USING FACEBOOK AS A SUPPLEMENTARY TOOL FOR TEACHING AND LEARNING

Kanda Runapongsa Saikaew[1*], Wit Krutkam[1], Rina Pattaramanon[2], Natthanon Leelathakul[3], Kornchawal Chaipah[1], Arnut Chaosakul[1]

[1]**Department of Computer Engineering, Faculty of Engineering, Khon Kaen University, Thailand**

[2]**Department of Biochemistry, Faculty of Science, Khon Kaen University, Thailand**

[3]**Faculty of Informatics, Burapha University, Thailand**

***Corresponding email address: krunapon@kku.ac.th**

ABSTRACT

Facebook, a social media web application, is a part of million student lives. Students use Facebook for communicating with friends and playing games. Since they use Facebook frequently and comfortably, we may exploit this entertainment-oriented site as an edutainment tool.

Although there are many tools available for eLearning, Facebook seems to be one of the most effective tools because students generally respond to discussions quickly and are comfortable enough in their "space" to share their information and opinions. By using Facebook in learning, the role of students can therefore shift from only receiving knowledge to both searching and sharing their knowledge. Moreover, interactions with teachers can become more instant since teachers and students can respond quickly via Facebook.

It is worthy to realize, however, that teachers cannot use Facebook as a single teaching and learning tool. Facebook still lacks features such as file submission and file sharing to support the complete learning process.

This paper presents the approach and the experience in using Facebook for both undergraduate and graduate courses as well as for both informal and formal learning. In the formal courses, Facebook is used for discussion, Moodle is used for assignment submission, and Google Docs is used for sharing documents. In the informal courses, Facebook is used for discussion, sharing video and document links. We found that students actively and quickly participated in both asking and answering a teacher's questions. In addition, students also shared their new knowledge even after the classes have ended and grades were assigned. As a result, Facebook has an excellent potential to serve as a lifelong learning channel for teachers and students.

Keywords: Facebook, e-learning, innovative teaching, social media, learning tool

1. Introduction

Millions of people access Facebook daily to connect with their family and friends, search information, or play games. While students spend more time on socializing with their friends through Facebook, they have less time on self-studying on books or academic web sites. Instead of being

against the usage of Facebook, teachers can constructively employ them as tools for supporting students' continuous learning activities. In this article, we present the usage of Facebook in formal education, such as using Facebook in formal courses in a university, and in informal education, such as using Facebook for learning English, advising students, organizing training courses, and giving knowledge about breastfeeding. We will also present advantages and disadvantages of using Facebook for learning and teaching.

Facebook has been increasingly popular worldwide nowadays. Citi analyst Mark Mahaney reported that Facebook had passed Google in terms of time spent online (Sterling, 2010). Mahaney noted that in August 2010, Facebook, for the first time took the top spot with 41.1 billion minutes followed by Google with 39.8 billion minutes (Sterling, 2010). The number one social network site is Facebook which has 704,130,980 user accounts on June 24, 2011 (Socialbakers.com, 2011a) while 50% of Facebook active users log on to Facebook in any given day (Facebook.com, 2011a) 80 million new user registered in the first 3 months of the 2011. Nearly 30% of the new account registrations have been made by users in the age group of 18–24 years, representing people who are in colleges and universities worldwide. This age group constantly remains the strongest one on Facebook and at this moment represents over 210 million Facebook users overall (Socialbakers.com, 2011).

In Thailand, there are about 10,360,900 active Facebook users in June 2011 which was about 175.75% increased from approximately 3,757,340 users in June 2010 (Bunloet et al., 2010). The age group that represents the majority of users is 18-24 years old, which is about 3,563,000 users (34%, Socialbakers.com, 2011b). Thai Facebook users growth in the last 6 months is shown in Figure 1.

Figure 1: Thai Facebook Users Growth in the Last 6 months (Socialbakers.com, 2011b)

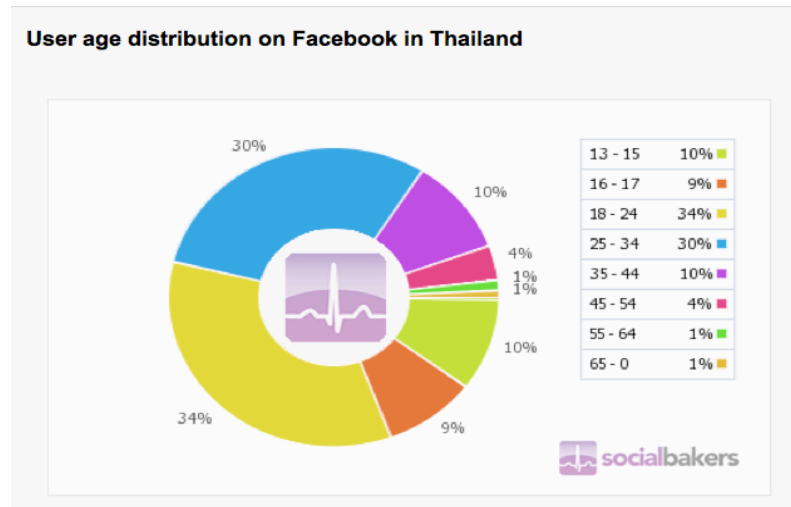The age distribution is shown in Figure 2.

Figure 2: User age distribution on Facebook in Thailand (Socialbakers.com, 2011c)

As a result, Facebook can be a potential tool for learning and teaching that can be used to reach this group of young people, many of which are in Thai colleges and universities. It is also essential to understand the advantages and disadvantages as well as how to appropriately use Facebook for learning and teaching.

In the remaining of the paper, we organize the paper as following. Section 2 discusses related work. Then, Section 3 presents the usage of Facebook in both formal and informal education. Then, in Section 4, we present both advantages and disadvantages of using Facebook for teaching and learning. Finally, we conclude in Section 5.

2. Related Work
In this section we consider related work in using Social media in teaching and learning.

One of the most interesting article that discusses how a teacher can use Facebook is "Facebook for Educator", which suggests 7 ways to educators as follows (Phillips, Baird, Derek, & Fogg, 2011).
1. Help develop and follow your school's policy about Facebook.
2. Encourage students to follow Facebook's guidelines.
3. Stay up to date about safety and privacy settings on Facebook.
4. Promote good citizenship in the digital world.
5. Use Facebook's page and group features to communicate with students.
6. Embrace the digital, social, mobile, and "always-on" learning styles of 21st Century students.
7. Use Facebook as a professional development resource.

Our work differs from the article titled Facebook for Educators (Phillips et al., 2011) in that we focus on how to use Facebook groups to communicate with others for learning and teaching. In addition, we provide a new insight into the advantages and disadvantages of using Facebook for learning and teaching.

Another related work is the work that proposes 7 best practices for educators using Facebook.

1. Don't Vent On Students
2. Find Out If Your School Has A Social Media Policy
3. Use Facebook As A Backup Tool

4. Don't Log In When You're Upset
5. Avoid The Time Suck
6. Take Advantage Of Facebook's Convenience
7. Only Post What You'd Be Proud To Say In Person

These best practices do not include how to use Facebook groups to communicate with students without requiring a student to be a Facebook friend with a teacher, but in our paper, we will have used a Facebook group so that students and teachers can participate in the same course without being friends to each other on Facebook.

Many teachers have applied social media such as Twitter and Facebook for learning (Block, 2009). Our work from this referred article in the point that we have created and analyzed the survey about the disadvantages and advantages of using Facebook as a learning and teaching tool.

3. Facebook Usage in Formal and Informal Education

In this section, we describe how we use Facebook in both formal and informal education. Formal education here refers to official courses that students can register in Khon Kaen University, Thailand. Informal education here refers to learning outside classroom and even learning outside school. In this paper, we give examples of learning outside classroom through using Facebook to share information in a research group, and using Facebook to ask and questions about how to breastfeeding.

3.1 Facebook Usage in Formal Education

In formal education, Facebook has been used in both undergraduate and graduate courses at Khon Kaen University. It has been used in XML and Web Services undergraduate course through Facebook group with 73 members. The Facebook group was created on October 26, 2010 while the course officially ended on March 4, 2011. However many students have continued to share useful information related to the course material with others. Figure 3 depicts the picture of the top part of Facebook group of XML and Web Services course.

Figure 3: XML and Web Services Group with the Most Recently Posted

In this course, we sometimes asked the user to submit the assignment via uploading a photo to the group. For example, in the assignment that assigned students to find an application that uses XML, students must capture the screen of the such application. Some of photos that the students have uploaded are shown in Figure 4. In addition, we have also updated useful information about resources related to the course and about course projects assignments using Facebook Doc as shown in Figure 5.
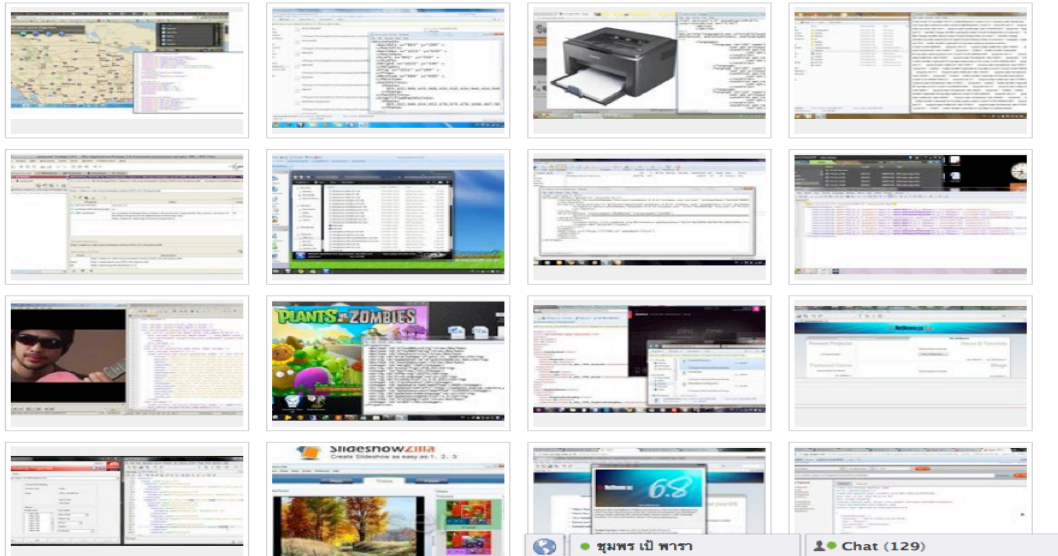

Figure 4: Shared Information via Uploaded Photos

Figure 5: Documents about Useful Resources and Projects

Another course that we have used Facebook for learning and teaching is Programming for Android. Originally, the Facebook group was created for only 10 graduate students

who have taken Programming for Android. Later, this Facebook group becomes interesting to many people who did not take the course. In addition, it has recently been reused in an undergraduate course called Wireless Devices Programming.

All assignments are given and checked by having students creating photo albums that contain the captured screens of their mobile applications and then update the links of those albums in Facebook documents. Figure 6 shows a Facebook document that contains the assignment information and the album links of students' assignments. Figure 7 shows a sample album of photos uploaded to fulfill the assignment.
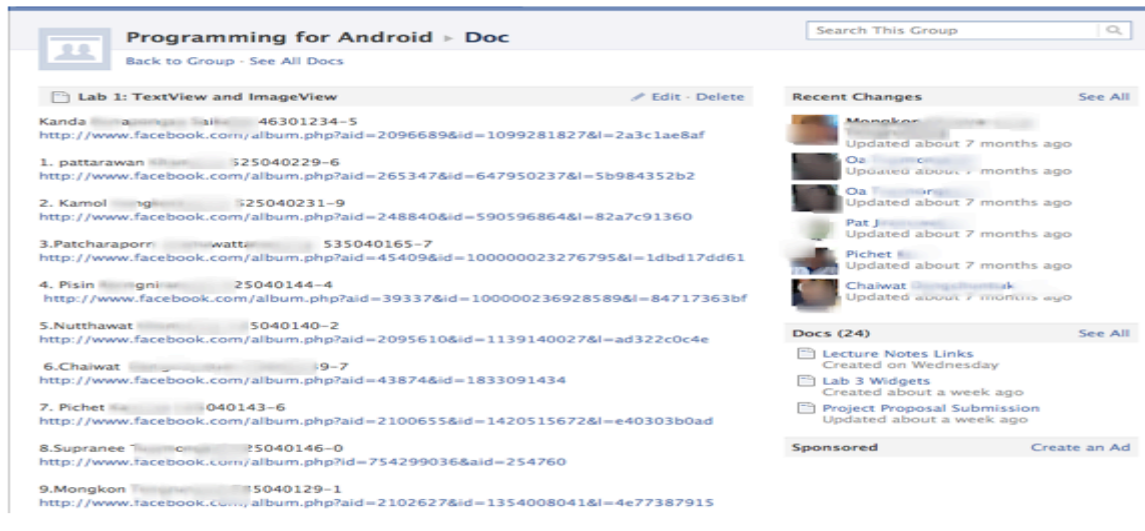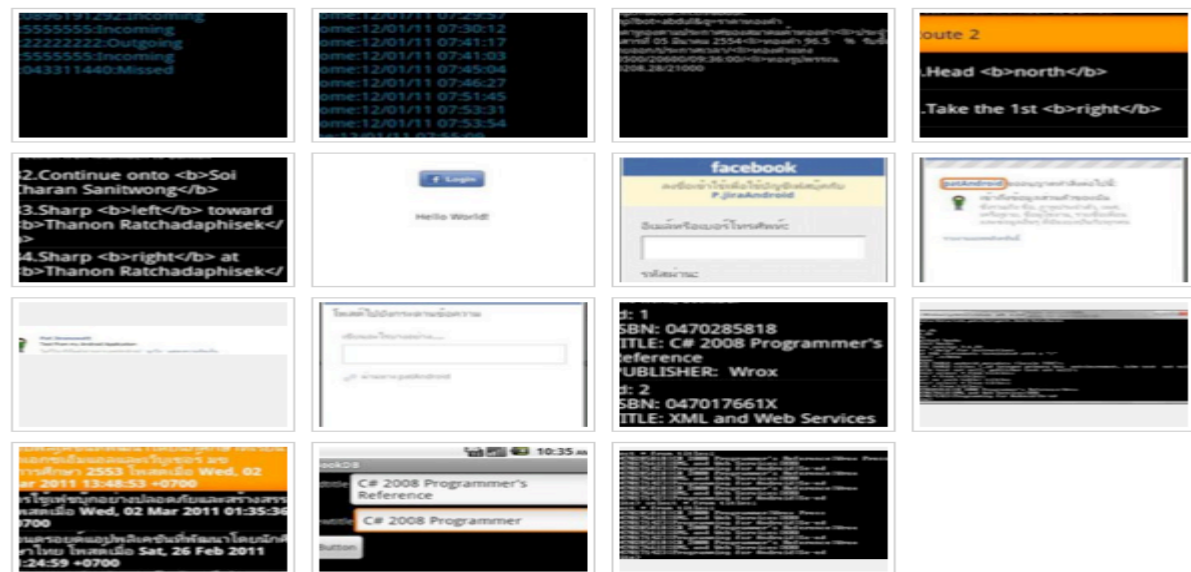

Figure 6: A Lab Assignment with the Links of Students' Photo Albums

Figure 7: A Sample Album of Photos Uploaded to Fulfill the Assignments

3.2 Facebook Usage in Informal Education

This section describes how we can use Facebook in informal education. We have used Facebook groups in a research group and in guiding new mothers in breastfeeding.

3.2.1 Using Facebook in a Research Group

Facebook group has been created for using among research group members. Since some discussion ideas should be kept as private, it is usually created in a secret group as shown in Figure 9. It can consist of announcements, setting laboratory meeting dates, posting research questions, assigning and following up tasks. After a few days of creating group, students responded and got acquainted quickly with all the activities mentioned above. That was counted as the first step of success in integrating research activities into students' personal agenda. From their wall, not only they see their friends' situation but also their research group's. This part of seeing instant wall post is inevitably important to catch students' attention. Since communicating with them needs to be quick and be through the right tool. Facebook is definitely an answer.

In a longer period, the second step of success is counted when students keep the group active. An advisor is the key player in this part since she/he is responsible of announcing, assigning and posting messages. For example, a research question is posted and students have to find an answer and post on comment section. This informal assignment is fast and interactive. Students are already there in front of their laptops serving the web. Thus they can use www to find answer or just analyze based on their research and classroom experience. In a group with a number of students, this activity is fun and open for all kinds of answers. Students have opportunity to express their thoughts and share with the others. The advisor again also plays a major role in guiding the answer in between comments. Such activity could be called virtual exercise.

The final stage, where called the final step of success, is that students are able to post research activity, ask interesting questions, and design their own tasks. The sample of the occurrence of this stage is shown in Figure 8. In this stage, the advisor plays a smaller part, but still needs to guide via comments. Once students naturally post research matters on the group wall, or even on their own wall, Facebook is formally the informal tool in their learning process.

Figure 8: Facebook Group for Research Group

3.2.2 Using Facebook for Sharing Good Practices of Breastfeeding

For the knowledge and skills that are beneficial to mankind such as information about health, the content should be shared as public and we want many people to view thus it is better to use Facebook page. For example, here we have created the Facebook page to provide useful information and answering questions that mothers who want to give breastfeeding. The Facebook page URL is at http://www.facebook.com/thaibreastfeeding. Currently, there are 4,474 people who like this page.

4. Survey Result

In order to survey the opinions and receive interesting comments, we have created the online survey page which is available at https://spreadsheets0.google.com/spreadsheet/viewform?hl=th&hl=th&formkey=dEFESy1FWm9 LNVB3NHJITHJqcTVVXSHc6MA#gid=0 The targets of this survey are teachers and learners who have some experience in using Facebook as a supplementary tool for teaching and learning. We separated the questionnaire into 2 sections. The first section is about general data of the questionnaire respondents and the other section is about opinions of advantages and disadvantages of using Facebook as a supplementary tool for teaching and learning. In this section, we refer to students as learners.

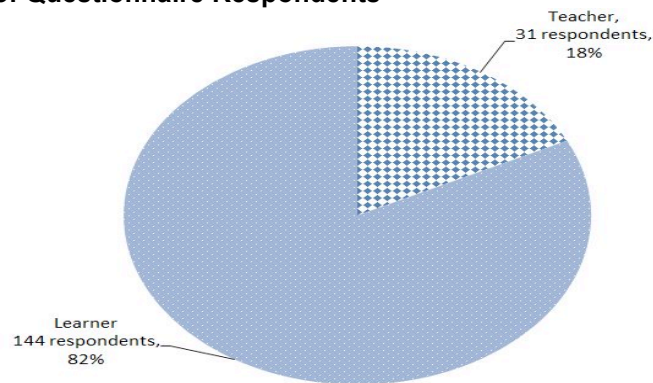### 4.1 General data of Questionnaire Respondents

Figure 9: Classified Respondents as Learners and Teachers

The online survey page has specifically sent to teachers and learners who have used Facebook. There are 175 responses. Figure 9 shows the percentage of types of respondents. About 82% is learner or student while 18% is teacher.
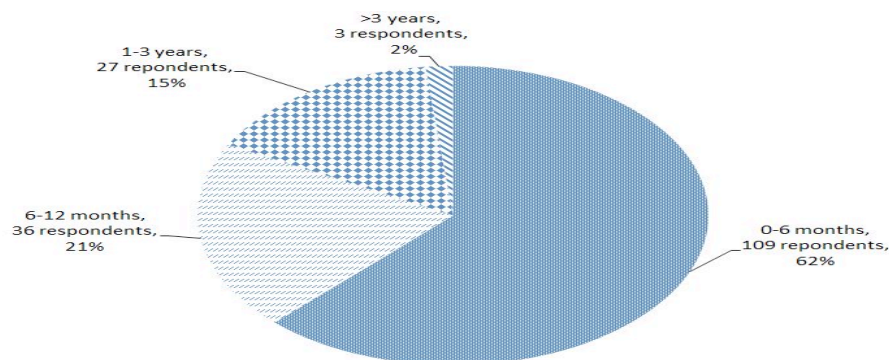

Figure 10: The Length that Respondents used Facebook for Teaching and Learning

Figure 10 shows that 62% have used Facebook for teaching and learning for only 0-6 months, 21% haved used for 6-12 months, 15% have used 1-3 years, and only 2% have used it for more than 3 years. This implies that the majority of people have just started to use Facebook for teaching and learning.
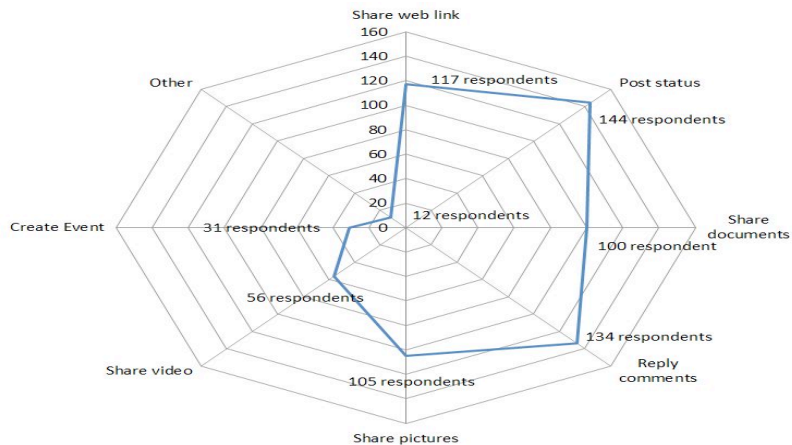

Figure 11 How Respondents use Facebook in Teaching and Learning

Figure 11 shows the results that 82% have used facebook for posting status, 77% have used Facebook for replying comments, 67% have used Facebook for sharing web link, 60% have used Facebook for sharing picture, 57% have used Facebook for sharing documents, 32% have used Facebook for sharing videos, 18% have used Facebook for creating events, and 7% have used Facebook for other purposes. This implies that most of respondents have used Facebook for sharing resources which include status, documents, and pictures.
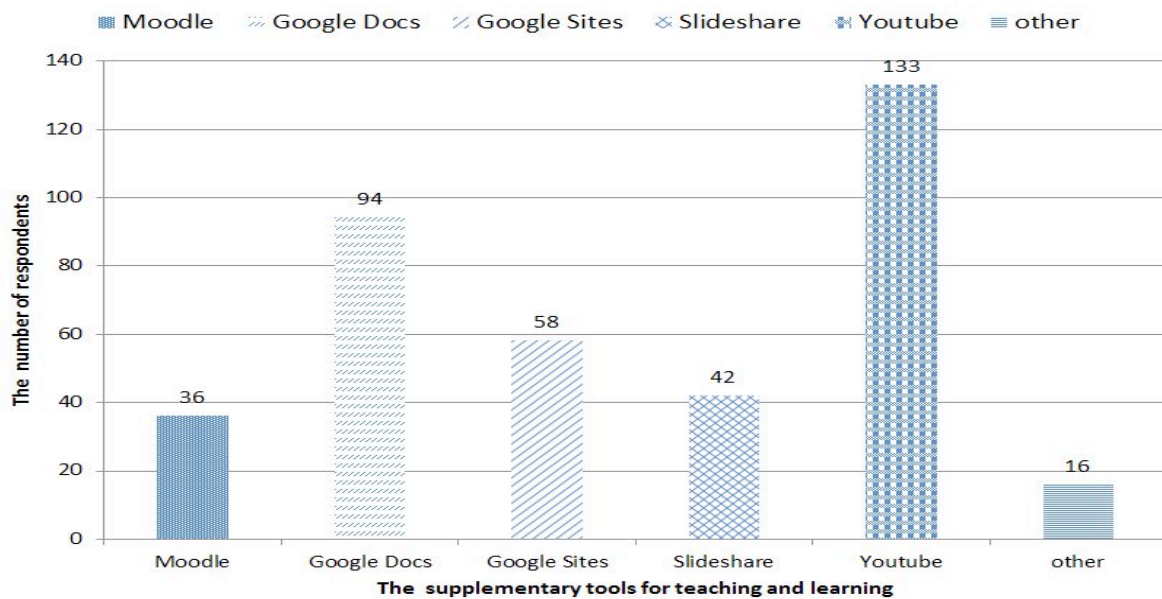.

Figure 12: Other Social Media Tools used by Respondents

Figure 12 shows the other options of using social media tools for teaching and learning by respondents. It was found out that 80% have used YouTube, 57% have used Google Docs, 35% have used Google Sites, 25% have used Slideshare, 22% have used Moodle and 10% have used other social media tools for teaching and learning. This means that YouTube an Google Docs used by more than half of respondents as a learning and teaching tool. Notice that respondents may select more than one choice, thus percentages may add up to more than 100%

4.2 The Opinions of Advantages and Disadvantages of using Facebook for Teaching and Learning

In this section we would like to investigate about advantages and disadvantages of using Facebook for teaching and learning. The first question is in the term of advantages of using Facebook for teaching and learning which include 1) Instant interaction, 2) Convenience, 3) Easy to use, 4) Courage to share and 5) Comprehensive participation. The degree of an opinion is divided into 5 scales: strongly agree, agree, neutral, disagree and strongly disagree.
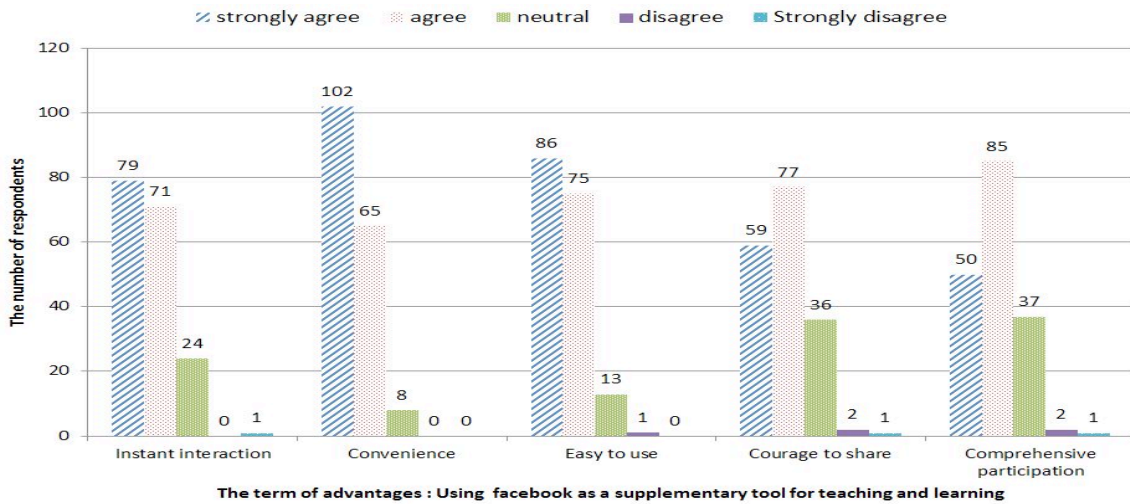
Figure 13: Opinions about the Advantages of using Facebook as a Supplementary tool for teaching and learning.

Table 1: Descriptive Statistics about Advantages of Using Facebook for Teaching and Learning

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Instant interaction	175	1	5	4.30	.745
Convenience	175	3	5	4.54	.585
Easy to use	175	2	5	4.41	.653
Courage to share	175	1	5	4.09	.797
Comprehensive participation	175	1	5	4.03	.772
Valid N (listwise)	175				

From Table 1, we can conclude that the distinguished advantages of using Facebook for teaching and learning include convenience, easy to use, and instance interaction

The second question is in the term of disadvantages of using Facebook as a supplementary tool for teaching and learning which include 1) Time consuming, 2) Difficult to find resources, 3) Difficult to keep resources, 4) Too open to public and 5) Disturb personal space. The degree of opinion is divided into 5 scales: strongly agree, agree, neutral, disagree and strongly disagree.
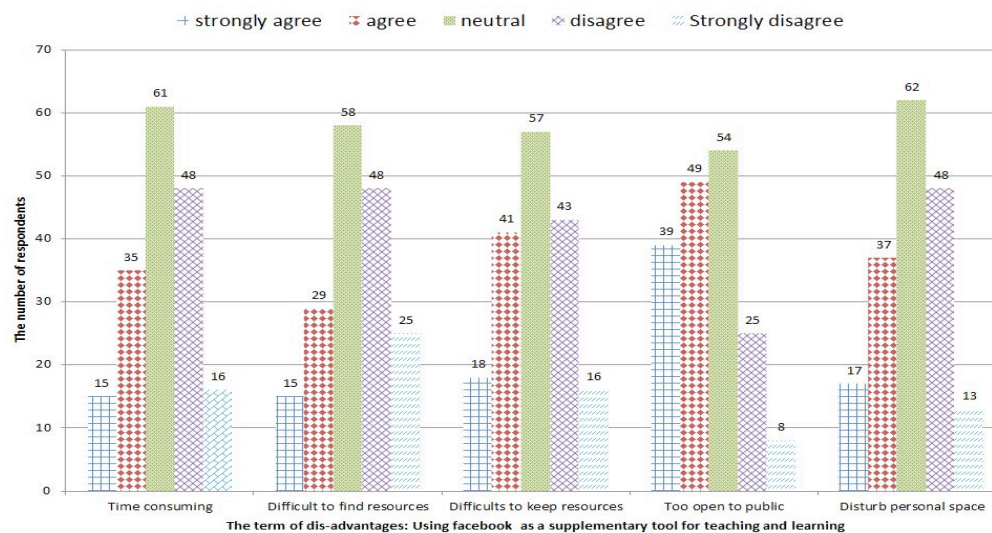

Figure 18: Opinions about the Disadvantages of using Facebook as a supplementary tool for teaching and learning

Table 2: Descriptive Statistics about Disadvantages of Using Facebook for Teaching and Learning

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Time consuming	175	1	5	2.91	1.087
Difficult to find resources	175	1	5	2.78	1.145
Difficult to keep resource	175	1	5	3.01	1.124
Too open to public	175	1	5	3.49	1.124
Disturb personal space	175	1	5	2.99	1.080
Valid N (listwise)	175				

From Table 2, we can conclude that the many people do not agree about many disadvantages of using Facebook for teaching and learning as the mean for each disadvanage is about 3.0 (neutral). The only disadvantage is too open to public.

5. Conclusion

In this paper, we have presented an approach and shared experiences in using Facebook for teaching and learning. It has been shown that many students quickly respond to teachers' posts and they also shared useful information. We have also evaluated and analyzed the result of the survey. It was found out that most people agree that the advantages are convenience, easy to use, and instance interaction while most people view the only disadvantages is too open to public. In the future, we consider developing a Facebook App and analyzing user interaction with it. We also would like to study what features may increase user engagement with web 2.0

References

Block, G. (2009). News | SDSU | Classrooms in a Twitter. Retrieved June 26, 2011, from http://newscenter.sdsu.edu/360/news.aspx?s=71580

Bunloet, A., Runapongsa Saikaew, K., Tengrungroj, M., Nalinthutsanai, N., Mungpooklang, T., Dabpookhiew, P., Winkam, T., et al. (2010). Analysis of Facebook Usage by College Students in Thailand (p. 107). Presented at the The 25th International Technical Conference on Circuit/Systems, Computers and Communications (ITC-CSCC 2010), Pattaya, Thailand.

Facebook for Educators. (2011). Sample Policies – Facebook for Educators. Retrieved June 25, 2011, from http://facebookforeducators.org/sample-policies

Facebook.com. (2011a). Facebook Statistics. Retrieved June 24, 2011, from https://www.facebook.com/press/info.php?statistics

Facebook.com. (2011). Facebook Safety. Retrieved June 26, 2011, from https://www.facebook.com/fbsafety

Facebook.com. (2011). Facebook and Privacy. Retrieved June 26, 2011, from https://www.facebook.com/fbprivacy?sk=wall

Phillips, L. F., Baird, Derek, & Fogg, B. (2011). Facebook for Educators. Retrieved from http://facebookforeducators.org/wp-content/uploads/2011/05/Facebook-for-Educators.May-15.pdf

Socialbakers.com. (2011a). Facebook Statistics by country - Socialbakers. Retrieved June 24, 2011, from http://www.socialbakers.com/facebook-statistics/

Socialbakers.com. (2011b). Facebook gains 80 million new accounts in the first quarter of 2011! - Socialbakers. Retrieved June 24, 2011, from http://www.socialbakers.com/blog/143-facebook-gains-80-million-new-accounts-in-the-first-quarter-of-2011/

Socialbakers.com. (2011c). Thailand Facebook Statistics - Socialbakers. Retrieved June 24, 2011, from http://www.socialbakers.com/facebook-statistics/thailand

Sterling, G. (2010). Facebook Passes Google In "Time Spent," What Does It Mean? Retrieved June 24, 2011, from http://searchengineland.com/facebook-passes-google-in-time-spent-who-should-care-50263