

The Influence of Lecturer's Educational Level and Teaching Quality on The Learning Interest of Students of the Faculty of Mathematics, Natural and Earth Sciences Manado State University

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Abstract:

This research aims to: 1) determine the influence of lecturer's education level on students' interest in learning at the Faculty of Mathematics, Natural and Earth Sciences, Manado State University. 2) determine the influence of lecturer's teaching quality on students' interest in learning at the Faculty of Mathematics, Natural and Earth Sciences, Manado State University. 3) determine the influence of the level of education and teaching quality of lecturers together on students' interest in learning at the Faculty of Mathematics, Natural, and Earth Sciences, Manado State University. The type of research used is quantitative research. The sample in this research was 112 semester 5 students of the Faculty of Mathematics, Natural, and Earth Sciences for the 2023/2024 academic year. The data in this research was collected through questionnaires, documentation and observation and then analyzed using regression analysis. The results of the research show that: 1) There is a significant influence on the level of lecturer education on students' interest in learning at the Faculty of Mathematics, Natural, and Earth Sciences, Manado State University, Odd Semester 2023/2024. This is proven by testing the first hypothesis which obtained a calculated t value = 2.370 > t table = 1.982. 2) There is a significant influence on the quality of lecturers' teaching on students' interest in learning at the Faculty of Mathematics, Natural and Earth Sciences, Manado State University, Odd Semester 2023/2024. This is proven by testing the second hypothesis which obtained a calculated t value = 2.107 > t table = 1.982. 3) There is a significant influence on the level of education and quality of lecturers' teaching on students' interest in learning at the Faculty of Mathematics, Natural and Earth Sciences, Manado State University, Odd Semester 2023/2024. This is proven by testing the third hypothesis which obtained a calculated f value = 27.786 > f table = 3.08.

Keywords —Education Level, Teaching Quality of Lecturers, Student Interest in Learning.

I. INTRODUCTION

Education is very important in developing human potential. The importance of education for humans, especially for the younger generation, aims

to shape or build the character of the younger generation so as to create individuals who are responsible and have good ethics or personality. Education in general means a life process in

developing each individual to be able to live and live their life so that they become an educated person. In education, there are elements that are related to each other, namely the student element and the educator element. Students are members of society who try to develop themselves by learning both through formal and non-formal education channels. Meanwhile, educators are people who are responsible for implementing education.

According to Law of the Republic of Indonesia Number 14 of 2005 concerning Teachers and Lecturers, it is stated that the position of teachers and lecturers as professional staff aims to implement the national education system and realize the goal of national education, namely developing the potential of students so that they become human beings who believe and are devoted to God Almighty[1]. Almighty, noble, healthy, knowledgeable, capable, creative, independent, and a democratic and responsible citizen. In higher education, lecturers are professional educators and scientists with the main task of transforming, developing, and disseminating science, technology, and art through education, research, and community service.

In carrying out the profession as a lecturer, you are required to have several skills, namely expertise in the field you are involved in, in this case, the level of education that the lecturer has. The level of education is the most important thing for a lecturer, because the higher the level of education taken, the easier it will be to carry out or carry out their duties and responsibilities, this is because the profession of a lecturer must have an established level of education[2]. This is in line with the opinion of Netty and Saragih who state that the higher the level of education, the higher the impact on lecturer performance[3]. Apart from the higher the lecturer's performance, according to Jumardin the higher the lecturer's educational level, the higher the pedagogical competence they have[4].

Based on the data obtained regarding the recapitulation of lecturer data at the Faculty of Mathematics, Natural and Earth Sciences, Manado State University, looking at the latest education, it shows that lecturers with doctoral qualifications are

50.97% while lecturers with master's qualifications are 49.03%. From this data, it can be seen that the level of education for lecturers with master's qualifications is still relatively large because it reaches almost half of the total lecturers at the Faculty of Mathematics, Natural and Earth Sciences, Manado State University. Success in the educational process cannot be separated from the role of lecturers, because it is from lecturers that knowledge can be transferred to students. Lecturers must have good qualifications, competence and teaching quality so that they can transfer knowledge according to their scientific field.

Based on the results of interviews with several students at the Faculty of Mathematics, Natural and Earth Sciences, Manado State University, it is known that there are several lecturers whose teaching methods are not varied or only use the lecture method. Apart from that, several lecturers still often experience a lack of skills in using learning media. The quality of the lecturer's teaching will certainly reduce students' interest in attending lectures. Apart from that, there are also several lecturers who have good teaching skills by using models, approaches, and techniques in learning to make students understand the lecture material given. The use of conventional models that are often used by lecturers will make the lecture process monotonous [5] which causes students' interest in learning in lectures to decrease. Interest is needed in the learning process, a person cannot carry out learning activities without an interest in learning. Syardiansah stated that this interest plays an important role in the teaching and learning process, without interest he cannot master the lessons given by his lecturer[6].

II. METHOD

The method used in this research is a quantitative research method, namely research based on the philosophy of positivism, used to research certain populations and samples generally carried out simply randomly, data collection is based on research instruments, data analysis is quantitative/statistical with the aim of testing predetermined hypotheses[7]. The data obtained

was analyzed using regression analysis. The research was carried out at the Faculty of Mathematics, Natural Sciences and Earth, Manado State University in the 2023/2024 academic year. The sample in this research was 112 semester 5 students of the Faculty of Mathematics, Natural and Earth Sciences for the 2023/2024 academic year. The data collection technique uses a questionnaire technique which is prepared with several questions using a Likert scale. The data analysis techniques used in this research include: (1) Testing the validity and reliability of the questionnaire instrument for lecturers' teaching quality and students' learning interest, (2) Testing classical assumptions, and (3) Testing hypotheses using regression analysis techniques.

III. RESULTS AND DISCUSSION

A. Description of Research Results

The data in this study was taken from a questionnaire given to respondents. The number of questionnaires given was based on a sample size of 112 students. The questionnaires given to respondents were all received back and can be analyzed. The description of the research data is the value obtained from each research variable, namely the Influence of Lecturer Education Level (X1), Lecturer Teaching Quality (X2), and Student Learning Interest (Y).

B. Instrument Validity and Reliability Test

Researchers tested the lecturer teaching quality questionnaire instrument consisting of 30 statement items given to 31 respondents. The results of the trial showed that all the question items were declared valid and could be used in further data collection. For testing the student interest questionnaire instrument, it consisted of 33 statement items given to 25 respondents. The test results showed that 3 questions were declared invalid because the calculated r was less than the r table. Invalid items cannot be used in further data retrieval. The results of the reliability test of the lecturer teaching quality questionnaire obtained a value of Cronbach's alpha of 0.946 and a reliability test of student learning interest of 0.898. These two Cronbach's alpha values are greater than 0.60, so it

can be said that all measurement results for each variable are reliable.

C. Normality Test

The normality test uses the Kolmogorov-Smirnov statistical test method. If the significance of the Kolmogorov smirnov test results is greater than 0.05 then it is normally distributed and if it is less than 0.05 then it is not normally distributed. The following results from the normality test are presented in Table 1.

TABLE 1
NORMALITY TEST RESULTS
One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual	
N		112	
Normal Parameters ^{a,b}	Mean	.0000000	
	Std. Deviation	8.30204745	
Most Extreme Differences	Absolute	.078	
	Positive	.064	
	Negative	-.078	
Test Statistic		.078	
Asymp. Sig. (2-tailed) ^c		.090	
Monte Carlo Sig. (2-tailed) ^d	Sig.	.090	
	99% Confidence Interval	Lower Bound	.082
		Upper Bound	.097

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 926214481.

Based on the results of the normality test, it is known that the significance value is $0.09 > 0.05$, so it can be concluded that the test value is normally distributed.

D. Multiple Linear Regression Analysis

The results of multiple linear regression test analysis using SPSS 27 can be seen in Table 2.

TABLE 2
RESULTS OF MULTIPLE LINEAR REGRESSION ANALYSIS

Model	Coefficients ^a					
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	54.368	20.263		2.683	.008
	Lecturer Education Level	6.550	2.763	.322	2.370	.020
	Teaching Quality of Lecturers	.374	.177	.287	2.107	.037

a. Dependent Variable: Student Learning Interests

From Table 2 above, it can be seen that the multiple linear regression equation in this research is as follows.

$$Y = \alpha + b_1X_1 + b_2X_2 + \mu$$

$$Y = 54.368 + 6.550X_1 + 0.374X_2 + \mu$$

Information:

Y = Student Learning Interests

α = Constant

X_1 = Lecturer Education Level Variable

X_2 = Teaching Quality of Lecturers Variable

b_1b_2 = Regression Coefficients

μ = Error

E. Hypothesis Test

- 1) Lecturer Education Level on Student Learning Interests Based on the Table 2, it is known that t count = 2.370 for the lecturer's education level and t table = 1.982, so tcount > ttable = 2.370 > 1.982.
- 2) Lecturer Teaching Quality on Student Learning Interest For the lecturer teaching quality variable, it is known that tcount = 2.107 for the lecturer's education level and ttable = 1.982, so tcount > ttable = 2.107 > 1.982.
- 3) The F test is used to find out whether all variables X (independent) influence variable Y (dependent). Based on the calculation results using SPSS 27, the results in Table 3 were obtained.

TABLE 3
F TEST RESULTS

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3900.544	2	1950.272	27.786	.000 ^b
	Residual	7650.563	109	70.189		
	Total	11551.107	111			

a. Dependent Variable: Student Learning Interests

b. Predictors: (Constant), Teaching Quality of Lecturers, Lecturer Education Level

Based on Table 3 above, it is known that fcount = 27.786 and ftable = 3.08, so the value of fcount > ftable = 27.786 > 3.08.

F. Discussion

- 1) **The Influence of Lecturer Education Level on Student Interest in Learning,**

Faculty of Mathematics, Natural and Earth Sciences, Manado State University:

Based on the research results, it was found that the lecturer's education level had a significant effect on students' interest in learning at the Faculty of Mathematics, Natural Sciences and Earth, Manado State University. This means that if the educational level of the lecturers at the Faculty of Mathematics, Natural and Earth Sciences, Manado State University is high, then the student's interest in learning will increase. This is in line with the results of research from Netty&Agus M. Saragih which states that the higher the level of education, the higher the impact on lecturer performance. High lecturer performance will influence student interest in learning. Good lecturer performance consists of several aspects, one of which is teaching methods. According to Alhadi, Esya., et al.said that teaching methods, teaching ethics, and obedience to regulations influence students' interest in learning[8].

- 2) **The Influence of Lecturer's Teaching Quality on Student Interest in Learning, Faculty of Mathematics, Natural and Earth Sciences, Manado State University:**

Based on the research results, it was found that the quality of lecturers' teaching had a significant effect on students' interest in learning at the Faculty of Mathematics, Natural Sciences and Earth, Manado State University. This means that if the teaching quality of lecturers at the Faculty of Mathematics, Natural Sciences and Geosciences, Manado State University is high, then the student's interest in learning will increase. The quality of a lecturer's teaching cannot be separated from the basic competence of the lecturer. This is in line with the results of research from Nardi which states that there is an influence of lecturers' basic competence on students' interest in learning in the Physics Education department

in semesters I, III and V (TA. 2014/2015) of 8%[9].

- 3) **The Influence of Lecturer Education Level and Lecturer's Teaching Quality on Student Interest in Learning, Faculty of Mathematics, Natural and Earth Sciences, Manado State University:** Based on the research results, it was found that the lecturer's education level and the quality of the lecturer's teaching had a significant effect on students' interest in learning at the Faculty of Mathematics, Natural and Earth Sciences, Manado State University. This means that if the education level and teaching quality of the lecturers at the Faculty of Mathematics, Natural Sciences and Earth, Manado State University are high, then the student's interest in learning will increase.

IV. CONCLUSION

Based on data analysis, hypothesis testing, and discussion results can be concluded as follows.

- 1) There is a significant influence on the level of education of lecturers on student's interest in studying at the Faculty of Mathematics, Natural and Earth Sciences, Manado State University, Odd Semester 2023/2024. This is proven by testing the first hypothesis which obtained a value $t \text{ count} = 2,370 > t \text{ table} = 1,982$.
- 2) There is a significant influence on the quality of lecturers' teaching on students' interest in learning at the Faculty of Mathematics, Natural and Earth Sciences, Manado State University, Odd Semester 2023/2024. This is proven by testing the second hypothesis which obtained a value $t \text{ count} = 2.107 > t \text{ table} = 1.982$.
- 3) There is a significant influence on the level of education and teaching quality of lecturers on students' interest in learning at the Faculty of Mathematics, Natural and Earth Sciences, Manado State University, Odd Semester 2023/2024. This is proven by testing the third hypothesis which obtained a value of $f \text{ count} > f \text{ table} = 27.786 > 3.08$.

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