Facebook as a Learning Tool - Students' Perspective

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Abstract. *Popularity and adoption of social networks among young people, especially Millennials have been in full swing during the last decade. Many researches have shown that social networks, Facebook especially, can be successfully used for educational purpose, not just for leisure. The authors are interested in exploring the situation related to the use of Facebook in higher education in Bosnia and Herzegovina. Research is aimed to explore what students think about and whether they will accept and use Facebook in their education. The paper presents the results of research conducted among students of the Faculty of Economics at the University of Mostar in Bosnia and Herzegovina. The results confirm that students do not have a negative attitude and aversion to the use of Facebook in education, although the educational usage of Facebook is not everyday practice at the Faculty of Economics at the University of Mostar. The findings show that Facebook is already in use for the exchange of materials and information and that the students are ready for active implementation of Facebook for educational purposes, especially in communication with teaching staff, which would benefit for both sides.*

Keywords. Social network, student, higher education, quality in higher education

1 Introduction

Today's higher education institutions (HEIs) are faced with a great challenge – how to prepare students for entry into highly competitive, globalized, dynamic, high-tech, complex and interdisciplinary business environment. HEIs can respond to that challenge by equipping their students with appropriate skills, knowledge, values, and attributes. There is a strong drive to build and create knowledge together with understanding a working life and reformulating the concept of knowledge in education institutions. Namely, HEIs are bound to provide quality teaching that leads to learning outcomes and, above all, added value for their students (Gašpar & Mabić, 2015). In reaching that goal, social networks could be a useful tool. Social networks (SNs) could play a valuable role during the problem-based learning process, serving as a critical tool for information searching, organizing and analyzing data, and presenting solutions.

Many researches confirm the usefulness of social networks in higher education (Jones, 2015; Schroeder and Greenbowe, 2009; Chawinga, 2017; De Wever, Hämäläinen, Voet, & Gielen, 2015; Terrell, Richardson, & Hamilton, 2011; Waycott et al., 2010; Wheeler, 2010). Some of the research is focused on main drivers of social networks in higher education (Dumpit & Fernández, 2017; Tess, 2013), while others analyze the effects of social networks on the academic performance of university students (Lau, 2017). Some of the authors (Manca &Ranieri, 2016; Dzvapatsva, Mitrovic & Dietrich, 2014) have researched the potentials and obstacles of social media in higher education. Thus, Barczyk and Duncan (2011) explained that critics of social networks as an educational tool in HEI mainly stressed that social networks mostly offer poor reference material generated by unreliable sources. Some teachers saw social networks such as Twitter and Facebook as distracters to learning (Galagan, 2010), while others (Barczyk & Duncan, 2011; Harris & Rea, 2009) added challenges like absence of computing resources, disruption of web-based resources and plagiarism because of contents' openness and easiness of students' copy and paste. However, the most of authors think that it is more important to focus on how best social networks can align with lesson objectives or curricula (Kietzmann, Hermkens, McCarthy & Silvestre, 2011; Szapkiw & Szapkiw, 2011; Wheeler, 2010). Different authors (Chawinga, 2017; Tang & Hew, 2017; Menkhoff et al., 2014) analyzed the potential of Twitter in the teaching process.

Many authors have studied the application of Facebook for educational purposes. Thus, Chen (2011) presented how Facebook provides a common interaction environment for problem-solving and reasoning the people, which reflects the user satisfaction of Facebook and improved academic performance of the students. The study also presented that students found Facebook simple, suitable, user-friendly and effortless for academic discussion. The

study by Madge et al. (2009) proposed that Facebook could act as an important tool to assist students in settling in the classroom. They also proposed that Facebook could improve their teamwork and organizational skills. It is clear that the application of social networks and their integration into the educational process is nothing new in the world, but in Bosnia and Herzegovina (BiH) it is not yet in full swing. The reasons are manifold, ranging from missing infrastructure to personal views and beliefs. Infrastructure is the factor that can be reasonably improved with some efforts, but people's views and opinions are what is much more difficult to change. In order to improve the state, it is necessary first to investigate the current habits and attitudes of both students and teaching staff.

The main aim of the research was to explore what students at the Faculty of Economics, University of Mostar, think about and whether they will accept and use SNs for educational purposes. In addition, the aim was also to give a brief insight into their habits of using the Internet and social networks.

2 Methodology

The empirical study was conducted at the end of 2016 and early 2017 at the Faculty of Economics, University of Mostar. The convenient sample consisted of students of all study programs and all study years. Students included in research had experience related to the use of Facebook during some courses. Namely, some of the teachers at the Faculty of Economics have already created Facebook groups for their courses. They used Facebook for sharing learning materials, encouraging students' discussions about some themes related to courses. At the beginning of the survey, it was explained to students what the objective of the survey was and for what purposes the obtained data would be used. The survey was voluntary (students decided whether to participate) and anonymous. In total, 197 students agreed to participate in the survey.

The questionnaire consisted of questions on computer usage habits (how often, what activities, etc.), knowledge of SNs (what networks they use, how often, what they do on them, etc.), possible experiences in the application of Facebook during their education. In addition, students were offered a set of statements (Table 1) related to their views on the contribution of Facebook to the experience of education - in their opinion, how Facebook influence the communication process with faculty staff and quality of education. Students evaluated statement from 1 (completely disagree) to 5 (completely agree). At the end of the questionnaire, the student wrote gender and age. The questionnaire was designed by authors.

Table 1. The set of statements

(Code) Statement
(S1) Facebook contributes to the quality of studying
(S2) Facebook makes it easier to study
(S3) Facebook makes it easier to communicate with other colleagues
(S4) Facebook makes it easier to communicate with professors and instructors
(S5) Facebook makes it easier to exchange materials (text, pictures, videos, etc.)
(S6) Facebook encourages knowledge sharing
(S7) Materials available on Facebook are accurate
(S8) Materials available on Facebook are usable
(S9) Facebook should be extensively used during the study
(S10) Facebook should be the primary medium of communication with teaching staff
(S11) Facebook allows students to participate in the creation of educational contents
(S12) Facebook makes it easier to carry out teaching on schedule
(S13) Facebook stimulates the creativity of students
(S14) Facebook is a good source of information
(S15) Facebook contributes to a better performance of students
(S16) Facebook makes communication simple
(S17) Facebook makes passive participants active
(S18) Facebook expands views on education (during the study)
(S19) Facebook "pulls down" the walls of classrooms/buildings
(S20) It is good to share information on Facebook
(S21) The use of Facebook during the study cannot do any harm to me
(S22) I would recommend everyone to use Facebook
(S23) Facebook makes studying more interesting and active
(S24) I would recommend everyone to use Facebook during studies
(S25) Facebook should be actively used
(S26) Facebook has more positive than negative sides
(S27) Facebook can help me more than hinder me

Source: prepared by the authors

After technical and logical analysis, 185 questionnaires were accepted for further analysis; 8 questionnaires did not have any ratings with the set of statements and 4 questionnaires have grade 3 for all statements, so these questionnaires were excluded from further analysis. Data from the completed questionnaires were entered into a database in the SPSS for Windows (17.0, SPSS Inc. Chicago, Illinois, USA) which was used for data analysis. Descriptive analysis included absolute and relative frequencies,

measures of central tendencies (mean, mode) and measures of variability (standard deviation, the coefficient of variation).

Analysis of students by age and gender showed that the participants were 31.4% (n1 = 58) men and 68.6% (n2 = 127) women; considering that the survey was conducted among students, their age ranged between 19 and 25 years (4 students did not report their age, and 13 reported being more than 25 years old).

3 Results

Table 2 gives results about students computer usage habits (how often, what activities, etc.), knowledge of SNs (what networks they use, how often, what they do on them, etc.), and possible experiences in the application of SNs during their education.

Table 2.

		No (%)
How often do you use a computer?		
	every day	121 (65.4)
	several times a week	44 (23.8)
	less often	20 (10.8)
For what purposes do you use a computer?		
	entertainment	154 (83.2)
	learning	31 (16.8)
How often do you use the Internet?		
	every day	182 (98.4)
	< 1 hour	5 (2.7)
	1 – 3 hours	71 (39.0)
	3 – 5 hours	63 (34.6)
	> 5 hours	43 (23.6)
	several times a week	3 (1.6)
Everyday activities on the Internet		
	e-mail	60 (32.8)
	Facebook	164 (90.1)
	writing/reading in the forums	31 (16.9)
	online gaming	11 (6.1)
	reading news	111 (60.3)
	watching movies	6 (3.3)
	listening to music	132 (72.5)
	chat	168 (91.8)
	searching for information for the study	64 (34.6)
	reading professional texts	13 (7.1)

Source: author's calculations

The most prevalent programs (applications) that students most frequently use on their computers are various Internet browsers and the Microsoft Office suite, with the emphasis on Word. The response "I use Facebook" had an exceptionally high rate (to this particular question answer is given by more than 90% of students).

Personal profiles on Facebook have 96.8% students, 65.4% on Instagram, and 45.4% on YouTube. Other popular SNs (Twitter, LinkedIn and Google+) are slightly less common among students. Certainly, having a profile on SNs does not mean actively using it and. Since it was assumed that all 96.8% of students were also in the group of active Facebook users, a question about it was asked too. It is determined that only one of the respondents reported having a Facebook profile but not actively using it, so active users make 96.2% of the sample. It is similar with other SNs, with the percentage of those actively using them being slightly less than the percentage of students having profiles on them. In addition to the said networks, several students also reported using some other SNs not being offered in the responses, but they did not specify which social networks these were.

The students who actively use Facebook also briefly described their habits. Their results are presented in Table 3.

Table 3.

		No (%)
How long do you use the Facebook?		
	a year	3 (1.7)
	1-2 years	3 (1.7)
	2-3 years	12 (6.7)
	more than 3 years	161 (89.9)
Facebook friends		
	<100	7 (4.0)
	100-200	21 (11.9)
	200-500	82 (46.3)
	500-1000	46 (26.0)
	>1000	21 (11.9)
How often do you use the Facebook (post, share, comment, like, etc.)		
	every day	172 (93.0)
	< 1 hour	49 (28.7)
	1 – 3 hours	87 (50.9)
	3 – 5 hours	21 (12.3)
	> 5 hours	14 (8.2)
	several times a week	8 (4.3)
The primary reason for using Facebook		
	data and information gathering	78 (43.6)
	education	25 (14.0)
	self-promotion (personal data and photos posting)	5 (2.8)
	connect with old contacts	49 (27.4)

maintain contacts	126 (70.4)
connect with new contacts	51 (28.5)
planning and organization of social events	42 (23.5)
gathering general information	49 (27.4)
trendy, cool	21 (11.7)
Other	5 (2.8)

Source: author's calculations

The leading answers to the question "what do you do most often on Facebook" are "I chat," "I like posts," "I follow other's posts."

After the questions on the Internet and Facebook habits, students evaluated a set of statements on the contribution of Facebook to the experience and quality of the educational process (all students evaluated them regardless of their habits of using Facebook). A descriptive analysis of the statements is shown in Table 4.

Table 4. Descriptive statistics for the set of statements

	N	[min-max]	D	M±SD	CV (%)
S1	185	[2-5]	4	3.87±0.69	17.9
S2	185	[3-5]	5	4.13±0.86	20.7
S3	185	[3-5]	5	4.76±0.50	10.5
S4	185	[1-5]	5	3.97±1.04	26.2
S5	185	[3-5]	5	4.77±0.49	10.0
S6	184	[2-5]	4	3.92±0.86	21.8
S7	185	[1-5]	3	2.98±0.80	27.0
S8	184	[1-5]	4	3.61±0.80	22.0
S9	184	[2-5]	5	3.97±0.96	24.3
S10	185	[1-5]	3	3.02±1.11	36.7
S11	185	[1-5]	3	3.16±1.08	34.2
S12	185	[1-5]	3	3.45±1.02	29.6
S13	185	[1-5]	3	3.48±1.01	28.1
S14	184	[1-5]	4	3.59±0.88	24.4
S15	185	[1-5]	3	3.17±1.04	32.7
S16	185	[3-5]	4	4.35±0.58	13.3
S17	184	[1-5]	3	3.46±0.97	28.0
S18	185	[2-5]	4	3.59±0.80	22.4
S19	183	[1-5]	4	3.77±0.76	20.2
S20	185	[1-5]	3	3.03±1.07	35.2
S21	185	[2-5]	4	3.70±0.75	20.4
S22	185	[1-5]	3	3.56±0.93	26.1
S23	185	[2-5]	4	4.01±0.86	21.4
S24	185	[2-5]	4	3.89±0.72	18.5
S25	183	[1-5]	4	3.72±0.77	20.6
S26	185	[1-5]	4	3.58±1.02	28.6
S27	185	[2-5]	4	3.75±0.87	23.2
N – the number of the answer, D – mode, M±SD –					

mean±standard deviation, CV - coefficient of variation

Source: author's calculations

Most of the statements have the value of the coefficient of variation, which confirms that they have representative mean. The exceptions are statements S10, S11 and S20, but since their coefficient of variation is slightly above 33%, the mean is also used for their analysis.

Since almost all students reported usage of Facebook, they were asked to answer several questions about their current use of Facebook for educational purposes. Thus, it is determined that 94.9% of respondents reported usage of Facebook as an aid during the study, 91.3% for some formal and informal groups whose main topic is studying, and 79.1% of them believe that Facebook can be used as an aid in learning, specifically through various group discussions.

Irrespective of the offered statements, in the part of the questionnaire on Facebook habits, students were asked to specifically express (yes or no) their views on the application of Facebook for educational purposes. Thus, it is determined that 85.8% of students believe that Facebook would be good for exchanging information related to the university, 89.1% believe that Facebook is good for sharing of teaching materials, and 60.8% feel that Facebook improves their study experience, while 24.4% of students do not know how to answer the question.

4 Discussion

The results show that more than a half of students use computers every day, one quarter does that several times a week, while others reported doing that less often (Table 2). As for the reasons for their use, the students offered only two reasons: entertainment and learning, with entertainment being significantly higher (83.2% vs. 16.8%).

Certainly, the use of computers does not show the frequency of the Internet use, the latter being available on other devices, particularly on mobile devices among students. That is why the question about the frequency of the Internet use had considerably different results. Almost all of the students answered the question as "every day." In this matter, ¾ of the students reported spending on the Internet up to 5 hours a day, and the rest more than 5 hours a day.

As for the activities on the Internet, the answers indicate that correspondence and use of Facebook are the most common activities (with about 90% of students being engaged in it on a daily basis). Reading news and listening to music are practiced every day by about ¾ of students. The least common extracurricular activities on the Internet include writing/reading in the forums, online gaming and watching movies, while the correspondingly

uncommon study-related activities include searching for information for the study and reading professional texts.

However, if the results of the computers use are compared with the results of the Internet use, it is evident that computer is not the dominant medium for the Internet use and online activities, although it is relatively frequent.

The results show that students use Facebook, but not primarily for educational purpose. However, the fact that they use Facebook can be a leading promoter for Facebook usage in education. Namely, the previous research (Sánchez, Cortijo & Javed, 2014) showed that Facebook adoption positively influences the educational usage of Facebook. According to the results, students are relatively active on SNs, especially on Facebook that is used by almost all students.

Most students have Facebook profiles longer than 3 years, almost ½ of them have between 200 and 500 and ¼ between 500 and 1000 friends, every day they post something, comment, like, etc. and spend between 1 and 3 hours a day on Facebook (Table 3). According to students' responses, the primary reason for using Facebook is to maintain contacts and to connect with old and new contacts. Only 14% of students reported education as the primary reason for using Facebook.

The best-rated statement according to mean grades is the statement S5: "*Facebook makes it easier to exchange materials (text, pictures, videos, etc.)*," closely followed by the statement S3: "*Facebook makes it easier to communicate with other colleagues*" (Table 4). None of the students rated these claims lower than 3, and the variations in ratings are relatively small too, which shows that the attitudes of students on these issues are relatively uniform. In addition to these, the claims S16, S2, and S23 also have means greater than four, with grades 4 and 5 dominant in students' responses, which reflects the agreement of students. Certainly, the agreement is not full because a part of the students does not have the opinion (grade 3). It shows that students feel that Facebook greatly facilitate communication, regardless of whether it is direct communication through correspondence or indirect communication accomplished through the exchange of different materials. That implies that students recognize and use the essential characteristics of Facebook, and these are strong interactivity and collaboration that generally characterize Web 2.0 technologies which Facebook belong. Of course, the communication is live and bidirectional, and it is no wonder that students feel that such communication makes studying more interesting and active. These results are consistent with the findings of Irwin et al. (2012). They analyzed student's perception using a designated Facebook page as a learning resource in courses at the Griffith University in Australia. The results of their research showed that students are receptive to incorporating Facebook into their courses. Students perceived the benefits of using Facebook through enhanced communication, interaction, and flexibility in course content delivery (Irwin et al., 2012).

The statement S7 was rated the lowest: "*Materials available on Facebook are accurate*." (mean 2.98 with dominant grade 3). When interpreting this result, one should take into account the assumption that students consider materials to be all materials available on Facebook. In this case, this result is acceptable because it shows that students are aware that only authorized materials and materials prepared by professionals can be considered accurate, high-quality and credible. That implies sharing of materials in groups created with the specific purpose and for a select group of people.

The results in Table 4 generally show that students have a relatively positive opinion on the application of Facebook during their education (studying). They find that Facebook significantly facilitates communication, primarily with colleagues, and then with teaching staff too. They believe that Facebook can improve the experience of studying, and a part of students feel that they can significantly contribute to a better performance of students by activating students in the exchange of data, information, ideas, opinions, positions, and knowledge as well as in the creation of new and innovative content for teaching. In addition, a significant number of students perceive Facebook as a tool for encouraging students to think outside of the box, which extends education beyond the classroom and outside of the bounds of what teachers transfer through various forms of teaching. Therefore, it is no wonder that students believe that Facebook should be extensively used during the study and would recommend everyone to use them. In addition, students agree more than they disagree that the advantages and benefits of Facebook overcome their negative sides and that their use can be beneficial more than frustrating. These results are similar to findings of Madge et al. (2009) and Chawinga (2017). Madge et al. (2009) proposed that Facebook could improve students' teamwork and organizational skills and act as an important tool in assisting students in the educational process. Chawinga reported that if appropriately deployed, Twitter and blogs emerged students to share and discuss course materials, post their course reflections and interact amongst themselves and with their teacher 24/7.

Despite the relatively positive attitudes of students towards the application of Facebook in the educational process, it should be noted that, in their opinion, Facebook should not be the primary medium for communication with teaching staff. Namely, new methods and media of communication, which are directly determined by the rapid and continuous development and impact of information technology, should complement the existing formal communication.

As it is presented in Table 4, the statement directly implying that Facebook contribute to the quality of studying (S1) is also offered. The mean grade of this statement is 3.88, with the range from 2 to 5 and four as the dominant grade. Not a single student reported being completely opposed; there are skeptics, but these results indicate the fact that students are very favorably disposed towards the application of Facebook during studies, which greatly enriches their study experience.

Almost 95% of respondents stated that they use Facebook for educational purposes; concretely each student is a member of at least one informal Facebook group in which discuss the themes related to study. More than ¾ of students thinks that the use of the Facebook is welcomed at the faculty, especially in the context of information and teaching materials sharing. Additionally, more than half of students think that Facebook improves their study experience.

5 Conclusion

So, students, could Facebook contribute to the quality of higher education?

The results show that there is a part of students who do not agree with it or at least do not agree with all of the given claims, but even these responses are sufficient for a positive answer to the question. Namely, students have recognized the significance of Facebook in promoting communication and sharing information. Additionally, the students' answers show that the use of Facebook during their study is not a novelty for them, because they already use Facebook for sharing useful information and teaching materials. Certainly, although the questionnaire was focused on the positive aspects of Facebook, students are evidently aware of their negative sides too. However, since the advantages of Facebook prevail, their use can be beneficial more than frustrating.

Based on the results of this study, it could be concluded that teaching staff at universities should take significant steps to increase the use of Facebook, as well as other social networks, at work. Certainly, the goal is not to adjust the educational process to SNs but to take the full advantage of SNs as a tool that can provide satisfaction and improve the experience of all interested parties, which will significantly reflect on the quality of the educational process.

One of the limitations of this research is the size of the sample. All the students who participated in this research come from the same institution – the Faculty of Economics at the University of Mostar, so findings cannot be generalized. Future research should include participants from different faculties and universities in Bosnia and Herzegovina.

Another limitation is a focus on specific SNs - Facebook. There are many other SNs, and their use and impact on educational process could differ.

However, since this research has not looked into attitudes of teaching staff, but only into views of students, that is what further research should do. It would be necessary to investigate the views and opinions of teaching staff on Facebook in general, their activities on Facebook and the extent to which they support the idea of using Facebook as a medium that can help improve and facilitate studying, but also bring improvements in the field of quality of education.

Similarly, the future research should also focus on negative aspects of the application of Facebook, as well as other social networks, both in everyday life and in the sphere of education.

The future research could be conducted among alumni, or people who studied at the time when there were no SNs and information and communication technologies were not used to such an extent. It would be interesting to know their opinions on past and present possibilities and ways of sharing information, materials, and knowledge. Their answers could be compared with the answers of today's students, which would yield clues about the influence of information and communication technologies on the educational process, and it would be possible to identify the changes they made in education.

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