



## Analysis of Student Learning Interest by Using Google Classroom on Online Learning for Engineering Physics Courses

Inung Diah Kurniawati<sup>1</sup>,

<sup>1</sup> Informatics Engineering, Universitas PGRI Madiun, Indonesia

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### ABSTRACT

Online learning has been implemented since the COVID-19 pandemic hit the world. Google Classroom is one of the media that can be used for online learning. By utilizing Google Classroom, it is expected to increase student learning interest. The purpose of this study was to analyze student interest in learning by utilizing google classroom in Engineering Physics course. This type of research is descriptive quantitative research. The subjects of this research are students of Electrical Engineering, PGRI Madiun University who are taking Engineering Physics courses. Research data obtained by distributing questionnaires to respondents. The questionnaire contains indicators of learning interest which consists of 4 indicators. The data obtained were then analyzed using a descriptive percentage analysis technique, which was then interpreted by category to then get a good conclusion. The results showed that the interest in learning of Electrical Engineering students in online lectures using Google Classroom was in a good position with a percentage value of 65.74%.

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### Corresponding Author:

Inung Diah Kurniawati,  
Informatics Engineering,  
Universitas PGRI Madiun,  
Jl. Auri No. 14-16 Madiun City 63117, East Java, Indonesia.  
Email: [inungdiah@unipma.ac.id](mailto:inungdiah@unipma.ac.id)

### 1. INTRODUCTION

The COVID-19 pandemic has affected all aspects of life and the development of information technology. One of them is in the education aspect, where all learning that was previously done face-to-face, now has to be done online. The government has given a policy that learning at all levels of education is carried out by distance learning (online), including in universities. With online learning, it is hoped that it will not change the essence of the material presented. In addition, the goals of education in higher education must also be achieved even though lecturers and students do not meet directly. Therefore, online learning must be done innovatively and creatively. This is intended so that students can take part in learning with pleasure and can receive the material presented to the maximum.

However, with the new rules this raises a new problem. Based on the results of interviews, it was found that students' interest in learning decreased due to online learning. One of the reasons is that there are no face-to-face meetings between lecturers and students, adaptation to technological

advances, and network constraints. The transition from face-to-face learning to online learning causes students' interest in learning to fall [1]. Therefore, it is necessary to innovate in learning so that student interest can increase. One of them is by using Google Classroom. It is hoped that by using Google Classroom, it can overcome the existing problems. The purpose of this study was to analyze student learning interest in online lectures by utilizing Google Classroom in Engineering Physics course.

Online learning can be done with various platforms. One of them is zoom meeting, google meeting, e-learning, google classroom, etc. Google Classroom (GC) is a learning window in education that can make it easier for teachers to create, share and classify each paperless assignment [2]. In addition, GC is made with a useful design to make it easier for teachers to save time, manage classes and improve communication with students. This GC can make it easier for students and teachers to communicate with each other without face to face. GC is very useful in education. The following are the benefits of CG, which can help make it easier for teachers and students to carry out teaching and learning activities more deeply [3], can assist in supervising activities to solve problems and create effective and efficient learning outcomes and show environmental friendliness [4][5].

Interest is very instrumental in achieving something. Interest in learning is one of the psychological aspects of a person in achieving goals [6]. If someone has an interest in appropriate, then he will feel happy and involved in something. Learning interest is closely related to personality, motivation, self-expression and concept or identification, heredity and external or environmental influences [7]. It can be concluded that interest in learning is a person's desire to know something from what is his concern that is closely related to personality. The indicators of learning interest used in this study were adopted from Arisanti, D., & Subhan, M [8] and Arliyanti [9]. The indicators of interest in learning used in this study, namely 1) feelings of pleasure, 2) interest in learning, 3) showing attention when learning, 4) involvement in learning. In detail the indicators of interest in learning are presented in the following table.

**Table. 1.1. Indicator of Learning Interest**

<b>Indicator</b>	<b>Sub Indikator</b>
Feeling of Pleasure	Enjoy participating in online learning with Google Classroom
	Keep the spirit of online learning with Google Classroom
	Stay present in online learning with Google Classroom
Student Interest	Repeating material that has been delivered by the lecturer
	Enthusiastic about doing assignments given through google classroom
Student Attention	Pay close attention to the material presented by the lecturer
	Record learning materials carried out with online learning
Student Engagement	Ask if there is material that you don't understand
	Actively answer questions given by the lecturer
	Actively discuss in online learning

Interest in learning is not new, so research on interest in learning is very encouraging. In this study, it was focused on students' interest in learning during online learning by utilizing Google Classroom. Several previous studies have shown that google classroom can increase interest in learning during online learning [10] [11] [12] [13]. Online learning during the pandemic period greatly affects student interest in learning because students become easily bored when learning online [14]. Interest in learning affects students' learning abilities [15]. Several studies were conducted at the primary and secondary education levels. Meanwhile, in this study, the focus is more on the tertiary level.

## 2. RESEARCH METHOD

The type of research used is descriptive research. While the approach used in this research is a quantitative approach. Descriptive research is research that provides a complete picture for the explanation and clarification of a phenomenon [16]. This research was conducted at the PGRI University of Madiun in the Electrical Engineering study program in the odd semester of the 2020/2021 academic year. The subjects of this study were Electrical Engineering students who took Engineering physics courses.

This research uses descriptive qualitative analysis. Data collection was carried out in this study by observation, interviews and distributing questionnaires. The instrument used in this research is a questionnaire. The questionnaire used contains 10 statements related to indicators of student interest in online learning. The questionnaire used is a closed questionnaire where the alternative answers are yes and no.

Quantitative data obtained from the answers to the questionnaire were then analyzed by descriptive analysis using percentages

$$P = \frac{f}{n} \times 100\% \quad [17]$$

Information:

P = percentage

f = frequency of each answer

n = number of respondents

Then the percentage results are interpreted according to the following categories

**Table 2.1. Category Percentage Descriptive Analysis**

No	Score Interval	Category
1	$0\% \leq P \leq 20\%$	Not Good
2	$21\% \leq P \leq 40\%$	Not Quite Good
3	$41\% \leq P \leq 60\%$	Pretty Good
4	$61\% \leq P \leq 80\%$	Good
5	$81\% \leq P \leq 100\%$	Very Good

## 3. RESULTS AND DISCUSSIONS

Interest in learning data was obtained from a questionnaire consisting of 4 indicators of asking for learning consisting of 10 statements. From this lift, quantitative data on interest in learning was obtained. Furthermore, the data was then analyzed using descriptive analysis techniques with percentages. Data analysis aims to draw conclusions well. The results of data processing are presented in table 3.1 below.

Based on Table 3.1 the overall average percentage is 65.74% in the good category. In the first indicator, the percentage value is 70.37% with good category. In this first indicator, there are 3 sub-indicators, where the sub-indicator attending online lectures gets the highest score. While the second indicator obtained a percentage value of 72.22% with good criteria. In this second indicator there are 2 sub-indicators, where the sub-indicator of enthusiasm in doing the task gets the highest score. In the third indicator, the percentage value is 61.11% in the good category. In this third indicator there are 2 sub-indicators, where the indicator records online lecture material getting the lowest score. Finally, in the fourth indicator, the percentage value of 59.26% is obtained in a fairly good category. In this fourth indicator, it consists of 3 sub-indicators, where the sub-indicator asking questions about material that is not understood gets the highest score. From these indicators, the

lowest percentage value was obtained in the fourth indicator, namely student involvement. While the highest percentage value is obtained by the second indicator, namely student interest. Overall, it was found that students' interest in learning using Google Classroom in Engineering Physics courses in online lectures during the COVID-19 pandemic was in the good category.

**Table. 3.1. Results of Data Analysis of Student Interests**

No	Indicator	Statement	F	P	Kategori
1	Feeling Happy	1	6	66,67	Good
		2	6	66,67	Good
		3	7	77,78	Good
	<b>Indicator Average 1</b>		<b>6,33</b>	<b>70,37</b>	Good
2	Student Interest	4	6	66,67	Good
		5	7	77,78	Good
	<b>Indicator Average 2</b>		<b>6,5</b>	<b>72,22</b>	Good
3	Student Attention	6	6	66,67	Good
		7	5	55,56	Pretty Good
	<b>Indicator Average 3</b>		<b>5,5</b>	<b>61,11</b>	Good
4	Student Engagement	8	6	66,67	Good
		9	5	55,56	Pretty Good
		10	5	55,56	Pretty Good
	<b>Indicator Average 4</b>		<b>5,33</b>	<b>59,26</b>	Pretty Good
<b>Overall Average</b>			<b>5,92</b>	<b>65,74</b>	Good

Based on the analysis above, it was found that the category of student interest in learning by utilizing google classroom was in the good category. This shows that students feel happy with online learning using Google Classroom. Online learning has an effect on student learning interest [14]. Online learning has a significant effect on student learning interest [18]. To increase students learning interest, it is necessary to choose a good learning strategy [19]. Online learning can have a positive impact on students learning interest [6]. This can be interpreted that the better the student's interest in learning will have an impact on the success of the learning carried out. Students' interest in learning also affects the ability to understand concepts [20]. Interest in learning generally grows from within. But it does not rule out the possibility of external factors influencing interest in learning, one of which is parents or friends. A friend also has roles such as parents and educators who provide positive motivation and enthusiasm for their friends to achieve and achieve something their friends want [21]. The encouragement of an educator who can generate student interest is to provide interesting strategies and methods in teaching and learning activities and must always provide motivation and enthusiasm for each student, especially in physics subjects [22] [23] [24] [25]. Three factors that underlie the emergence of interest are internal motivation factors, social motivation factors and emotional factors [26]. Learning with online media can also improve learning activities during the COVID-19 pandemic [27].

#### 4. CONCLUSION

Based on the results and discussion, it can be concluded that the level of interest in learning Electrical Engineering students in online lectures using Google Classroom is in a good position. This proves that students still have a good interest in taking online lectures in Engineering Physics courses. It is hoped that this research can be developed to be more complex by analyzing the understanding of concepts and students' higher-order thinking skills. In addition, it can also be developed using other platforms.

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