The Impact of Social Media & Messaging Application Utilization to the Learning Effectiveness (Higher Education Learning Effectiveness Through Social Media & Messaging Application)

Yuliana Lisanti, Devyano Luhukay, Rudy

Abstract: Indonesian internet users reached 143,26 Million in 2017, most of them used internet for accessing messaging and social media application. We argue that usage of messaging and social media can give positive impact to the learning process. Our research method using questionnaire to collect data, research conduct in Private University in Jakarta, and student as our research unit analysis. The second year's research shows that optimization of social media application and messenger services to improve student performance can be done by knowing the most common social media application and messenger services that used by student, socialize the process to increase number of participation, utilization of features of the application, continuous improvement, and communication about method's success story that can attracts lecturer and students to apply and keep improve the more effective method and learning process. This research result can be use by the lecturer or educator to improve education through social media application and messenger.

Keywords : messenger services, optimization, social media, student performance,

I. INTRODUCTION

Based on survey conducted by [1], internet penetration in Indonesia reached 143,26 million, amounting 54,86% of the total population of Indonesia. The use of the internet by Indonesian users is mostly used for messaging and social media. Internet usage in Indonesia is high and most of it is used for accessing social media and messaging, it's become our consideration for conducting this research. Use of cellular devices and social media creates opportunities for interaction and provides collaboration for students to engage with learning material and communication [2]. We argue that the use of social media and messaging can be used positively, especially in the learning process.

Revised Manuscript Received on December 30, 2019.
* Correspondence Author
   Yuliana Lisanti*, Faculty Member, Department of Information Systems, School of Information Systems, Bina Nusantara University, Indonesia.(E-mail: lisanti@binus.edu)
   Devyano Luhukay, Faculty Member, Department of Information Systems, School of Information Systems, Bina Nusantara University, Indonesia. (E-mail: devyano@binus.edu)
   Rudy, Faculty Member, Department of Information Systems, School of Information Systems, Bina Nusantara University, Indonesia.

Based on our first-year research, lecturer and students who use social media (Facebook) and messaging services (WhatsApp) as a media to support learning activities were interviewed and the result was analyzed to understand whether the utilization of these applications have given a positive impact to the learning effectiveness, which was shown by the improvement of the student performance index or GPA. At that time, the conclusion was class that used social media and messaging services to support learning activities did not show any significant impact compare to the rest of the class without social media and messaging services, as the average GPA for class with social media and messaging services had 40% students with GPA 3 and above (out of 4), while class with no social media and messaging services had 30% students with GPA 3 and above (out of 4). The insignificant result was identified due to some challenges in both technical and non-technical issues such as failure during data download or upload, hung or freeze condition, discussion was not properly managed such as there were some students who dominate the discussion while the rest were just quiet, there was a concern from lectures that the material which were uploaded into the social media might be too public, these reasons caused both social media and messaging services were not fully utilized to improve the learning effectiveness. In addition, the previous research showed (Fig.1) that only less than 20% students who were active to use it (more than 75% participations)
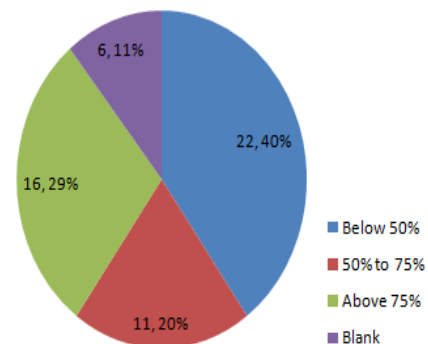

Fig. 1 % Student Participation via WhatsApp or Facebook on First-year Research

The Impact of Social Media & Messaging Application Utilization to the Learning Effectiveness (Higher Education Learning Effectiveness Through Social Media & Messaging Application)

From the above experiences, the team then continue the research in this second year, as planned that it will be focused on the student's side, to identify how to optimize the usage of this social media and messaging services hence these can improve the learning effectiveness significantly. The research will find answers for questions such as how to optimize the usage of social media and messaging services? what are the functions and features of these applications that will improve the students' performance? and how the applications would help to improve the learning effectiveness?

II. PROBLEM STATEMENT, OBJECTIVES, BENEFIT AND RESEARCH URGENCY

A. Problem Statement

The research problem statements are how to optimize the usage of social media and messaging services? what functions and features of these applications that will help to improve the students' performance? and how the applications would help to improve the learning effectiveness?

B. Research Objectives

The research objective is to analyze and find out on how to optimize the usage of social media and messaging services hence these can improve the student's performance significantly.

C. Research Benefit

The research benefits are for universities and educational institutions, as a reference to know on how to optimize the usage of social media and messaging services hence these can improve the student's performance significantly. For educators, as a reference to understand on how to take advantage of social media and messaging services to improve the learning process effectiveness. For the Government, as a reference to facilitate to govern and to provide assistances for educators and learners in using social media and messaging services as a medium of learning to teach. For students, employees or general public, as a reference to utilize social media and messaging services as to get a positive benefit from social media.

D. Research Urgency

The research urgency for this research is the high number of social media users in the Indonesia, that has not been widely used to improve our education learning process. To utilize social media to improve our teaching and learning activities by making educators and learners more interactive, collaborative and innovative in carrying out teaching and learning activities so that materials can be more easily understood.

III. RESEARCH METHODS

The research was conducted in a university in Jakarta, the participants were from various majors and interests. The research team members are lecturers, continuing the first-year research that based on research by [3] in Australia and [4] in Philippine and Turkey. This research divided into 3 phases, on the first year, research was designed to know whether there is influence of social media and messenger service utilization to the effectiveness of student learning performance, then on this second year, research focused to know how to optimize

social media and messaging service utilization so then can give significant impact to the effectiveness of learning process. On the third or the final year research is to implement the research result of the previous both year using much large number of sampling, so the result of the previous research can be more sustain, so it can be as a reference to the university, educators, student, and government.

This research that based on first year research result is focused to analyze how to rightly optimize the social media and messaging services to give significant impact on student's learning performance. Questionnaires and survey were applied to 240 students in various majors on one of the campus in Jakarta. Beside questionnaire, survey and interview, the research also used literature study by going deep into previous research from research journals, articles, and any additional information from the internet. Random sampling technique was used for distributing the questionnaire.

IV. LITERATURE STUDY

Research of [5] writes that Facebook is a popular social media among learners because it has a look (GUI - Graphical User Interface) to interact very easily in access and use. [5] also said that the interaction between students and lecturers and student engagement with the learning process increases as Facebook has features to support these activities such as events, group discussion, security setting, and so forth. In [6] from Konya University, Turkey, who conducted research on 27 students taking history courses (2 credits) at Selcuk University in his article called "Evaluations of Students on Facebook as an Educational Environment" used the following methods and procedures:

- Creation of a group: A group called "Science History" is formed by an educator then access is given only to students enrolled in the class with setting "member access only" meaning not made for public
- Checking User ID: Students who follow this class are asked to perform login test and access to the group on Facebook, for students who do not have ID, then asked to create Facebook account ID so that can be given access into discussion group.
- Invitation and Acceptance: Students are sent an invitation to access the group, and students who receive the invitation will be granted access to the group on Facebook.
- Initial training for students: the process flow and the procedure of group usage in Facebook such as guideline given to students who have registered so that teaching and learning activities will be more effective.
- Clear deadline: Timeline for 2 months is set to run this teaching and learning via Facebook as a medium.
- Evaluation: Lastly, a discussion to determine whether or not the previous learning model is effective and what can be improved is performed before the next session is started.

V. RESULT AND DISCUSSION

In this research, questionnaire was distributed to university students with different majors and interest in a university in Jakarta, 240 were responded. The summary of response as below:

A. General Information About Student Respondent

1) Questionnaire result shows that 64% of student respondent are male and 36% is female

2) Questionnaire result shows that 70% student respondent in on 4th, 3rd, 2nd and 1st semester of study or on their first and second year of study, while the rest are on their 5th to 14th semester (sevenths year of their study)

3) Questionnaire result shows that 61% of students are majoring in Information Systems, 13% are majoring Business, and the rest are majoring Information Technology, Management, Accounting, Communication and Industrial Engineering.

4) Questionnaire result shows that 59% student respondent have GPA of 3 until 4 and 34% have GPA of 2 until 2.9.

5) Questionnaire result shows that 60% student respondent takes 21 – 24 credit of course per semester, 23% takes 16 – 20 credit of course and the rest are less than that.

B. Result of questionnaire about utilization of social media and messenger

1) 90% of student respondents stated that they are active user of social media and messenger application

2) 62% of student respondents stated that the use smartphone to access social media, while 35% use computer and smartphone

3) 68% student respondents stated that they use smartphone to access social media application, while 28%% use computer and smartphone

4) 67% student respondents stated that they use Instagram, while 20% use Facebook and Instagram. This result become interesting because on the first-year research, lecturers are more familiar using Facebook application.

5) Messenger application that used by most of the student respondents is WhatsApp with 66%, and 29% is Line, while the rest of them use Telegram.

6) 57% student respondents stated that they access social media every day, 38% even stated that they access it every hour.

7) 48% student respondents stated that they access messenger every hour and 46% stated they access it every day.

C. Result of questionnaire about utilization of social media and messenger for learning process

1) 58% student respondents stated that class they take is using social media application as a tool to support learning process

2) 86% student respondents stated that class they take is using messenger application as a tool to support learning process

3) 83% student respondents stated that Social Media Application is useful to support learning process.

4) 97% student respondent stated that Messenger Application is useful to support learning process.

5) 34% student respondents stated that Social Media and Messenger Application are used to distribute material, assignment, question and answer, and group discussion, while 10% stated that it only used for group discussion, 7% stated it used to distribute learning material and group discussion.

6) 76% student respondents stated that Social Media and Messenger application are useful because it can improve discussion between student and lecturer, so later can increase the understanding of the material. They also stated that those applications also increase communication between student and lecturer in learning process.

7) 38% student respondents stated that the limitation of social media and messenger applications in learning process is possibility of miscommunication because there is no face to face session, while 29% stated that the applications are not used as tool for learning process. The rest of the student respondents have worried in terms of security and privacy.

8) More than 60% (accumulative) student respondents stated that the additional feature like Virtual Class, Data Storage, Trail Audit (Activity Log), Video Conference, Project Room will be useful and optimize the learning activity through utilization of social media and messenger application.

9) 23% student respondent stated that class that utilize social media and messenger application has increase their GPA/GPS and the impact can be felt significantly (40%-50%), while 32% Student respondents stated the impact is about 20-30%, and the rest of them stated it has less impact.

10) 88% student respondents agree that lecturer should increase utilization of social media and messenger application to support learning activity.

D. Optimization utilization of social media and messenger application in supporting learning activity

1) Using social media and messenger application service that popular for the students. They are Instagram, and Line or WhatsApp as messenger services.

The previous research that shows utilization of social media has no significant impact on student performance is the research that applied to class and lecturer that use Facebook to support learning activity. At that time, the research recognized less than 20% of student is actively participate on discussion or give argument on the discussion. This is caused by the student preference that use Instagram rather than Facebook, so then when Facebook is used as a support application for learning activity, there are not many students interested to join the discussion.

The Survey result this year (point 6 until point 12) shows that of total 90% who use social media and messenger services, almost 70% of them use Instagram and 80% use Line, followed by WhatsApp with 60%. Then above 60% stated that they are active user who use those applications every day, even almost every hour, and they access it through smartphone and computer.

From the research result above, can be conclude that to optimize result of social media and messaging service utilization, lecturer need to know preference of the application used by the students, as for example, Instagram right now is more popular than Facebook, because high number of student's participation in discussion forums will increase effectiveness of social media and messenger application utilization to improve student learning result like GPA.

2) The more class use social media application and messenger services to support learning activity will increase student participation on this activity.

On this second-year research, questionnaire result shows that 60% student respondent stated that their class already uses social media application to support learning activity, and almost 90% stated that their class already uses messenger to support learning process. And all of them agreed that both applications are useful in supporting learning activity (survey result point 13 until 16).

So, it can be concluded that they already actively participate in learning activity through social media and messenger service. Compare with the previous research, at the time there is only few classes that uses social media application and messenger service as a learning activity support tool. The more class already use this supporting application, the more student actively participates to support this activity.

3) Utilize the right features in social media and messenger application.

More than 50% student respondents agree that the social media application and messenger services are so helpful to distribute learning material, assignment, questions and answer, and group discussion. About 76% student respondent agree because the increase of discussion between student and lecturer, they become easier to understand learning material that delivered to them, this because communication of student and lecturer that positively increase (survey result point 17 and 18).

4) Continuous Improvement to reduce limitation.

It is needed to have continuous improvement to solve the current limitation and keep improve the learning process through this media. For example, the possibility of miscommunication because there is no face to face session was stated by 38% student respondents, while 29% stated that there is possibility that those applications are not used to learning activities.

Student respondents also suggest that additional of features like Virtual Class (that become a solution to miscommunication problem), Data Storage, Trail Audit (Activity Log that can be a solution to reduce misused of the applications), Video Conference (to increase face to face session), Project Room (to increase discussion) will be useful and optimized learning activity through social media and messenger application (survey result point 19 and 20).

5) Communicate the success story of utilization of social media and messenger application to increase student's performance.

Survey result shows that 23% student respondents stated there is significant benefit (40% - 50% impact), and 32% get the improved result of GPA/GPS with the utilization of social media and messenger services in the learning activity. This need to be communicated so can increase the participation of student and lecturer to get the same positive result.

VI. CONCLUSION AND SUGGESTION

The second-year research result bring conclusion to the researcher that the previous research result on the first-year that shows there is no significant difference between class that uses social media application and messenger services to improve student performance, is because there is no optimization of implementation process like lack of knowledge or information about the applications that been used, so it created technical problems, lack of socialization and communication of the program, and low optimization of feature utilization of social media and messenger service. Because of that, to optimize social media and messenger service to increase student performance, lecturers need to understand factors below:

1) Use social media application that popularly used by student. This time Instagram, and Line or WhatsApp as a messenger service
2) The more class that used social media application and messenger services to support learning activity, the more increase number of student participation on this activity.
3) Rightly utilize features in social media and messenger
4) Continues Improvement to reduce current limitation
5) Communicate success story of social media and messenger utilization to increase student's performance

Comparison between student and lecturer responses indicate that students are more willing to use newer social media than lecturer that prefer "traditional" social media [7]. Suggestion for the next research is to apply learning activity through this social media and messenger services by considering the factors mentioned above so the result will be more optimal, significantly improve learning performance of the student that can be seen by their GPA/GPS.

REFERENCES

1. APJII, (2017) "Penetration and Behavior of Indonesia Internet User Survey", https://apjii.or.id/survei2017.
2. Gikas, J., Grant, M.M. (2013) "Mobile Computing Devices in Higher Education; Student Perspective on Learning with Cellphones, Smartphones & Social Media", Internet and Higher Education, Vol. 19, pp. 18-26.
3. Irwin, C, Ball, L, Desbrow, B, Leveritt, M, (2012) "Student Perceptions of using Facebook as an interactive learning resources at university", Australation Journal of Education Technology
4. Esteves, K, K, (2012) "Exploring Facebook to Enhance Learning and Student Engagement: A Case from the University of Philippines (UP) Open University", Malaysian Journal of Distance Education 14(1), 1-15 (2012).
5. McCarthy, J. (2010) "Blended learning environments: Using social networking sites to enhance the first-year experience". Australasian Journal of Educational Technology, 26(6), 729-740.
6. Coklar, A, N, (2012) "Evaluations of Students on Facebook as an Educational Environment", Turkish Online Journal of Qualitative Inquiry, April 2012, 3(2).
7. Roblyer, M.D., McDaniel, M., Webb, M., Herman, J., Witty, J.V. (2010) "Findings on Facebook in Higher Education: A Comparison of College Faculty and Student Uses and Perceptions of Social Networking Sites". Internet and Higher Education, Vol.13, pp. 134-140.

AUTHORS PROFILE

Yuliana Lisanti – She has been teaching Information System subjects such as Applied ERP (SAP), Management Information System, IS concept, etc in Bina Nusantara University for almost 15 years. Her BSc in iS was completed in 2000 and graduated from Wolongong in master in IT management in 2005. Publications in Conference and National/International Journal such as ICIMtech namely IT risk and service management in SMEs (2017), SMEs online business strategy (2016), And ICSItech on IT impact on creating positions with study case companies in Jakarta (2015),

then Journal of Theoretical and Applied Information Technology on The design of knowledge management system model for SME (UKM) (2014), were results from some of her research. Her achievements also can be acknowledged from her professional career role. She is currently holding one of strategic position in Bina Nusantara.

Devyano Luhukay - He has a qualification of Magister Management in Financial Management form Trisakti University, Indonesia, while his B.sc in Information Technology from Bina Nusantara University in 2008. He is currently associated with Bina Nusantara University as a lecturer in Information Systems Department and simultaneously pursuing Ph.D. in Doctoral of Computer Science, Bina Nusantara University. He has 8 years' experience in teaching and research. Some of the courses that being taught by him are Introduction to Database Systems, Data & Information Management, Applied Database, Database Design. His research interest includes Knowledge Management, Database and Information Systems Design. He has already published 8 international papers indexed by SCOPUS.

Rudy – He is a Senior Lecturer at Bina Nusantara University of School of Information Systems. He also a PhD candidate at Bina Nusantara University of BINUS Business School Doctor of Research in Management, Indonesia. His research interests include e-Commerce, Digital Marketing, Digital Business, Business Intelligence, and Information Systems Strategic. He holds a Master of Management (MM) degree from Bina Nusantara University Jakarta, Indonesia.