

Strategies for Improving the Quality of Learning in Logistics Management Subjects based on E-learning at the MICE Study Program at Politeknik Negeri Medan

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Abstract

This study aims to determine appropriate e-learning strategies to be used in the teaching and learning process of the Logistics Management course to improve the knowledge and skills of students in subject of Management Logistics. Researchers analyze the e-learning process in the MICE Study Program. The e-learning strategy carried out with the indicators Learning by doing, Incidental Learning, Learning by Reflection, Case-based Learning, Learning by Exploring, while to determine the Quality of Learning, the indicators used are Knowledge, Comprehension, Application, Analysis, Synthesis and Evaluation. Respondents were 35 students and 2 lecturers. Researchers also observed the results of MICE students' Logistics Management exam for the 2018-2019 (offline learning) and students for the 2019-2020 (e-learning). The results of the study found that the use of a combination of e-learning applications Google Meet or Zoom, WhatsApp and SIPADI in the Logistics Management course is strategy or method e-learning that students improve the quality of their knowledge and skills in the Logistics Management course. This study proves that the e-learning strategy carried out by Logistics Management lecturers increases the result Logistics Management learning by 1% on average from the results Logistics Management offline learning in the classroom.

Keywords: E-Learning, Strategy, Quality, Logistics Management

INTRODUCTION

In concept, e-learning can replace conventional face-to-face learning in the class, maybe even have a greater positive impact. However, in practice the teaching and learning process based internet may be more difficult and the impact weakens the value of the teaching and learning process. The problems that arise in e-learning are thought to be due to a lack of good and quality preparation in the presentation of teaching materials and practical methods of the subjects being taught. According to researchers' observations on the implementation of online learning (e-learning), there are several applications used in implementing e-learning, namely SIPADI (recommended from institutions), google class, google meet and zoom and also whatsapp (wa). However, the e-learning application is not all that can be carried out proficiently by lecturers and students. Apart from the proficiency level of the lecturer, the level of risk and the cost of using e-learning applications can be a consideration that makes online learning not take place like it was in the real class before the pandemic.

The Logistics Management subject taught in semester 4 (four) of the MICE study program consists of 40% theory

teaching and 60% practice (MICE Study Program; 2019). This course is a source of knowledge and skills that are very important to be mastered by students of the MICE study program needed when entering the world of work. This course equips students to become experts in handling the logistics needed to hold a successful MICE event. Therefore, researchers as educators pay great attention to conducting research in the method of teaching this course online which is indeed required as long as the Covid pandemic state has not ended. The author wishes to find an e-learning strategy, model or method of learning that is suitable and even appropriate to teach this logistics management course so that it is hoped that it will improve the quality of learning this logistics management course even for other practical courses. This is also in accordance with the mission of the MICE study program, namely that a quality learning strategy or method will produce and improve the quality of a skilled workforce in the MICE business industry. The professional workforce as the goal of the MICE

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study program is experts in the MICE industry who are competent, creative, innovative, adaptive and mastering information technology that is internationally competent worker.

LITERATUR REVIEW

E-learning is a tool for learning and training that uses an internet connection and web-based interaction (Masrom, 2017). E-learning as a form of learning media using information technology. Therefore, the use of e-learning must be supported by the competence of educators and students in the field of information technology. As a learning tool or media, the e-learning component consists of e-learning infrastructure, e-learning system, application and e-learning content itself. While the benefits of E-learning for the world of general education, namely: (1) flexibility of place and time, (2) independent learning, (3) costs, (4) flexible speed learning, (5) standardization teaching, (6) effectiveness of teaching and learning, (7) speed distribution, (8) availability on demand, e-learning can be accessed at any time, (9) automating administrative processes.

The definition of learning strategy is "the general pattern of making teachers and students in the form of teaching and learning" so that the teacher has prepared a lesson plan carefully about how learning will be conveyed to students before teaching in class (Azhar, 2011). According to Koswara (2006) there are various learning steps that can be carried out using online learning, namely: 1) Learning by doing, namely learning exercises by implementing the material to be discussed; 2) Incidental learning means strategy learning for something interesting to learn; 3) Learning by reflection is deepen something with expanding the thought of the material to be discussed; 4) Case-based learning is learning something based on cases that have been carried out on the material to be discussed. This strategy is based on informants and events that can be obtained on the subject to be discussed; 5) Learning by exploring means deepening something by carrying out a search for the material to be discussed.

The e-learning strategy is to support the implementation of the educational process, it is desired to add to the effect of school fees on the material provided, increase active participation from school fees, increase the ability of schools to learn independently, materials improve the quality of learning and training, add skills to show information with information technology tools, expanding the teaching and learning process using the internet, not limited to time and space.

According to Dimiyati and Mudjiono (2006) the quality of learning can be measured by the following six types of indicators: 1) Knowledge acquires thinking skills on things that have been discussed and embedded in memory; 2) Understanding (Comprehension). Contains skills to get meaning about what has been studied; 3) Application. Includes the skills of implementing steps and rules for dealing with real and new problems. 4) Analysis. Contains the skills of detailing the whole into their respective parts so that the whole content can be understood correctly 5) Synthesis. Includes the ability to form a new pattern. 6) Evaluation. Contains skills to form ideas about various things based on certain criteria.

RESEARCH METHODE

This type of research is a descriptive exploratory study with a qualitative approach. This research was preceded by data collection for 4th semester students of the MICE study program and also a lecturer in the Logistics Management course at the MICE Study Program and semester course plans as well as Logistics Management teaching materials and users of MICE Study Program graduates.

This research was conducted using the interview method by making a list of interviews with informants, ie 2 lecturers in the Logistics Management course and 35 students of the 4th semester MICE Study Program who received teaching from the two lecturers. Researchers conducted observations from the start of e-learning which was carried out in a state of compulsion due to the Covid pandemic until the end of the semester in July 2020. Researchers conducted a literature study by studying course materials and RPS for Logistics Management courses and also e-learning applications used in learning vocational college level.

RESULT AND DISCUSSION

The results of the analysis of the learning quality variable with the Knowledge indicator explain that the use of e-learning applications is suitable for making it easier for students to remember the Logistics Management knowledge that is taught there are 4 applications used by 2 lecturers i.e Zoom, Google Meet (GM), SIPADI and what'sApp Group (WAG). A lecturer using a combination of 2 e-learning applications is generally

considered that students are able to improve memory about students' knowledge of learning Logistics Management.

Learning Strategies

The results of the analysis of the Learning Strategy variable with 5 (five) indicators are discussed below:

a. Learning by Doing

Learning by Doing explains that the learning strategy for Logistics Management through Learning by Doing is a learning simulation by doing what you want to learn.

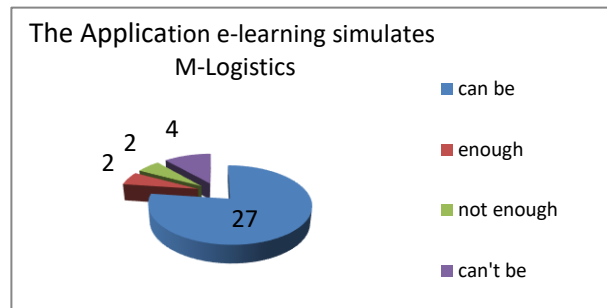
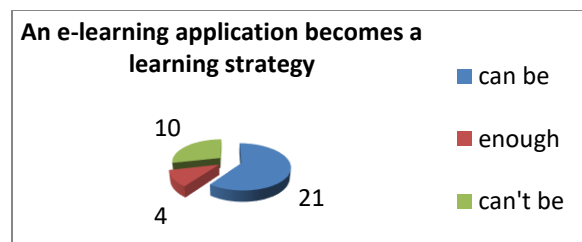


Figure-1 Learning by Doing indicator Source: Research Result, 2020

According to respondents doing Learning by doing based on online learning using appropriate applications, can be a good learning strategy (27 people or 77%). The reasons why respondents say that the e-learning application used can be learning by doing, among others, is that lecturers can simulate logistics management more easily, provide opportunities for students who independently take control of learning, can directly present and practice how to do it, because there are features video calls so that lecturers can freely convey learning, because there is an exchange of ideas between one another that makes this possible.

b. Incidental Learning

The Incidental Learning indicator explains that e-learning applications used in learning Logistics Management courses can be a learning strategy that is used for something interesting to learn. The reason for the respondent is that the lecturer can explain the lecture material optimally so that it is an interesting learning strategy. This is new for students, they can gather through virtual applications, talk and discuss as usual, are quite effective and easy to learn, lecturers combine google meet and google classroom.



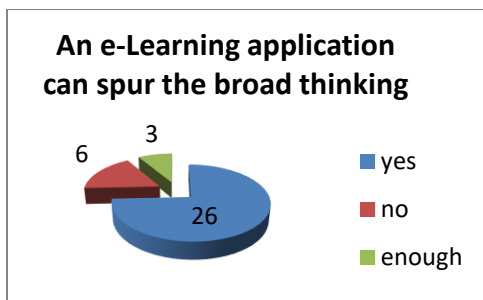
Source: Research Results, 2020

Figure 2. Incidental Learning Indicators

The e-learning application able and is interesting to be a learning strategy as stated by 21 respondents (60%), while 40% of respondents stated that they not able to be a learning strategy for something interesting to learn.

c. Learning by Reflection

The Learning by Reflection indicator explains that the e-learning application used in the Logistics Management course can spur students to expand their thinking to understand and implement it after being developed by the student's idea.



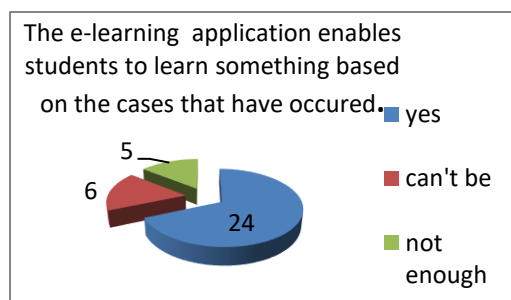
Source: Research Result, 2020

Figure 3 Learning by Reflection Indicator

A total of 26 students said yes or can, can the e-learning application be a learning strategy that can spur students to expand their thinking to understand and develop by the student's own ideas. The rest stated that it was not enough.

d. Case-based Learning

The Case-based Learning indicator explains that the e-learning application used in the Logistics Management course according to students (24 students) can enable to learn something based on cases that have occurred regarding Logistics Management that they want to learn and can improve student experience in Management Logistics.



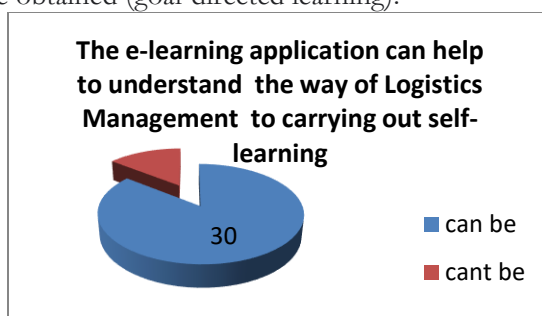
Source: Research Result, 2020

Figure 4 Case-based Learning Indicator

A number of 6 respondents stated that the e-learning application used in Logistics Management learning cannot be a learning strategy for something interesting to learn.

e. Learning by Exploring

The results of the Learning by Exploring indicator data analysis state that the e-learning application used by lecturers can deepen Logistics Management by implementing the design of the material to be discussed. Students are triggered to understand a subject by carrying out their own search for the learning. Applications must contain sufficient knowledge to facilitate searches from students. Understand something by determining the material to be obtained (goal-directed learning).



Source: Research Result, 2020

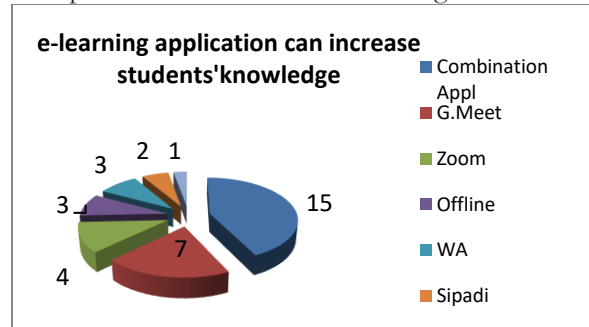
Figure 5 Learning by Exploring Indicator

As many as 30 respondents stated that e-learning with the Learning by Exploring indicator could be a Logistics Management learning strategy to improve the quality of learning in this subject. As many as 5 respondents stated that they were not able to do it.

The results of the learning quality variable data analysis consisting of 6 indicators can be explained as follows:

1. Knowledge

Knowledge Indicators explains that the use of e-learning applications that are suitable for making it easier for students to remember the Logistics Management knowledge taught is that there are 5 applications used by 2 lecturers, namely Zoom, Google Meet (GM), Sipadi and what's up group (WAG) and Google Class. The results of interviews with respondents can be seen in the diagram below.



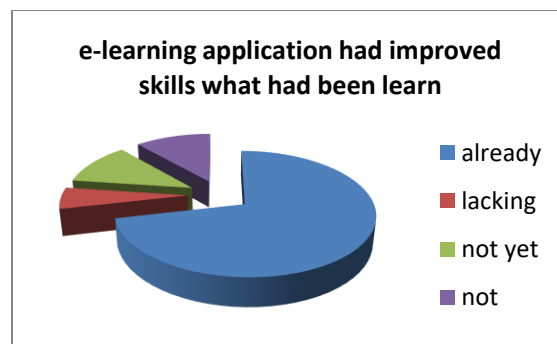
Source: Result Analysis, 2020

Figure 6. Knowledge Indicator

The reasons students say this are: a) students can access any materials that have been sent by the lecturer regarding Logistics Management, b) there is direct interaction in a face-to-face manner that is delivered by the lecturer which is easier to implement. because of oral delivery, it is also easier for students to carry out conversations and discussions freely so that they are easy to digest, c) make it easier for students to remember the current knowledge of the Logistics Management Committee if they forget about their learning, students can just open their cellphones about logistics management and there are stored all the learning they have recorded.

2. Comprehension

Comprehension explains that the e-learning application used by the Logistics Management lecturer has improved the skills that have been learned. The results of the interview explained that the respondents' answers were categorized into 4 categories, namely already, lacking, not yet and not which can be seen in the diagram below:



Source: Research Result, 2020

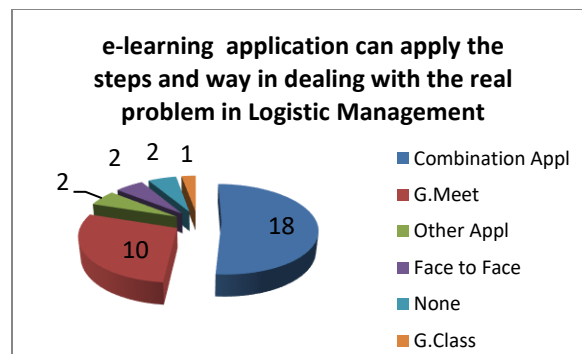
Figure 7. Comprehension

E-learning application used by the Logistics Management lecturer had improved skills about what had been learned, among others, for the reasons: a) the application that the lecturer had used in the Logistics Management course also made it easier for students to access any matters related to Logistics Management, b) in explaining the material presented that is easily implemented by students, c) students learn more easily to improve their skills, d) with an explanation that is it was very clear from the lecturer accompanied by the

teaching materials that were delivered, students had very much understood the material presented so that they could improve the skills and abilities of the material.

3. Application

This indicator explains that the e-learning application used in Logistics Management learning can apply steps and methods in dealing with real problems in Logistics management. The results of the interview showed that several e-learning applications that were considered by students to be used to improve the quality of learning were the Google Meet application, zoom, youtube, google classroom, sipadi, WAG and their combinations.



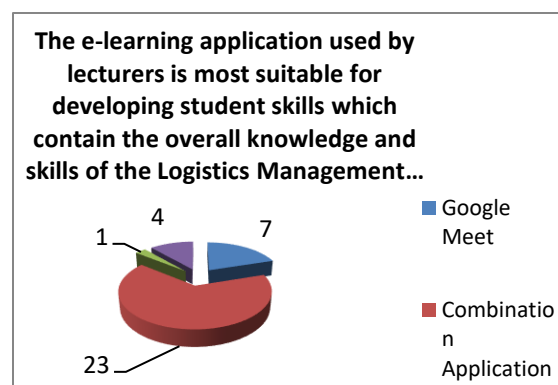
Source: Research Result, 2020

Figure 8. Application Indicator

The reasons for respondents who said that the combination of e-learning applications used by Logistics Management lecturers could apply steps and ways to deal with real problems in Logistics Management, among others: a) the most suitable application, b) can be seen, heard, practiced, and can be seen by participants in google fulfill these. So that it is so effective, easier to apply and practice and helps to more easily imagine what to do, c) can directly display the results of our work and can also directly explain it, d) appropriate in dealing with real problems in logistics management, due to direct facts by the lecturer the supervisor regarding the study, e) we can immediately see from the application of the subject material discussed.

4. Analysis

Indicator Analysis which explains that the e-learning application used by Logistics Management lecturers is most suitable for developing student skills which include the overall knowledge and skills of the Logistics Management course into its parts so that it can be said to achieve the quality of online learning shown in Figure 9 below.



Source: Research Result, 2020

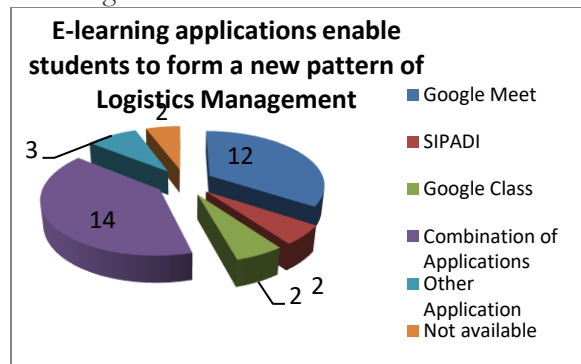
Figure 9 Analysis Indicator

The combination of the e-learning application, namely Google meet with Sipadi or Zoom with WA, the three applications are suitable for developing students who include overall knowledge and skills into its parts for

reasons including: a) can debate and express opinions on logistics management issues and will feel more real, b) can develop student skills and increase student knowledge about Logistics Management even to the hardest part c) students can contact instructors, resource persons via email, chat or participate in interactive dialogues at times, d) lecturers can directly expressing what you want to convey without having to bother to write the explanation in a written application, e) which is the most effective to use, sometimes there are some problems but in my opinion this application is superior to others.

5. Synthesis

The results of the synthesis indicator data analysis explained that the e-learning application used by Logistics Management lecturers enabled students to form a new pattern of logistics management. As many as 30 respondents said the e-learning application used by lecturers had improved the quality of logistics management learning as shown in Figure 10 below.



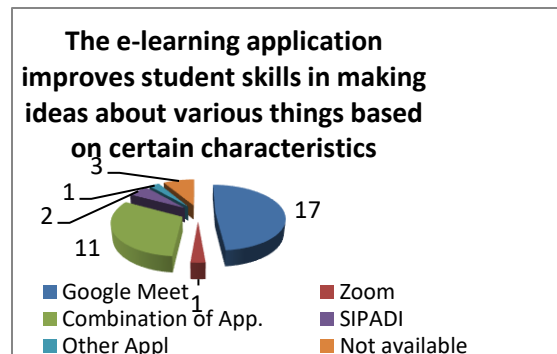
Source: Research Result, 2020

Figure 10 Synthesis Indicator

6. The e-learning application that has been used by lecturers is a teaching and learning strategy for the Logistics Management course that can improve the quality of learning for reasons including: a) The students think the e-learning application used today is an application that is very suitable for improving abilities and shaping b) Because students can read files and materials sent by lecturers to the class WhatsApp group and explain the material on google meet, c) can be directly, presented and practiced how to improve skills in new pattern skills, d) fulfill it more effectively than in increasing abilities, e) After giving the material in Sipadi, we will discuss it on Google Meet or WA so that it is still quite effective in forming new skills in terms of logistics management.

7. Evaluation

The results of this evaluation indicator data analysis explain that the e-learning application used by the Logistics Management course lecturer improves student skills in making ideas about various things based on certain characteristics. Answers to 17 respondents' questions said the Google Meet application was an application used to improve the quality of online-based learning. . A total of 11 respondents said the google meet application or the like, namely zoom and a combination of the google meet, SIPADI or WA application as seen in Figure 11.



Source: Research Results, 2020

Figure 11 Evaluation Indicators

Respondents (17 students) said that the Google Meet application is an e-learning application used by lecturers in the Logistics Management course to improve student skills in making ideas about various things based on certain characteristics for reasons including: a) it can explain the material directly and is easier to remember, b) to exchange ideas it is better to use, because we are like a video call, and it feels like a direct one, c) Can meet face to face and exchange ideas, d) can be explained and give opinions to one another, e) appropriate in dealing real problems with logistics management.

The results of data analysis concluded that the Learning Strategy variable consisting of indicators of Learning by doing, Incidental Learning, Learning by Reflection, Case-based Learning, Learning by Exploring explained that the application used by Logistics Management lecturers was an e-learning application. who carry out learning strategies to improve the quality of learning. The quality of learning is measured from the statement of students as users and implementers of the teaching and learning process carried out by Logistics Management lecturers. Learning strategies using online learning applications such as Google Meet, Zoom, SIPADI, WhatsApp Group have shown an increase in the quality of learning in Logistics Management courses. The quality of learning is obtained for several reasons, namely 1) The e-learning application is suitable for making it easier for students to remember the Logistics Management knowledge taught so that knowledge increases; 2) The appropriate e-learning application is used to improve comprehension skills about what has been learned in the Logistics Management course; 3) The e-learning application used is appropriate to improve student skills in the application of steps and ways of dealing with real problems in logistics management; 4) The e-learning application used by the lecturer is suitable for analyzing the Logistical Management course, which means that developing student skills contains the overall knowledge and skills that all can train well; 5) e-learning application which is used to improve student ability to form a new pattern of new skills (synthesis) Logistics Management; 6) The e-learning application used by Logistics Management lecturers to improve student skills make ideas about various things in Logistics management based on the characteristics of certain events (evaluation skills).

To prove this research that the online learning strategy carried out by Logistics Management lecturers for 6 months (since the pandemic) can improve the quality of learning, the researchers made comparisons between classes that received online teaching and those that received offline teaching as shown in Table 1 below.

Table 1. Comparability of Examination Result of Online and Offline Learning of Logistics Management

Students	Offline Learning School Year 2018/2019		Online Learning School Year 2019/2020	
	MICE4A class	MICE4B class	MICE4A class	MICE4B class
1	73	82	80	79
2	76	75	79	80
3	81	76	74	71
4	80	77	80	80
5	80	74	72	74
6	66	79	77	81
7	81	71	80	79
8	74	77	77	80
9	78	70	70	79
10	81	75	81	80
11	79	77	66	79
12	74	73	77	79
13	75	73	77	80
14	68	80	76	79
15	68	78	73	80
16	82	78	77	79
17	80	75	76	79
18	77	82	77	81
19	82	73	76	81
20	77	79	74	80
21	81	78	77	82
22	80	81	84	81
23	66	84	71	80

Average/ Class	76,4	76,8	76,1	79,2
Average	76,8		77,7	
Increase			1,2%	

Source: Study Program MICE, 2020

Comparison of Logistics Management learning outcomes for semester 4 of the 2018/2019 school year MICE4A and MICE 4B classes directly (offline) in class with Logistics Management learning outcomes for semester 4 of the 2019/2020 school year MICE4A and MICE 4B classes online (e-learning) has increased an average of 1.2%. This comparison assumes that the student input standard is the same based on the Polmed admission test standard.

CONCLUSION

1. To carry out online learning, the Logistics Management course lecturer uses the SIPADI application which is required at Politeknik Negeri Medan. In addition, Logistics Management learning also uses the Google Meet or Zoom and Whatsup Group applications. The use of the 4 applications is adjusted to the topic and teaching method instructed in the Semester Class Plan (RPS)

Online learning using SIPADI, Zoom and Whatsup Group applications is considered appropriate as a strategy that meets the indicators of Learning by doing, Incidental Learning, Learning by Reflection, Case-based Learning, Learning by Exploring to improve the quality of Logistics Management learning as measured by occurrence increase in Knowledge, Comprehension, Application, Analysis, Synthesis and Evaluation of students in Logistics Management.

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