Towards the use of selected social media in the process of education at a technical university - study of students' awareness and preferences

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ABSTRACT: This article presents the results of research conducted amongst the students of Lublin University of Technology (LTU), Lublin, Poland. The investigated topics covered the use of social networks as auxiliary resources in the process of education at the university level. Within the framework, learning was divided into *formal* and *informal* - special attention was focused on the second aspect i.e. *informal* education. The students' preferences towards the specific portals, as well as the reasons for using the outlined forms of communication and acquiring knowledge, are presented. The pros and cons of the social media reported by the respondents of the survey as the most important, are shown. The article results from the course *Application of Social Media in Teaching and Learning* offered entirely on-line during the winter semester 2017/2018 for PhD students at LTU from the University of South Australia, Adelaide, Australia.

INTRODUCTION

In recent years, social media have become an essential element of the modern Internet user's life. As of January 2017, the number of active social media users in the world was some 2.789 billion i.e. 37% of the whole human population and 74% of the total number of Internet users [1]. Compared to the previous year this number increased by more than 20%. The most numerous group of Internet users populates North and South America being 66% and 59%, respectively of the whole continent population. In Poland, 39% of all citizens use social media, which is 2% higher than the mean Internet user percentage worldwide [2].

After many years of the opinion that social media can be used exclusively for entertainment purposes, other possible applications were found as well. For example, manufacturers promote their products in social networks creating and reinforcing their image; informational portals compete for Internet users' attention by publishing breaking news; politicians try to gain popularity (and election victories) by distributing dubious news causing discussions and arguments amongst readers; employers check the social media accounts of their potential employees.

The largest group of Facebook users consists of persons aged between 18 and 24-years (562 million i.e. 30% of all Internet users) [1]. The users of Facebook have just finished their school education or are making their first steps into the job market or are university students. Social media are present in the life of every modern student, so the question arises: what influence do they exert on the education process? What portals are used most often for educational purposes? What aspects are the most important advantages for students and what aspects are the greatest disadvantages of social media?

SOCIAL MEDIA - DEFINTION AND A HISTORICAL REVIEW

Social media are defined in various ways, but every definition emphasises several common features. Social media are a combination of the complex technology and Internet applications used for transferring information amongst people within social networks. Their characteristic feature is that they are open access, which allows the content to be created and modified constantly on the Web. A highly important fact is that a user of social media is transformed from a passive consumer to an active prosumer by both creating and using the content on the Internet [3-6].

Increasingly, Web sites enable community-based input, interactions, content-sharing and collaboration in the Web 2.0 environment [7]. The following resources may be qualified as social media [8]:

- social portals (e.g. Facebook, Twitter);
- Web sites for sharing multimedia (e.g. YouTube, Flickr);

- tools for creating and publishing (e.g. wikis and blogs);
- aggregating contents and publishing via RSS (rich site summary) communication channels;
- combinations of tools for sharing and publishing.

The Web-service Classmates.com created in 1995 in the USA that was used for searching schoolmates may be considered to have been the first social portal [9]. As for Poland, the following facts important from the perspective of Internet communication took place: Gadu-Gadu Internet messenger appeared in 2000, as well as the first highly popular Polish social portals emerged: Fotka.pl (snapshot) in 2001, Nasza-klasa (our class) in 2005.

In 2004, Facebook went on-line and its Polish version appeared four years later. This event triggered a true boom of social media portals, such as: YouTube, Twitter, Instagram and Snapchat, and many more, which are still popular as well. The 2018 book by Lupton, Mewburn and Thomson, covered comprehensively the use of digital media in higher education, including applications of social media [10].

SOCIAL MEDIA - CURRENT TRENDS AND STUDENTS' PREFERENCES

The present article is based on research conducted in December 2017 among the students of the Departments of Electrical Engineering and Computer Science at LTU. The research was based on a questionnaire survey, conducted within a group of 175 students of age between 19 to 24 years. The *informal* aspect of education i.e. unorganised learning without a teacher and unrelated to an educational programme was the subject of the research. *Informal* learning is often defined as the process closely related to day-to-day activities involving work, hobbies or relaxation, as well as other activities, which sometimes are not even considered to be learning by students [11]. Due to that fact, the questions in the questionnaire were related to the use of social media outside the University, but still for purposes intimately connected with the education process, i.e. filling gaps in knowledge, additional learning, off-class group working and sharing information.

Popularity and the Usage

Results of the survey are shown in Table 1. The respondents reported Facebook to be the most popular social media portal amongst all social networks presented. 93% of respondents stated they use it frequently or very frequently. The obtained result confirms the world statistics: Facebook is the most popular social portal having about 1.871 billion active users [1].

Similarly, a high result was achieved by YouTube being reported by 35% of respondents using it frequently and by 52% as using it very frequently. Wiki services and forums are also in high demand, and Wikipedia is the most popular amongst them in Poland. Along with the portals listed in the questionnaire, it was possible for a respondent to report some other resource he/she prefers to use. More than 3/4 of respondents used that option, most of them pointed to the Instagram. The survey results are graphically represented in Figure 1.

Table 1: Use of social media by students.

	Facebook	Twitter	WhatsApp	Flickr	Blogs	YouTube	Google+	Forums	Wikis
Very frequently	72%	3%	1%	1%	10%	52%	17%	38%	25%
Frequently	21%	2%	2%	1%	29%	35%	18%	38%	45%
Rarely	5%	15%	8%	2%	36%	10%	26%	13%	26%
Never	2%	78%	86%	92%	23%	2%	38%	10%	4%
No response	0%	2%	3%	4%	2%	1%	1%	1%	0%

Purpose of Use of Social Media

Information exchange between students was the most frequently chosen purpose. This was indicated by over 92% of the respondents. However, the nature of the information was not related to the learning process itself, but rather to organisational issues, such as communication related to scores and deadlines. Along with that, when sharing educational information, it turned out that over half of the respondents (53%) did not discuss issues related to learning with their classmates and tended to avoid educational group work via social media.

Sharing files, such as instructions and notes, turned out to be another frequent motivation for using social media: 86% of respondents reported they use social media frequently or very frequently for that purpose. Also, 56-66% of the students taking part in the research pointed out that they use social media for filling up the gaps in knowledge, usually by viewing education-related channels and webinars (66%), reading blogs and forums (56%), as well as searching for news from their area of interest (56%). Results of the survey on the purpose of using the social media is shown in Table 2, and the main uses in decending order are graphically shown in Figure 2.
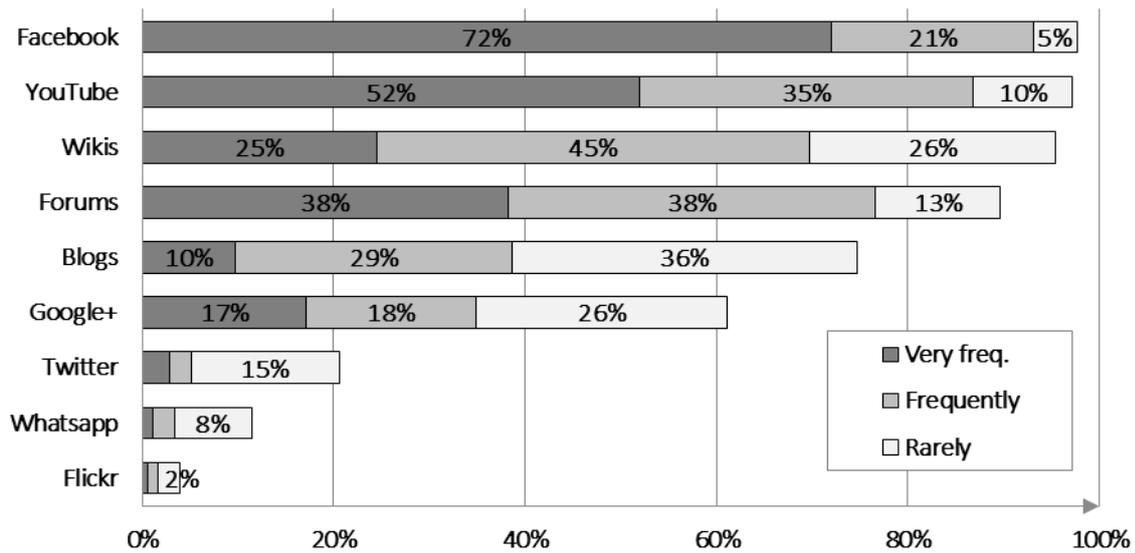
Figure 1: Use of social media by students.

Table 2: Purpose of use of social media.

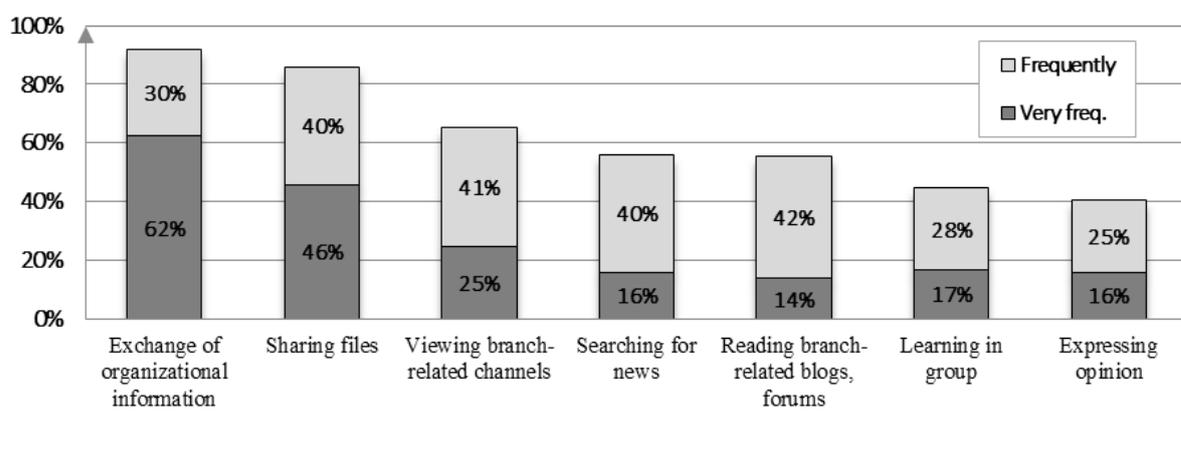|	Information exchange	Sharing files	Viewing educational channels of interest	Reading blogs and forums	Expressing opinion	Learning in group	Searching for news
Very frequently	62%	46%	25%	14%	16%	17%	16%
Frequently	30%	40%	41%	42%	25%	28%	40%
Rarely	5%	9%	28%	31%	46%	35%	32%
Never	1%	2%	4%	9%	12%	18%	9%
No response	2%	3%	2%	4%	2%	2%	3%

Figure 2: Purpose of use of social media.

Pros and Cons of Using Social Media

A large majority (70%) of the students, who took part in the survey, reported convenience as the most important advantage of social media. Convenience of use is understood as the ability to receive information and to interact with other users at any desired place and time. Almost 2/3 of the respondents stated that easy accessibility by means of mobile devices is the major feature that allows the use of social media in educational purposes on the day-to-day basis.

A similar percentage of the participants concluded that social media provide better interaction compared to traditional conversation or simple text, because the users of social media can exchange files, pictures and recordings, comment posts, and take part in group questionnaires in a very simple way. More survey results on the students' perceptions on advantages of using social media are presented in Figure 3.

The next series of questions covered the disadvantages of social media in relation to education. As shown in Figure 4, almost 80% of the respondents stated that social media often act as a distracting factor in the educational process. More than a half of the participants responded that information in social media can be unreliable and, hence useless, and 46% of the respondents noted that they prefer face-to-face meetings instead of on-line conversations.
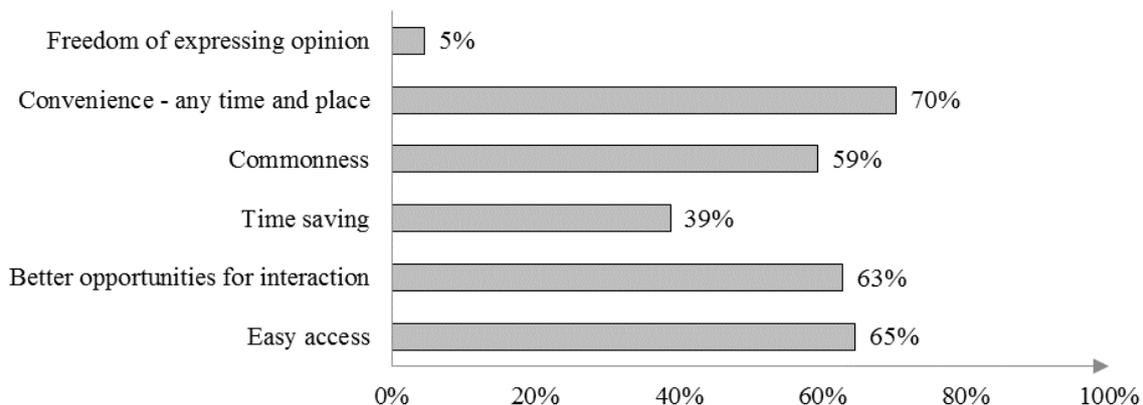
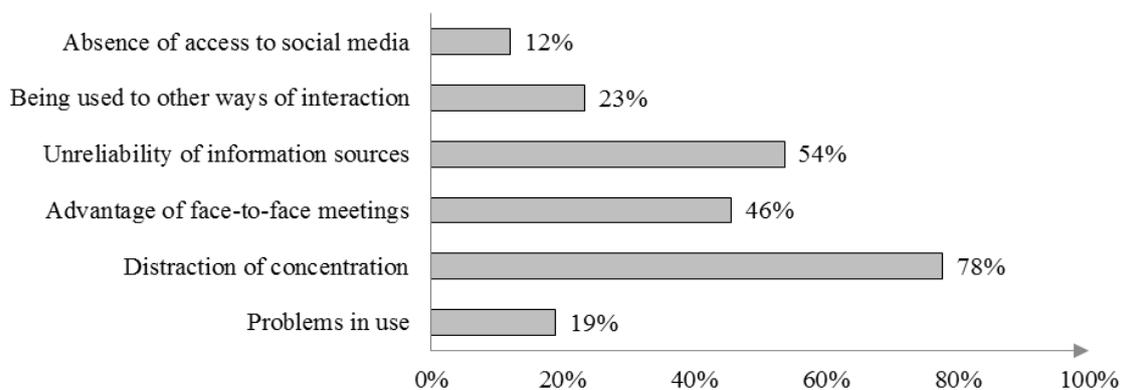Figure 3: Advantages of using social media in education.

Figure 4: Disadvantages of social media in education.

CONCLUSIONS

Informal learning plays an important role in the process of education at a university. A student needs to spend a lot of time outside the university, searching for information which is closely related to his/her field of specialisation and the job that he/she is going to take up after graduation.

This process of independent searching for knowledge is especially important in the field of technology, because technical knowledge is constantly developing, thus becoming increasingly more advanced. Engineers should take every opportunity to improve their knowledge and skills including the simple and easily accessible solutions, such as social media. Therefore, examination of modern students' preferences in respect to social media is an issue of high importance.

The education process also covers *formal* aspect i.e. learning with a teacher. However, this aspect was not emphasised in this article, because social media are not considered to be tools of education at Polish universities; hence, students' experience is not wide in this area. Almost 2,000 academic teachers took part in research conducted in the USA [12]. The research has shown high importance and significant potential for applying social media in education.

Similar research conducted amongst Polish school teachers provided positive results as well, and demonstrating that the teachers tend to use social portals in school education [13]. These facts show promising perspectives for introducing new tools to university education in Poland.

The results of survey presented in this article show that social media are highly popular amongst university students. Facebook and YouTube are at the top of the list. According to the results of the survey, the most frequent applications of social media are communication and file sharing, along with the use of social media as a source of additional knowledge.

However, learning in groups is quite rare application of social media. In accordance with the opinions of respondents, the most important advantages of social portals are the convenience and easy access via mobile applications.

The distracting feature of social media and unreliable information are reported to be the major disadvantages of using social media in education.

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