The Effect of Online Learning on Increasing Student GPA and Increasing The Quality of Graduates In Higher Education

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ABSTRACT

Online learning methods are increasingly being used, including for conducting university learning. It becomes a condition that must be avoided as part of the health protocol (hence: Prokes). Several factors influence student achievement using this online learning method, namely: student GPA, gender, ethnicity, first-generation status, and income status. The independent variables are discipline, environment, learning motivation, and learning media, while the dependent variable is GPA and the quality of graduates. The method of collecting data in this research is by distributing questionnaires to 153 student respondents. The research approach used is correlation investigation to find the relationship between variables. The method of collecting data on the sample is probability sampling, which uses a simple random sampling technique and SmartPLS software. PLS analysis using the inner model, outer model, and hypothesis testing. This study has four hypotheses. Three of them are supported, and one is not supported. The results of this study indicate a positive and significant relationship between discipline, environment, and learning motivation on GPA and graduate quality. However, the learning media variable has no relationship to the GPA variable. This research focuses on active students in the Department of Management at Andalas Universityand Padang State University.
Keywords: Online Learning, Students Quality, Higher Education, Learning Media

A. INTRODUCTION

Online learning methods are increasingly being used, including for conducting university learning. This method has become increasingly used since the outbreak of Covid 19, which caused health protocols (Prokes) to be applied in every activity, including implementing the teaching and learning process. Face-to-face lectures are a condition that must be avoided as part of the Prokes (Ningsih, 2021). Several factors affect student achievement using this online learning method: student GPA, gender, ethnicity, age, first-generation status, and income status (Wave & Ozogul, n.d. 2019.) Another factor affecting student achievement when using online learning methods is the discipline of the students who take lectures with this method. (E. et al., 2021) state that the effectiveness of online learning is determined not only by cognitive factors but also by non-cognitive factors such as discipline, friendliness, and awareness in using this learning media. Learning is a process of changing one's behavior and knowledge because of the experience gained in the learning process (L. et al., n.d. 2020). The negative impacts arising from online learning include those from the environment, which directly affects the achievement of students who carry out learning with this online method. Environmental factors that influence the student achievement in question include family situations and family economic factors.

Without this learning motivation, the learning process will have difficulty achieving maximum results. Nirmala, Tripalupi, and Suharsono (2014) state that learning motivation is the tendency of students to carry out learning activities that are motivated by the desire to get excellent learning outcomes. Students' motivation in each learning activity has a role in improving student achievement in certain subjects (Nashar, 2004). According to Makmun (2017), students with high learning motivation will behave positively, meaning that the students concerned have the drive to produce better learning outcomes through intensity, and a longer learning period.

The research that will be carried out has the aim of knowing the determinants of student GPA and the quality of graduates majoring in management who have carried out lectures using the online method. This learning method is used because of conditions that require students not to have face-to-face meetings to avoid student gatherings and keep their distance in carrying out activities due to the ongoing Covid 19 outbreak. The determining factors are the discipline of the students, the environment faced by the students, the motivation to learn, and the learning media used.

Hypothesis Development

Relationship between Two or More Variables

The first hypothesis aims to determine the effect of discipline on the GPA having a positive original sample value of 0.199 while the p-values are below 0.05, which is 0.029. So, the results of testing this hypothesis discipline have a positive and significant effect on GPA, and it can be determined that the first hypothesis (H1) is supported. This is supported by research conducted by(Handayani & Subakti, n.d.2021)), which has a t value below 1.96. Discipline in students can support the learning process well so that the student's GPA can be optimal. The same thing happened to the research (Supadmi & Purnamaningsih, 2022), which had a p-value below 1.96, which showed that discipline was proven to affect student learning outcomes significantly. So student discipline must be maintained so that the student's GPA remains optimal.

The second hypothesis aims to determine the effect of the environment on the GPA. The result is a positive original sample value of 0.265 while the p-values are below 0.05, which is 0.001. So, the results of testing this hypothesis show that the environment has a positive and significant effect on GPA. So it can be determined that the first hypothesis (H1) is supported. This study is similar to research by (Pratama & Mulyad, n.d.2020) has a P value of 0.000. It is stated that the student learning environment dramatically influences their learning outcomes. The home environment, parental support, a helpful friendship environment, and adequate campus facilities can increase students' GPA scores so the campus and families must be able to provide a comfortable, peaceful, and supportive environment to optimize student GPA scores.

The next hypothesis aims to determine the effect of learning motivation on GPA. The result is that it has a positive original sample value of 0.216 while the p-values are below 0.05, which is 0.027. So, the results of testing this hypothesis show that learning motivation has a positive and significant effect on GPA. So it can be determined that the first hypothesis (H1) is supported. This is in line with research conducted by(Rista, 2021), which has a significant value of 0.007, which states that learning motivation can significantly affect a student's GPA. This is because learning motivation will make students give their best efforts when studying, tenacity, fortitude, and an unyielding attitude. This will then positively affect the GPA.

The next hypothesis aims to determine the effect of learning media on GPA. The result is a positive original sample value of 0.087, while the p-values are below 0.05, which is 0.517. The results of testing this hypothesis show that learning media has a positive but not

significant effect on GPA, so it can be determined that the first hypothesis (H4) is not supported. The same research was conducted by (Murti & Prasetio, 2018), which has a value of 0.50. This means that the role and ability of lecturers in providing learning media cannot affect the students' GPA. So in the future, it is necessary to increase the ability and competence of lecturers to increase the student's GPA.

A. METHOD

The population in this study was active students in the Management Department at Andalas University and Padang State University, totaling 1,647 people. The number of samples in the study was determined using the stratified random sampling method. Stratified random sampling is a sampling technique concerning to a level (strata) in the population elements. Based on the population grouping carried out in this study, the sample used was 153 students (Sekaran, 2017). Data processing in this study using Structural Equation Modeling (SEM) with PLS 3.0 software. PLS is a variant-based structural equation analysis that can simultaneously evaluate the measurement model as well as evaluate the structural model. The measurement model is used to test the validity and reliability of research instruments, while the structural model is used to test causality (testing hypotheses with predictive models). (Ghozali, 2018) explains that PLS is an analytical method that is soft modeling because it is not based on the assumption that the data must be with a measurement scale, distribution of data (distribution free), and a certain number of samples.

C. RESULT AND DISCUSSION

It will describe the data processing process to obtain the results of the data, which is then analyzed to determine the results of the formulation of the problem and hypothesis testing in this study. In the data processing of this research using SmartPLS 3.2.9. software.
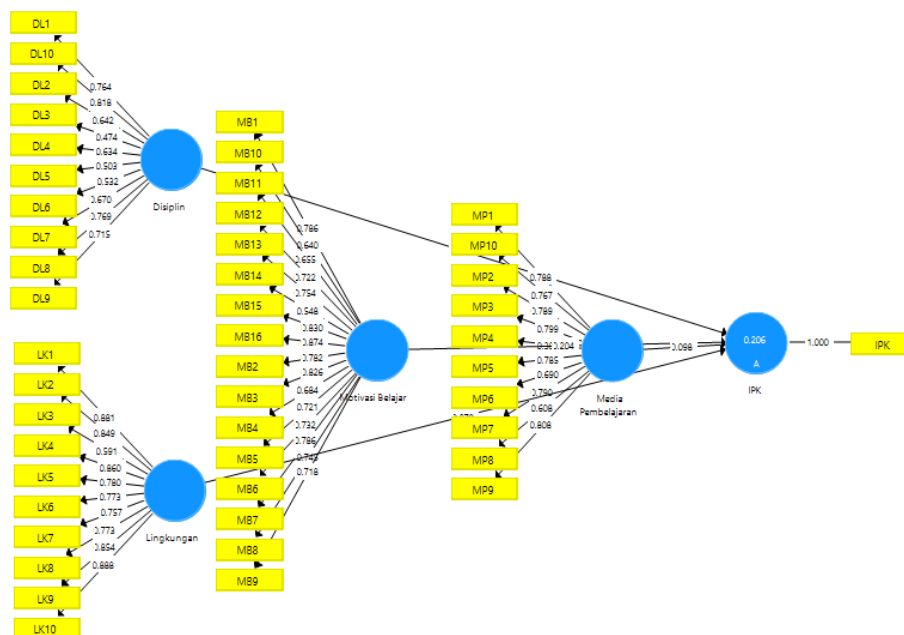

Figure 1. Outer Loading Result after testing

Table 1. Initial Model AVE Results

	Average Extractef Variance (AVE)
Discipline	0.438
Environmental	0.648
Learning Media	0.536
Motivation Learning	0.550
GPA	1.000

In the table above, the outer loading value still has a value below 0.50. The Discipline Variable has a value below 0.50 while the Environmental Variable, Learning Media, and Learning Motivation have a value above 0.50. Therefore, it must be re-tested by removing several indicators with small values.
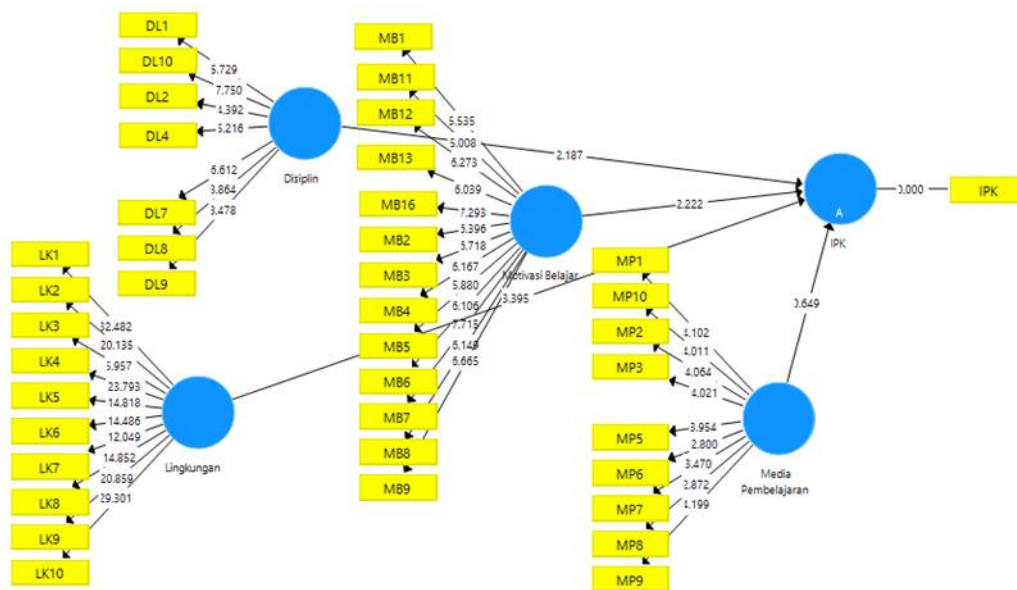
Figure 2. Outer Loading Results After Testing

The picture above shows the results of the test again after removing several indicators that have values below 0.50. After the retesting process, it is known that all outer loadings have a value above 0.50 so it is feasible and can be used for further research.

Table 2 AVE Result Table Testing

	Average Extractef Variance (AVE)
Discipline	0.520
GPA	1.000
Environmental	0.648
Learning Media	0.604
Motivation Learning	0.572

The table above shows that the variable already has a value above 0.50 which means that this indicator has met the requirements of convergent validity and can be used in this study and further research. In the table below, it will be explained that the indicators issued for the re-testing process to meet the value of the convergent validity test are as follows.

Table 3. List of Questions Issued

No	Questions
	Discipline
DL3	I do my assignments on time according to the time allotted.
DL5	I obey and obey the dress code according to the rules given by the campus.
DL6	I dress clean and tidy when I'm on campus.
	Motivation to learn

MB10	I discuss every lecture material with my friends all the time.
MB14	If in class some friends get high marks, I will be encouraged to keep going even if I can't.
MB15	I feel less confident if I must compete with other people in achieving in college.
	Learning Media
MP4	The lecturers use media that are following the learning materials during lectures.

This test aims to see the correlation or strength relationship of each indicator with its parent variable. The test by measuring the discriminant. This variable must be able to represent the latent variable. The value is as follows.

Table 5. Fornell-Larcker Method Cross-Loading Results

	Discipline	GPA	Environmental	Learning Media	Motivation Learning
Discipline	0.721				
GPA	0.286	1.000			
Environmental	0.227	0.323	0.805		
Learning Media	-0.099	0.086	0.041	0.777	
Motivation Learning	0.163	0.263	0.044	0.037	0.756

Source: Primary Data Processing Results (2022)

In the table above, it can be concluded that the correlation value in the same variable is higher than that of the other variables. Meaning that according to the validity test with Fornell-Larcker criteria in this study it can be used. This measurement aims to test if the research instrument used is feasible to use as a valid measuring instrument so that the consistency and reliability of this instrument can be accounted for. The reliability test can be seen by knowing cronbach's alpha and composite reliability (Hair et al., 2021). If the variables studied have a composite reliability value above 0.70 while having a value greater than 0.60 for Cronbach's alpha.

Table 6. Reliability test Results

	Cronbach's Alpha	rho_A	Reliabilitas Komposit
Discipline	0.851	0.872	0.883
GPA	1.000	1.000	1.000
Environmental	0.939	0.963	0.948
Learning Media	0.923	0.915	0.932
Motivation Learning	0.938	0.951	0.945

Source: Primary Data Processing Results (2022)

The table above explains that the value of the composite reliability of each variable has a value of > 0.70 while cronbach's alpha has a value of > 0.60. It can be concluded that this variable has a high-reliability value. This analysis looks at the influence of discipline, environment, learning motivation, and learning media on student GPA and the quality of graduates majoring in management. This r-square analysis (Hair et al., 2021) is used to measure the percentage of the high influence of one variable on another variable. This R

square is only owned by the dependent variable (the dependent variable) so this analysis explains how much the independent variable can influence the dependent variable.

Table 7. R Square Result

	R Square	Adjusted R Square
GPA	0.207	0.185

Source: Primary Data Processing Results (2022)

Based on the table above, the r-square value of the GPA variable is 0.207. The greater the value of an r square, the higher it affects other variables. It can be concluded that the variables that affect the GPA are discipline, environment, learning motivation, and learning media 0.207. At the same time, more is influenced by other variables that are not found in this study. To be able to test the truth of the hypothesis, it can be seen from the bootstrapping method on the smart pls 3.2.9 software. The hypothesis can be accepted if the value of the t-statistic is above 1.96 while the significance has p values above 0.050.

Table 8. Hypothesis Test Results

Direction	Original sample (o)	Sample mean (m)	Tstatistic ($|o/stdev|$)	P values	Decision
Discipline -> GPA	0,199	0,197	2,187	0,029	Supported
Environment -> GPA	0,265	0,270	3,395	0,001	Supported
Learning Motivation -> GPA	0,216	0,235	2,222	0,027	Supported
Learning Media -> GPA	0,087	0,073	0,649	0,517	Not supported

Source: Primary Data Processing Results (2022)

D. CONCLUSION

It can be concluded that discipline has a positive and significant effect on the GPA. It means that students do their assignments on time, arrive on time, dress neatly, be orderly in class, and study before entering class. Then it will affect the student's GPA. The environment has a positive and significant effect on the GPA. It can be concluded that if students have a good family environment, campus environment, friendship, and social environment, it can significantly affect their GPA. Learning motivation has a positive and significant impact on GPA.

D. SUGGESTIONS AND ACKNOWLEDGMENTS

There are suggestions that the author can convey in this study, including student discipline, which must still be maintained and improved by the campus because it is proven to be able to improve the performance of the GPA and the quality of management graduates. Discipline includes coming to class on time, doing assignments on time, following class rules, and studying before starting class. A conducive, comfortable, and supportive home learning environment can positively impact GPA and management graduates. If the home environment is safe and peaceful, students can focus on learning and get the best results. But not only in the home environment but also in the campus environment. Because the campus is where the main activities occur, the better the facilities, the more important it is for the campus to maintain them. Repairing damaged facilities, maximizing existing facilities, and socializing campus facilities greatly affect student GPA results. Student learning motivation also needs to be improved because it affects the GPA. Provide motivational seminars and classes to encourage student enthusiasm. The campus must often hold similar events to maintain and optimize the GPA and the quality of management graduates. Although learning media has no significant effect on student GPA and graduate quality. However, the campus must still pay attention to the competence and ability of lecturers. Providing lecturers with facilities that can improve their abilities and evaluating the performance of lecturers can increase student GPA and graduate quality.

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