# The Influence of Learning Habits on Learning Achievement of Land Measurement Engineering Phase E Building Modeling and Information Design SMK Negeri 5 Semarang Academic Year 2023/2024

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**ABSTRACT**

Learning achievement serves as an indicator of students knowledge mastery. Learning achievement is crucial as it relates to students knowledge aspects. There are many factors that can influence learning achievement, one of which is learning habits. Good learning habits will assist students in mastering subject-related knowledge. Having good learning habits will also result in good learning achievement. The purpose of this research is to determine the impact of study habits on the learning achievement of students of Land Measurement Engineering Phase E Design Modeling and Information Building SMK State 5 Semarang academic year 2023/2024. This research uses descriptive research designs with a quantitative approach. The research carried out is ex-post-facto research. The population of this research is a student phase E Design Modeling and Information Building SMK State 5 Semarang academic year 2023/2024 on subjects of Land Measurement Engineering as 105 students. The sampling technique used is a simple random sample with a total sample of 84 people. The data collection method in this study uses questionnaires and documentation. The findings of this research indicate that there is an influence of learning habits on the learning achievement in land measurement engineering, as evidenced by a significance level (Sig) less than 0.05 (0.00001 < 0.05), as well as a t-value > t-table (17.880 > 1.663) and a significant effect of 79.6%. Recommendations from this study are as follows: 1) Teachers are expected to understand students' study habits in order to design and plan more suitable learning processes that can help improve students' study habits and academic performance 2) Students are encouraged to enhance their study habits through activities such as taking comprehensive notes, reviewing study materials regularly, practicing comprehension by solving problems, and actively participating in the learning process

_Keywords: learning habits, learning achievements, modeling design and building information_

## 1. INTRODUCTION

The success of the learning process in an institution can be seen from the academic achievements of students. The learning process is undoubtedly closely related to students' academic performance. Learning achievement can be considered as the outcome of learning in the field of education. This is because learning achievement, as a result of students learning process, can serve as a benchmark to determine whether students can master the subject matter that has been taught within a certain period of time. This is supported by the opinion of Jihad & Haris [1] who state that academic achievement is inseparable from the learning process, as it is the result of that learning process.

Learning achievement is the result of assessment obtained through the measurement of cognitive aspects achieved by students after undergoing the learning process within a specific period of time,

usually expressed in numerical or letter form. Learning achievement reflects the learning effort made by students. To determine the learning achievement of students, testing and assessment of their mastery of the material provided is necessary. These tests and assessments are conducted by educators as a form of evaluating student learning outcomes.

Based on the observations made by the researcher during the implementation of UNNES LANTIP activities at SMK Negeri 5 Semarang, there are several poor study habits among students. These include studying only before exams or not studying at all additionally, students understanding of the subject matter is lacking, leading teachers to repeatedly explain the same material. The educators also report that students often struggle to complete assigned tasks due to their limited understanding of the material furthermore, in the subject of Land

Measurement Engineering, 10th grade (Phase E) students at SMK Negeri 5 Semarang obtained relatively low scores on the Final Semester Exam, with an average of 68.97, and 90% of students scored below the Minimum Criteria Requirement of 75.

In previous research by Afrinaval & Syamwil [2] that examined the influence of learning habits on learning achievement, it was concluded that learning habits significantly affect student learning achievement. Hermanto's [3] research on the impact of learning habits on learning achievement found that learning habits have a significant influence on learning outcomes.

From the explanation above, the researcher conducted a study on the topic of The Influence of Learning Habits on Learning Achievement in Land Measurement Engineering Phase E Modeling Design and Building Information at SMK Negeri 5 Semarang for The Academic Year 2023/2024.

## 2. METHOD

### 2.1 Research Type

This research uses a descriptive research design with a quantitative approach. The conducted research is of an ex-post facto nature. Ex-post facto research is also often referred to as research after the fact According to Rukminingsih et al. [4], ex-post facto research is conducted after an event has occurred.

### 2.2 Research Location

This research was carried out at SMK Negeri 5 Semarang which is located in Jalan Dokter Cipto No.121, Karangturi, Kec. Semarang Tim., Kota Semarang, Jawa Tengah 50124

### 2.3 Populations and Samples

The population of this research consists of 105 students from the 10th grade (Phase E) of the Design Modeling and Building Information Competency Program at SMK Negeri 5 Semarang for the Academic Year 2023/2024 The research sample was calculated using the Yamane formula with a significance level of 5%, resulting in 84 students as the sample.

### 2.4 Research Variables

In this research, two variables are used: learning habits as the independent variable and learning achievement as the dependent variable.

### 2.5 Data Collection Techniques

This research utilizes documentation and questionnaires as data collection techniques. The use of documentation aims to obtain data related to the list of names and final semester exam scores of 10th grade (Phase E) DPIB students as learning achievements. Questionnaires are a data collection technique by providing a set of questions or statements to respondents for them to answer [5].

### 2.6 Data Validation Techniques

#### 2.6.1 Validity Test

Validity in research refers to the degree of accuracy of the research measurement tool (instrument) in measuring research variables. Data collection using a valid research instrument requires validation testing after the research instrument has been piloted.

#### 2.6.2 Reliability Test

In this research, the reliability test of the instrument is conducted to determine whether the research instrument can be trusted or not as a data collection tool.

## 3. RESULTS AND DISCUSSION

### 3.1 Research Data

#### 3.1.1 Learning Achievement

Learning achievement data uses student assessment by Mr. Dedy Prasetiyo, S.Pd. as a teacher of Land Measurement Engineering. The assessment was carried out in the Final Semester Exam (UAS) and obtained an average score of 68.88.

#### 3.1.2 Learning Habits

The learning habit variables consist of 32 statement items in the instrument, divided into 2 indicators: delay avoidance and work method [6] From the data collection, the smallest value obtained was 72 and the largest value was 113.

### 3.2 Result

#### 3.2.1 Normality Test

The normality test is conducted to determine whether the data distribution in regression analysis is normal or not. The result of the normality test for the learning ability data towards academic achievement shows a significance value (Asymp Sig (2-tailed)) of 0.200, indicating that the data is normally distributed because the significance value is greater than 0.05.

#### 3.2.2 Linearity Test

Conducted to determine whether there is a linear relationship between the independent variable and the dependent variable. Good data should exhibit a

linear relationship between the independent and dependent variables. The linearity test results show a significance value (Sig. Deviation from linearity) of 0.367 > 0.05, therefore it is concluded that there is a linear relationship between learning habits and learning achievement.

### 3.2.3 Simple Linear Regression Analysis

**Table 1** Simple Linear Regression Analysis

| Model | Coefficients [a] | | |
|---|---|---|---|
| | B | t | Sig. |
| (Constant) | 68.881 | 1218.137 | .000 |
| Learning habits | .003 | 17.880 | .000 |

The multiple linear regression equation based on the table above is as follows:

$$Y = 68.881 + 0.003X_1$$

### 3.2.4 Partial Test (t-test)

Partial test (t-test) is conducted to determine whether the variable of learning habits has an influence on learning achievement. The results of the partial test (t-test) can be seen in the following table:

**Table 2** Partial Test (t-test)

| Variables | $t_{value}$ | $t_{table}$ | Sig. |
|---|---|---|---|
| Learning Habits | 17.880 | 1.663 | 0.00001 |

The partial test result (t-test) for the variable of study habits shows a t-value of 17.880, thus it can be concluded that learning habits significantly influence learning achievement because the $t_{value}$ is greater than the critical $t_{table}$.

### 3.2.5 Coefficient of Determination Test

Used to determine the magnitude of the influence given by independent variables on the dependent variable The results of the coefficient of determination test can be seen in the following table:

**Table 3** Coefficient of Determination Test

| Model Summary | | | |
|---|---|---|---|
| Model | R | R Square | Adjusted R Square |
| 1 | .892 | .796 | .793 |

The coefficient of determination test result indicates an R-square value of 0.796. This means that the percentage of the contribution of learning habits to learning achievement is 79.6%.

### 3.3 Discussion

The habit of learning significantly influences learning achievement. This is proven by the t-value > t-table, which is 17.880 > 1.663. In multiple linear regression analysis, the habit of studying variable obtains a coefficient of 0.003, meaning that if the learning habit variable increases by one unit, it will also lead to a 0.003 increase in learning achievement variable.

Students in 10th grade (Phase E) DPIB at SMK Negeri 5 Semarang still have poor learning habits in the subject of Land Measurement Engineering. The questionnaire results indicate several poor study habits that students have, including not reviewing material taught by the teacher at home, irregular note-taking, late completion of assignments, lack of confidence in completing tasks leading to copying from classmates, and prioritizing playing on their phones over studying, not studying the subject material before attending class, not asking the teacher if there are parts of the material that are not understood, and not reviewing the practice exercises given. Such learning habits are not good and have been done by students, and have been proven to affect the learning achievements obtained by students.

Therefore, it is necessary to improve students' study habits for better performance. Subject teachers in the school, especially the Land Measurement Engineering teacher, play an important role in assisting students to enhance their study habits.

## 4. CONCLUSION

The learning habits significantly influence the learning achievement of the Land Measurement Engineering Phase E Building Modeling and Information Design at SMK Negeri 5 Semarang for the Academic Year 2023/2024. Based on the analysis and calculations, it is known that the level of significance (Sig. value) is less than 0.05 (0.00001 < 0.05), and the t-value is greater than the t-table (17.880 > 1.663) with an influence magnitude of 79.6%.

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