'Web 2.0' or 'social software'. Satisfaction of users with a web-based system is a standard key necessity and an important predictor of online consumer behaviour and the success of a web-based system to survive in a competitive business environment.

2.1 Approaches to the Use of Information and Communication Technologies in Academic Related Work.

A positive approach to ICT still prevails in 'academic papers'. The approach to ICT is usually elaborated from three aspects, pedagogical [3], social, and technical [4]. Their ratio varies according to the focus of the contribution. The most common positive attributes of ICT in the process of education are: modern, open, enormous potential, rich in motivation, creative, revolutionary, productive or challenging, enabling systematic work [5]. The process of instruction supported by ICT is considered suitable and beneficial for learners of all learning styles [6]. Tools and activities offered in the environment where the process

of instruction is supported by ICT are highly positively assessed because they enable tailoring the process of education to any learning style. When the social aspect is taken into consideration other distinctive strengths get revealed we mean the development of one's identity within the framework of social network self-presentation, communication and interpersonal relations in virtual space [7].

On the other side there is also a distinctive critical approach. N. Selwyn presents her rather sceptical view of the potential of computer technologies in her research. In spite of the fact that the potential of computer technologies to revolutionize university teaching and learning has long been celebrated, reality is completely different. She states that many university students make only limited formal academic use of computer technology. Moreover the use is limited, linear and not creative or productive as is generally presented [8].

Another critical point is brought in a wide survey stating that information literacy is still in its very beginnings despite all enthusiastic expectations from computer technologies. [9] The last in here listed sceptical author seems to be irritated by the cliché "that technological innovations promise to revolutionize education and that the potential of multimedia and e-learning can reliably transform the way we learn". He finds the achievements isolated and discouraging. The core of the problem is in an approach to computer technologies in education which is exclusively from a pedagogical-technological perspective and only tension between pedagogy and technology is highlighted. The tensions are complex and include distinctive social issue [2].

There are plenty of other worthy studies bringing both positive and negative aspects of social software applications in education [10], [11] [12].

3 Research Methodology

The study problem of the research, goals and sub-goals are presented in this section. The research tool is described in detail.

3.1 The Study Problem

The study problem of the research concerns various types of social software applications such as Facebook, Youtube, sharing photos on the web, on-line computer games, blogs, learning management systems which have received a widespread attention. Their implementation into the higher and further education to support teaching and learning processes brings not only benefits but also there is also adverse side of their utilization. In this paper we have focused just on the fraction of this issue. Before implementing new applications into the process of education it is important to be acquainted with the current situation, to what extent students are familiar

with them. In literature number of researches has been described but do they correspond to situation in our country? To what extent can we draw from them?

3.2 The Goal and Sub-goals

The goal of the research was to map the utilization of selected social software applications networking systems among university students at the University of Hradec Králové.

Two main sub-goals were to find out what the awareness of social networking systems among our students is and in case they know the software application what is their level of satisfaction with it.

3.3 Conduction of the Research

The above mentioned research has been explored for about two years by a team of researchers from two faculties - Faculty of Informatics and Management and Faculty of Education, University of Hradec Kralove within three scientific projects:

- "Evaluation of the modern technologies contributing towards forming and development university students' competences",
- "A flexible model of the ICT supported educational process reflecting individual learning styles"
- and a specific research "Construction of Identity and Contemporary Adolescent's Identity Experiments within the Framework of Social Networks".

Joint efforts of professionals from the two faculties led to forming a team which was able to deal with both technological and educational aspects.

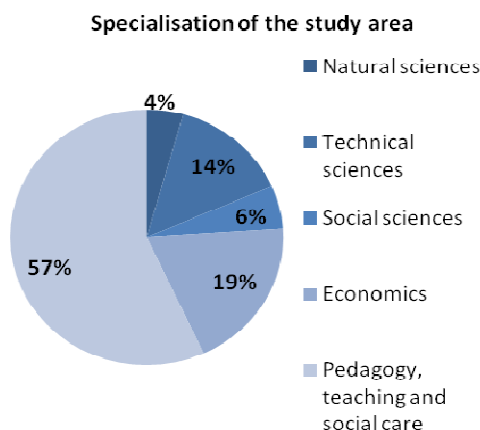


Figure 1. Specialisation of respondents' the study area

3.4 Research Sample

The research assessable sample consisted of 272 students of present and combined form of studies Faculty of Education and Faculty of Informatics and Management, University of Hradec Králové.

Male and female ratio 61% to 39% was in favour of women. The reason is that more participants were from the Faculty of Education with prevailing percentage of

women. 87% of students were in their first year of study. Fig 1 demonstrates representation of individual specialization.

3.5 Research Tool

A survey instrument was pilot tested with 40 undergraduate students. Hard copy questionnaires were distributed in class by the researcher. It took about 18 minutes to complete the survey. We checked formulation of questions, whether they are understandable and valid. Just minor adaptations were made.

The questionnaire itself was formed by the team of experts from the pedagogical, technology and psychology departments.

The next stage was creation of an electronic form of the questionnaire. The research questionnaire was then distributed by e-mail to students from the Faculty of Informatics and Management and from the Faculty of Education. While collecting the data, students were informed that participation in this study was voluntary and anonymous. As for demographic data, just data on gender, year of studies and specialization were requested. Students in follow up discussion informed us that it took them just about 10 minutes to complete the survey.

The questionnaire consisted of five parts:

- The first section contained set of software applications. Students were asked to mark whether they know individual software applications. If the marked 'Yes' then they were to chose the frequency of their visits.
- The second part concerned the level of satisfaction with the set of applications.
- The third part was focused on utilization of these applications in both their higher education and further education.
- The fourth part also dealt with the educational issue like the previous one. This time three areas were in focus; the level of students' satisfaction with study materials, ways of communication and testing options was explored.
- The last one concerned the demographic data.

4 Results and Findings

The results will be presented chronologically, according to the questionnaire.

The set of surveyed social software applications covered the following ones:

- Social nets like Facebook and Twitter,
- then Youtube as application enabling sharing predominantly music recordings and then presentations and instructions from various areas
- Wikis which can serve as platforms for knowledge integration

- Skype and ICQ as exclusively social communication application
- Blog as a form of online reflective diaries,
- Social-bookmarking fitting for storing and sharing web-links
- Sharing photos (on-line photo albums),
- On-line computer games like Second-life,
- Learning management systems like WebCT and Moodle. These robust systems are often hosted by the individual Institutions where they form an integral part of the overall course management.

A few questions were open so as we could get chance to learn more on issues we were interested in – like social nets and learning management systems.

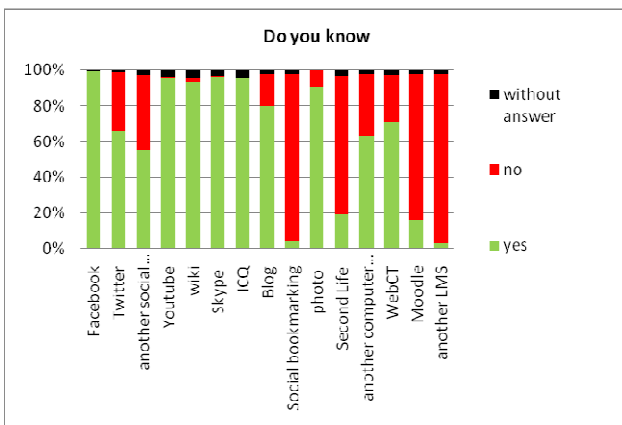


Figure 1. Applications that students know and do not know

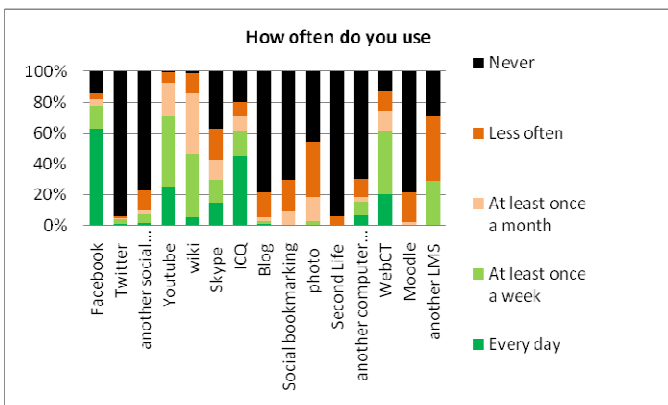


Figure 2. Frequency of using the applications

4.1 Awareness of the Existence of Selected Applications and Frequency of their Visits

In the Fig 2 we can see the general picture of the students' awareness of the existence of the surveyed applications.

- Facebook, wiki, Youtube, Skype, ICQ, share photos followed by blogs and learning management system WebCT are the most known applications.
- The absolute winner is Facebook reaching 99% closely followed by wiki, Youtube and

predominantly communication application Skype and ICQ.

Fig 3 is a graph which illustrates the frequency in using these applications.

We would like to point out that that awareness of the existence of the application does not mean that students use it.

- For example Blog, 80% of students know blog but only 20% use it.
- As for Skype, 96% stated that they know it but only 15% use it daily and 37% do not use it at all.

In the focus of our interest was the use of learning management systems. 70% of students know virtual space WebCT and those who use it, those use it frequently see Fig 4. More than half of them use it daily.

As for Moodle, situation is completely different. Currently this open-source e-learning software platform is being introduced into secondary schools and has been widely utilized at Czech universities. But this LMS is not established at our faculty and our students had not had any experience with it at the secondary school, as well. Only 16% knew that Moodle as a kind of LMS exists.

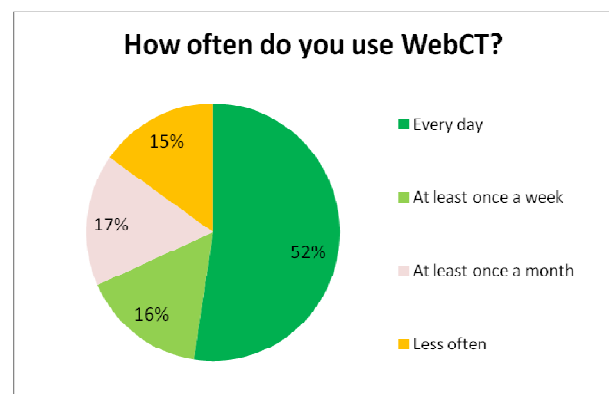


Figure 3. How often do you use WebCT

A history of Bookmarking as a method for organizing and storing resources on-line is short but anyway it has got a wide popularity abroad. The remark has to be done in here. Social bookmarking is surprisingly completely unknown application to our students. Only 4% of asked respondents knew this application.

On the other site wiki is a famous phenomenon among our students.

- Just 2% do not know this kind of social software (for example Wikipedia, WikiSkripta, PB Works).
- Only 1% out of those who know it does not use it.
- Nearly half of respondents use wiki once a week. Fig 5.

The gained results on wiki utilization are comparable to those concerning Youtube just the frequency of visits was higher. A quarter of respondents are on Youtube daily, 46% at least once a week, 21% gets there at least once a month and only 7% rarely visit these websites.

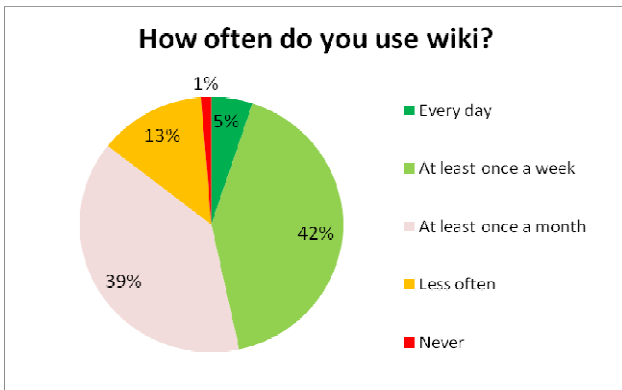


Figure 4. How often do you use wiki

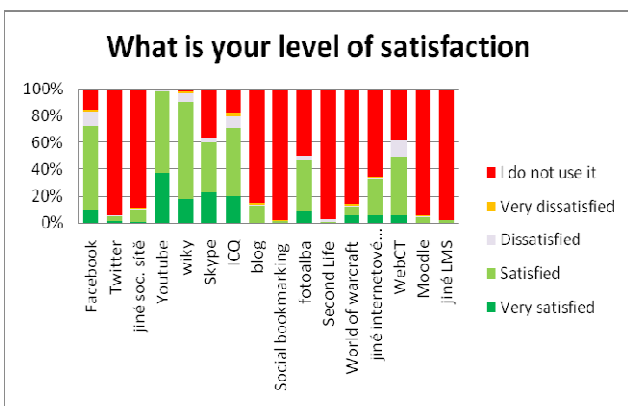


Figure 5. Students' satisfaction with applications

4.2 Level of Satisfaction with the Social Applications

The following widely explored area was the level of users' satisfaction with selected applications. The applied four-level scale was spread from full satisfaction to complete dissatisfaction.

When analyzing the level of satisfaction with the selected applications a few remarkable findings are worth highlighting, see Fig 6.

- The absolute winner is evident it is Youtube (37% of respondents are very satisfied and 61% satisfied).
- The other social software application highly appreciated by the respondents was wiki.
- As for Facebook, there is a quite high level of dissatisfaction with it which reaches 13%.
- This ratio of dissatisfaction is comparable to the dissatisfaction with WebCT.

4.3 Software Applications used in Higher and Further Education

The next findings relate to the specialized part of the research where the aspect of education forms the core.

- The strongest potential is visible in wiki, followed by WebCT (LMS) which drops 25% behind wiki.
- Youtube exceeds the threshold of 50%.
- The other promising software applications in higher education are ICQ and Facebook.

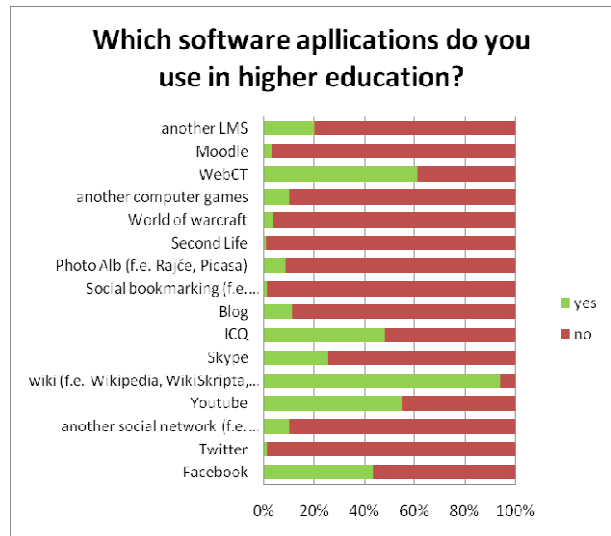


Figure 6. Software applications used in higher education

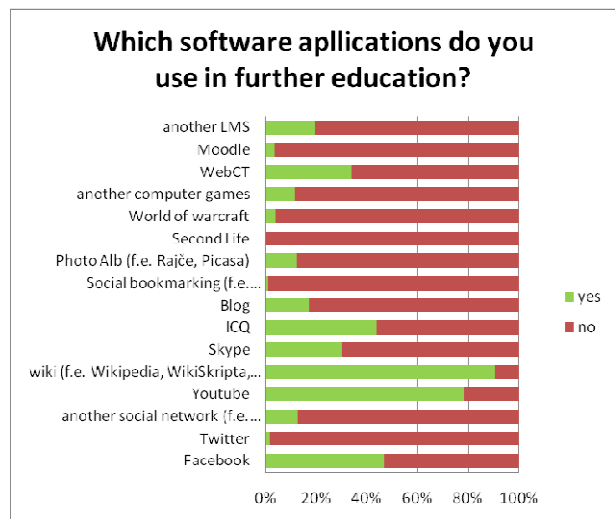


Figure 7. Software applications used in further education

Utilization of further education brings even higher data with the same leading applications.

- Wiki reaches nearly 95% and Youtube 80% of utilized applications so they prove to be the most beneficial applications in further education.
- LMS WebCT which is hosted by university is used apart from standard educational process relatively frequently. Every fourth student attends the site in his/her further education which sounds good and proves that the robust system is versatile and applicable in extra - classes activities.

4.4 Discussion

More than half of respondents use learning management system WebCT daily but 12% of them are dissatisfied with it.

As for the most widely spread social net Facebook it is visited daily by 63% and weekly by 14% so the rate of frequency is very high, so why is the level of dissatisfaction also rather high reaching 13% of answers? Youtube and wiki enjoy the highest frequency of visits and most popularity reaching the highest levels of satisfaction.

The strongest potential of social applications in higher education is visible in wiki, followed by WebCT (LMS) which is 25% behind wiki.

Youtube exceeds the threshold of 50% in utilization of social applications. The other promising software applications in higher education are ICQ and Facebook.

In further educations Wiki reaches nearly 95% and Youtube 80% of utilized applications so they prove to be the most beneficial applications in further education, as well.

What stays behind these results? Why wiki and Youtube are the most utilized applications?

It will be the starting point for the next stage in the research on social applications.

5 Conclusion

In this paper we have focused just on the segment of a large social application issue. Before implementing new applications into the process of education it is important to be acquainted with the current situation, to what extent students are familiar with them. In literature a number of researches have been described but do they correspond to situation in our country? To what extent can we draw from them?

We believe the outcomes will provide readers with a general view of utilization of social networking systems including learning management systems in both the process of education and just in daily life as a common current activity. The findings relating to the evaluation - rate of satisfaction with these applications will be a significant contribution to research in the area, and provide us with a better understanding of online consumer behavior which will be beneficial to a suitable approach in further implementation of these applications into the process of education.

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