E-LEARNING UTILIZATION TO IMPROVE THE STUDENTS' LEARNING ACHIEVEMENT AT TELKOM UNIVERSITY BANDUNG

Fetty Poerwita Sary
Economy and Business Faculty
Telkom University, Indonesia
E-mail: fettyps@telkomuniversity.ac.id

Adhi Prasetio
Economy and Business Faculty
Telkom University, Indonesia
E-mail: adhipras@telkomuniversity.ac.id

Milleniartha Moslem
Economy and Business Faculty
Telkom University, Indonesia
E-mail: milleniarthamoslem@student.telkomuniversity.ac.id

Abstract: The covid-19 pandemic has influenced many aspects in Indonesia, including education. Now, the method of teaching and learning in all levels of education is forced to implement the online learning. Telkom University has prepared previously by establishing The Center of e-Learning and Open Education (CeLOE) and developing the CeLOE Learning Management System (LMS) that would be used by all students and lecturers. Telkom foundation also provided E-Learning grants for the lectures to prepare their courses conducted online two years before the pandemic struck. Therefore, during the development process, not all courses were ready to be used online. There were also trials and errors that were needed to make it better and perfect. Therefore, this study aimed to analyze the utilization of E-Learning whether it affected the students' learning achievement. For this research, the sample and population of this study are 88 international class students who take E-Commerce courses that has implemented LMS CELOE. The data were processed through computer assistance using the SPSS21 program and simple regression analysis techniques. The results of this study indicate that the variable X (E-learning utilization) has no effect on student achievement, E-Learning has not encouraged students to study independently and according to students, E-Learning has not saved overall education costs. The students still felt comfortable if they learnt directly with the lecturers, saw the figure of the lectures who taught them, asked, and discussed things they did not understand directly. Therefore, efforts are still needed to make students aware that learning is a necessity and must exist within themselves and should adapt to the new way of learning. Meanwhile, for the lecturers, they must still get the training in relation to design an interesting method in delivering the material to maximize the use of E-learning.
Keywords: *E-learning; motivation; learning achievement.*

INTRODUCTION

E-learning is something that we cannot avoid any more today. Since internet is getting faster, it can accommodate the e-learning synchronously and asynchronously. The learning can facilitate both students and lecturers. According to Adeed (2018), there are three important pillars for instilling learning methods for millennials to be ready to face the industrial era 4.0, namely: first, increasingly diverse literacy sources including digital, technology and human literature, as well as extra-curricular; second, hybrid learning method, that is learning that can be done online; third, life-long learning. The phenomenon of e-learning or online learning is currently an alternative learning method that can be provided to students. This learning method in line with the characteristics of millennial generation. This generation is different with the previous generation in which based on the results of a

study conducted by the Boston Consulting Group (BCG) with the University of Berkley in 2011 in the United States regarding the USA, millennial generation are as follows: 1) they prefer to read through their smartphones; 2) Millennials are required to have social media accounts as a communication tool and information center; 3) Millennials prefer cell phones over television. Watching a television show is now no longer an entertainment because anything they can find on mobile phone (Prasasti & Prakoso, 2020).

To support the learning characteristics of this generation which are the characteristics of current students, we can apply Information and Communication Technology (ICT) in education sector in Indonesia today, such as by implementing the e-learning program because currently it does not only rely on what in the classroom but also how to explore and use the various learning resources needed.

The benefits of e-learning are: 1) flexibility in choosing the time and place to access material and study; 2) an opportunity for learners to independently control the success of learning; 3) cost efficiency that can be put into three categories. First, cost efficiency for the administration of the organizers; second, the efficiency of providing physical and learning facilities and third, cost efficiency for students which covers the cost of transportation and accommodation.

Meanwhile according to Pranoto (2009), the use of e-learning to support the implementation of the learning process can increase student absorption of the material being taught, increase active participation of students, improve students' self-study abilities, improving the quality of teaching and training materials, improve the ability to display information with information technology devices, which is difficult to do with ordinary devices.

From these benefits, e-learning requires students to be able to study independently, access course materials, and communicate in discussion forums with lecturers, do practice questions, and interact with fellow students in completing course assignments.

Increasing learning achievement cannot be achieved quickly and easily, it requires time and a long process. One way that can be done is to increase learning achievement gradually from time to time during the learning process of each semester. Learning achievement that gets better gradually will have a strong and lasting impact on students. Based on the description above, the researcher wants to find out whether e-learning can be used to develop effective and efficient learning by utilizing ICT facilities and infrastructure. The use of e-learning in the teaching and learning process is expected that it can improve learning achievement (Ibrahim and Suardiman, 2014). Therefore, from the above phenomena, the researcher is interested in conducting a study to reveal whether e-learning utilization influences students' learning achievement at Telkom University.

E-learning
E-learning is a combination of two words, namely E which stands for electronic and learning. Therefore, e-learning is the learning that is using the help of electronic tools. According to Hamdani in Sary & Prasetio (2021), e-learning is the use of computer technology, networks, and the internet in the distance learning process. Learning that uses internet access in the process or is also called web-based learning.

E-learning allows students to learn via computers in their respective places, without having to go to class. E-learning is often understood as a form of web-based learning that can be accessed from the internet. E-learning materials do not have to be distributed online, either via local networks or the internet. Off-line distribution using CD/ DVD media also includes e-learning patterns. According to Hamdani (in Sary & Prasetio, 2021), there are several definitions related to E-Learning as follows:

Blended learning/ hybrid learning
Caulfield (2011) defines blended learning as a program that reduces 'face-to-face time' which is replaced by time spent outside the traditional classroom. Meanwhile, according to Garrison & Vaughan (2008) blended learning is a good blend of online and face-to-face learning experiences.

In this learning design, traditional face-to-face learning classes are combined with web-based online learning and / or computer-mediated learning or other smart devices. Schemes and learning times inside and outside the classroom are arranged in such a way as to get the advantages of each lesson.

Blended learning is often also referred to as hybrid learning, which in principle is to utilize the strengths of face-to-face learning and online learning as well as cover the weaknesses in each learning. Face-to-face learning has advantages and cannot be replaced by distance learning, and vice versa.

Distance learning
E-learning allows students to gain knowledge without having to physically attend a class. Students can be anywhere, while the lecturers and lessons that are being followed are in other places, other cities, and even other countries. Interactions can be executed online and in real time or offline or achieved. Students receive instruction through online classes, video recordings, video conferencing, or any other audio/visual technology medium.

Learning with computer devices
In general, the device is equipped with a multimedia device with a CD drive and an internet connection or a local intranet. By having a computer connected to the internet, students can participate in e-learning. The number of students who can participate is not limited by class capacity.

Formal vs informal learning
E-learning can include formal and informal learning. Formal e-learning, for example learning with a curriculum, syllabus, subjects, and tests that have been arranged and compiled based on a schedule agreed upon by the related parties (e-learning managers and students).

Learning that is supported by experts in their respective fields.
Even though it is provided only through a computer device, e-learning is actually prepared, supported, managed by a team consisting of experts in their respective fields, namely (1) Subject Matter Expert (SME), in this case the content creator, (2) Instructional Designer (ID), whose task is to systematically design SME material into e-learning material by incorporating elements of teaching methods, (3) Graphic Designer (GD), converting text material into graphic form to be studied, (4) Experts in Learning Management System (LMS), manages the system on the website, which regulates the traffic of interactions between teachers and students and between students.

Learning achievement
To be able to support the success of learning in higher education, there are several factors that play an important role. These factors are grouped into internal factors and external factors (Ginting in Martoredjo, 2013). The internal factors that influence the success of the study are intelligence, talent, interest and attention and motives. In addition to internal factors, there are also external factors that can affect the success of the study. Those are social factors such as college friends, family, boarding friends, and society.

Another thing that has an important role in studying in college is motivation. Student motivation to study in higher education plays a very important role in achieving the highest achievement in higher education. Good achievement can only be achieved by studying diligently. Willingness to learn is reciprocally related to learning success. A great willingness to learn becomes a support to achieve success. On the other hand, perceived success will increase the willingness to continuously develop themselves (Ginting in Martoredjo, 2013).

Meanwhile, according to Tu'u (2004), learning achievement is the result that someone achieves when doing certain tasks or activities. Learning achievement can be a benchmark for students in evaluating their learning efforts. Learning achievement shows the value of learning outcomes for each individual student. Students who get poor grades show low learning achievement, therefore these students are motivated to improve to get better grades in the next opportunity. There are also students whose grades are not bad, but their scores are not satisfactory, so it cannot be said that their learning achievement is high. In addition, there are students who get good grades who show high learning achievement, with good grades the students concerned will be motivated to be able to maintain their achievement. It can be concluded that student learning achievement is a student benchmark that shows the learning process and learning outcomes within a certain period assessed from its cognitive aspects. These results can be addressed through the value or number of the evaluation results in the form of daily tests or semester exams conducted by the lecturer on students.

Research model
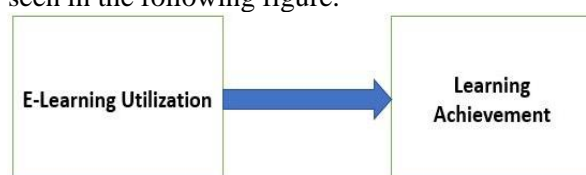The model to be tested in this research can be seen in the following figure.

Figure 1. *Research model*

METHOD
The population and sample of this study are 88

students. The research instrument used is a questionnaire consisting of 5 statement items consisting of 5 statements of the use of e-learning variables using a Likert scale. After the data is collected, the validity and reliability are tested. The SPSS results show that all items are valid where the Sig. (2-tailed) have a value of 0.000 <0.05 and are reliable where Cronbach's Alpha Value is 0.845 > 0.6. In addition, the items of this statement have also met the normality, multicollinearity, heteroscedasticity, and Glejser tests where all these test results show that they have fulfilled all the classical assumptions for regression.

The type of this research is descriptive research. Descriptive research presents a detailed picture of a special situation, social setting, or relationship. Meanwhile, the quantitative descriptive method approach is used to explore and clarify the problem being researched by describing the variables relating to the problem and the unit under study quantification. In this writing, the research object chosen by the researcher is the MBTI Student of the Faculty of Economics and Business, Telkom University who took E-Commerce courses in the even semester 2019/2020.

Meanwhile, Variable Y, namely learning achievement is measured based on the E-Commerce grade obtained by students at the end of the semester using normal reference assessments with the following conditions:

Table 1. *Normal reference assessment*

Course Score Value (CSM)	Grade	Score
m + 1,2s < CSM	A	7
m + 0,6s < CSM ≤ m + 1,2s	AB	6
m < CSM ≤ m + 0,6s	B	5
m − 0,6s < CSM ≤ m	BC	4
m − 1,2s < CSM ≤ m − 0,6s	C	3
40< CSM ≤ m − 0,6s	D	2
CSM ≤ 40	E	1

m = Mean grades of class students with CSM > 40;
s = standard deviation of the class values with CSM > 40

The data is processed through computer assistance using the SPSS 21 program using multiple regression analysis techniques to determine whether the e-learning utilization influences learning achievement at Telkom University Bandung.

The results of the study based on the student response questionnaire to variable e-learning utilization showed that variables X was in good categories, that is 71.3%. As for the statement items "Learning by utilizing e-learning saves the cost of education as a whole" got the lowest score, namely 62.4% with the following details:

FINDINGS AND DISCUSSION

Table 2. *Item description*

Question Items	Percentage
E-Learning Utilization	
Learning by utilizing E-Learning saves time in the learning process	73.4%
Learning by utilizing E-Learning reduces the cost of traveling to campus	76.9%
Learning by utilizing E-Learning saves overall education costs.	62.4%
Learning by using E-Learning has trained me to be more independent in gaining knowledge.	69.9%
Learning by utilizing E-Learning in reaching a wider geographical area	73.9%

Table 3. *Results of Data Processing*

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.297	.423		5.425	.000
	Pemanfaatan E-Learning	-.032	.029	-.186	-1.090	.281

a. Dependent Variable: Learning Achievement

Meanwhile, based on table 2, variable X (e-learning utilization) has no influence on learning achievement because the sig value is 0.281> 0.05 where the linier regression equation is as follows: Y = 2.297 - 0.032X

Based on data analysis and hypothesis testing that has been done, it is known that there is no significant influence between the e-learning utilization on learning achievement. This research is supported by Wahyuningsih in Sari (2020) which states that students who learn with e-learning are half times less likely than students with conventional methods. The use of e-learning may not influence learning achievement due to several things. The results of this study are also in accordance with the results of research by Nisa (2002) which stated those several things are, for example 1) internet access; 2) lack of consistency of lecturers in mentoring in online classes. Learning by means of e-learning is a relatively new way of learning for students. Therefore, intensive mentoring needs to be carried out by lecturers, especially in guiding and giving responses in online discussions.

This is also supported by Nursalam in Khoir, Murtinugraha, & Musalamah (2020), that says e-learning also has many disadvantages such as 1) lack of interaction between teachers and students or even between students themselves; 2) the tendency to ignore academic or social aspects and instead make business/ commercial aspects grow; 3) the teaching and learning process tends towards training rather than education; 4) the changing role of the lecturers from previously mastering conventional learning techniques, is now also required to know learning techniques that use ICT (information, communication, and technology); 5) not all places have internet facilities (perhaps this is related to problems with the availability of electricity, telephones, or computers); 6) lack of human resources who master the internet; 8) lack of mastery of computer languages; access to adequate computers can be a problem for students; 9) students can be frustrated if they cannot access graphics, pictures, and videos because of inadequate equipment, 10) availability of infrastructure that can be met; 11) information may vary in quality and accuracy so guidance and inquiry features are required, and the last 12) students can feel isolated.

Therefore, since there are still disadvantages faced by not only students but also lecturers, and the students who came from different background such as economic, ICT literacy, etc., can be the obstacles in the teaching and learning process.

CONCLUSION

Based on the results of research and data processing, it can be concluded that the use of e-learning is still not a factor that increases student learning achievement. This is because the system used was sometimes down, the internet was unstable, for example when they accessed the quiz, suddenly they were out the system because the signal was lost. They could not submit the assignment or accessed the material. and so on. Students were also still inexperienced in using e-learning with LMS. It turns out that experience is a factor that influences behavior in adopting new technology.

According to students, they preferred to do assignments from lecturers together. They felt secured because they could communicate, asked, and got the answer right away. With the lecturer in the class, they were more motivated, because the lecture could directly remind and guide them about the homework, quiz, etc. Students were also more active in the class, and the class was more regular for them. So that, the concept of E-Learning, in which the students are expected to be independent learners, has not been felt and implemented by all students. In addition, according to some students, there was still no evidence that the use of e-learning was more cost effective because there is still no reduction in tuition fee, and they still must subscribe internet.

REFERENCES

Adeed, P. (2018). *Tiga Pilar Menanamkan Metode Pembelajaran Generasi Milenial*. Retrieved July 18, 2020, from https://siedoo.com/berita-11628-tiga-pilar-menanamkan-metode-

Garrison, R. & Vaughan, N. D. (2008). *Blended Learning in Higher Education: Framework, Principles, and Guidelines*. WILEY Publisher.

Ibrahim, D. S. & Suardiman, S.P. (2014). *Pengaruh Penggunaan E-Learning Terhadap Motivasi Dan Prestasi Belajar Matematika Siswa Sd Negeri Tahunan Yogyakarta.* journal.uny.ac.id

Khoir, H. M., Murtinugraha, R. E., & Musalamah, S. (2020). Pengembangan media pembelajaran e-learning berbasis Moodle pada mata kuliah metodologi penelitian (Studi pada Program Studi Pendidikan Teknik Bangunan, Fakultas Teknik, Universitas Negeri Jakarta). *Jurnal Pendidikan Teknik Sipil (JPenSil)*, 9(1), pp. 54-60.

Martoredjo, N. T. (2013). Meningkatkan prestasi belajar di perguruan tinggi dengan

mengembangkan kecerdasan emosional. *Humaniora,.4*(2), pp.1093-1104

Nisa, L. C. (2002). Pengaruh pembelajaran e-learning terhadap hasil belajar matakuliah statistics mahasiswa tadris bahasa Inggris Fakultas Tarbiyah IAIN Walisongo. *Jurnal Phenomenon, 2*(1), pp.7-26.

Prasasti, S. & Prakoso, E. T. (2020). Karakter dan perilaku milineal:peluang atau ancaman bonus demografi. *ONSILIA Jurnal Ilmiah BK, 3*(1),pp.10-22. https://ejournal.unib.ac.id/index.php/j_consilia

Pranoto, A. (2009). *Sains dan Teknologi*. Jakarta: PT Gramedia Pustaka Utama.

Sary, F. P. & Prasetio, A. (2021). Pengaruh pemanfaatan e-learning terhadap motivasi dan prestasi belajar pada mata kuliah e-commerce di Universitas Telkom Bandung. *Edum Journal, 4*(1), pp.29-39. https://edum.unwir.ac.id/index.php/edumjournal/article/view/75

Sari, W. F. & Kurniawati, T. (2020). Pengaruh motivasi belajar dan pemanfaatan e-learning terhadap prestasi belajar mahasiswa jurusan pendidikan ekonomi. *Jurnal Ecogen*, 3(1), pp.176-184. http://ejournal.unp.ac.id/students/index.php/pek/index

Tu'u, T. (2004). *Peran Disiplin Pada Prilaku dan Prestasi Siswa.* Jakarta: Grasindo