

Analysis of Informatics Engineering Students' Learning Interest in a Linear Algebra Course

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Abstract

Learning is an interactive process between educators and students in a certain lesson. One of the affective aspects that has a role in the learning process is learning interest. This learning interest has an extremely important role and has a great impact on students in a lesson. This research intended to comprehend Informatics Engineering students' learning interest in a Linear Algebra course. The subjects of this research were Informatics Engineering Students of Universitas Islam Lamongan, with a total of 53 students. This research method was a qualitative descriptive method. The data source in this research came from the questionnaire of students' learning interests in a Linear Algebra course. The data analysis in this research used four learning interest criteria including feelings of pleasure, attention, interest, and involvement. The results of the analysis that was obtained from this research got an average of: 71.89% for the criteria of pleasure feeling; 72.36% for the attention criteria; 71.79% for the interest criteria; and 71.79% for the involvement criteria with a total average of 71.96%. It can be concluded that students' learning interest in the Linear Algebra course was in the high category.

Keywords: *analysis, learning interest, informatics engineering, linear algebra.*

INTRODUCTION

Education is a process that influences students' personalities to adapt the best they can to their surroundings so that it provides changes in them in order to function in social life (Sardiyannah, 2020). Therefore, in a learning problem, it does not only lies in students and educators; however, the community and the surrounding environment can also influence the educational problem. Education is a teaching and learning process formally in an educational institution, particularly a school or university. Learning is an interactive process between educators and students in a specific lesson. According to Mursyidi (2020), learning is an effort to change an individual's behavior. The change that is referred to is not only in knowledge addition; however, proficiency, attitude, skill, self-esteem, perceptivity, character, interest, adaptation are also included in those changes. Through learning, a person can make those changes as a determinant related to life importance so that they can improve their fate and can achieve their desired goals. Many

factors impact students in learning. Those factors can come from internal or external.

An educator must be able to foster students' curiosity in the learning process. According to Siagian (2015), students' learning process is extremely important because of the following: 1) An educator must understand how great students' learning interest levels are as early as possible; 2) There is a need for cooperation between educators and students' parents to monitor the learning process and conduct a good learning habit; and 3) There is a need for further monitoring regarding students' interests and habits/learning styles because they highly impact students' learning outcomes. Students' success in a learning process can be seen from the learning outcome, which is the result of students' learning process, which was influenced by many factors. One of the main factors that can influence it is learning interest. This learning interest is one of the affective aspects that has a role in the learning process. Moreover, Febrianto (2021) stated that learning interest is the main factor that can

determine students' participation level; if a learning process that is studied is not appropriate for the interests they have, students will not study properly.

Informatics Engineering is a study program at the university that studies mathematics. Elementary Linear Algebra is one of the courses in mathematics that must be studied by Informatics Engineering students. This elementary linear algebra course is the basis of automation in the Informatics field (Hanifah & Nawafilah, 2021). However, many students still consider that by entering this Informatics Engineering study program, they do not need to learn material related to the mathematics field. The existence of this problem can influence students' learning interests which may become lower in a linear algebra course.

Several studies have described learning interest; among them were Friantini (2019) and Sucipto (2021), which discussed the analysis of learning interest in mathematics learning, Safitri (2020) regarding an analysis of MTs students' learning interest in mathematics learning assisted by

Gogebra, Hemayanti (2020) and Harefa (2020) concerning the analysis of learning interest of eleventh grade students majoring in natural Science on a chemistry subject, and Wahyuni (2021) on the analysis of students' learning interest in a physics subject at SMA Negeri 2 Kota Jambi. However, there was still no analysis that examined an analysis of learning interest in a linear algebra course. From the background that has been described, the researchers wanted to comprehend how much Informatics Engineering students' learning interest in a Linear Algebra course. The objective of this research was to describe Informatics Engineering students' learning interest in a Linear Algebra course.

METHODS

This research was a qualitative descriptive study. This research was conducted at the Islamic University of Lamongan. The subjects in this research were students of the Informatics Engineering study program in the even semester of 2021/2022, with a total of 53 students. The data source in this

research came from students' learning interest questionnaires in a Linear Algebra course. The learning interest questionnaire with a total of 16 questions using a Likert scale. This learning interest questionnaire used four learning interest criteria, including pleasure feeling, attention, interest, and involvement, which can be seen in Table 1.

Table 1. Learning interest questionnaire creation guideline

Interest Indicator	Question Criteria
Pleasure feeling	Consciousness in learning
	Learning enthusiasm
	Willingness to learn
Learning interest	Seriousness in learning
	Interest in the course
	Interest in the educator
Learning attention	Interest in the learning situation
	Learning convenience
	Learning concentration
Learning involvement	Learning desire
	Learning time utilization
	Learning frequency

Source: (Situmorang & Siahaan, 2019)

The following is a Likert scale conversion for students' questionnaire fulfillment in a Linear algebra course which was used. It was categorized into five such as Strongly Agree (SS), Agree (S), Neither agree nor disagree (KS), Disagree (TS), and Strongly Disagree (STS). The statement scoring per item can be seen in Table 2.

Table 2. Questionnaire statement item score

Category	Score Per Item
Strongly Angree (SS)	5
Agree (S)	4
Neither agree nor disagree (KS)	3
Disagree (TS)	2
Strongly disagree (STS)	1

Learning interest questionnaire was used to comprehend students' learning interest in this linear algebra course using GoogleForm. Data processing was conducted by calculating the percentage of each of the four criteria of students' learning interest questionnaire, which consisted of pleasure feeling, attention, interest, and involvement. Then, from the four

percentages that have been obtained, a mean was taken, so it was acquired a conclusion from students' learning interest with an assessment category guideline which can be seen in the following table.

Table 3. Learning Questionnaire Assessment Criteria Guideline

Interval (%)	Category
80 - 100	Extremely high
60 - 79	High
40 - 59	Medium
20 - 39	Low
0 - 19	Extremely low

Source: modification (Arikunto, 2010)

RESULT

From the response result of 53 students who had filled out students' learning interest questionnaires in a linear algebra course can be presented in Table 4 as follows.

Table 4. Students' Learning Interest Questionnaire results in a Linear

Algebra Course			
No	Criteria	Total	
		Score	Percentage (%)
1	Pleasure feeling	762	71,89%
2	Attention	767	72,36%
3	Interest	761	71,79%
4	Involvement	761	71,79%
Mean of students' learning interest Category			71.96% High

From Table 4 it can be seen that: for students' learning interest percentage with pleasure feeling criteria, the percentage was 71.89%; for the attention criteria obtained a higher percentage than the other criteria, that was 72.36%; while for students' interest and involvement criteria in a linear algebra course obtained the same percentage that was 71.79%.

Students' learning interest in a linear algebra material for pleasure feeling criteria was related to an indicator of students' learning enthusiasm when a linear algebra learning took place, students felt that this linear algebra course was interesting and challenging, students infrequently even never skip the class during a linear algebra course,

and students felt that this linear algebra course was easy to be understood. For students' attention criteria in this learning interest, it contained indicators regarding students' sitting positions when linear algebra learning went on in the class, students' attention to the lecturer explanation during the teaching and learning activities, students set aside time to resolve linear algebra exercises, and discussed when teaching and learning activities took place, students talked more with their friends or focussed more on the lecturer's explanation.

Learning interest with the interest criteria contained indicators regarding students repeated the material that had delivered in class, students did their own assignments or exams given by lecturers, students always doing the assignments given, and students always studying without waiting for an exam to be held. The fourth criteria pertaining to students' involvement on this learning interest included discussed students' participation in asking or answering questions when learning activities took place in class, students'

seriousness when did linear algebra exercises, and students' attention when experienced difficulties in solving linear algebra exercises.

From Table 4 above, it can be seen that the mean of learning interest from the four criteria that have made, it was got a percentage of 71.96%. According to the criteria guideline of learning interest questionnaire criteria, it was obtained that students had a high learning interest in a linear algebra course.

CONCLUSION

According to the analysis result of students' learning interest questionnaire in a linear algebra course that had described, it can be concluded that: feeling pleasure criteria obtained a percentage of 71.89%; attention criteria obtained a percentage of 72.36%; interest criteria obtained a percentage of 71.79%; and involvement criteria obtained a percentage of 71.79%. From the four learning interest criteria, it was obtained a mean of 71.96% which meant that students' learning interest in a linear algebra course was in the high

category.

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