



Research Article

Effect of learning management system on online learning because Covid-19: Study and learning courses students of biology education program, Pattimura University

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ABSTRACT

The problem of education in this digital era is that there is still a lack of teaching staff or lecturers expressing creative and innovative ideas in the form of books, or scientific works, learning models, teaching materials as solutions in learning digital technology. The knowledge and skills of Learning Management Systems for Biology Education students at the University of Pattimura in exploring and mastering the concept of Learning and Teaching are indispensable in the online learning process through the zoom meeting and whatsapp program during the covid-19. The analysis of variance test for the F_{value} of 2065,198 with the significance of the calculated F is 0.000 and the mean squared value is 1673,000, > Partial squared value of 0.989. This means that there is an influence of mastery and skills of the Learning Management System on the learning outcomes of learning and learning subjects through online learning during the Covid-19 pandemic in Semester VI Students of the Biology Education Program, Faculty of Teacher Training and Education, Pattimura University. there was success in improving learning achievement and learning outcomes in the Maluku region during the covid-19 pandemic, even though the lecture process was carried out online or online using the zoom meeting and whatsapp program. in dealing with the spread of covid 19 in the Mauku Region.

Keywords: Skilled of learning, system management, knowledge learn, study.

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INTRODUCTION

Changes in the world of education towards the digital era occur in the world of learning or lectures in universities. This change in educational civilization demands that lecturers and students master 21st century skills, namely being able to understand and utilize information and communication technology. Education carried out through the learning process or lectures conducted by a lecturer plays a very important and strategic role in building students' thinking skills so that they are knowledgeable and have skills, namely technology and media literacy, effective communication, critical of thinking, problem solving, and collaboration. The problem of education in this digital era is that there is still a lack of teachers or lecturers coming up with creative and innovative ideas in the form of books, or scientific works, learning models, teaching materials as solutions in learning digital technology. According to Munir (2017) the potential of students needs to be developed to improve

the teaching and learning process based on information and communication technology because computer literacy and gadgets are now adequate. The potential of these students must be balanced by the University in providing programs to improve the teaching and learning process through the learning management system (LMS) to master the concepts of learning and learning subjects. Therefore, students need to be invited to think smart in mastering and using this learning management system.

Mastery of learning for lecturers in the digital era and faced with the Covid-19 pandemic condition is a necessity or necessity, if you want to be considered authoritative in front of students in the lecture process. [Candra Ronitua Gultom \(2020\)](#) said that during the covid-19 pandemic, the solution for carrying out learning or lectures online was a must for every lecturer. Likewise, the lecture process at pattimura university is in accordance with the joint decision of the ministry of education and culture, the ministry of religion number 302/E.E2/KR/2020 which was issued on March 31, 2020. Thus, the lecture process for learning and learning courses followed by semester VI students of the Study Program Biology education uses the zoom meeting and whatsapp program. According to [Dwi Sulisworo et al, \(2020\)](#) that learning in universities during the covid-19 pandemic can be done through the Zoom Meeting application, WhatsApp, Google Classroom, Google Meet, and others.

The knowledge and skills of Learning Management Systems students of Biology Education in exploring and mastering the concept of Learning and Teaching are indispensable in the online learning process through zoom meeting and mastery of learning management systems that really help students master the concepts of learning and learning. According to [Intan Firda Alifiyanti et al, \(2018\)](#) that the use of the internet network in learning by using a learning management system actually contributes quite a lot in terms of utilization and allows students to access it anytime and anywhere through the ability to operate a learning management system with many types. and very broad benefits as an online network can also be monitored by parents, teachers and lecturers. The existence of students' abilities in utilizing the Learning Management System is expected to increase knowledge and learning achievement of learning and learning concepts.

The importance of online learning in the covid-9 pandemic conditions, the knowledge and skills of system management learning applications as a tool for the learning and learning lecture process will be effective and efficient. The purpose of this study was to determine the effect of mastery of learning management systems on learning outcomes of learning and learning subjects through online learning during the covid-19 pandemic in Semester VI students of the Biology Education Program, Faculty of Teacher Training and Education, Pattimura University.

METHODS

This research is descriptive-qualitative, which is to reveal the online lecture process through the zoom meeting and whatsapp program, then statistical tests are carried out on the mastery of learning management systems based on the established criteria score and assessment of learning outcomes in online learning and learning courses during the covid-19 pandemic in semester VI students of Biology Education Program, Faculty of Teacher Training and Education, Pattimura University. The implementation time of this research is 5 March to 5 July 2021, with 25 students as research subjects. To obtain accurate data, valid data collection steps are carried out using tests, and an assessment of knowledge and skills of learning management systems through assignments given to students during the online lecture process that takes 12 face-to-face online with the zoom meeting program and whatsapp.

RESULTS AND DISCUSSION

Based on the results of the assessment process and observations made on the tasks given to each student to obtain an overview related to the knowledge and skills of mastering ICT media, namely the use of Learning Management Systems to improve mastery of learning concepts obtained from 25 students as respondents. Mastery and skills of Learning Management Systems are assessed based on the assignments given and carried out and returned to students. The assessment is carried out based on frequency (f) and percentage (%) according to the criteria for the mastery score of knowledge and skills in learning management systems as shown in table 1. below.

Table. 1. Results of Frequency Analysis and Percentage of Mastery of Learning Management Skills from 25 Students Who Participate in Learning and Lectures Through Online Learning Models.

Score	Criteria	Rating result											
		Skilled in operating the Learning Program on the Internet		Skilled in Making Power Points, Learning Videos and Animations		Skilled Looking for information and storing and sending information (data)		Skilled in operating a computer or gadget		Skilled in downloading and accessing various online programs		Final score	
		F	%	F	%	F	%	F	%	F	%	F	%
90 -100	Very good	2	8	2	8	1	4	2	8	1	4	8	32
80-88,9	Good	1	4	1	4	1	4	2	8	2	8	7	28
70-79,9	Enough	2	8	1	4	2	8	1	4	2	8	8	32
60-69,9	Less	0	0	0	0	0	0	1	4	1	4	2	8
0 < 59,9	Bad	0	0	0	0	0	0	0	0	0	0	0	0
	Amount	5	20	4	16	3	12	7	28	6	24	25	100

Based on the data in table 1. above, it can be explained that 32% of students' skills on learning management systems are very good, 28% are good skills, 32% are sufficient and only 8% are lacking. The measure the mastery of the learning concept material, a test was carried out to assess the level of mastery of the material by 25 students according to the mastery criteria score, then an overview of the mastery of learning concepts was obtained, as shown in table 2. below.

Table. 2. The results of the knowledge assessment of learning concepts based on frequency and percentage and according to the criteria score for the level of student knowledge through online learning.

Score	Score	Rating result											
		The Nature of Learning		Principles of Learning		Learning Models and Methods		Design Learning		Develop an Assessment Plan		Final score	
		F	%	F	%	F	%	F	%	F	%	F	%
90 -100	Very good	2	8	2	8	1	4	2	8	1	4	8	32
80-88,9	Good	2	8	3	12	3	12	1	4	0	0	9	36
70-79,9	Enough	0	0	1	4	2	8	1	4	1	4	5	20
60-69,9	Less	0	0	1	4	0	0	1	4	1	4	3	12
0 < 59,9	Bad	0	0	0	0	0	0	0	0	0	0	0	0
	Amount	4	16	7	28	6	24	5	20	3	12	25	100

Based on the data above, it can be explained that of the 25 students who mastered the material or concepts of learning according to the score of the assessment results, it can be described as follows: (1) students have knowledge with very good score criteria as much as 32%, (2) students have knowledge the concept of learning with good score criteria as much as 36%, (3) students who have knowledge of learning concepts with sufficient criteria as much as 20%, (4) students who have knowledge of learning concepts with less score criteria as much as 12%. Based on the results of the assessment of knowledge and skills of Learning Management Systems as well as the results of the assessment of the mastery of knowledge of learning concepts from 25 students, it make of analysis of variance (Anova). it is shown in table 3.

Table 3. Anova results of knowledge and skills on student success in carrying out tasks for study and learning courses

Analysis of Variance (Anova)									
Source	Dependent Variable	Type III Sum of Squares	df	Mean Squares	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^c
Corrected Model	Cognitive	.000 ^a	0	.	.	.	.000	.000	.
	LMS	.000 ^b	0	.	.	.	.000	.000	.
Intercept	Cognitive	167281.000	1	1673.000	2065.198	.000	.989	2065.198	1.000
	LMS	161604.000	1	161604.000	1523.368	.000	.984	1523.368	1.000
Error	Cognitive	1944.000	24	81.000					
	LMS	2546.000	24	106.083					
Total	Cognitive	169225.000	25						
	LMS	164150.000	25						
Corrected Total	Cognitive	1944.000	24						
	LMS	2546.000	24						

a. R Squared = ,000 (Adjusted R Squared = ,000)

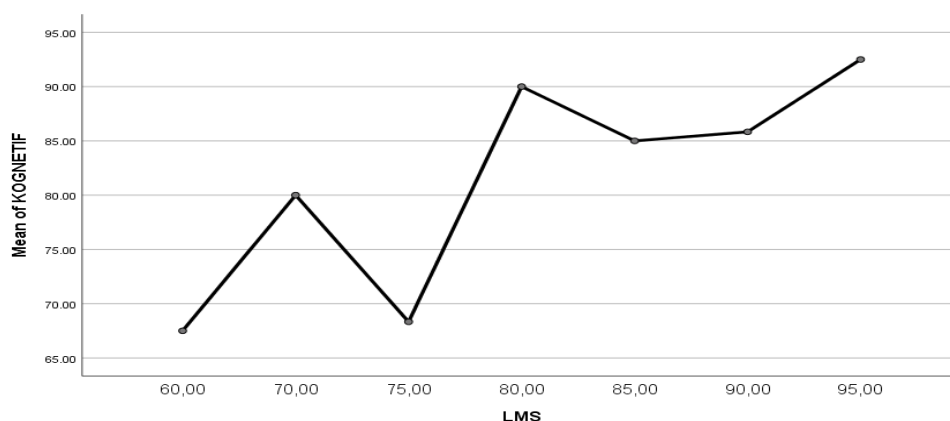
b. R Squared = ,000 (Adjusted R Squared = ,000)

c. Computed using alpha = ,05

a. Dependent Variable: KOGNETIF

b. Model = Intercept, LMS (Learning management system)

Based on table 3.1, it can be explained that the value of F_{count} is 2065,198 with a significance of calculated F is 0.000 and the mean squared value is 1673,000, > Partial squared value of 0.989. This means that the research hypothesis is accepted (there is an effect) on the mastery of the Learning Management System on the learning outcomes of learning subjects through online learning during the covid-19 pandemic in Semester VI Students of the Biology Education Program, Pattimura University. In accordance with the description of the influence of Learning Management System knowledge and skills owned by students and also the level of knowledge of learning concepts, a graph is obtained which explains that the better the Learning Management System skills, the better the mastery of learning concepts. This can be seen in graph 1.



Based on the data in the graph above, it can be explained that the higher the knowledge and skills of Learning Management Systems that students have, they can master the concept of learning and learning and can complete the learning and learning process well through online learning using the Zoom meeting program, and WhatsApp.

DISCUSSION

The development of internet technology has led to various new applications, including the zoom meeting application for the lecture process. One of the benefits of applying internet technology in learning is as a means of direct face-to-face substitute learning in the form of online application. From the results of the assessment of all students, both individually and in groups during the lecture process with the zoom meeting program, it shows that there is a balance between student knowledge of learning and skills in implementing learning management systems by students with very good criteria scores. This is in accordance with [Setya Raharja. \(2011\)](#) that mastery of Learning Management Systems can be used to understand lecture material properly and correctly online, and it is easy to understand the relationship of each concept to the material being studied, besides that students can access the material and its storage. and submit assignments on time via online to the lecturer, so that the lecturer can assess knowledge through the assignments given.

The level of student knowledge in understanding learning materials during the lecture process is thought to be due to the ability to operate the Learning Management System. [Yusring Sanusi. \(2016\)](#) explained that several online learning theories that are commonly used as references are constructivism, cognitive and behaviorism, these three theories are always interesting to look at. Online learning through with the Zoom meeting program turns out to be an inspiration for students in finding teaching materials, carrying out assignments. According to [Munir. \(2010\)](#) Learning Management System contains materials in pedagogic and professional competencies, as well as skills related to packaging (text, animation, video, sound, download various programs), given as learning competency development. learning management system offers learning innovations that include innovations in the field of information and communication technology, especially those based on virtual through web online learning, multimedia and video conferencing. Learning management system is a web-based learning developed dynamically. According to [Taofik Muhammad. \(2017\)](#) the level of mastery of System Management Learning will result in mastery of different materials in various information received and worked on. The ability of students to utilize learning management systems is needed, especially the ability of collaborative learning which is a structured and systematic instructional strategy in which students work together, it can be in the form of dialogue, negotiation of arguments to solve the problems they are working on.

The results of this study are in accordance with [Septian Nur Ika Trisnawati. \(2019\)](#) revealing that the ability of the Learning Management System skills possessed by students will greatly affect success in improving learning achievement and learning outcomes. Based on the results of analysis and study of learning theories carried out during the online lecture process through online, it turns out that the higher the ability to master the Learning Management System, the higher the knowledge possessed by students.

CONCLUSION

There is an influence on the mastery of the Learning Management System on the learning outcomes of learning courses through online learning during the covid-19 pandemic in the sixth semester students of the biology education program, faculty of teacher training and education, Pattimura University.

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