

Adoption Of Social Networking In Education: A Study Of The Use Of Social Networks By Higher Education Students In Oman

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ABSTRACT

The use of social networks is a growing phenomenon, being increasingly important in both private and academic life. Social networks are used as tools to enable users to have social interaction. The use of social networks (SNs) complements and enhances the teaching in traditional classrooms. For example, YouTube, Facebook, wikis, and blogs provide a huge amount of material on a wide range of subjects.

This research aims to explore the need to change the traditional style of teaching and learning after the innovation of Web 2.0. The main objectives of this research are to discover the motives for the use of social networks by higher education students in Oman, to recognize the impact of social networking tools in learning and education generally, to analyse the problems that students might face when using social networks, and to determine whether the traditional learning methods need to be changed in the era of Web 2.0 technologies?

In order to achieve the objectives of this research, the research methodology is to conduct a survey amongst Omani students at different universities, colleges, and other higher education institutions and to explore the social networking tools that might have an influence on teaching and learning styles. The type of data collected will be both quantitative and qualitative. This study is based mainly on the student's perspective - the impact on students of using social networking tools and what effect it has on the traditional style of learning and teaching.

This study highlights the benefits of using social networks as tools for developing a new style of learning, and the negative impacts that can affect the process of learning, in order to provide a justification for using social networks in higher education.

Keywords: Social Networks; Social Software; E-Learning 2.0; Web 2.0; Connectivism

1. INTRODUCTION AND BACKGROUND

The use of social networks is a growing phenomenon in both private and academic life. Social networks refer to tools used to enable users for social interaction. The use of social networks (SNs) complements and enhances teaching in traditional classrooms. For example, YouTube, Facebook, wikis, and blogs provide a huge amount of material on a wide range of subjects. Students can therefore turn to any of these tools for further explanations or clarifications. Virtual tools, such as Moodle/Sloodle, helps students to keep in touch with their classmates and teachers/instructors in a participatory environment in which these tools help the material taught to become easily accessible to all users at anytime and anywhere. In this environment users, and especially students, can ask or post questions and queries and they will be answered by their fellow classmates or teachers/instructors. In

addition, teachers can have a great time grading quizzes and exams. They can measure class participation in this way and give comments on any subject for the purpose of teaching and spreading knowledge. Facebook, Twitter, and other tools can be utilized in a similar way. Many other SN tools, such as collaboration, online surveys, crowdsourcing, bookmarking and citation, document sharing, and online storage, can be employed to enhance the education process in a way that was not possible before.

It is important to realize the difference between user-generated content (electronic media) and existing content (traditional media) in order to make decisions about the most efficient way of learning and receiving knowledge. Users can have many social media tools at their fingertips by using their computers and mobile devices, and these tools have become quite widespread. Nowadays, the most used interfaces are Facebook and Twitter. Facebook gives users a chance to create their own profiles and to interact with other users. In contrast, Twitter is a social media interface which allows users to share a small amount of content in a quick and easy way. The importance of these interfaces and other tools has become focused on in the education sector, specifically by higher education students. They have changed the way of learning through providing free courses on their websites and, furthermore, they allow students to interact with instructors and other students to gain and share their knowledge.

Social networking systems are becoming very popular nowadays and many people are attracted to them. They are used for all sorts of purposes by different people, and it has been said by social networking advocates that “if you are not on social networking, you are not alive.” Many educational institutions are putting great effort into adopting such technologies to communicate with their teachers/faculty members and students, as well as parents, to provide better services.

The main objectives of this study are to discover the reasons why students in Oman use social networking tools, to recognize the impact of social networking tools on the methods of learning and education generally, to analyse the main problems that students face when using these networks, and to determine whether or not the traditional learning methods should be changed in this era of Web 2.0 technologies. Thus, mini-case studies will be conducted in the high educational institutions in and around Oman. In these case studies, the researcher will ask students the following questions.

Taking into consideration the motivations for this research, the aims and the objectives, the researchers accentuated the following research questions:

1. Do you use social media tools at all?
2. What is your main reason for visiting these kinds of social networks?
3. What are the main problems of using social networks in education?
4. Why do you think that shifting your learning style from traditional to online will bring benefits?
5. What are the positive and negative impacts of social networking on education?

After the brief introduction above, the following section provides an account of the existing literature and related research, followed by the methodology employed in this research study, the research findings, and observations and findings on the impact of social networks on higher education.

2. LITERATURE REVIEW AND RELATED RESEARCH

2.1 Social Networks in Higher Education

In the few past years, there has been rapid growth in the availability and uptake by many colleges and universities of teaching their courses to their students online, and the effectiveness of learning by using different social networking tools has increased due to the increase in provision of these electronic courses for students. As the world has changed from earlier ages to today’s highly technological world, learning has also changed from the traditional classroom methods of learning to distance learning, and now to online learning. With the increasing popularization of computer technology, the way of classroom teaching has also changed from plain lectures to multimedia presentations. Also, with the technological advancement and the Internet, the world has become a vast storehouse of information (Tham & Werner, 2005).

Online learning (or E-learning) provides many opportunities that were not possible before and opportunities to learn from a reputable university - or from across the state or country - can be extremely valuable. Social networks for learning are social structures consisting of nodes that represent relationships between individuals (or organizations) within a certain domain (Liccardi et al., 2007). Ellison (2007) defines social networking sites as “web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system” (Ellison, 2007). Social networks are not used for communication only, but are used in education too. Typically, intuitions, colleges, and universities are taking action by providing suitable materials, locations (classrooms, labs, and lecture halls) and people who can teach their students (Liccardi et al., 2007). All activities can be ‘face-to-face,’ but many also are mediated by social networking technologies, including peer assessment, discussions, and collaborative work (Liccardi et al., 2007). Liccardi states that 30% of students use social networks to communicate with other students (trading posts on blogs, for instance) while more than 52% use online videos, podcasts, blogs, and wikis (group-authored websites) during class time (Blankenship, 2011). Studies also show that social networking tools support educational activities by making interaction, collaboration, active participation, information and resource sharing, and critical thinking possible (Mazman & Usluel, 2010).

The main three top social networks in education are Twitter, Classroom 2.0, and Facebook (Kapuler, 2011). Students often use global social networks (i.e., Facebook, Twitter, YouTube, Classroom 2.0, etc.) for different purposes and around 60% of these students say they use social networking tools to discuss classes, for learning outside school, and planning for college (Masic et al., 2012). Students also report that they are using chatting, text messaging, blogging, and online communities, such as Facebook and MySpace, for educational activities, including collaboration on school projects. Facebook, Twitter, and YouTube are the tools most used by the students because users, and especially students, interact and exchange knowledge in very easily accessible ways (Yuen & Yuen, 2008). The following subsections provide some details about the most popular social networking sites.

2.1.1 Facebook

Facebook is a popular networking tool that is used for communication, exchanging knowledge and sharing information, with special features such as being able to chat with different people all around the world. The reason for choosing this tool is that most higher education students interact effectively with it, as mentioned above. Online social networks have offered brilliant opportunities for users through the interaction between them. However, these networks seem to attract non-users as well because they recognize that there is a high level of security in place because you can check if an account really belongs to a certain user by sending a code to the user's mobile phone. People around the world, young and old, are willing to use Facebook for different purposes, such as chatting and sharing information in different sectors like engineering, nursing, infrastructure concepts, business, and even education. Many organizations are also interacting with Facebook through offering hundreds of sites for communication, finding friends and jobs, and so forth. A study by Acquisti and Gross (2006) illustrated that 87.4% of the users had heard about Facebook and only 12.6% of the users had not. In this study, Acquisti found that 70.8% had a profile on this website, 26.7% had never had one, and only about 2.5% had once but then deactivated. Many students nowadays are attending courses through having an account on Facebook and meeting instructors and other students. In addition, they are sharing what they have learned through these courses and are benefitting other students by supporting the material with photos and videos (Acquisti & Gross, 2006).

Another use of Facebook is uploading materials for entertainment. There were interesting data collected in Liu's study about uploading files and having fun by using Facebook. The data showed that users had an average of 248 friends and had uploaded an average of 363 photos. Also they had about 185 status updates, 66 links, three notes, and two videos. The study also found that 45 users had uploaded fewer than 10 times. These data helped to clarify what kind of activities users usually do online (Liu et al., 2011). Hughes realized through his study that sociable users will look to use Facebook. However, less sociable individuals will be more attracted to use Twitter. These two results may be because the different styles of the two social networks. (Hughes et al., 2011).

2.1.2 Twitter

Twitter is one of the most popular services in micro-blogging, with the motto: “The best way to discover what’s new in your world.” This service was designed by Jack Dorsey in March 2006 and it was launched in July of that year. The main objective of designing this service is to share short messages constantly between friends. These messages can play an important role for the users, especially for students in colleges, universities and institutions, in receiving short news items about anything at all, such as business, health, fashion, etc. They can receive a brief summary about any course they need by receiving them through Twitter. A study of Goroshko and Samoilenko showed that Twitter is the fastest-growing website, with a growth of 1,382% monthly, but it only manages to hold onto 40% of its users. Regarding the languages used, 70% of the tweets are English messages, followed by Japanese and Spanish. These data show how important Twitter has become in recent years and the many different objectives of using tweeted messages (Goroshko & Samoilenko, 2011). It should be noted, however, that less than 0.05% of the user population is attracting about 50% of all the attention on Twitter (Wu et al., 2011).

The Twitter service has helped its users through the provision of several tools. The first tool is ‘Opinion Finder’ and its role is to analyse the text content of many tweets submitted by users on a certain day to provide a positive and negative daily time series of the public mood. The second tool, GPOMS (General Process Modelling System), also analyses the text content of tweets to give a six-dimensional daily series that provides a more detailed view of the different dimensions of mood. The most important thing is to determine whether the public mood of the large-scale collection of tweets that are posted on twitter.com is adding any critical value for the readers. The results showed that users tend to scan large scale of Twitter feeds and respond to a variety of socio-cultural content. However, much of the current analysis taking place is facing geographical and cultural problems, so the analysis will have to factor in location and language to avoid geographical and cultural sampling errors (Bollen et al., 2011).

2.1.3 YouTube

YouTube is a social network tool which helps users download or upload videos as well as enables them to interact by commenting on other videos. In addition, by linking up with ‘like’ users, you can find out which videos impress them. YouTube provides a huge number of features to help different categories of users to discover their videos of interest. YouTube can obtain the data for how people use these features, which helps it to improve its service. Along with general users, students can access YouTube videos in different ways, such as by using Google search or Facebook via laptops and mobile devices, and also by using features that are provided on YouTube itself, in order to learn more about certain subjects. They can see lectures, programs and conferences to obtain detailed information and additional knowledge. A study by Zhou presents a most useful source of opinions on video views, and the majority of these contributions consider and discuss the relevant statistics and data. The percentage of YouTube video views in search is 66.88% and 56.06% for related video. However, video views from outside YouTube, like Google search, Google video search, Facebook, and other sites, have a percentage of 7.6% only (Zhou et al., 2010).

2.1.4 Classroom 2.0

Higher education students tend to be part of “Net Generation” and use many tools that help them learn and aid them when they are choosing a career. Because students are more plugged into the technology and SN tools, web developers have been challenged to make as many resources available as possible for students (Rhoades et al., 2008). The developers face the added difficulty of trying to fit the use of the technology into classrooms. Despite the fact that students have increased their use of the technology in their courses, there are many students who still see Web 2.0 as a social networking tool and use it in their classrooms without enjoying it. Rhoades’s study finds that students can take advantage of using podcasts in their classrooms but are often not yet experienced enough to actually use this tool in a beneficial way (Rhoades et al., 2008).

2.2 The Positive Impact of Social Networking in Education

The influence of social networking has been illustrated by the use of three models (Cheung et al., 2011). ‘Subjective norm,’ ‘group norm,’ and ‘social identity’ models have all shown the impact of social networking on

peoples' behaviour. Cheung et al. (2001) conclude that people are influenced the most by a 'subjective norm.' In addition, Dholakia et al. (2004) also focus on group norms and social identity and identify the impact of them on organizing and managing the virtual communities and how the social networks influence different variables in decision making and participation.

The impact on students of perceiving the importance of social networks has changed their behaviour by engaging with their everyday fascinations and obsessions (Scholz, 2009). E-learning has become a powerful tool in today's world and makes a strong impact on its users. It provides personalized, interactive learning and can also encourage self-motivation (Shim et al., 2011). Nagy (2005) shows that this tool resulted in an increase in the demand for e-learning market (Nagy, 2005) which has become very important for many institutions and universities because it helps them to survive and to be successful (Elena Lidia Alexa, 2012). Furthermore, there are ample opportunities to develop and improve the technology of the learning content. This attribute, together with the provision of privacy, content ownership, and opportunities, gives the user a positive view of the social networks (Siemens & Weller, 2011). The use of social networking tools has impacted positively through creating diversification between different categories of people and has supported them in both their personal and academic lives (McLoughlin & Lee, 2007). There are four fundamental social software tools: 1) Connectivity and social rapport, 2) Collaborate information discovery, 3) Content reaction, and 4) Knowledge and information aggregation and content modification (McLoughlin & Lee, 2007).

These affordances have helped learners access their knowledge easily and share it anytime and anywhere. Social networks, such as e-learning technologies, provide an opportunity for educators to revise their content quickly and maintain control over it, learn the sequence pace of learning, time - and often media, which allows them to gain experience to meet their personal learning objectives (Bates, 2005). All the organizations need to do is develop their educational tools to give a high performance and to satisfy the educators by providing suitable websites, papers, classes, and group collaboration. Here social networks play a very important role in providing knowledge equally for the users, especially students and teachers users (Klamma et al., 2007). Klamma illustrated that one of the most important advantages of social networking is the ability to manage knowledge and learning by connecting with different experts and knowledgeable people in order to share common processes, activities, tools, concepts, etc. (Klamma et al., 2007).

There is an effective use of social software in learning and teaching which has resulted in having many benefits for the organization, such as staying in touch with the courses presented by the organization, attracting more external people, and keeping the conversation flowing. Despite the fact that students and teachers can gain benefits from social software, they can also face challenges (Minocha, 2009). The extensive use of Web 2.0 tools has made changes in individuals' behaviour, specifically, and to society generally. Dean Groom identified Behaviorism, Cognitivism, and Constructivism theories that are used to create the instructional environment. Moreover, the effective use of Web 2.0 was identified as a way to 'watch one, do one and teach one.' This means to find role models, to explore the information personally and, finally, to share your knowledge with other students and teachers.

Ologie (2013) presents four proven models for using SNs: 1) Build a community (by exchanging information), 2) Energize passionate people (to benefit from every tool and convert it to useful information), 3) Come up with a good idea (to share with others), and 4) Meet a need to make a connection (by searching for what satisfies you). Social networking makes users more motivated to learn, especially in higher education. Students have the accessibility to create a public profile to share with different users (Fardoun et al., 2012). A study by Cheung et al. (2011) demonstrates the reasons for using social networks, especially Facebook; namely, because of the effective connections made between people, and the easy way in which they exchange knowledge (Cheung et al., 2011). Another study carried out by Bostrom et al. (2008) describes some methods to help students and encourage them to work together to achieve shared learning outputs by understanding the concept of 'collaborative learning.' They find that the most successful method is the 'face-to-face' way of collaborative learning in small groups. Also, Microsoft Groove software was found to be the most successful application in peer-to-peer collaboration work (Bostrom et al., 2008).

Ashforth and Mael's (1989) paper outlines a theory called 'Social Identity Theory' that divides people into two groups - 'social identification' and 'group identification.' This study focused mainly on group identification,

which has four basic characteristics: 1) It is not associated with any principles for specific behaviour, 2) Success and failure are experienced personally, 3) Social identification is distinguishable from internalization, and 4) Identification with a group is similar to that with a person. However, there was a problem in their paper regarding the behaviour of people as they confuse organizational committeemen with organizational identification (Ashforth & Mael, 1989).

Klamma et al. (2007) discuss the importance of using social networks, such as blogs, and how people share their knowledge with others. In addition, they illustrate two types of learning - formal and informal. This study presents detailed information about steps that can be taken to interact with social networks. Many educational institutions worldwide are reserving budgets to harness this technology (social networking systems in particular) in order to transform the way education is conducted.

2.3 The Drawbacks of Using Social Networks in Education

On the other hand, a study by Stollak et al. (2011) demonstrates that students' grades can be affected negatively by using social networking tools and visiting lots of sites. A questionnaire was conducted in this study to verify this fact, which shows that 63% of students get high grades because they spend less time using the web (Stollak et al., 2011). Thus, spending more time on Facebook appears to result in a lowering of student grades. In addition, some learners are not using the system, such as e-learning, in proper ways, which has also resulted in failing to achieve success (Pituch & Lee, 2006). According to 'The survey of distance learning programs in higher education' (1999), 16% of students enrolled in courses using distance learning in 1998 failed to complete the courses (Pituch & Lee, 2006). Sun et al. (2008) mention in their paper that "the e-Learning market has a growth rate of 35.6%, but failures exist" (Sun et al., 2008). Social networks allow people to post anything - "Many students who use Facebook post embarrassing, humiliating, and hurtful content in text, photos, and videos which harm others" (Fodeman & Monroe, 2009).

3. RESEARCH METHODOLOGY

To achieve the research aims and objectives, the researcher employed triangulation; i.e., different research methods. Hence, the researcher conducted a two-stage study:

- **Stage One** to conduct a *literature review* to explore the following:
 - Definitions of social networking systems
 - Which are the most commonly used of the social networking tools?
 - How do Facebook, Twitter, and YouTube affect the way of teaching and learning online?
 - Social media usage and adoption in higher educational students
 - The drawbacks of using social networks in education
- **Stage Two** to conduct a *questionnaire* among the students of higher education from private and public universities, colleges and institutions in Oman to elicit from them their experiences of adopting social networking in their education. The online questionnaire was sent by email to 106 students.

4. RESEARCH FINDINGS AND DISCUSSION

This section outlines the research findings and provides some discussion around them. After completing the survey, the data were manipulated to produce frequencies and percentages in order to provide a general idea of the nature of the data collected.

4.1 Participants' Profile

A questionnaire was distributed to approximately 106 students, of which 56% were female and 44% were male. The participating students were divided into age groups of 19 to 25 years old (96%) and 25 to 35 years old (4%). Regarding the type of school attended, 21% of the students were studying at private schools and 79% of them were at public schools. The participating students consisted mainly of Bachelors (75%) and Diploma students (24%) as shown in Table 1.

Table 1: Demographics of Survey Respondents (N = 106)

Participant General Information	%
<i>Gender</i>	
Male	44
Female	56
<i>Age</i>	
19-25	96
25-35	4
<i>School Sector</i>	
Private	21
Public	79
<i>Education</i>	
Diploma	24
Bachelors	75
Master	1

4.2 Students and the Traditional Teaching Style

The primary objective of this study is to explore the need for changing the traditional style of teaching and learning after the innovation of Web 2.0. Students can be affected by the style of learning they use and prefer. This fact is demonstrated in the survey outcome shown in Table 2, which shows the students' attitudes toward - and beliefs about - the traditional teaching style. Most of students (63%) state that the traditional style of teaching does not attract them because it is a poor, obsolete way of presenting course material. However, a few of them (15%) believe that they can obtain benefits from using the traditional learning style and about 23% of the students can be flexible in their attitude to both styles. In addition, most students agree that there is not enough information provided by the instructors (60%) and that there is very little interaction between students in the classroom (67%).

Table 2: Students' Attitude Towards the Traditional Teaching Style

Statement	Agree (%)
Traditional teaching materials are poor and unattractive	63
Instructors do not provide adequate information to cover different aspects of the topic in hand, so I compensate for that by surfing the net	60
There is very little interaction between students during class time	67
It is hard for me to understand the subject in hand by relying on traditional teaching styles	46
I believe that the traditional teaching style should be changed by the adoption of social networks	78
I'd rather use social media tools in the classroom	61
I do not like the traditional ways of teaching and learning	53

On the other hand, there is a fluctuation in the percentage of students who find it hard to understand a particular subject by relying on the traditional teaching styles (46%) and those who see that they can learn by both traditional and online learning (35%). It seems that many students have a negative attitude toward the traditional style of teaching and they would like it to be changed by adopting social networking tools.

Therefore, the majority of the students believe that the way of teaching should change to online learning by using different social network tools (78%). In addition, 61% of these students are ready to implement these tools. Finally, it was determined that the majority of students do not prefer the traditional learning style (53%), although a few (17%) feel that they can meet their educational needs by relying on this style.

4.3 Favourite Social Networking Sites

The study revealed the most favourable sites that students usually use to interact and communicate with each other and with other people. YouTube is the most popular site (45%) selected by many students at different universities, colleges, and institutions. In second place was Facebook (37%).

Twitter only received 8% of the votes while some students preferred other sites, such as wikis and blogs (11%).

4.4 Motives vs. Obstacles Facing Social Networking Users

When asked about the motives for visiting social networking sites, respondents replied with the reasons shown in Table 3:

Table 3: Reasons for Visiting Social Networking Sites

Statement
Online resources/courses offer students a more flexible timetable.
For building connections by meeting and having access to other students and professionals.
The information provided in class is not adequate, which forces us to resort to social networking in order to compensate for this.
To enjoy my free time after class.
Peer-to-peer pressure - all my friends use social networks.
Social networking is a more effective and comfortable way of learning than the traditional way.

The majority of students tend to visit social networking websites for the purpose of entertainment which is how they enjoy their time after class. In addition, they tend to use these sites because they provide an effective and comfortable way of learning and for the flexibility of being able to spend time on these websites. However, some of the students believe that visiting SN websites is important because they build connections between students and professionals. Another reason is that traditional styles of learning provide very little information on the study topics, which forces students to shift to social networking tools to meet their educational needs. Lastly, a few students responded that their reason for using social networks was because their classmates were using them. Similarly, when they were asked about the obstacles of using social networks in education, they highlighted the main problems (see Table 4) that can constitute barriers for the usage of these tools in higher education institutions.

The second objective of the study is to analyse the problems/obstacles that students face when using social networks. Students can face many problems in the use of social networks tools. Table 4 shows that most students face the difficulty of choosing the most appropriate website for them and much of their time is consumed in searching and selecting. In addition, many of the students stated they had concerns regarding security and privacy when using these websites, while some said that they worried about cyber-bullying. Finally, very few of the students may disturb other users during communicating in the social networks, while other students have other unknown problems.

Table 4: The Main Problems with Using Social Networks in Education

Statement
Lack of trust between members.
Security and privacy concerns when using SNs.
Time concerns.
They could have a negative impact on the morality of students.
Too much choice – there are so many sites that it is difficult to know which one is the most appropriate.

The third objective is to recognize the impact of social networking tools in learning and education, generally. These tools affect the way students can learn both positively and negatively. Table 5 shows that most of the students are affected positively by using online learning styles. Sixty-eight percent stated that SNs improved their educational performance and 51% of them said they could get better help from online members. Sixty-two percent of students declared that they could understand the topic much better online than they did being taught in the traditional way.

Table 5: The Impact (Positive or Negative) of Social Networks on Education

Statement	Agree (%)
When I started using social networks my performance in education improved.	68
Members on social networks provide more help with my studies than my classmates.	51
Social networks enable me to understand the topic in hand better than the traditional teaching style.	62
I like the flexibility of social networking as I can learn anytime and anywhere.	84
I usually refer to YouTube, Facebook, and Twitter if there is anything that is not clear.	64

Table 5 cont.

I develop my communication skills more using social networks than through the traditional way of teaching and learning.	63
My skills in technology increase by using social networks.	88
The social networking style encourages me to work on group projects.	68
I feel more confident interacting with other students/teachers online than in the classroom.	62
I get more ideas and opinions from using social networks than in traditional education.	78
Generally, I believe that social networking has a positive impact on education.	82

The survey showed that the flexibility and availability of SNs had a positive impact on 84% of the students, 64% could turn to other resources very easily if they faced any difficulties in understanding the subject, and 63% of the students improved their communication skills by using social networks. Moreover, the highest percentage of students stated that they had gained more technological skills through the use of SNs (88%). Most of the students agreed that there were many other positive impacts of SNs in education, such as confident interaction between members, encouraging group work, and sharing many ideas and beliefs. From the data analysis, we can see that this case study has completely answered the research questions. Considering the first question, which is about the majority of students using social networks, it was found that most of these students were using them a lot, both in their academic and private life. The second question was about the main reasons for using SNs, and most of the students agreed that time flexibility was one of the main reasons. Also, SNs provide an effective and comfortable way of learning so that they can even enjoy it. These reasons are a result of the increase in the shift from traditional to online learning. The study discovers many problems that students can face in using SNs, such as difficulty in choosing proper websites, communicating with impolite users, and problems with security and privacy.

5. CONCLUSIONS

This paper covered some of the positive and negative impacts of using social networking as a way of learning and the results suggest that a high percentage of students were affected positively by using SNs tools, which gave them the chance to control their own learning environment and allowed them to share their knowledge with other students in different ways such as texting, voice, and video media.

In addition, Web 2.0 tools, such as blogs, Facebook, YouTube, and online courses, are giving students better learning opportunities to enhance their educational performance. Students would prefer to find better ways of learning by changing their learning styles and connecting with an environment that has more dynamic social potential and not to study in isolated environments that provide traditional styles of learning.

This paper also discussed the reasons for students shifting from the traditional style of learning to online learning in order to create their own architecture for learning. It would be a good idea if all universities, colleges, and institutions were to implement online teaching, fix any problems that come up and encourage all students to use this style to create their own educational environments, and see if they receive positive or negative feedback from using social networks.

Finally, it was determined that the majority of students surveyed are fully engaged/immersed in the new technologies of Web 2.0 and they find it very attractive, enjoyable and useful to help them better understand the topic at hand. There was almost a consensus among students that social media improved their educational performance. Hence, it can be concluded that the traditional learning and teaching styles need to be changed in the era of Web 2.0 technologies to enable students to learn more by using the readily-available online tools in an effective and comfortable way.

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REFERENCES

1. Acquisti, A., & Gross, R. (2006). Imagined communities: Awareness, information sharing, and privacy on the Facebook. *In the proceeding of Privacy Enhancing Technologies*, 36-58.
2. Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review*, 20-39.
3. Bates, A. (2005). *Technology, e-learning and distance education*. RoutledgeFalmer.
4. Blankenship, M. (2011). How social media can and should impact higher education. *Education Digest*, 76(7), 39-42.
5. Bollen, J., Mao, H., & Zeng, X. (2011). Twitter mood predicts the stock market. *Journal of Computational Science*, 2(1), 1-8.
6. Bostrom, R. P., Gupta, S., & Hill, J. R. (2008). Peer-to-peer technology in collaborative learning networks: Applications and research issues. *International Journal of Knowledge and Learning*, 4(1), 36-57.
7. Cheung, C. M., Chiu, P.-Y., & Lee, M. K. (2011). Online social networks: Why do students use facebook? *Computers in Human Behavior*, 27(4), 1337-1343.
8. Dholakia, U. M., Bagozzi, R. P., & Pearo, L. K. (2004). A social influence model of consumer participation in network-and small-group-based virtual communities. *International Journal of Research in Marketing*, 21(3), 241-263.
9. Elena Lidia Alexa, M. A. a. C. M. S. (2012). The Use of online marketing and social media in higher education institutions in Romania. *Journal of Marketing Research & Case Studies*, 2012.
10. Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13(1), 210-230.
11. Fardoun, H., Alghazzawi, D., López, S., Penichet, V., & Gallud, J. (2012). Online social networks impact in secondary education. *In the proceeding of International Workshop on Evidence-Based Technology Enhanced Learning*, 37-45.
12. Fodeman, D., & Monroe, M. (2009). The impact of Facebook on our students. *Teacher Librarian*, 36(5), 36-40.
13. Goroshko, O. I., & Samoilenko, S. A. (2011). Twitter as a conversation through e-learning context. *Revista de Informatica Sociala*, 15.
14. Hughes, D. J., Rowe, M., Batey, M., & Lee, A. (2011). A tale of two sites: Twitter vs. Facebook and the personality predictors of social media usage. *Computers in Human Behavior*.
15. Kapuler, D. (2011). Top 20 social networks for education. *Technology & learning*, 32.2.
16. Klamma, R., Chatti, M. A., Duval, E., Hummel, H., Hvannberg, E. T., Kravcik, M., Law, E., Naeve, A., & Scott, P. (2007). Social software for life-long learning.
17. Liccardi, I., Ounnas, A., Pau, R., Massey, E., Kinnunen, P., Lewthwaite, S., Midy, M.-A., & Sarkar, C. (2007). The role of social networks in students' learning experiences. *In the proceeding of ACM SIGCSE Bulletin*, 39, 224-237.
18. Liu, Y., Gummadi, K. P., Krishnamurthy, B., & Mislove, A. (2011). Analyzing Facebook privacy settings: User expectations vs. reality. *In the proceeding of Proceedings of the 2011 ACM SIGCOMM Conference on Internet Measurement Conference*, 61-70.

19. Masic, I., Sivic, S., & Pandza, H. (2012). Social networks in medical education in Bosnia and Herzegovina. *Materia Socio Medica*, 24(3), 162-164.
20. Mazman, S. G., & Usluel, Y. K. (2010). Modeling educational usage of Facebook. *Computers & Education*, 55(2), 444-453.
21. McLoughlin, C., & Lee, M. J. (2007). Social software and participatory learning: Pedagogical choices with technology affordances in the Web 2.0 era. *In the proceeding of ICT: Providing choices for learners and learning. Proceedings ascilite Singapore 2007*, 664-675.
22. Minocha, S. (2009). An empirically-grounded study on the effective use of social software in education. *Education + Training*, 51(5/6), 381-394.
23. Nagy, A. (2005). The impact of e-learning. *E-Content*, 79-96.
24. Ologie (2013). *Making Digital connections in higher education*. Retrieved 12/4/2013 from <http://ologie.com/>
25. Pituch, K. A., & Lee, Y.-k. (2006). The influence of system characteristics on e-learning use. *Computers & Education*, 47(2), 222-244.
26. Rhoades, E., Friedel, C., & Irani, T. (2008). Classroom 2.0: Student's feelings on new technology in the classroom. *NACTA Journal*, 52(4), 32-38.
27. Scholz, T. (2009). *Social media in higher education*. Eugene Lang College, pp. 59.
28. Shim, J., Dekleva, S., Guo, C., & Mittleman, D. (2011). Twitter, Google, iPhone/iPad, and Facebook (TGIF) and smart technology environments: How well do educators communicate with students via TGIF? *Communications of the Association for Information Systems*, 29(1).
29. Siemens, G., & Weller, M. (2011). Higher education and the promises and perils of social network. *Revista de Universidad y Sociedad del Conocimiento (RUSC)*, 8(1), 164-170.
30. Stollak, M. J., Vandenberg, A., Burklund, A., & Weiss, S. (2011). Getting social: The impact of social networking usage on grades among college students. *In the proceeding of Proceedings from ASBBS Annual Conference*, 859-865.
31. Sun, P.-C., Tsai, R. J., Finger, G., Chen, Y.-Y., & Yeh, D. (2008). What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction. *Computers & Education*, 50(4), 1183-1202.
32. Tham, C. M., & Werner, J. M. (2005). Designing and evaluating e-learning in higher education: A review and recommendations. *Journal of Leadership & Organizational Studies*, 11(2), 15-25.
33. Wu, S., Hofman, J. M., Mason, W. A., & Watts, D. J. (2011). Who says what to whom on twitter. *In the proceeding of Proceedings of the 20th international conference on World wide web*, 705-714.
34. Yuen, S. C.-Y., & Yuen, P. (2008). Social networks in education. *In the proceeding of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education*, 1408-1412.
35. Zhou, R., Khemmarat, S., & Gao, L. (2010). The impact of YouTube recommendation system on video views. *In the proceeding of Proceedings of the 10th annual conference on Internet measurement*, 404-410.

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