© 2005 – ongoing JATIT & LLS

ISSN: 1992-8645

www.jatit.org



E-ISSN: 1817-3195

### THE IMPACT OF FACILITY, SOCIAL MEDIA AND LEARNING MATERIAL ON STUDENT ENGAGEMENT MASTER IN TECHNOLOGY ONLINE STUDENT IN INDONESIA

#### <sup>1</sup>LINDA W, <sup>2</sup>SFENRIANTO

<sup>12</sup> Information Systems Management Department, BINUS Graduate Program – Master of Information

Systems Management, Bina Nusantara University, Jakarta, Indonesia 11480

E-mail: <sup>1</sup>lindawijay@gmail.com, <sup>2</sup>sfenrianto@binus.edu

#### ABSTRACT

The importance of knowing the factors that affect Student Engagement is required in Online Learning in Indonesia because if the Online Master Student has a good Student Engagement in the place where they study it will create a successful study in line with expectations, have a good student engagement is mean student can enjoy study in they place. Factors that can improve the Student Engagement of Online Master Learning students can come from the facilities provided in the Learning Management System, the material provided and also comes from Social Media that can not be separated from the people of today. Some problems are found in a student who does not achieve a GPA that has been established Online Learning providers and the level of student satisfaction with LMS is lacking. So this study aims to determine the influence of factors related to Student Engagement Online Learning students that can be improved by Online Learning in Indonesia, so as to improve the condition of the problems that occur.

Keywords: Online Learning, Student Engagement, Learning Management System, Social Media

#### 1. INTRODUCTION

Education is important for the people of Indonesia today, where education is a means for the community to pursue education that will provide educational learning, thus the education will help the community to achieve higher education level as well as learning to shape the character of society so that can understand the norms that apply in the environment where he lived. Education can be reached by the community is divided into 3 types of formal education, non-formal education and informal education, where the formal education of the community get a structured and tiered education path as in general the community can take basic education as in elementary school, secondary education as well as higher education including diplomas, scholars, masters, to specialist experts, non-formal education is education outside the formal but still has a structure and also structured, and the last type of education is the informal education that people get from learning or education of their families and the environment from the community itself [1].

Education in Indonesia is increasing from year to year from since 1999 it can be concluded that the people of Indonesia began to realize the importance of education including master's education [2].

Significant technological developments that make Indonesia have the largest internet user development in Indonesia with a high increase of 44.6 million users and of the total internet users (132.7)million internet users) [3], so that people who can't be physically present to do learning in particular through the master's education can be assisted by the internet technology that is a distance education. In general education or traditionally done by way of face-to-face meetings between lecturers and students in the classroom and also conducted at the same time to convey educational materials to students, so that at present the term cyberspace that allows the community to be able to study in the same time but can be done in different places in various ways such as email, discussion forums, and other supporting features.

<u>15<sup>th</sup> July 2018. Vol.96. No 13</u> © 2005 – ongoing JATIT & LLS



www.jatit.org

2.2 Student Engagement

Student Engagement is an important tool for predicting the achievement of a learner's study [14], as well as the interest and motivation of the learner to access or have an interest in the content that contains the learning materials, including the

In implementing distance education learning there are strategies and dimensions of factors for the success of the study period and the success of getting good grades for students such as from the use of technology skills, facilities / tools Online Learning providers themselves, the ability and the way of students in doing online learning, and also the skills, goals and objectives of the students at the time of online class taking that can impact on learning motivation, student lifestyle, individual character[4] as well as other components of learning methods undertaken by students[5]

The way in which the environment of an Online Learning can make students have a success factor of study and produce good grades and also increase the satisfaction of the learner is to create a student engagement with his students through various ways as found from previous studies of learning management facilities system owned by the university or from Online Learning provider of student learning that can be seen from the quality of learning materials, easy accessing of learning materials by students, where students see learning outcomes, as well as facilities supporting the learning of the university as an indirect discussion with teachers (discussion forums, student-accessible tasks and feedback from teachers) or media for live discussion (video conferencing or other communication media) that can measure student interactions and make students have the motivation, interest and desire to make the process of success of learning so that it can be called by students have a student engagement with the learning media[6],[7],[8],[9]

The use of social media is very rapidly growing today, social media is not only a social network, but social media can now be used as a supporting media for learning for E-Learning, not as a substitute for E-Learning because social media has a medium for dissemination media information related to learning, media so that students can interact with fellow students and with teachers, in previous research social media proved as a practical medium to be applied as a medium of learning that can improve student engagement, E-Learning can also be combined with social media as a medium of learning informal because of some things in a profitable social media that allows students to make students can communicate in real-time and also userfriendly[10],[11].

So that will be researched research to help Online Learning in Indonesia who has majoring Master in Technology to evaluate factors that can be increase student engagement for them Online Master Student because found from result of questionnaire that obtained is student satisfaction still less than 80%, which is where 80% is the achievement of desired quality and also average the average achievement of GPA Online Master in Technology Student still below 3.00 out 4.00, so it needs to do research things that can improve student engagement which will affect student satisfaction and also student achievement besides from side of Learning Management System also researcher want to know whether social media students can become a supporting medium of Online Learning in Indonesia to improve student engagement so that students can graduate with good, qualified and satisfied achievement on learning in Indonesia major for Master in Technology major.

From the background description that has been put forward, then the problems to be discussed by researchers are as follows:

Q1 : How is the influence of students' material on student engagement Online Master in Technology Student?

Q2 : How is the influence of students' facility in Learning Management System on student engagement Online Master in Technology Student?

Q3 : How is the influence of students' social media usage on student engagement Online Master in Technology Student?

#### 2. LITERATURE REVIEW

#### 2.1 Learning Management System

A learning system that provides for the needs of well-designed learners and easy navigation for learning activities, rules and management for learning using information technology [12].Learning Management System has a feature that is divided into 3 namely from the learner, supporters and technical features. Learning features include communication (discussion forum, internal email, real time chat, video service), for productivity (bookmarks, help, search in course, calendar / review progress, synchronization work), and learner involvement in LMS (teamwork, self-assessment, student community building, learner portfolio). Supporting features such as for administration, delivery of materials, as well as curriculum design (including content, templates, etc.). In terms of LMS technical specifications in the form of hardware / software and also pricing / license [13]

#### . . . . . . . . . . . . . . .

E-ISSN: 1817-3195

<u>15<sup>th</sup> July 2018. Vol.96. No 13</u> © 2005 – ongoing JATIT & LLS



<u>www.jatit.org</u>



E-ISSN: 1817-3195

interaction with the teacher and also create a comfortable environment for the learner so as to make the learner active learning online [15]. To create an engagement on the learner it is necessary to facilitate a system with a more personalized design, has a good design aesthetics for the learner and also the navigation system easy to use by the learner, because the learner will feel having a good relationship with the system when the learner has an interest long in system usage[16]

#### 2.3 Social Media as Student Engagement

Social Media allows users to create a community to create something, collaborate and also change the content of their own users, by utilizing the latest features of web 2.0 then users can also create other users as contributors by providing comments, searching for information and tagging [17].

Social Media can be used by users to collaborate with each other and also share information that can be used for learners in an academic purpose to improve a student engagement and social media can be used to facilitate a better learning process, with the use of social media as a medium of learning, the learner inter-connected between social media network it will feel connected with other learners, improve liaison between learners so that learners can also be triggered to participate [18].

#### 3. METHOD

Framework for thinking in this research is divided into 4 activities as follows:

1. Determining Research

In determining this research activity is where done background making problems faced by object of research, formulate problem and also conducted analysis condition related to problem which want to be studied. In doing background research problems will be done by searching literature studies from related journal sources, then do the formulation of the problem and make direct observation of the data obtained from Online Learning in Indonesia who has majoring Master in Technology which divided into Master Information Technology and Master Information System.

2. Designing Research

The design of the research will be done by making a hypothesis of the formulation of research problems conducted, complete the study of literature sourced from journals and scientific papers for variables that affect student engagement from Online Learning student to be used for research, analyze each variable that has been determined by describing the research indicators for these variables.

3. Doing Research

In conducting the research, the population will be determined from the research that is determining the population of the active students for the Master in Online Learning which will then be determined the number of samples from the student population, compile questionnaire question from predetermined indicator when conducting the research design, test reliability and validity questionnaires using Cronbach Alpha and AVE, after the questionnaire is said to be valid and reliable it will be distributed questionnaires, then perform data collection from questionnaires distributed to sample research, from the questionnaire will be calculated by using Partial Least Square Structural Equation Modeling method and the results of the research hypothesis testing are accepted or rejected.

4. Describe Research

In describing the research will be presented the results of research that has been done then will be made conclusions from research and suggestions for further research.

There are 2 types of variables used in this study that is Independent Variable and Dependent Variable.

1. Independent Variable

In this research will be reviewed some facilities provided by Online Learning in Indonesia in Facility (X1), social media (X2) as an active learning alternative for students outside Learning Management System Online Learning in Indoenesia and material related to student's learning about in Learning Material (X3), .

Variable X1 explains where the activities performed by students while doing lectures such as posting in forums, attending video conference with lecturers and classmates, work on tasks to enrich teaching materials so as to make the students feel enriched of their knowledge which resulted in the students' college students increasingly interested in the subject, the more curious, the spirit and optimism provided by Online Learning in Indonesia's facility.

Variable X2 explains how social media can help students to facilitate flexible communication with the intensity of these students do group work, sharing of materials between learners so as to increase knowledge for progress and that is learned by the students

Variable X3 explains how the learning material provided by Online Learning in Indonesia majoring Master in Technology is fitted with materials that make students comfortable, not

## Journal of Theoretical and Applied Information Technology <u>15<sup>th</sup> July 2018. Vol.96. No 13</u> © 2005 – ongoing JATIT & LLS

ISSN: 1992-8645

#### www.jatit.org



confused and have curiosity on learning materials for the student's learning progress.

2. Dependent Variable

The dependent variable in this study is determined by Student Engagement (Y) variable which explains the level of interest, attention, optimism, and success of the students in taking the lecture in the form of online



Figure 1. Theoretical Framework

Table 1.	Table	Variable	with	Indicators

Variable	Indicators	Sources
Facility	Actively Participate(B1) Implementation theoretical to the real case problems(B2) Creating Relationship with Classmate Online Member(B3)	[19], [20]

		r
	Motivation to	
	Expand	
	Knowledge(B4)	
	Performance in	
	subjects(B5)	
	Easy to	
	discussion with	
	Classmate	
	online(B6)	
	onnic(D0)	
	Easy to	
	discussion with	
	lecturer(B7)	
Social		
	Easy to share	
Media	data(B8)	[21],[22]
	Easy to use(B9)	
	User-	
	Friendly(B10)	
	( · · ·	
	Easy to	
	understand(B11)	[21],[22]
	According to the	
	need(B12)	[23]
	Length is	[25]
	8	
Learning	fit(B13)	
Material	Easy to	
wiaterial	understand	
	material(B14)	
	The material	[23]
	have a positive	
	impact on self-	
	motivation (B15)	
	The material is	
	significant to	
	online	
	student(A1)	
	Interactions	
	make online	
	student feel	
Student	valuable(A2)	
Engagement		
Engagement	Build a personal with online	
	classmates and	
	lecturer(A3)	
	Increase	
	motivasion	
	because of easy	
1	to use(A4)	[22],[23]

<u>15<sup>th</sup> July 2018. Vol.96. No 13</u> © 2005 – ongoing JATIT & LLS



ISSN: 1992-8645	www.jatit.org	E-ISSN:
-----------------	---------------	---------

Based on the theoretical framework that has been made then the order of hypothesis is as follows:

- Ho1 = Student Activity has no influence on Student Engagement
- Ha1 = Student Activity has influence on Student Engagement
- Ho2 = Social Media has no influence on Student Engagement.
- Ha2 = Social Media has influence on Student Engagement
- Ho3 = Learning Material has no influence on Student Engagement
- Ha3 = Learning Material has influence on Student Engagement

The population for this study is the students of Online Learning in Indonesia active or not yet graduation who have majoring Master Information Technology and majoring Master Information System.

With the total population of active students majors Master Information Technology as many as 334 students and student majors Master Information System as many as 441 students. Sampling technique used is probability sampling technique that is simple random sampling method with sampling using Yamane/Slovin technique from the journal of Sampling Technique and Determination of Sample Size in Applied Statistics Research: An Overview [24].

$$- n = \frac{N}{1+N(e)^2}$$

- Information :
- n = sample size
- N = total population is 775 online student
- E = is the percentage of errors tolerated in sampling there is 10% for tolerated.

so  

$$n = \frac{775}{1+775(0.1)^2} = 88.57 / 89$$
 Online  
Student

the sample to be used is a minimum of 89 students, to anticipate inaccurate data then the researchers took 100 students.

#### 4. RESULT AND DISCUSSION

Respondents in this study were enrolled students active in lectures Online Master Student who has majoring in Master of Informatics and Master of Information Systems Management. Questionnaires made using Google Form were distributed to 440 respondents randomly via email on 18 - 27 September 2017. The results of reciprocity there are 103 respondents who fill out the questionnaire and 100 respondents is completely in the filling questionnaire.

Characteristics of respondents are described based on the program study, gender, graduated year student, age, and social media used by the respondents. Here is a table 2 that explains that respondent's characteristics.

Table 2. Characteristic Respondent

Variable	Data
	22 - 25 years old (Qty = 28 ->
	26 – 29 years old (Qty=24 -> 26.1%)
	30 - 33 years old (Qty=15 ->
Old	16.3%)
	34 – 37 years old (Qty=10 -> 10.9%)
	38 - 41 years old (Qty=12 -> 13%)
	>41 years old (Qty=3 -> 3.3%)
Gender	Male (Qty=69 -> 69%)
	Female (Qty=31 -> 31%)
Decouver	Master Information Technology (Qty=36 -> 36%)
Program	Master Information System (Qty=64 -> 64%)
	< 2016 (Qty=2 -> 2%)
Graduated	2016 (Qty=19 -> 19%)
Year	2017 (Qty=48 -> 48%)
	2018 (Qty=26 -> 26%)
	2019 (Qty=5 -> 5%)
Sosial	Whatsapp (Qty=97)
Media the	Facebook (Qty=63)
used	Nothing (Qty=1)

There's summary respondent answer question at questionnaire. 5 answers that can be choose by respondent are SA is Strongly Agree, A is Agree, N is Neutral, D is Disagree and SD is Strongly Disagree.



ISSN: 1992-8645

www.jatit.org

E-ISSN: 1817-3195

Table 3. Summary Respondent Answer

Question	SD	D	Ν	А	SA	total
I actively participate in e-learning Video Conference so that my knowledge increases	1	4	6	42	47	100
I am often actively involved in discussion forums at my Learning Management System	1	4	6	42	47	100
In the discussion forums, the topics covered varied and helped me understand the material that I have already downloaded	1	0	7	57	35	100
By engaging in the Learning Management System discussion forum, I got a problem solving on my learning materials	1	0	7	57	35	100
By following the Video Conference with my classmates and lecturers, I got a solution in the subject of learning in the lecture	2	0	7	56	35	100

Discussion forums make it easy to engage my relationships with online classmates	1	5	22	49	23	100
The assignment provided me with the motivation to expand my knowledge	1	1	9	50	39	100
The assignments that provided in the course facilitate me in adding to my knowledge	1	1	9	50	39	100
The assignment improves my performance in my study	1	7	13	51	28	100
I use social media in discussing with my online classmate	1	2	4	44	49	100
I prefer to discuss using social media with online classmates than any other media including Learning Management System	1	2	4	44	49	100

# Journal of Theoretical and Applied Information Technology <u>15<sup>th</sup> July 2018. Vol.96. No 13</u> © 2005 – ongoing JATIT & LLS



ISSN: 1992-8645

#### www.jatit.org

E-ISSN: 1817-3195

	1	-	1	-	-	-
I find it easier to discuss with my classmates online when using social media	1	2	4	44	49	100
I use social media in discussions with lecturers	1	4	25	60	10	100
I prefer to discuss using social media with lecturers than other media including LMS	1	4	25	60	10	100
I find it easier to discuss with lecturers when using social media	1	4	25	60	10	100
Social media makes it easy for me to share (upload) learning materials to online classmates	0	4	17	44	35	100
Social media facilitate the lecturer in sharing or upload learning materials to me	0	4	17	44	35	100
Social media is easy to use	1	3	12	46	38	100
Social media is easy to understand	1	1	15	35	38	90
The length of the material on the lecture notes matches with our need	2	2	25	56	15	100

The length of the material/total slide on the presentation material is in accordance with the needs	2	2	25	56	15	100
The length of the material on the lecture notes is fit (not too long and not too short)	2	4	24	57	13	100
The material length or total slide in the presentation material is fit	2	4	24	57	13	100
Lecture notes and powerpoint which is given allows me to understand the course material	1	1	21	53	24	100
Supporting materials provided facilitate me in understanding the course material	1	1	21	53	24	100
The lecture notes and ppt given gave a positive impact on my motivation in college	1	1	17	59	22	100
Supporting the material provided has a positive impact on my motivation in college	1	1	17	59	22	100
I feel that I need to read the learning materials	1	0	2	53	44	100

<u>15<sup>th</sup> July 2018. Vol.96. No 13</u> © 2005 – ongoing JATIT & LLS

ISSN: 1992-8645

#### www.jatit.org



I feel reading the learning 1 0 2 53 44 material is 100 important I feel my opinion is considered by 15 62 22 1 0 friends and lecturers in discussion forums 100 My interactions with my classmates 1 0 16 61 22 and lecturers made me feel valuable (both in forum and 100 social media) The facilities provided me to build a 1 0 10 65 24 personal relationship with 100 classmates The facilities provided me 10 to build a 1 0 65 24 personal relationship with lecturers 100 The social media provide me to build 10 1 0 65 24 personal relationships with 100 classmates The social media provide 0 10 65 24 me to build 1 personal relationships 100 with lecturers My motivation increased with 1 0 3 71 25 the ease of accessing the material 100

My motivation increased with the ease of discussion through the facilities provided	1	0	3	71	25	100
My motivation increased with the ease of discussion through social media	1	0	3	71	25	100

#### 4.1 Composite Reliability

Composite Reliability is an alternative to Cronbach's Alpha to assess whether a variable is reliable. A variable can be said to be acceptable, consistent and reliable when it meets the range of values for composite reliability and cronbach's alpha is as follows:

When the value of composite reliability / cronbach's alpha > 0.8 then the indicator can be said very well and composite reliability / cronbach's alpha.

When the value of composite reliability / cronbach's alpha > = 0.7 then the indicator can be said well and composite reliability / cronbach's alpha.

When the value of composite reliability / cronbach's alpha> = 0.6 then the indicator can be said to be still acceptable but needs further research and still comply with the composite reliability / cronbach's alpha.

If the value of composite reliability / cronbach's alpha <0.6 then the indicator is said not meet the composite reliability / cronbach's alpha [25], [26]

Variabel	Cronbach's Alpha	Composite Reliability
Facility	0.819	0.874
Social Media	0.867	0.909
Learning Material	0.857	0.896
Student Engagement	0.859	0.904

www.jatit.org

<u>15<sup>th</sup> July 2018. Vol.96. No 13</u> © 2005 – ongoing JATIT & LLS



E-ISSN: 1817-3195

It can be concluded from the results of reliability testing based on data processing using SmartPLS application from Table 3 where Facility variable has Cronbach's Alpha value of 0.819 and Composite Reliability value of 0.874, Social Media variable has Cronbach's Alpha value of 0.867 and Composite Reliability of 0.909, Learning variable The material has Cronbach's Alpha value of 0.857 and the value of Composite Reliability of 0.896, Student Engagement variable has Cronbach's Alpha value of 0.859 and Composite Reliability value of 0.904 so that from the values described it can be said that all the results of the value of each variable is good / reliable and meet requirement because overall value> 0.7.

Table 5. Summary Result of Reliability Test				
Variable	Summary			
Facility	Reliable			
Social Media	Reliable			
Learning Material	Reliable			
Student Engagement	Reliable			

#### 4.2 Outer Loadings

ISSN: 1992-8645

Is the values (factor loadings) for the indicators can be said to be valid whether or not from the data questionnaire that has been filled by the respondents. An indicator can be said to be valid if it meets the following values:

- Value > 0,5 is mean indicators is eligible or valid.
- Value < 0,5 is mean indicators is not eligible or not valid[26]

			iry Outer Loa	0
Indic	Facility	Social	Learning	Student
ators		Media	Material	Engage
				ment
B1	0.750			
B2	0.865			
B3	0.687			
B4	0.751			
B5	0.751			
B6		0.764		
B7		0.563		
B8		0.575		
B9		0.890		
B10		0.873		
B11		0.895		
B12			0.815	
B13			0.851	
B14			0.844	
B15			0.867	
A1				0.780

#### Table 6. Summary Outer Loadings

A2		0.857
A3		0.856
A4		0.858

#### 4.3 Average Variance Extracted

Used to perform convergent and divergence tests of validity, which reflect the mean correlation between latent variables within a reflective model. The values that are said to qualify for subsequent tests are as follows

AVE > 0.5 is mean the indicators is eligible or qualify.

AVE < 0.5 is mean the indicators is not eligible or not qualify, then table 6 describes the results of data processing of each variable for the Average Variance Extracted value.

Table 7 Summary of Result AVE				
Variable	Average Variance			
	Extracted (AVE)			
Facility	0.583			
Social Media	0.713			
Learning Material	0.598			
Student	0.703			
Engagement				

After evaluating the measurements of the variables and being considered reliable, valid, qualified and having correlation between variables, the next step is to evaluate the structural model with Path Coefficients

#### 4.4 Path Coefficients

The results of the calculation using SmartPLS against 4 variables are described with the following table

Tabel 8 Summary Path Coefficient				
Variable	Facility	Learn	Social	Student
		-ing	Media	Engageme
		Mate-		nt
		rial		
Facility				0.320
Learning				0.342
Material				
Social				0.362
Media				
Student				
Engage				
ment				

From the results of table 7, it can be concluded that each independent variable affect the

<u>15<sup>th</sup> July 2018. Vol.96. No 13</u> © 2005 – ongoing JATIT & LLS



				•	
ISSN: 1992-8	645		<u>www.jatit.</u>		E-ISSN: 1817-3195
dependent variable with the variable value Facility affect the Student Engagement variable of 0.320, the Learning Material variable affects the Student			able of 0.	facility variable will affect the value of the Student Engagement variable.	
Engagement variable of 0.342 and Social Media			nd Socia	l Media	Hypothesis 2 :
variable affects the Student Engagement variable of 0.362			ement va	riable of	Ho : Social Media has no influence on student Student Engagement
In the result of data processing in this research to test the hypothesis will using Tvalue and			0		Ha : Social Media has influence on student Student Engagement
Tstatistics which can be seen from the following table8			m the fo	ollowing	Decision Making: Tvalue > TStatistic, Accepted Ho, Rejected Ha
Table 9 Hypothesis Testing Result		ult	Tvalue < TStatistic, Rejected Ho, Accepted Ha		
	Original Sample	Sample Mean	Tdev	Statistic	Result :
Facility - >	0.320	0.304	0.085	0.784	Tvalue = 1.960

TStatistic = 5.278 Summary :

Tvalue < TStatistic then Rejected Ho and Accepted Ha,

Social Media has an influence on Student Engagement students, has a strong relationship so that any increase or decrease in the value of Social Media variable will affect the value of the Student Engagement variable.

Hypothesis 3 :

Ho : Learning Materials has no influence on student Student Engagement

Ha : Learning Material has influence on student Student Engagement

From table 8 can be intrepreted result of hypothesis testing as follow :

0.358

0.354

0.085

0.069

0.010

0.278

Hypothesis 1 :

Student

Engage

Learning

Material

Student

Engage

ment

Social

Media ->

Student

Engage

ment

0.342

0.362

ment

\_>

Ho : Facility has no influence on student Student Engagement

Ha : Facility has influence on student Student Engagement

Decision Making : Tvalue > TStatistic, Accepted Ho, Rejected Ha Tvalue < TStatistic, Rejected Ho, Accepted Ha

Result :

Tvalue = 1.960 TStatistic = 3.784 Summary :

Tvalue < TStatistic then Rejected Ho and Accepted Ha so, Facility has an influence on Student Engagement of students, has a strong relationship so that any increase or decrease in the value of the Decision Making :

Tvalue > TStatistic, Accepted Ho, Rejected Ha Tvalue < TStatistic, Rejected Ho, Accepted Ha

Result :

Tvalue = 1.960 TStatistic = 4.010 Summary :

Tvalue < TStatistic then Rejected Ho and Accepted Ha so, Learning Material has an influence on student's Student Engagement, has a strong relationship so that any increase or decrease in the value of Learning Material variables will affect the value of the Student Engagement variable.

#### 4.5 Implications for research

The result of research that can be describe is :

#### The relation of Facility with Student Engagement

<u>15<sup>th</sup> July 2018. Vol.96. No 13</u> © 2005 – ongoing JATIT & LLS



www.jatit.org

4249

between lecturers and students, because with good interaction between students and lecturers can make students interested to actively interact and have a sense of ownership in a community/they class [27], but in this research found that the weak indicator are related to discussion with lecturers and also sharing data / material with lecturers in the use of Social Media. So it can be concluded that students do not use social media to be able to discuss and share material with lecturers.

And it can be improved the Student Engagement through Social Media then it can be recommended Learning Management System Online Learning in Indonesia which added real-time discussion feature by embed with social media which is widely used by students to get a media that is easy to use, understandable, user-friendly and to make it easier for students to create a relationships with classmates and lecturers.

Similar researches related to Social Media have a strong influence in influencing a Student Engagement where Social Media is used by students and lecturers almost at any time and has been attached to smartphones students and lecturers, so that with the Social Media of an educational institution can increase student interaction and enlarge engagement with learning materials[28]. The interactions between Online Student with they online classmate or with lecture proved influencing Student Engagement Online Student in Indonesia[22]

## The relation of Learning Material with Student Engagement

Based on the results of data processing and also the discussion that shows that Learning Materials has a significant influence on Student Engagement and seen from the most influencing indicators Learning Materials is the indicator of Positive Impact on Self Motivation (B15) can be said most strongly affect the variable Learning Materials, where the material provided able to make active students to motivate themselves to learn and engage further search on a material offered.

In related research, it has been proved that the material presented by providing a certain benefit that makes students can increase knowledge, selfmotivation increases with the presentation of such a good visual appearance of material, appropriate length of material, make students feel comfortable in doing the learning can increase student engagement student towards learning[21].

#### may be supported by enriching the topic of discussion in the discussion forum facilities or video conferencing with teachers, making a modification of assignment features in the Learning Management System so that students can apply the theory obtained on the problems in the office / case studies encountered. Based on the previous research found that facilities within a Learning Management System affect students' motivation and engagement such as rapid responses to problems faced by students, the

Based on the results of data processing

and also the discussion that shows that Facility has a

significant influence on Student Engagement and

seen from the indicators that most affect Facility is

an indicator can apply the theory on new problems,

which can be concluded that to improve Student

Engagement Online Learning can see from side

facilities that need to be provided to students is a

facility that can make students apply the theory that

The lowest indicator that affects Student Engagement is an indicator to create a relationship with team members, so it can be concluded that the facilities provided, especially discussion forums of the Learning Management System found not yet support the creation of student relationships with his online classmates

presence of audio, visual, and text in the features of

discussion forums [27]

## The relation of Social Media with Student Engagement

Based on the results of data processing and also the discussion that shows that Social Media has a significant influence on Student Engagement, and is the variable that has the greatest influence compared with the Facility variable and Learning Material variable. and seen from the indicators that most affect Social Media Student Engagement is easy to use, followed by indicators easy to understand and user-friendly, it can be said that Social Media 99% in use by Online Learning students to support lectures have an easy view making it easier for students to discussing with students in they online class.

Supported by 95 respondents out 100 respondents agree more using Social media than other media including Learning Management System to discuss with classmates. One that can improve Student Engagement of students is one of them is the establishment of a good interaction



<u>15<sup>th</sup> July 2018. Vol.96. No 13</u> © 2005 – ongoing JATIT & LLS



www.jatit.org



E-ISSN: 1817-3195

So that the Online Learning in Indonesia can improve Student Engagement from the students it is necessary to present the material with the appropriate material with the right length and easy to understand (in terms of language, etc.), providing materials that can motivate students to search from the material that has been provided (primary material, additional material), so the material that already in the Learning Management System in Online Learning in Indonesia needs to be reviewed by the expert material and the determination of the standard at the university so that each department has the same standard in its presentation.

#### 5. CONCLUSION

With the results of data processing and also the hypothesis testing to produce analysis and discussion in the previous chapter on the influence of Facility, Social Media and Learning Materials on Student Engagement Online Master in Technology student then it can be concluded that the Facility variable can be said significantly and positively affect the variable Student Engagement, Social Media variables can be said significantly and positively affect Student Engagement variables, and Learning Material variables can also be said significantly and positively affect Student Engagement variables.

In this research study contributed as a literature on the variables that affect Student Engagement determined by the previous variables by researchers there are Facility variables, Social Media variables and Learning Material Variables. So the advice can be given as follows :

For Online Learning in Indonesia who has major Master Information Technology and Master Information System, where the Facility variable affects the Student Engagement, it is recommended to review the Facility provided, combined with the needs of the students such as Facility that supports the students to apply the theory in a case study, so that the student can be more interested and want to use the Facility , in addition, Facility can also improve the relationship between fellow students Online and Teachers, because it is important to make students actively participate in the facility if there is a relationship established between fellow students Online with teachers

For Online Learning in Indonesia who has major Master Information Technology and Master Information System, where Social Media variable affect the improvement of Student Engagement, then the recommended thing is the incorporation of Social Media features into the Learning Management System because the features of Social Media are already easy to understand, easy to use by students to discuss in real-time with other fellow Online students as well as for discuss with the lecturer. The importance of combining the features provided by Social Media is seen from the influence of Social Media compared with Facility in Learning Management System, the suggestion from the students on the Learning Management System to add function that allows students, to discuss with fellow students Online who choose to use Social Media (more than 75%) than discussed using Learning Management System(Forum Discussion) and the importance of students can discuss in real-time in order to increase Student Engagement Online students.

For Online Learning in Indonesia who has major Master Information Technology and Master Information System, where the variables of Learning Material affect the improvement of Student Engagement, then it is recommended to review the material that has been given, standardize for each creator to provide materials that can improve selfmotivation to students to learn the material in accordance with the needs and the right length , can be presented with something interactive / gamification depending on the application of technology to be used.

Suggestions for future research, for each variable need to be tested with the enhancement that has been implemented in Learning Management System Online Learning in Indonesia and evaluated the results of its application yields positive results or not, the other suggestions may also test other variables outside Facility, Learning Materials and Social Media for things that can improve Student Engagement for Online Student or Regular Student.

#### **REFERENCES:**

- B. Kesowo, "Sindiker Dikti," 2003. [Online]. Available: http://sindikker.dikti.go.id/dok/UU/UU20-2003-Sisdiknas.pdf.
- [2] I. Kintamani, "PERKEMBANGAN PENDIDIKAN TINGGI Tahun 1999/2000 – 2013/2014," 2015. [Online]. Available: http://publikasi.data.kemdikbud.go.id/upload Dir/isi\_888D196B-BA5D-4E76-A15C-446A19C61CB7\_.pdf.

<u>15<sup>th</sup> July 2018. Vol.96. No 13</u> © 2005 – ongoing JATIT & LLS



ISSN: 1992-8645

#### www.jatit.org

- [3] A. H. Pratama, "Perkembangan Pengguna Internet di Indonesia Tahun 2016 Terbesar di Dunia," 31 January 2017. [Online]. Available: https://id.techinasia.com/pertumbuhanpengguna-internet-di-indonesia-tahun-2016.
- [4] L. Schrum and S. Hong, "DIMENSIONS AND STRATEGIES FOR ONLINE SUCCESS: VOICES FROM EXPERIENCED," JALN Volume 6, Issue 1, pp. 57-67, 2002.
- [5] E. Yukselturk and S. Bulut, "Predictors for Student Success in an Online Course," Educational Technology & Society, pp. 71-83, 2007.
- [6] L. Wong, "Student Engagement with Online Resources and its impact on Learning Outcomes," Journal of Information Technology Education: Innovations in Practice, pp. 129-146, 2013.
- [7] J. A. Gray and M. DiLoreto, "The Effects of Student Engagement, Student Satisfaction, and Perceived Learning in Online Learning Environments," National Council of Professors of Educational Administration (NCPEA), pp. 1-20, 2016.
- [8] D. Williams and A. Whiting, "Exploring the Relationship Between Student Engagement, Twitter, and a Learning Management System: A Study of Undergraduate Marketing Students," International Journal of Teaching and Learning in Higher Education, pp. 302-313, 2016.
- [9] N. P. Salter and M. R. Conneely, "Structured and unstructured discussion forums as tools for student engagement," Elsevier Computers in Human Behaviour, pp. 18-25, 2015.
- [10] R. Kalasi, "The Impact of Social Networking on New Age Teaching and Learning: An Overview," Journal of Education and Social Policy, pp. 23-28, 2014.
- [11] M. Mbodila, C. Ndebele and K. Muhandji, "The Effect of Social Media on Student's Engagement and Collaboration in Higher Education: A Case Study of the Use of Facebook at a South African University," Journal Communication, pp. 115-125, 2014.
- [12] M. R. Istambul, "E-Learning Design Activity to Improve Student's Knowledge and Skills: A Case Study of Database Design," International Journal of Information and Education Technology, pp. 423-429, 2016.

- [13] N. Cavus and T. Zabadi, "A Comparison Of Open Source Learning Management Systems," Elsevier Procedia - Social and Behavioral Science, pp. 521-526, 2014.
- [14] M. M. Handelsman, W. L. Briggs, N. Sullivan and A. Towler, "A Measure of College Student Course Engagement," The Journal of Educational Research, pp. 184-192, 2005.
- [15] S. Young and M. A. Bruce, "Classroom Community and Student Engagement in Online Courses," Journal of Online Learning and Teaching, 2011.
- [16] P. I. Santosa, "Student Engagement with Online Tutorial : A Perspective on Flow Theory," International Journal of Emerging Technologies in Learning(IJET), pp. 60-67, 2015.
- [17] E. Alwagait, B. Shahzad and S. Alim, "Impact of social media usage on students academic performancein Saudi Arabia," Elsevier Computers in Human Behaviour, pp. 1-6, 2014.
- [18] K. Tarantino, J. McDonough and M. Hua, "Effects of Student Engagement with Social Media on Student Learning," Student Affair E-journal, 2013.
- [19] B. J. Mandernach, Ph.D, "Indicators of Engagement in the Online Classroom," February 2012. [Online]. Available: https://www.minotstateu.edu/oit/documents/ online-student-engagement-report.pdf. [Accessed July 2017].
- [20] M. R. Istambul, "E-Learning Design Activity to Improve Student's Knowledge and Skills: A Case Study of Database Design Courses," International Journal of Information and Education Technology, pp. 423-429, 2016.
- [21] D. Y. Shee and Y.-S. Wang, "Multi-criteria evaluation of the web-based e-learning system: A methodology based on learner satisfaction and its applications," Elsevier Computer and Education, pp. 894-905, 2008.
- [22] W. M. Al-Rahmi, M. S. Othman and L. M. Yusuf, "The Role of Social Media for Collaborative Learning to Improve Academic Performance of Students and Researchers in Malaysian Higher Education," International Review of Research in Open and Distributed Learning, pp. 177-204, 2015.
- [23] P. I. Santosa, "Student Engagement with Online Tutorial : A Perspective on Flow

© 2005 – ongoing JATIT & LLS



<u>www.jatit.org</u>



Theory," International Journal of Emerging Technologies in Learning, pp. 60-67, 2015.

- [24] A. S. Singh and M. B. Masuku, "Sampling Techniques & Determination of Sample Size in Applied Statistics Research : An Overview," International Journal of Economics, Commerce and Management, pp. 1-22, 2014.
- [25] I. Ghozali, Aplikasi Analisis Multivarite dengan SPSS, Semarang: Badan Penerbit Universitas Diponegoro, 2006.
- [26] G. D. Garson, Partial Least Squares : Regression and Structural Equation Model, USA: Statistical Publishing Associates, 2016.
- [27] D. Gedera, J. Williams and N. Wright, Identifying Factors Influencing Students' Motivation and Engagement in Online Courses, Singapore: Springer, 2015.
- [28] E. Ivala and G. Daniela, "Social media for enhancing student engagement: The use of Facebook and blogs at a University of Technology," South African Journal of Higher Education, pp. 152-167, 2012.