

Using Facebook as a Learning Management System: Experiences of Pre-service Teachers

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Abstract. The purpose of this study was to examine students' experiences using Facebook as a learning management system during a course. The study participants were 18 junior education faculty students attending a compulsory distance education undergraduate course delivered by the Computer Education and Instructional Technology Department at a university in Turkey. Upon completion of the 14-week Facebook-based course, participants were requested to answer nine open-ended questions. The results of content analysis show some advantages and some problematic aspects to using Facebook as a learning management system (LMS). Most students were satisfied with their learning experience using Facebook. The students favoured some features and situations, while other students saw the same things as being problematic. They also appreciated the sharing of course materials, instant messaging, opportunity to upload files, having discussions and getting instant notifications. A few students had negative thoughts about sharing materials in terms of accessing pre-uploaded files. However, their thoughts about synchronous and asynchronous communication were all positive. In particular, all students favoured the instant Facebook communications with their instructor and engagement in discussions. Almost half of the students had positive thoughts about the usefulness of Facebook in education. When these positive thoughts were examined, the students were found to consider that Facebook could be used as a LMS because it has many similar features.

Keywords: Facebook, learning management systems, social networks.

1. Introduction

The rise in the popularity of social networks means that many people often use them in their everyday life; thus, integration of these social network environments into education has become a concern. Many social networking sites are now being used for purposes different from their original design. In particular, people started using these environments for the purposes of communication, and now they are also used for collaborative authoring, sharing multimedia and other materials, creating blogs, tagging and social bookmarking, and the creation of digital identities.

Younger generations intensively monitor social networking platforms, which have been integrated into their daily life for different purposes. Gülbahar, Kalelioğlu and Madran (2010) summarized the use of some social networks (Facebook, Twitter and Flickr) from an educational perspective. They noted that Facebook and Twitter could be used to share materials (e.g., video clips, sound files, photographs, Word files, presentations, spreadsheets, database files and websites); follow daily news, people or groups; participate in discussion platforms to support collaborative learning; and support questioning, critical and problem-solving skills.

Gülbahar and Kalelioğlu (2010) discussed the use of Flickr for language teaching. Flickr can be effectively used to create visual presentations, collections and videos. It can also support discussions, brainstorming and preparing visuals for learning, and preparing e-portfolios for both learning and assessment. In a different study, Kalelioğlu and Gülbahar (2010) investigated the use of blogs in educational settings from a multiple-intelligences perspective. According to the results of both qualitative and quantitative measures, participants liked creating and managing their own blog page, and sharing their own works with other students through their blog pages. Moreover, Kalelioğlu and Gülbahar (2010) stated that blogging involved interpersonal, intrapersonal and linguistic intelligence types. Similarly, Brady, Holcomb and Smith (2010) found that social networking sites could be used most effectively to improve online communications among students in higher distance education courses. Studies should be conducted to investigate the effectiveness of such activities in educational settings for different disciplines.

Many studies have examined and discussed the use of social networking for educational purposes and students thought positively about them. However, few researchers focused on the complete transposition of course content to a social network site that could also be used as a learning management system. Wang, Woo, Quek, Yang and Liu (2012) reviewed the Facebook-related literature and found that many studies investigated the use of Facebook and social networks in general, the effect of the teachers' self-disclosure via Facebook, and the academic performance of Facebook users. However, few studies have examined if Facebook could be used effectively as a learning management system. Therefore, the purpose of this study was to examine students' experiences using Facebook as a LMS during a course.

1.1. *Facebook as a LMS*

Although Facebook was not originally created for educational purposes, it can be used as a virtual environment for discussions and knowledge sharing (Kurtz, 2014). The findings from Dalsgaard's (2014) study show the educational potential of Facebook groups in terms of supporting peer-to-peer learning between students. Moreover, Wang *et al.* (2012) noted that one possible method for using Facebook in teaching and learning is to use its group function as a LMS.

Courses can be managed using a LMS as the platform. These LMS have three main characteristics (Coates, James, & Baldwin, 2005; Meishar-Tal, Kurtz, & Pieterse, 2012;

Morgan, 2003): the creation and delivery of several content types (e.g., lecture notes, articles, links, presentation slides, video) are allowed; asynchronous and synchronous communication and collaboration can be facilitated using discussion forums, chat wikis, blogs and conference tools; and administrative and assessment tools are provided for recording tasks, grading and feedback. A report option can be used to monitor user participation.

The first two main characteristics are easily demonstrated using a closed Facebook group (Fig. 1 and Fig. 2). The teacher could create or upload course materials to a closed Facebook group, such as presentation slides, articles, audio-visual materials, assignment instructions and website links. Concerning communications, chat and wall discussions can be created and managed easily. As for the third characteristic, however, Facebook users cannot be tracked and monitored directly. That is, teachers would have to track

Filiz Kalelioğlu
31 Ekim 2012

E-öğrenme konusunda yapılan araştırma sonuçlarını tartışıyor-yorum!
Uzaktan eğitimde yapılan araştırma sonuçlarına göre, aşağıdaki iki bulgunun nedenlerini açıklıyoruz.

- 1- "Öğrenci başarısı açısından geleneksel eğitim ile uzaktan eğitim arasında fark olmadığı gözlenmiştir."
- 2- "Uzaktan eğitimde bireysel katılımın değil, öğrenciler arasında işbirliği ve grup dinamiği oluşturmanın daha önemli olduğu görülmüştür."

Beğen - Yorum Yap

✓ Herkes gördü

Ben 1. maddeye katılmıyorum. çünkü benim araştırdığım makalede hız ve içerik kontrollerinin başarıyı artırıcı etkiye sahip olduğu ispatlanmıştır. geleneksel eğitimde öğrenci içeriği kendi belirleyemez veya hızı kendi ayarlayamaz. bunun için iki eğitim arasında fark vardır.
2) işbirliği yapıldığında öğrenenlerin farklı öğrenme seviyeleri ve tecrübeleri bu sürece olumlu katkı sağlar.
31 Ekim 2012, 18:38 - Beğen - 1

1. maddeye katılmıyorum çünkü geleneksel eğitim ile uzaktan eğitim arasında fark vardır. En önemlisi geleneksel eğitimde öğrenci ve öğretmen arasında bir etkileşim ve iletişim vardır. Oysa ki uzaktan eğitiminde etkileşim problemi bulunmaktadır. 2. maddeye katılmıyorum çünkü öğrenciler arasında işbirliği ve grup dinamiği oluştuğunda öğrencilerde ki kaygı azalmaktadır.
31 Ekim 2012, 19:30 - Beğen - 1

Aslında her iki eğitim ortamı da kendisine göre başarı sağlamaktadır. Geleneksel eğitimde yüz yüze yapılan eğitim sayesinde öğrenci gerçek sınıf ortamında öğretmen ile rahatça konuşabilerek, arkadaşlarıyla yüz yüze iletişim kurarak gerçek bir eğitim al...
Daha Fazlasını Gör
31 Ekim 2012, 20:46 - Beğen - 1

Fig. 1. Screenshot of a Facebook Group Wall Discussion.



Fig. 2. Screenshot of Video Sharing and Instructions for an Assignment.

users manually instead. Facebook also sends group members instant notifications when a change is applied in the group and gives information about who sees the content. For the assessment options, students can send their digital artefacts and assignments to the group and the teacher can provide feedback to the students.

1.2. Previous Facebook Studies

When the Facebook-related literature was examined, studies were found to focus typically on the general uses of social networking sites, analysis of Facebook content, purposes of Facebook usage, comparing Facebook with other platforms, and educational uses of Facebook in terms of integrating instructional techniques to Facebook, or managing a course via Facebook.

Selwyn (2007) examined the content shared through Facebook by college students and found that the shared contents included recounting and reflecting on the university experience, exchanges of practical or academic information, displays of supplication and/or disengagement, and exchanges of humour and nonsense. Moreover, Selwyn (2009) found that only 4% of 68,169 Facebook wall postings were related to educational use. No significant difference was found in terms of Facebook activity by students' gender, year of study or grades. Madge, Meek, Wellens and Hooley (2009) observed that undergraduate students thought Facebook was used most importantly for social reasons and not for formal teaching purposes, although it was sometimes used informally for learning purposes. Dwyer, Hiltz and Passerini (2007) compared trust and concerns about privacy on the Facebook and Myspace social networking sites and found that Facebook members were more trusting of the site and its members, and were more willing to include identifying information in their profile. In a comparative study, Roblyer, McDaniel, Webb, Herman and Witty (2010) observed that students were much more likely than were faculty members to use Facebook and were significantly more open to using Facebook and similar technologies for educational purposes. Faculty members were more likely to use more-conventional communication technologies such as e-mail. Similarly, Moran, Seaman and Tinti-Kane (2011) found that students might feel comfortable about the educational use of Facebook, while faculty staff were not ready to integrate Facebook into their teaching and learning processes.

While examining educational uses of Facebook, DeSchryver, Mishra, Koehleer, and Francis (2009) investigated the effect of using Facebook for discussions during an online course, which was compared with discussions on Moodle forums. Social presence and the frequency and length of students' interactions in discussions were measured. The analysis identified no differences between the measures. Schroeder and Greenbowe (2009) compared Facebook group discussions with WebCT discussion forums and concluded that students used Facebook more dynamically than they used WebCT's discussion functions. Using Facebook discussion groups, Menon (2012) conducted a study with medical students and determined that Facebook groups were a worthy way to engage students' learning and can be used in medical education to stimulate creative clinical thinking. Moreover, Pellizzari (2012) found improvements in qualitative aspects of undergraduate math students' academic performance.

Meishar-Tal *et al.* (2012) discussed the educational uses of Facebook as a LMS and found that students expressed satisfaction with learning using Facebook and indicated their willingness to continue using these Facebook discussion groups for future courses. Parslow, Lundqvist, Williams, Ashton and Evans (2008) compared Facebook with Blackboard. They noted that the students were very much at the centre of the platform and environment, and utilized the opportunities allowed by Facebook's flexibility to control both the environment's content and its audience fully. Wang *et al.* (2012) used a Facebook discussion group as a LMS and found that students were basically satisfied with their use of Facebook as a LMS. However, they noted its limitations, i.e., Facebook does not support other file formats, the discussions are not listed in threads, and students did not feel that Facebook was a secure platform. Kurtz (2014) compared a Facebook

group and a course website and found that students favoured using a Facebook group and appreciated its major contribution to their own learning experience. The Facebook group was perceived as a safe environment that fostered social learning processes and highlighted learner participation, active contributions, and interactions with peers and their instructor. Moreover, the course website was perceived as a content repository designed for traditional individual learning processes that required simple recall and understanding of the content. Following their results, Özmen and Atıcı (2014) concluded that integrating social networks into distance learning activities created a more positive effect on learners' achievements, and was more effective in the acquisition of behaviours at the knowledge level of the cognitive domain than activities in other groups.

2. Method

This research study is a qualitative case study. According to Yin (2003), descriptive case studies describe a phenomenon or intervention in the context it occurs. The case in this study is the use of a social networking site, Facebook, as a tool of learning and as a content management system. Moreover, Creswell (2007, 2012) defined a case study as an in-depth exploration of a bounded system, such as activity, event, process or individuals, based on extensive data collection. In addition, a 'case' may be a single individual, several individuals separately or in a group, a programme, events, or the activities of a teacher or several teachers, or the implementation of a new academic programme.

2.1. Participants

The study participants were 18 junior education faculty students attending a compulsory distance education undergraduate course provided by the Computer Education and Instructional Technology Department at a private university in Turkey. Of the 18 participating students, there were 11 females and 7 males. The mean age of the students was 24.29 years (range, 21 to 32 years). The students had been using Moodle for 3 years in different courses and were familiar with the course activities such as Lesson, Resource, Assignment, Forum and Wiki modules in Moodle.

2.2. Course and Procedure

The Distance Education course consists of 14 topics, which are discussed on Facebook. These discussions are supported by face-to-face meetings to reinforce their theoretical bases, and include synchronous and asynchronous discussions on related topics. The course aims to teach students the basic concepts of distance education, the worldwide history of distance education, techniques and methods to deliver a course using distance education technologies, features of learning content management systems and virtual meeting systems used for delivering content through Internet-based technologies, com-

munication and collaboration tools (i.e., social networking tools), software to prepare interactive content for e-delivery, the roles of e-teachers and e-students, and the e-assessment types that can be used in the e-learning context.

First, the researcher created a closed Facebook group for the Distance Education course. Students were told that the Facebook group would be used as the LMS for their lessons and they were added as members of the group. The course syllabus was later uploaded as a Word file. PowerPoint presentations on the topics were then added on a weekly basis. Instructions on how to complete assignments were posted on the Facebook group wall with an assignment title and number. Students submitted their completed assignments in accordance with the assignment submission rules. Instant messaging and wall discussions were often used for communication and active learning. Moreover, questions were able to be posted on related assignments.

2.3. Data Collection Tools

Upon completion of the programme, the 18 participants were requested to answer nine open-ended questions to measure the participants' levels of satisfaction and perceptions and all 18 completed the questionnaire.

1. What do you think about sharing course notes (i.e., the presentation slides), videos, articles, and so on through the Facebook group?
2. What do you think about submitting the assignments to Facebook?
3. What do you think about synchronous and asynchronous communication (instant messaging/chat and group discussions on the Facebook wall)?
4. Do you find the use of Facebook in education useful?
5. What are your favourite aspects of using Facebook in education?
6. What are your least favourite aspects of using Facebook in education?
7. Do you want to use Facebook for other courses?
8. What are your suggestions to improve the effectiveness of the use of Facebook in education?
9. What other social networks could be used for this course?

2.4. Data Analysis

Content analysis was applied to data gathered from the open-ended questions. Each answer was read more than once, coded and a frequency table created. The emerging themes were identified and lastly, harmonization of codes and themes was examined. Significant ideas and statements by participants are included as quotations to illustrate the findings.

The researcher reanalyzed half of the data to establish the reliability of the codes generated in the data analysis process. The percentage of reliability between the results of the two analyses was found to be 0.78. As a result, the consistency between the results of both analyses was found to provide the required level.

3. Results

3.1. *Sharing the Course Materials (e.g., Lecture Notes, Videos, Papers) Through the Facebook Group*

Positive and negative thoughts emerged as themes in response to the first open-ended question on students' thoughts about sharing their course materials through the Facebook group (Table 1).

Concerning students' positive thoughts, seven students considered their file sharing as being different, nice, positive and productive. Five students said that they could easily access the files, two noted that they were continuously interacting on the site, two explained that their queries were followed-up more quickly, two described that following lessons through Facebook was easy, and two commented that there was no need to take notes. One student's answers were coded as the opportunity to keep track of a lot of information, its positive contribution to learning success and the way video sharing captured their attention.

The following statements from different students express their positive thoughts:

"I think that the sharing of lecture notes, assignments and articles was very different [from Moodle] and pleasing. Instead of working from papers, studying the course in this way was very easy. There was also a more regular basis."

"We are constantly interacting and sharing information [course materials] in the Facebook environment. We receive notifications about all of the course information and can access this information instantly."

"I have not experienced any confusion and benefitted from the ordered collection of all materials in one place. I was interested in the video sharing."

"I did not experience any differences from Moodle. However, sharing the lecture notes on Facebook was good for me because I enjoy using Facebook."

Five students expressed negative thoughts. They all had problems in accessing their files after uploading to the Facebook wall. One student noted,

"Sometimes to achieve the desired information, you need to scroll down a long way".

Another student stated,

"It takes time to access the old files because the wall was full of so much information".

Table 1

Sharing the course materials (e.g., lecture notes, videos, papers) through the Facebook group

Themes	f
Positive thoughts	
File sharing is different/nice/positive/productive	7
Easy access to files	5
Continuous interactivity	2
Follow-up process has accelerated.	2
Following lessons through Facebook was easy	2
No need to take notes	2
Opportunity to keep track of a lot of information	1
Positive contribution to learning success	1
Video sharing captured attention	1
Negative thoughts	
Problems accessing files	5

3.2. Uploading Assignments to the Facebook Group

When students' thoughts about uploading assignments to the Facebook group were examined, positive and negative thoughts emerged as themes (Table 2). Eight students positively expressed that they had the opportunity to review their peers' assignments, six noted that they experienced no difficulties while uploading files, three indicated that uploading files was easy and good, and two expressed that they had the opportunity to update their files.

Concerning the positive theme, one student explained,

"I like sharing homework because we have the opportunity to examine other students' homework".

Table 2

Uploading assignments to the Facebook group

Themes	f
Positive thoughts	
Opportunity to review peers' assignments	8
Experiencing no difficulties	6
Uploading files was easy/good	3
Opportunity to update files	2
Negative thoughts	
Experiencing difficulties finding uploaded files	5
No time limitations for submission of assignments	3
No prevention of visibility of assignments to other students	2

Similarly, other students noted,

“Difficulties could be experienced in uploading assignments to Moodle, but I did not encounter these difficulties on Facebook. It was very successful and easy”.

Despite these positive thoughts, five students stated that they experienced technical problems with low-speed Internet connections and large file sizes, three complained about not having a time limitation for the submission of assignments and two were not satisfied with the visibility of their assignments to their peers. Another negative theme is shown by one student’s concern that *“it was not clear who sent the assignment”*.

3.3. Synchronous and Asynchronous Communication

All students positively responded to the question about synchronous and asynchronous communication (Table 3). Seven students stated that instant messaging with their instructor was very helpful, six favoured communication as effective, good, successful and different, two noted that Facebook facilitated communication, two expressed that they learned through the online discussions, and two commented that they had the opportunity to review the discussion on the group wall. One student expressed that he monitored continuously to see if something was shared asynchronously.

Students expressed the following thoughts about synchronous and asynchronous communication:

“Facebook was usable in terms of communication. To be able to ask the instructor questions immediately helped me very much. I think that the wall discussions are productive discussions.”

“Everyone would follow Facebook rather than their e-mail; therefore, we can get quicker responses to our questions. It is good to have discussions on Facebook. Easy to follow.”

Table 3
Synchronous and asynchronous communication

Theme	f
Positive thoughts	
Instant messaging with instructor was very helpful	7
Communication was effective/good/successful/different	6
Facebook facilitates communication	2
Opportunity to learn through discussions	2
Opportunity to review the discussion on the group wall	2
Monitored continuously to see if something was shared asynchronously	1

“I try to follow everything shared through asynchronous communication. My curiosity and interest were also aroused whenever something had been shared.”

“Synchronous and asynchronous communication was successful because of its 24/7 open access and feedback.”

3.4. Facebook's Usefulness in Education

In response to the question about Facebook's usefulness in education, 11 students considered Facebook as being useful, but four did not consider it useful and two were undecided (Table 4). In the aspect of usefulness, four noted Facebook's ease of communication and four favoured its sharing opportunities. Two students described learning using Facebook as interesting and motivating; they could easily track activities and submit assignments, and discuss the submitted assignments. One student stated that they appreciated the opportunity to see Facebook used in education. A student described Facebook as being similar to Moodle, while another explained that learning in Facebook is

Table 4
Facebook's usefulness in education

Themes	f
Usefulness	
It is useful	11
It is not useful	4
Undecided	2
Usefulness aspects	
Ease of communication	4
Sharing opportunities	4
Ease of use	2
Learning in Facebook is interesting/motivating	2
Easily track activities	2
Opportunities to submit assignments	2
Easily submit assignments	2
Opportunity to discuss assignments	2
Benefitting from peers' assignments	1
Opportunity to experience Facebook used in education	1
No differences to Moodle	1
Appropriate for group work	1
Encourages active learning	1
Non-useful aspects	
Some elements are distracting	3
Cannot access previously uploaded files	3

appropriate for group work. One student commented that Facebook encouraged students to be active learners.

Some students expressed their thoughts about the useful aspects of Facebook as a LMS as shown below:

“In this way, I think we had more fun and a more active semester.”

“I think there was no difference from Moodle.”

“Yes, I find it useful. If we were using a different system for education, it could be difficult to follow. I was already using Facebook; when something about the course happens, I am informed instantly.”

“I have not used Facebook for educational purposes before. This year showed me that Facebook was effective and a very useful environment for visualization, access to activities, uploading homework and instant notifications.”

“We have learned that Facebook can not only be used for social networking or entertainment, but can also be used for education.”

As for the non-useful aspects of Facebook, three students stated that elements of Facebook are distracting and three other students explained that they could not access their previously uploaded files. Concerning the distracting elements, one student said,

“There are advantages such as the ease of communication, [but] I open Facebook to look for something to do with the course and then I find myself playing Angry Birds. I think it is very tempting”.

In accessing files, one student said that the mixture of *“information, discussions, assignments and other shared materials creates one big ball of confusion. Why can't they be grouped?”*

3.5. Students' Favourite Aspects of Using Facebook in Education

In response to the question about their favourite aspects of the use of Facebook in education (Table 5), seven students appreciated the quick responses to their questions, six mentioned the uploading of files/assignments, five enjoyed having discussions, three liked sharing videos, three appreciated receiving instant notifications, and two favoured the opportunity to examine other students' assignments. Two students noted that larger files could be uploaded to Facebook than to Moodle,

“There is a file upload limit [on Moodle] of 8 MB, while we can upload files to Facebook of 25 MB”.

The students' other favourite aspects of Facebook are its ease of use, focus on interests, ease of content management, appropriateness for group work and activities utiliz-

Table 5
Students' favourite aspects of using Facebook in education

Themes	f
Quick responses to questions	7
Uploading files/assignments	6
Discussions	5
Sharing videos	3
Receiving instant notifications	3
Opportunity to examine peers' assignments	2
Ability to upload larger files than on Moodle	1
Ease of use	1
Focus on interests	1
Ease of content management	1
Appropriate for group work	1
Whole class activities	1
Access to the course from anywhere	1
Enabling students' active learning	1

ing the whole class. Being able to access the course from anywhere enabled students' active learning. In this respect, a student said,

"We get answers to problems in a very short time and we can connect with our friends when we want".

3.6. Students' Least Favourite Aspects of Using Facebook in Education

The students' thoughts about their least favourite aspects of using Facebook in education were examined (Table 6). Seven students declared that they had some difficulties accessing the content, five experienced distracting situations and applications while being

Table 6
Students' least favourite aspects of using Facebook in education

Themes	f
Difficulty accessing the content	7
Distracting situations/applications (applications, games, notifications and other posts)	5
Problems while uploading assignments	4
Communication problems when experiencing Internet connection issues	4
No time limitations for assignments	1
Not suitable for other courses	1
Non-secure platform	1

online for the purposes of following the course, four mentioned that they had problems while uploading assignments, and four had communication problems when they had no Internet connection.

Additional least favourite aspects for using Facebook in education were that students were given no time limitations to complete their assignments, its unsuitability for other courses and the lack of security for the platform. One student said,

“When following the course, Facebook notifications and sharing [of materials] are distractions”.

Another student noted,

“It is hard to access slides. I cannot just access my own assignments.”

3.7. Willingness to Use Facebook for Other Courses

When the future use of Facebook was examined (Table 7), eight students wanted to use Facebook for other courses, while seven did not want to use it. Four stated that Facebook was unsuitable for all courses. However, three declared that some courses requiring theoretical or technology-based teaching could be delivered via Facebook, and one stated that Facebook could be used for announcements and communication.

Some students discussed the use of Facebook for other courses:

“I would like to use [Facebook] for ICT-related courses because it is ideal for uploading videos and presentations. We can also receive notifications about the course. Educators and students can be in continuous interaction.”

“It is appropriate for this course. I think [using Facebook] really fits the name of the course”.

“It is suitable for theoretical courses, but it is not well-suited for other classes; for example, mathematics, physics or programming courses may not be delivered correctly”.

Table 7
Willingness to use Facebook for other courses

Themes	f
Yes, I want to use Facebook	8
No, I do not want to use Facebook	7
Not suitable for all courses	4
Can be used for theoretical, technology-based teaching	3
Can be used for announcements and communication	1

"I do not want to [use Facebook], as it sometimes affects my study by distracting me. I want to send messages to my friends, and when they realize that I am on Facebook, they send me messages."

3.8. Suggestions to Improve Facebook's Effectiveness in Education

The students suggested some features that could improve Facebook as a LMS. Four students suggested an archival system to overcome the file-access problems. Two students preferred that Facebook should not include advertisements and games. One student offered to create a general-purpose group, another suggested writing the lesson topic on the wall each week, and finally another said that Facebook should have an advanced search engine for accessing files.

Additionally, a student said,

"We need to see what has been shared by whom, and when. This will also help the instructor to read the assignments".

Similarly, another student said,

"The file system should be better organized. Other than that, I think there is no problem".

Another suggestion was,

"With a more-advanced search engine, it would be easier to search for information in separate categories".

3.9. Appropriateness of Other Social Networks for This Course

The students suggested some other social networking sites that could be used for this course, such as Twitter (9), blogs (4), MSN (2) and Pbworks (1). Five students indicated that only Facebook was suitable for this course.

4. Discussion

Most of the students thought positively about sharing course materials in a closed Facebook group. Similarly, Wang *et al.* (2012) noted that students found the Facebook wall useful for sharing information and resources. A few students had negative thoughts about sharing materials in terms of accessing pre-uploaded files, which was related to Facebook's poorly manageable file access.

Students' responses to the question about uploading assignments were mainly positive. Other than the difficulties finding uploaded files, most of the students appreciated

the opportunity to review their peers' assignments because they could not see them on the Moodle platform. However, some students felt uncomfortable about this situation because they did not want other students to see their assignments. This issue of privacy can be adjusted using Facebook privacy settings, i.e., the students could adjust their file visibility settings as "just for X person". Including such a feature for the closed Facebook groups could resolve this problem because it is well known that the visibility of a Facebook post or material can be adjusted by setting the "who can see this post feature".

Another important point raised was the lack of time limitations for submitting assignments on Facebook. The instructor includes the deadline for uploading assignments while posting their initial instructions, but the students are used to seeing strict deadlines as in Moodle (the system locks the option to upload if the students cannot upload their files by the given date, which blocks students from uploading their files). Some students may prefer to be directed by a teacher or system, may not want this flexibility because of their differing personalities and work habits, and clear explanations of assignment instructions may be insufficient for those students. However, this situation can be corrected by issuing strict instructions, such as "files sent after the deadline will not be evaluated". In addition, the students are required to complete their assignment in a given time. At the beginning of the lesson, the instructor should be clear and deliver the information in the syllabus.

The students' thoughts about synchronous and asynchronous communication were all positive. In particular, all students appreciated the instant communications with their instructor and the discussions on this platform. Facebook obviously facilitates communication, which is a vital basis for learning (Roblyer *et al.*, 2010; Tsai, Shen, & Chiang, 2013).

Considering the usefulness of Facebook in education, almost half of the students had positive thoughts. Students felt that Facebook could be used as a LMS because it has many similar features. Similarly, Meishar-Tal *et al.* (2012) found that students expressed satisfaction with learning in Facebook. Wang *et al.* (2012) also found that students were basically satisfied with using Facebook as a LMS.

Some students identified distracting elements such as advertisements, games and other online friends. They may be correct; however, they should self-regulate against use of these elements. They can download the course files to their desktop, study them offline and try to write their comments as soon as possible. After completion of their educational tasks, they would then be free to do as they please. Any situation may affect students who are easily distracted or having problems focusing. In addition, cyber-loafing is already one of the major problems for students who use the Internet for education (Ergün & Altun, 2012; Kalaycı, 2010). It is up to the student to deal with distractions or interests elsewhere; thus, it cannot be guaranteed that these students will not face similar problems by using static platforms or avoiding interaction on these platforms. Moreover, students can be influenced in the same way by using multiple websites simultaneously, such as opening other social media applications on the Internet or their smartphone. Of course, it is not the same, but it may be possible for students to organize their work habits around the ways they use social media.

Students favoured instant messaging, opportunities to upload files, having discussions and receiving instant notifications for course activity. In Moodle, students cannot see their files if they do not regularly check their course content. However, if there is a notification system that informs the users that something has changed, students can get information instantly. This notification system can motivate students by supporting their learning, and especially provide support to dependent learners.

As previously discussed, the lack of easily manageable content options means that accessing pre-uploaded material on Facebook becomes a big issue. A partial solution is available for Facebook; however, it cannot solve the problem completely. That is, a “files and documents” menu option is available in the closed Facebook group. When the user opens the menu, a list of files and documents can be easily seen along with information about who created the files and when they were uploaded. This menu option could be used instead of scrolling up and down the Facebook group wall to find the relevant file. In addition, the researcher informed the students how to apply file names before uploading. Students should definitely be reminded about these precautions (such as rules for naming files and using the files/documents menu option) during the first meeting of the class. However, students might not prefer to use the files/documents menu option and attempt to find the files by scrolling through the Facebook group wall. Consequently, they might have trouble searching for files. However, this issue may not be experienced if the menu option is used and fewer files are uploaded. Files may also be uploaded to the group as a zipped file. Additionally, cloud-computing platforms such as Google Docs or Dropbox may be used for file-sharing purposes. These solutions may help manage files and make them easier to find. Thus, the confusion of locating files can be reduced considerably.

After experiencing the use of Facebook as a LMS, half of the students wanted to continue using it, but the rest of the students did not. These students did not want to continue using Facebook because they felt that the type of course or structure might not be compatible with Facebook. However, all course materials (i.e., lecture notes, assignments or announcements) were independent of the platform. These digital materials could be delivered to the students via a static webpage, blog, LMS or any other suitable social network.

Some students felt that if Facebook could upgrade some features, the problems they faced would be solved. In particular, students mentioned an archival system for closed Facebook groups. In addition, although advertising is a commercial Facebook concern, students could possibly turn the advertisements off easily by adjusting their display settings as appropriate. Facebook also uses games in a conscious strategy to keep users on the website. However, students are responsible for managing their time appropriately, and if they prefer to play games, they can try to choose to play in their spare time or after the coursework is completed. Currently, Facebook includes a search engine option for closed Facebook groups. However, students would like Facebook to upgrade to an ‘advanced’ search engine to increase the efficacy of their search results.

5. Conclusion

The aim of this study was to experience the use of Facebook as a LMS and discover whether Facebook can be used for educational purposes successfully. When used as a LMS, Facebook had some advantages and problematic aspects when compared with Moodle. Most students were satisfied with the use of Facebook; however, some students favoured some features and situations, while other students saw the same things as being problematic. These variations may be caused by individual differences and preferences. The results of this study show that Facebook can be used for courses where the following are true: sharing of video and lectures notes is required; cloud-computing applications can be used to submit assignments, and links to the assignments could then be posted to the Facebook group; synchronous and asynchronous communication facilitates students' reflection of their ideas and informs students about announcements; and when class sizes are small.

The suggestions from this study will be helpful for instructional designers and for educators who want to integrate Facebook into their courses. A limitation of this study was that the sample is limited to the students enrolled in the higher distance education course within this research context. Further studies could be conducted in different courses to discover the effect of using such platforms on learning. Moreover, interaction patterns in these platforms and learning analytics can be analyzed deeply to gather more information and evidence for learning.

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