We are Different but Alike: A Comparative Analysis between Students’ and Teachers’ Use of Facebook

Erlin, Susandri, Triyani Arita Fitri
Informatics Engineering, STMIK Amik Riau, Pekanbaru, Indonesia
erlin@stmik-amik-riau.ac.id

Abstract. The purpose of this study is to compare the use of Facebook by students and teachers in higher education. This study is not merely discussed Facebook in intercourse educational environment, or about teaching and learning purposes but more focus to explore and analyze the similarities and differences between students and teachers use of Facebook. This study released an online survey that consists of 17 questions in a questionnaire. A total of 378 respondents from three colleges in Indonesia had given feedback. The finding reveals that neither students nor teacher’s positivity agreed with the statements related to the potential of Facebook for education. Students and teachers stated that Facebook could be used to quickly share information, file, news, events, and resource courses. There were differences in perception on question teachers use the chat facility on Facebook to guide students’ final project. Almost half of students agreed with this statement while teachers vice versa. Based on the similarities more than the differences indicate that Facebook can be used as a possible educational tool and media assistant for academic communication and academic purposes.

1. Introduction

The rise of Web 2.0, led to the increasing popularity of Social Networking Sites (SNS), in line with social escalation interaction, collaboration, and sharing among internet users. SNS such as Facebook, Twitter, Instagram, Path, Google+, etc. have gained immense popularity in the today’s digital society and are being adopted briskly by billions of users. It has entered almost all facets of society. Business, politics, health, trade and education cannot be separated from the role of SNS in it. In 2017, it is estimated that there will be around 2.51 billion social network users around the globe, up from 2.34 billion in 2016 [1]. This number will continue to increase over time as more quickly gained internet access by users around the world.

In spite of various SNS, Facebook is the most popular and the biggest social networking site with the largest number of users. In the third quarter of 2012, the number of active Facebook users had surpassed 1 billion. As of the second quarter of 2016, Facebook had 1.71 billion monthly active users [1]. A huge and vastly growing number of Facebook users, cause a lot of scholars, conducted research on Facebook such as research on Facebook usage [2][3]. Another scholar discussed and analysed the potential Facebook for education [4][5]. Furthermore, several scholars pointed out the effects of using Facebook [6][7], including academic performance [8].

Facebook’s user base is dominated by 25 years old or older, but they still have more than 50 million users under 25 years old [9]. Since Facebook has a lot of a number of users under the age of 25 years old, many researchers interested to explored and analysed the use of Facebook for an educational environment. El Bialy and Jalali [10] stated that Facebook is not convenient for education because
teachers do not offer a suitable mode of learning. Moreover, Manca and Ranieri [11] argued that more favourable attitude towards personal sharing and connecting with peers in professional networks rather than integrating social media into their teaching practices. In contrast [12] [13], revealed that Facebook could be used to enhance the learning process and promote a mindset of continual learning.

Although many studies conducted in several different countries in understanding how much, why and how students use Facebook as a popular social networking site, but authors have not yet found the articles or empirical studies on the use of Facebook by students and teachers in Indonesia. Therefore, the primary objective of this study was to investigate and compare the use of Facebook by students and teachers at three colleges in Indonesia and also investigate the purpose of the students and teachers using Facebook in educational settings. This study is a continuation previously study that focused on Facebook usage at Riau college students [3].

2. Research Method

2.1. Respondents

This study used students and teachers of college as research subjects. The respondents were contacted through their on-campus email accounts and sent a link to a survey hosted on SurveyMonkey.com, the world's most popular commercial survey online. A total of 135 respondents agreed to participate in the pre-test survey, 92.59% (125) are students and 7.41% (10) are teachers. 93.33% (126) pre-test is valid, including 118 (response rate 94.4%) students and 8 (response rate 80%) teachers. After the approval of three colleges in Riau, Indonesia; STMIK Amik Riau, STIE Pelita Indonesia, and STIKOM Pelita Indonesia, the researchers send the questionnaire that has been validated by SPSS version 2.0 a statistical software package. A total of 400 questionnaires were released, 350 for students and 50 for teachers; and there were 378 valid responses for an overall 94.5% response rate. Of the 378 respondents, 87.04% (329) are students and 12.96% (49) are teachers.

2.2. Measures

Respondents were required to complete an online survey. The first part of survey questions was general information that consists of four questions for students (gender, age, year of study and time using Facebook) and five question for teachers (gender, age, education, department, and time using Facebook). The second part was about Facebook usage that consists of five survey questions; log in to Facebook per day, time spent on Facebook per day, the number of friends on Facebook, the number of group on Facebook, and favourite social networking sites. The last part of survey questions was about the perceptions of students and teachers on Facebook for education. This part consists of seven questions; a group created by teachers, teachers used Facebook group to share information, academic staff used Facebook group to share information, teachers used Facebook chat to guide students on final project, Facebook conveys information quickly, Facebook is convenience in sharing file, multimedia, and other resources among fellow academicians, and Facebook is better for reviewing and searching through past article on a certain topic. This part used 5-point Likert scale; 1=strongly disagree, 5=strongly agree.

2.3. Procedures

This study uses a survey online in the form of a questionnaire to gather opinions and perceptions of students and teachers towards the use of Facebook. Before the questionnaire distributed to the respondents, the questionnaire was prior tested to a small number of respondents to determine the validity and reliability of the survey. The validity of the survey’s items was tested using the Pearson correlation method (p <0.05) and the reliability was tested using Cronbach α with Cronbach’s α of 0.83. After reaching the standard value, the questionnaire is ready to be shared with the students and teachers of three colleges in Indonesia.

The technical on filling out the questionnaire by respondent was designed using nonparametric statistical which are closed. Analysis obtained from this technique is descriptive and explanatory, and
the data were expected valid and filled with actual by the respondent to describe how the real data available in the field.

3. Results and Discussion

3.1. Students and Teachers Demographic Profile

Table 1 shows the students demographic profile that consisted of four items: gender, age, year of study and time using Facebook. In term of gender, 69% (227) of respondents identified as male, while 31% (102) of respondents are female. In age, 27,66% (91) of respondents under 20 years of age, whereas 67,17% (221) of respondents were 20 to 25 years old, and 5,17% (17) of respondents above 25 years old. In the year of study, 26,44% (87) of respondents at first year, 20,67% (68) at second years, 31% (102) at third years, 19,45% (64) at the fourth years; whereas only 2,43% (8) of respondents at more than four years. Finally, in term of time using Facebook, almost all respondents were long term Facebook users, with the vast majority (95,13%, 323 respondents) indicating they had used Facebook for more than 2 years, 4,56% (15) for 1 to 2 years and only one student had used Facebook less than a year.

| Table 1. Students Demographic Profile | Table 2. Teachers Demographic Profile |
|--------------------------------------|--------------------------------------|
| Demographic                          | Demographic                          |
|                                       | n (329)  n (%)                        |
| Gender                               | n (49)  n (%)                         |
| Male                                  | 227  69,00                             |
| Female                                | 102  31,00                             |
| Age                                   |                                  |
| < 20 years old                       | 91  27,66                             |
| 20 – 25 years old                    | 221  67,17                            |
| > 25 years old                       | 17  5,17                              |
| Year of Study                        |                                  |
| 1st year                             | 87  26,44                             |
| 2nd year                             | 68  20,67                             |
| 3rd year                             | 102  31,00                            |
| 4th year                             | 64  19,45                             |
| >4th year                            | 8  2,43                              |
| Time Using Facebook                  |                                  |
| <1 year                               | 1  0,30                               |
| 1-2 years                            | 15  4,56                              |
| 3-4 years                            | 92  27,96                             |
| 5-6 years                            | 129  39,21                            |
| >6 years                             | 92  27,96                             |
| <30 years old                        | 27  55,10                             |
| 30 – 40 years old                    | 11  22,45                             |
| > 40 years old                       | 11  22,45                             |
| Education                            |                                  |
| Master Degree                        | 48  97,96                             |
| Doctorate Degree                     | 1  2,04                              |
| Department                           |                                  |
| Informatics Engineering              | 31  63,27                             |
| Information Systems                  | 18  36,73                             |
| Time Using Facebook                  |                                  |
| < 1 year                              | 0  0                                 |
| 1-2 years                             | 0  0                                 |
| 3-4 years                             | 2  4,08                              |
| 5-6 years                             | 14  28,57                             |
| > 6 years                             | 33  67,35                             |

In spite table 1 shows the student’s demographic profile, table 2 presents the teacher’s demographic profile that consisted of five items: gender, age, education, department and time using Facebook. In gender term, 61,22% (30) of respondents identified as male, while 38,78% (19) of respondents are female. In age, 55,10% (27) of respondents under 30 years of age, whereas 22,45% (11) of respondents were 30 to 40 years old, and 22,45% (11) of respondents above 40 years old. In term of education, only 1 (2,04%) of respondent had a doctorate degree; the rest are master degree (97,96%). Majority of respondents from informatics engineering department (63,27%-31), while 36,73% (18) from information systems department. Similarly, in term of time using Facebook, most of the respondents (67,35% ) used Facebook for more than 6 years, 28,57% (14) for 5 to 6 years, 4,08% (2) for 3 to 4 years; no one indicated they had been using Facebook for less than a year as well as for 1 to 2 years.
3.2. Facebook Usage

Comparison of students and teachers on Facebook usage as shown in table 3. On the first question related to the login to Facebook per day, there is a difference between students and teachers. Most of the students (38.60% - 127) log in to Facebook three to six times per day, while most of the teachers (53.06% - 26) login to Facebook less than three times per day. However, in term of time spent on Facebook, neither students nor teachers spent their time on Facebook around 30 to 60 minutes per day. It means that, although teachers did not log in as much as students but time spent on Facebook alike. Means, once logged into Facebook the teachers spending more time than the students.

In a number of friend’s term, about half of respondents for both of students and teachers claim to have the number of friends of more than 1000 shows that both of students and teachers receiving quite a lot of friends and inviting someone to be a friend on Facebook. From the student’s side, some of other respondents (23.71% - 78) have a number of friends between 500 to 1000, and 90 respondents (27.36%) have a number of friends less than 500 friends. From the teacher’s side, 18 respondents (36.73%), have a number of friends between 500 to 1000 friends, and the remaining, 8 respondents (16.33%) have a number of friends less than 500 friends.

| Table 3. Comparison of student and teacher on Facebook usage |
|---|---|---|---|
| Question Items | Indicator Question | Student (N=329) | Teacher (N=49) |
| | N | n % | N | n % |
| Log in to Facebook | < 3 times | 83 | 25.23 | 26 | 53.06 |
| | 3 – 6 times | 127 | 38.60 | 20 | 40.82 |
| | > 6 times | 119 | 36.17 | 3 | 6.12 |
| Time spent on Facebook per day | < 30 minutes | 71 | 21.58 | 12 | 24.49 |
| | 30 – 60 minutes | 150 | 45.59 | 27 | 55.10 |
| | > 60 minutes | 108 | 32.83 | 10 | 20.41 |
| Number of Friends on Facebook | < 500 | 90 | 27.36 | 8 | 16.33 |
| | 500 – 1000 | 78 | 23.71 | 18 | 36.73 |
| | > 1000 | 161 | 48.94 | 23 | 46.94 |
| Number of Group on Facebook | < 5 | 84 | 25.53 | 11 | 22.45 |
| | 5 – 10 | 135 | 41.03 | 26 | 53.06 |
| | > 10 | 110 | 33.44 | 12 | 24.49 |
| Favorite Social Networking Sites | Facebook | 256 | 80.82 | 38 | 77.55 |
| | Google+ | 138 | 43.40 | 13 | 26.53 |
| | Plurk | 13 | 4.09 | 0 | 0 |
| | Twitter | 181 | 56.92 | 17 | 34.69 |
| | Instagram | 191 | 60.06 | 29 | 59.80 |
| | LinkedIn | 23 | 7.32 | 4 | 8.16 |
| | Pinterest | 14 | 4.40 | 0 | 0 |
| | Path | 92 | 28.93 | 13 | 26.53 |
| | Others | 59 | 18.55 | 7 | 14.29 |

Furthermore, the questions relating to the item the number of the Facebook group that owned by respondents. Most of respondents, both students (41.04%-135) and teachers (53.06%-26) have a Facebook group between 5 to10 groups, shows that both of them are equally open towards the formation of the group on Facebook related to their profession as a student and a teacher. From the student’s views, (33.44%-110) of respondents stated that they have a Facebook group are more than 10 groups, and the remaining, 84 respondents (25.53%) have a Facebook group are less than 5 group. Instead of the teachers, 12 respondents (24.49%) claimed to have a Facebook group of more than 10 groups and the remaining 11 respondents (22.45%) have a Facebook group of less than 5 groups.

The last questions related to the social networking site which is available and be a favourite for the respondent by right now. Although there are numerous social media sites available, Facebook is a significantly popular site. The overwhelming majority of respondents, either students (256-80.82%), nor teachers (77.55%-38) stated that Facebook was the most used and preferred SNS by students and
teachers at the college compared to others sites such as Google+, Twitter, Instagram, LinkedIn, Path, Plurk, Pinterest and others (Line, BBM, WA, etc). It means that Facebook becomes a popular choice for students and teachers as social media to interact each other. Both types of respondents, students, and teachers alike agree that Instagram becomes another popular social media after Facebook, followed by Twitter, Google+, Path, Others (Line, BBM, WA, etc), LinkedIn, Pinterest and the last Plurk. Although the order of the favorite social media in the same order, but the difference lies in social media Plurk and Pinterest, where is no one teacher stated that they have the account on Plurk and Pinterest.

3.3. Facebook For Education
Table 4 and table 5 depicts the perceptions of students and teachers on Facebook for education. In this study, the perception of respondents which is categorized as strongly agree and agree would be classified as total agree, whereas perception of respondents which is categorized as strongly disagree and disagree would be classified as total disagree.

The results showed that in general, students and teachers were more likely a group created by teachers. One of feature that is owned by Facebook is the ease of forming the group consisting of similar cohorts with similar objectives. Overall agreement by students (strongly agree=41.56% + agree=44.38%, total agree = 85.94%), and overall agreement by teachers (strongly agree=44.90% + agree=46.94%, total agree = 91.84%). Regarding the teachers used Facebook group to share information, most of the respondents (students = 86.16%, teachers = 93.86%) indicated that they were more likely Facebook group as a tool to share information with teachers. Teachers feel more comfortable to share information with the member of the group in their class that they have created before.

Due to the teachers found that it easy to share information through Facebook, it is not surprising that there are the number of teachers who agree the academic staff use Facebook to share information is also very high (91.84%) of the respondents. It is also directly proportional to the student’s perception that also prefers to academic staff use Facebook to share information (76.08%).

Regarding teachers used Facebook chat to guide students on the final project, the result reported that less than half (46.11%) of students agree to use chat feature of Facebook as a tool to guide them in the final project. On the other hand, (81.63%) of teachers, disagree about that. Teachers have a certain view, not unimpeled for guiding the final project through the chat tool on Facebook.

Furthermore, teachers experience when using the Facebook group, where rapid in conveying information to members of the group, providing a view of the 87.76% of teachers agree that Facebook can deliver information quickly, while 73.38% of students have the same perception of the teachers. Only a small of respondents who disagree with this statement.

The capabilities of Facebook in sharing files, multimedia, and other learning resources easily become rationale 93.88% of teachers, and 71.96% of students agree with this statement. Share files in multi-media format have become another advantage of Facebook in attracting the attention of respondents. Moreover, during follow and become a member of the Facebook group, the respondents confirmed that Facebook is very easily used as a tool to share files and other resources for their communities that they follow.

When a user uploads a file in various formats, whether text, images, video or other sources, users quickly browse and looking back the files in question. A total of 72.82% of students and 87.76% of teachers agreed to this statement. It proves that Facebook is very easy to use and has a search facility which is a requirement for social networking application.
4. Conclusion

Facebook is one of the most popular social networking sites that has been widely used by students and teachers in their daily life activity. Facebook use became more ingrained into their life, and as a consequence, has the potential to become valuable resources to support academic communication and academic purposes.

Based on the results, there are some similarities compared to differences between students and teachers use of Facebook. Students and teachers have the same perception on the four of five questions related to the Facebook usage. They only differ on the first item about the matter how many times a user logged into Facebook per day. Although there is a different login level, however, the time spent on Facebook per day has the same time, 30 – 60 minutes per day.

Furthermore, on the part of Facebook for education, students and teachers agree on almost all questions. The difference is only found on the item in question number 4 (four) that teachers use the chat facility on Facebook to guide a student in the final project. Nearly half the students agreed with this statement, while most teachers precisely do not agree. The percentage of the teachers agree greater than the students in 9 (nine) of the 10 (ten) item in question. For the student, the whole question agrees more dominant compared to strongly agree, while for teachers, 5 of the 7 questions, strongly agree more dominant than agreed, which means that the teachers strongly agree Facebook used as a tool for educational purposes.

Table 4. The perceptions of students on Facebook for education

| Questions                                      | strongly agree | agree | neutral | disagree | strongly disagree | skipped | total |
|------------------------------------------------|----------------|-------|---------|----------|-------------------|---------|-------|
| A group created by teachers                    | 41.56%         | 44.38%| 11.88%  | 1.56%    | 0.63%             | 9       | 320   |
| Teachers used Facebook group to share information | 40.25%         | 45.91%| 11.64%  | 0.63%    | 1.57%             | 5       | 318   |
| Academic staff used Facebook group to share information, news, and event | 34.47%         | 41.61%| 18.01%  | 5.28%    | 0.62%             | 7       | 322   |
| Teachers used Facebook chat to guide students on final project | 17.45%         | 28.66%| 24.92%  | 23.05%   | 5.92%             | 8       | 321   |
| Facebook convey information quickly           | 34.06%         | 39.32%| 19.81%  | 5.88%    | 0.93%             | 6       | 323   |
| Convenience in sharing file, multimedia or textual educational resources | 24.92%         | 47.04%| 23.99%  | 3.74%    | 0.31%             | 8       | 321   |
| Facebook is better for reviewing or searching through past article | 28.44%         | 44.38%| 22.81%  | 4.06%    | 0.31%             | 9       | 320   |

Table 5. The perceptions of teachers on Facebook for education

| Questions                                      | strongly agree | agree | neutral | disagree | strongly disagree | skipped | total |
|------------------------------------------------|----------------|-------|---------|----------|-------------------|---------|-------|
| A group created by teachers                    | 44.90%         | 46.94%| 4.08%   | 2.04%    | 2.04%             | 0       | 49    |
| Teachers used Facebook group to share information | 51.02%         | 42.86%| 4.08%   | 0.00%    | 2.04%             | 0       | 49    |
| Academic staff used Facebook group to share information, news, and event | 44.90%         | 46.94%| 0.00%   | 4.08%    | 4.08%             | 0       | 49    |
| Teachers used Facebook chat to guide students on final project | 10.20%         | 6.12% | 2.04%   | 30.61%   | 51.02%            | 0       | 49    |
| Facebook convey information quickly           | 46.94%         | 40.82%| 4.08%   | 4.08%    | 4.08%             | 0       | 49    |
| Convenience in sharing file, multimedia or textual educational resources | 48.98%         | 44.90%| 2.04%   | 2.04%    | 2.04%             | 0       | 49    |
| Facebook is better for reviewing or searching through past article | 40.82%         | 46.94%| 4.08%   | 4.08%    | 4.08%             | 0       | 49    |
Based on this study, indicates that Facebook as a good medium not only for communication but also for engagement in the process of learning, especially when teachers and students use the facebook group. Facebook has the potential to enhance teaching and learning process and support formal learning. Hence, finding of this study support the point of view that social networking site, particularly Facebook, can be used as a part of improving and arousing students’ and teachers’ experience and learning.

Acknowledgement

The researchers would like to thank the Ministry of Research, Technology and Higher Education (Kemenristekdikti), Indonesia, for funding this research. We also thanks to teachers and our students for their assistance and the survey filling.

References

[1] Statista.com, Number of worldwide social network users. Retrieved Juni 2016.
[2] L. Ahern, J. Feller, and T. Nagle, “Social media as a support for learning in universities: an empirical study of Facebook Groups,” *J. Decis. Syst.*, vol. 25, no. sup1, pp. 35–49, 2016.
[3] E. Erlin, A. F. Triyani, and S. Susandri, “Using Social Networks: Facebook Usage at the Riau College Students,” in *Procedia Computer Science*, 2015, vol. 59, pp. 559–566.
[4] S. Kumar, A. Joshi, and H. Sharma, “A multi-analytical approach to predict the Facebook usage in higher education,” *Comput. Human Behav.*, vol. 55, pp. 340–353, 2016.
[5] D. Lambić, “Correlation between Facebook use for educational purposes and academic performance of students,” *Comput. Human Behav.*, vol. 61, pp. 313–320, 2016.
[6] J. H. Tang, M. C. Chen, C. Y. Yang, T. Y. Chung, and Y. A. Lee, “Personality traits, interpersonal relationships, online social support, and Facebook addiction,” *Telemat. Informatics*, vol. 33, no. 1, pp. 102–108, 2016.
[7] N. Leelathakul and K. Chaipah, “Quantitative effects of using facebook as a learning tool on students’ performance,” in *10th International Joint Conference on Computer Science and Software Engineering (JCSSE) 2013*, pp. 87–92, 2013.
[8] R. Junco, “Student class standing, Facebook use, and academic performance,” *J. Appl. Dev. Psychol.*, vol. 36, pp. 18–29, 2015.
[9] Socialbakers.com, “Facebook statistics.” Retrieved Juni 2016.
[10] S. El Bialy and A. Jalali, “Go Where the Students Are: A Comparison of the Use of Social Networking Sites Between Medical Students and Medical Educators,” *JMIR Med. Educ.*, vol. 1, no. 2, p. e7, 2015.
[11] S. Manca and M. Ranieri, “Is it a tool suitable for learning? A critical review of the literature on Facebook as a technology-enhanced learning environment,” *J. Comput. Assist. Learn.*, vol. 29, no. 6, pp. 487–504, 2013.
[12] O. Ozyurt and H. Ozyurt, “Using Facebook to enhance learning experiences of students in computer programming at Introduction to Programming and Algorithm course,” *Comput. Appl. Eng. Educ.*, vol. 24, no. 4, pp. 1–9, 2016.
[13] Z. A. Weber and A. H. Vincent, “Facebook as a method to promote a mindset of continual learning in an ambulatory care pharmacy elective course,” *Curr. Pharm. Teach. Learn.*, vol. 6, no. 4, pp. 478–482, 2014.