SOCIAL NETWORKS IN THE PROCESS OF LEARNING: AN OVERVIEW

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Abstract: Modern trends in education require the use of modern tools to support the learning process. Teaching and learning methods are evolving along with learning tools in order to follow contemporary trends in education. The Internet is a phenomenon of modern society that shapes educational reality. Information technologies are involved in all areas of human activity as they play a major role in supporting the learning process. The emergence of the World Wide Web as the Internet service gave a significant momentum to new learning opportunities. Web-based tools complement the educational technology used for distance learning. In addition, communication enabled by computers, primarily the Internet, in the form of asynchronous and synchronous communication, has further transformed the learning process. The emphasis is on collaboration and communication, as well as an assumption that individuals perform their activities through connections they make. The rapid spread of ICTs resulted in computer-mediated social networks. Social networks are a means of communication and interaction among users, as well as places where information and ideas are generated, shared and exchanged. They emerge as the result of technologies that affect the ways in which we share or collect information. Hence, they change the way we learn. The largest number of users of social networks are young people, including students. The implementation and integration of online technologies, including social networks, is becoming more and more popular in higher education. As a result, they have become a part of students' lives. Social networks offer an alternative way of learning which is informal, mobile, flexible. It has no time constraints. Numerous studies have been conducted in this area, ranging from comparative analyses to instructions for adapting social networks to the learning process despite the differences in the number of users of social networks and the differences in their use in the learning process throughout different regions. This paper analyzes the use of social networks at tertiary education, including the frequency of their use, as well as how students use them and what are the potentials or possibilities of using social networks in the learning process. The results of the analysis can be used to formulate criteria for the use of social networks at institutions of higher education. The results of the research may be significant for the design or implementation of distance learning software solutions and, moreover, for the adaptation of the curriculum to contemporary learning needs. Different subjects require different approach to exploring socials networks as means of learning and communication.
Keywords: social networks, distance learning, e-learning, information technologies, higher (tertiary) education.

1. INTRODUCTION

The development and use of information and communication technologies have transformed modern society into information society, in which the creation, spreading, and manipulation of information is the major economic and cultural activity. Its main characteristic is that information and communication technologies play an important role in all spheres of life affecting both individuals and society as a whole. The level of development of the information and communication infrastructure is a significant indicator of the overall development of the society. The core of these technologies is the Internet. Millions of people around the world are constantly sharing a diverse range of relevant or irrelevant content on the Internet. Online contents are created, developed and distributed at enormous speed.

According to Internet World Stats on June 30, 2018, the Internet was used by more than 4.2 billion people out of the 2018 world population of 7.6 billion. Considering the number of inhabitants on continents, it is not surprising that almost 50% of the population that uses the Internet comes from Asia. In North America, 95% of the population has internet access, in Europe this percentage is 85.2, and in Africa it is 36.1%. The common feature for all continents and regions is the significant annual growth of Internet users. [1]

According to the Institute for statistics in Serbia, 3.9 million people (out of approximately 7 million inhabitants) used the Internet ove the last 3 months of 2018. In comparison to 2017, the number of Internet users in the Republic of Serbia increased by 1.4% in 2018. Observing the level of education among the Internet users, 90.8% of them has higher education, 83% has secondary education, while 46.9% has lower than secondary education. In terms of working status, the largest number of Internet users are students [2].

Information and communication technologies are very important prerequisite for successful implementation of many activities in the modern world, including lifelong learning, inclusive of e-education.

The term e-education is widely used to describe educational processes supported by information and communication technologies. For instance, it comprises Computer-Assisted Language Learning in the field of Foreign Language Acquisition. E-education is based on principles of cognitive science, artificial intelligence and pedagogy.
Analyzing the differences between distance learning and traditional learning, it can be concluded that there are advantages and disadvantages to these approaches to learning (Table 1).

Table 1. Advantages and disadvantages of distance learning [3]

Advantages	Disadvantages
• Possibility to get engaged into lifelong learning and development irrespective of time and place.	• Studies based on contemporary technologies require considerable investments.
• Possibility to learn at a learner's pace and according to his/her abilities and demands.	• Creation of modern learning tools is expenditure-consuming.
• Learning expenses are reduced.	• Not all students can afford to use the Internet.
• Teaching materials are available.	• Technological incompatibility can arise.
• Dissemination of innovations and achievements is achieved.	• Teachers' positive approach to distance education, adequate knowledge and qualificationa are a must.
• Cooperation among different institutions in managing their studies, common projects, or research is attained.	• New technologies require computer literacy and the use of foreign languages.
	• There is a lack of social contacts.

The most widely accepted approach to e-learning is the use of Learning Management System (LMS). It is the basis for a reliable e-learning platform. LMS is in compliance with the standards recommended by respectable educational and corporate institutions. In addition to using available LMS systems, many educational institutions use special software containing LMS elements, as well as additional elements related to the specificities of the given educational institution, which is part of the web portal.
In that respect, the factors that motivate universities to introduce LMS include:
• increased teaching efficiency,
• additional learning resources for students,
• opportunities to use advanced technologies,
• competition among universities,
• control and regulation of educational tools for teaching and learning [4].
Furthermore, a successful online course reflects interaction between the student and the teacher as one of the most prominent features. In addition to LMS and other distance learning software systems, interaction that takes place within social networks prompts their involvement in the educational process.

2. SOCIAL NETWORKS IN THE PROCESS OF LEARNING

Milions of users explore social networks on a daily basis to interact, share posts aimed at giving advice, praise, criticism, expressing opinions, etc. The use of social networks has evolved into a major cultural, social and economic phenomenon. Online social networks have become a global phenomenon with tremendous social and economic impact. Consequently, online social networks attract a great deal of attention among a wide variety of groups. The use of personal mobile phones (smartphones and tablets) increases the widespread use of current social networks (Facebook, Instagram), as well as the creation and design of new social networks. In addition, user mobility is one of the key features of smartphones and tablets.
Social networking, a newly coined term denoting the use of a website or application to connect to friends, family, colleagues, or people who share common interests, has created powerful new ways to communicate and share information. Social networking websites, including twitter as a free social networking microblogging service, are regularly used by millions of people, and it also seems that social networking will be an indispensable part of everyday life. As a medium for spreading information quickly, gathering like-minded people, encouraging change, distributing positive and negative information, a typical social networking site includes commenting, sending private messages, uploading, downloading, photo sharing, video sharing, blogging and instant messenger.
Today, facebook is the most popular social network and the second most visited site after Google. It is particularly popular with generations of young people who use social networks to build relationships in the community.
The use of other social networks is depicted in Figure 1. In the Republic of Serbia, personal use of social networks has a very prominent role in terms of personal Internet use. In that respect, 96.4% of the Internet population from 16-year-old to 24-year-old population, have an account on social networks (Facebook, Twitter) (See Figure 2).

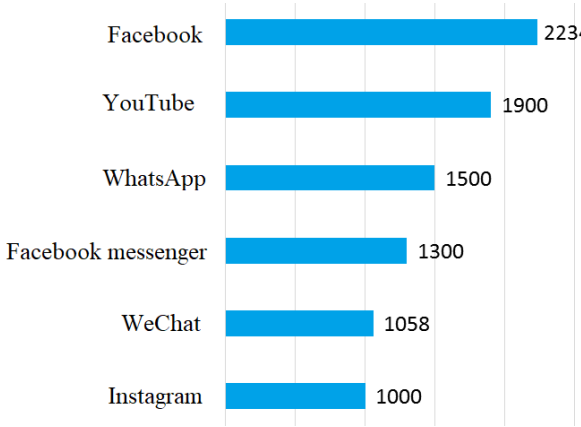

Figure 1. The most popular social networking sites worldwide, ranked by the number of active users (in millions) [5]

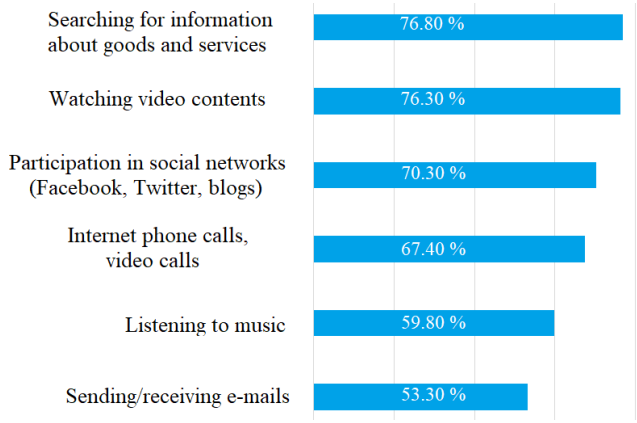

Figure 2. Types of personal Internet use in the last three months in the Republic of Serbia [2]

The widespread use and variety of social networks provide the basis for their use in many areas, including the field of education. The analysis of their application has been the subject of research aimed at improving the process of learning. Therefore, they can also be viewed as dynamic and interdependent learning networks. Social networks are a challenge in the teaching process at higher education level (tertiary level), because they are an integral part of students' spare time.

Technologically speaking, social networks are online services that offer free communication and collaboration among users. Numerous programs developed within allow users to connect and create a public or personal profile.

The comparison of Moodle as a distance learning system and Facebook is shown in Figure 3. Since their use has been widely accepted, there are features common to both of the systems.

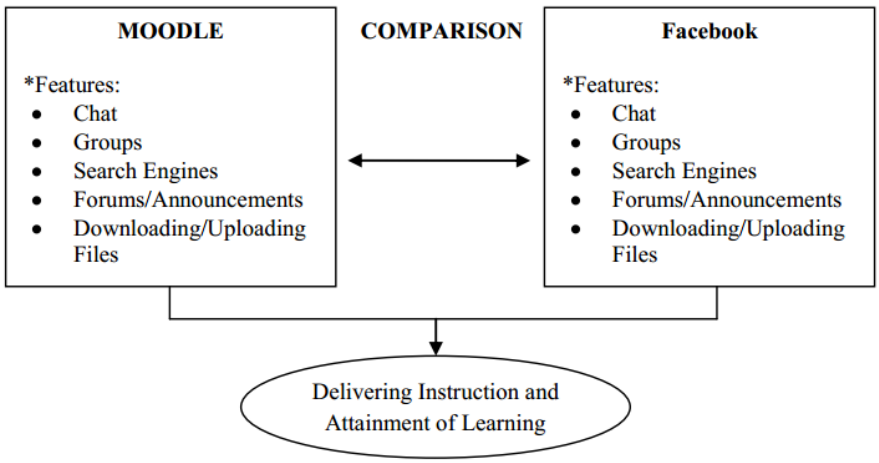

Figure 3. Characteristics of LMS of Moodle and Facebook [6]

Since social networks enhance communication, collaboration and develop problem-solving skills by linking different opinions, knowledge and attitudes of learners and/or teachers, the use of social networks in education changes the relationship between students and teachers in addition to changing the way students communicate and collaborate [7], [8]. Therefore, social networks could also be used as tools [9], [10], [11], [12].

3. RESEARCHING THE USE OF SOCIAL NETWORKS IN LEARNING AT TERTIARY LEVEL OF EDUCATION

Since the percentage of students that utilize social networks is high, it is important to analyze why, how and how often students use social networks in educational environment. For this purpose, a survey was conducted in the first semester of 2018. The participant were 48 students of College of Applied Professional Studies in Vranje.

The results indicate that the most frequently used social network is Instagram, followed by Facebook with slightly lower usage (Figure 4). However, the data for the world population promote Facebook as the leading social network (Figure 1).

As for the time spent on social networks (Figure 5), the largest number of respondents tend to use social networks continuously, while few respondents do not use social networks on a daily basis, or do not use social networks at all.

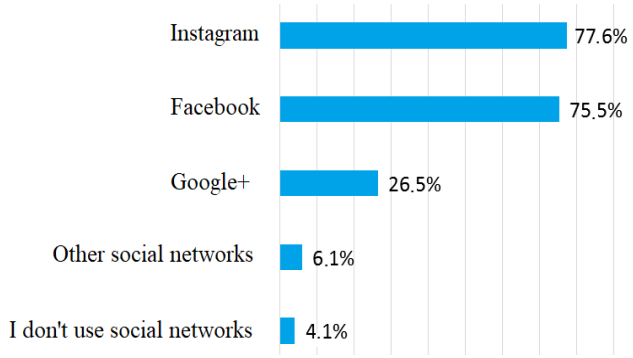

Figure 4. Social networks by respondents (in percentage)

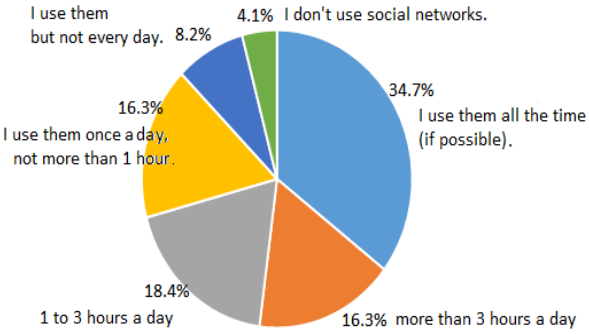

Figure 5. Time spent on social networks

The research was carried out among 78 students of College of Apllied Professional Studies in Vranje (Serbia) in 2018. The questionnaire contained two questions.

Data on how students obtain relevant information show that most of the information is obtained through College website bulletin board (Figure 6). The use of social networks is significant, with Instagram and Facebook being equally used while Google+ is being used by a smaller number of students. It is believed that older students (attending the second and the third year of study) are expected to make more use of social networks for personal and professional interaction than the freshmen, having previously established mutual and personal contacts and connections. Information is also obtained through mobile messages (SMS), while e-mail is the leased use tool, which shouldn't be ignored.

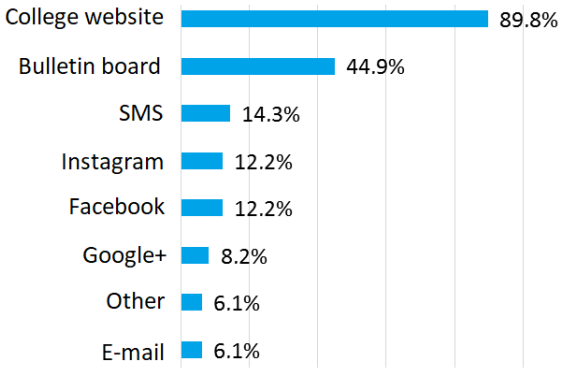

Figure 6. Tools used by students to obtain information

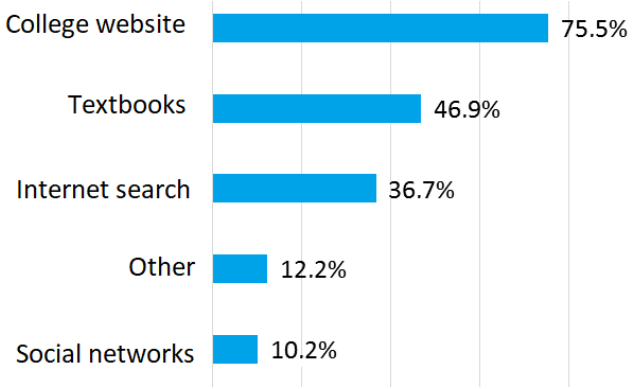

Figure 7. Tools used by students to obtain reading materials

Sources for downloading reading materials are the website and textbooks. These are most frequently used, whereas social networks are lagging behind, although their use is not negligible (Figure 7). Infrequent use of social networks in downloading materials can be explained by the fact that teaching materials are rarely posted on social networks by teachers themselves, as these are more often posted on the portal of the educational institution in question.

The results of the research which has been carried out may serve as factors for correcting existing distance learning systems based on the use of social networks. These could thus influence the process of improving the user interface, the integration of social networks into LMS systems and other software systems, the inclusion of various multimedia contents, etc. Therefore, the analyses of the use of social networks can be used not only for general advancement of distance learning, but also for achieving specific learning goals, where specific opportunities for implemetation are endless.

4. CONCLUSION

Although future directions of social networking development are unknown, the facts show that continual growth and impact of this social and technological phenomenon is expected. Social networks are a significant resource for distance learning. In addition to special content offered by websites and portals of educational institutions and specialized distance learning systems, social networks provide many opportunities in the modern educational process.

The analysis of the research conducted with a group of students confirms that social networks are significantly used in the learning process purposefully, for the exchange of information and educational material. Thus the results of the analysis can be used to improve learning and teaching processes, to pave the way for the use of social networks at tetriary level of educational more efficiently, and to improve other software systems for both teaching and learning.

The phenomenon of social networks and their use in the educational process imposes the need for constant research, adaptation and implementation, including the unavoidable issue of responsibility and prevention of misuse inherent in information sperading through the Internet.

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