



Original Article

Analysis of the Role of Learning Motivation on Student Achievement at Muhammadiyah 32 Elementary School Medan

Ari Lestari✉

Sekolah Tinggi Manajemen Informatika dan Komputer Logika

ariLestari79a@yahoo.com✉

Abstract:

Learning is a process of human life development. Therefore, effective and integrated learning involves the use of various models or strategies to achieve a goal. In other words, it is the process of acquiring new knowledge, skills, and attitudes, which results in significant changes that are generally permanent. Learning motivation is a form of encouragement that occurs within an individual to carry out tasks within the scope of learning, with goals that have already been instilled or aspired. The parameter used to measure the level of knowledge, mastery of material, and skills of students towards the material provided is learning achievement, typically shown in the form of grades. The purpose of this research is to empirically prove whether there is an influence of self-motivation on student learning achievement. The level of influence of learning motivation significantly affects student achievement simultaneously, while partially, learning motivation has a significant effect on student learning achievement.

Keywords: learning, motivation, achievement, linear regression.

Introduction

Improving human resources is a crucial step that must be taken in the field of education. Quality and potential human resources, in the broad sense, created by the education system will shape individuals who are highly competitive in responding to global changes that affect societal, national, and state [life \(Stevani, 2016\)](#).

Education is an activity aimed at developing students' abilities, uncovering their potential both ethically and intellectually through learning activities. Education is a conscious and purposeful effort to develop human quality as an activity that is aware of its goals. Therefore, its implementation is part of a continuous process at every level and type of education, all interconnected within an integrated education system. Learning is a process of human life development. Therefore, learning should be active and integrative, using various strategies and models to achieve specific goals.



<https://jurnal.usk.ac.id/riwayat>

Education is expected to shape all aspects of a person, creating an independent, excellent, and high-quality individual. Through education, humans gain benefits in knowledge, skills, and values, which help them develop systematic thinking, rationality, and critical approaches to problems, enabling them to compete, especially in the current era of globalization ([Robbi A, Gusnardi, and Sumarno, 2020](#)).

Learning achievement is one of the most important aspects in education, as good learning achievement can open broader opportunities for an individual's future ([Riki & Kusno, 2023](#)). According to [Nadya et al. \(2019\)](#), learning achievement is considered appropriate if it meets three aspects of learning: cognitive, affective, and psychomotor, which can be reflected in the evaluation results carried out together by students and educators (teachers). Several factors can influence students' learning achievement, one of which is motivation. Motivation is the internal drive of an individual to take specific actions ([Asmelia and Fitria, 2020](#)).

Based on observations and interviews with teachers, it was found that many students still face learning difficulties, as seen in students who are reluctant to study and lack enthusiasm in receiving lessons in class. As a result, students' learning outcomes are less satisfactory, as many scores are below the passing standard of 75 (semester 2 report cards for the 2020/2021 academic year).

The aim of this study is to determine whether there is an effect of self-motivation on students' learning achievements.

Methods

The research method used is descriptive quantitative. This research was conducted during the odd semester of the 2021/2022 academic year at Muhammadiyah 32 Private Elementary School Medan, Grade VI.

A. Population and Sample

The population of this study consists of all the Grade VI students at Muhammadiyah 32 Private Elementary School Medan, totaling 20 students. Since the number is relatively small, the sample used is the entire population of students.

A sample is a part of the population that possesses characteristics to be investigated and can represent the entire population (Sugiyono, 2016).

B. Research Design

The stages of the research proposed by the author can be seen in the following diagram:

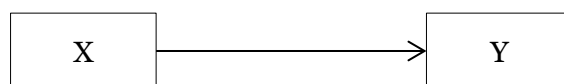


Figure 1. Research Design

Where:

X : Learning Motivation

Y : Learning Achievement

C. Operational Definitions

Operational definitions are elements of research that explain how a variable is measured, so that by measuring it, indicators supporting the analysis of those variables can be identified ([Singarimbun, 1995](#)). In other words, an operational definition of research variables is a definition based on characteristics that can be observed from whatever is defined or changes the concept into words that describe observable behaviors that can be tested and determined for their accuracy by someone ([Nurcahyo and Khasanah, 2016](#)).

In this study, several operational definitions and variable measurements are used as follows:

1. Independent Variable (X)

The independent variable in this study is learning motivation, which is the driving force or desire to perform certain actions, carried out consciously to achieve a goal. The indicators are:

- a) Aspirations
- b) Students' abilities
- c) Physical and mental condition of students
- d) Environmental conditions
- e) Dynamic learning elements
- f) Teachers' efforts to teach students

2. Dependent Variable (Y)

The dependent variable in this study is learning achievement, which is the achievement of learning outcomes by Grade VI students in Mathematics at Muhammadiyah 32 Private Elementary School Medan, as reflected in their semester report card grades for the second semester of the 2021/2022 academic year.

D. Data Collection Techniques

Data collection techniques refer to the accuracy of the methods used to gather data, which can be done in various settings, from different sources, and by different methods. The data collection methods used in this study are distributing questionnaires and documentation study (report card books).

E. Hypothesis

A hypothesis is a preliminary answer to the research problem formulation, where the research problem has been stated in the form of a question ([Sugiyono, 2016](#)).

The hypothesis is as follows:

Ho: $\beta = 0$

Hi: $\beta \neq 0$

The criteria for hypothesis testing are:

1. If F-count > F-table and the significance level < α (0.05), then the independent variable has an effect on the dependent variable.
2. If F-count < F-table and the significance level > α (0.05), then the independent variable does not affect the dependent variable.

The decision criteria are:

1. If F-statistic < F-table, then Ho is accepted.
2. If F-statistic > F-table, then Ho is rejected.

F. Data Analysis Techniques

Data analysis techniques refer to activities that involve processing, tabulating, and calculating data to answer the research problem and hypotheses according to the variables and respondents ([Sugiyono, 2016](#)). Data processing in this study is assisted by the SPSS application (Statistical Product and Service Solutions) version 2016.

1. Data Quality Test

Data quality in hypothesis testing will affect the accuracy of hypothesis testing results ([Wirjono and Raharjo, 2007](#)). In this research, the quality of the data generated from the instrument is evaluated using validity and reliability tests.

a) Validity Test

The validity test is used to measure whether a questionnaire is valid or not ([Ghozali, 2013](#)). Valid means that the questions in the questionnaire are able to reveal what is being measured. For questionnaires containing multiple questions, each item in the questionnaire should have a high correlation with the other items. The validity is measured using inter-item total correlation. Questions with low correlation to other questions are considered invalid ([Sujianto, 2009](#)).

In this study, the validity test used is the construct validity approach, which assesses the correlation of each item score with the total score (inter-item total correlation). The method used is the Pearson product-moment correlation. If the calculated correlation (r-count) is greater than the table correlation (r-table), then the question is considered valid.

b) Reliability Test

Reliability refers to the consistency, reliability, and stability of a measurement tool ([Azwar, 2001 in Sujianto, 2009](#)). In other words, a reliability test measures whether the answers given by respondents to the questionnaire are consistent or stable over time ([Nurcahyani, 2010](#)). The reliability test is conducted using Cronbach's Alpha method. A questionnaire is considered reliable if the Cronbach's Alpha value is greater than 0.60.

2. Multiple Regression Analysis

In this study, the data analysis method is conducted using statistical analysis. After the classical assumptions are met, the analysis uses a multiple linear regression model. The model is:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3$$

Data analysis is conducted using the Statistical Product and Service Solution (SPSS) version 16 with a confidence level of 95% and an error tolerance (alpha) of 5%.

Results

The validity test is used to measure whether a questionnaire is valid. In this study, the validity test is conducted by examining the correlation between the score of each question item and the total score (item-total correlation) of the variable. The calculation is performed using Pearson's Product Moment correlation formula in the SPSS program. The value of the table correlation (r-table) is calculated using the degrees of freedom (df) analysis, with the formula $df = n - k$, where n is the number of respondents and k is the number of independent variables used.

Table 1
Results of the Validity Test

Question Item	r-count	r-table	Conclusion
1	1,000	0,4329	Valid
2	0,561	0,4329	Valid
3	0,974	0,4329	Valid
4	0,475	0,4329	Valid
5	0,561	0,4329	Valid
6	0,439	0,4329	Valid
7	0,468	0,4329	Valid
8	0,473	0,4329	Valid
9	1,000	0,4329	Valid
10	1,000	0,4329	Valid

Source: Primary Data, processed, 2024

Table 1 above shows that the Pearson correlation values (r-count) for each question item are greater than the r-table values. The significance level for the items is at 0.05. This indicates that all the indicators/question items used to measure the variables are valid.

The reliability test of the data was conducted using the Cronbach's Alpha statistical test. The results of the reliability test for the questionnaire are presented in the following table:

Table 2.
Reliability Statistics

Cronbach's Alpha	N of Items
.917	12

Source: Primary Data, processed, 2024

Table 2 above shows that the Cronbach's alpha value for the variable is 0.955. This value is greater than 0.60. This indicates that the set of questions designed to measure the variable is reliable.

From the research data obtained, which consists of primary data regarding the effect of learning motivation on student achievement, the research variables will be explained by testing the Coefficient of Determination (R^2) and regression analysis.

Table 3. Results of the R Square Test for Student Motivation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.349 ^a	.122	.111	.24138

a. Predictors: (Constant), Motivasi

Based on the SPSS Model Summary output above in Table 3, the R Square value is 0.122, which indicates that all independent variables simultaneously have an effect of 12.2% on learning achievement (the dependent variable). The remaining 87.8% is influenced by other variables not tested in the study.

The adjusted R Square value is 0.111 (11.1%). This means that the independent variables in this study explain 11.1% of the variation in the dependent variable, while the remaining 88.9% is explained by other variables outside the independent variables in the study.

The test used is multiple linear regression to determine the effect of learning motivation on achievement. By testing multiple linear regression, the results will be shown in Table 2 as follows:

Table 4. Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	2.445	.225		10.889	.000	1.998	2.893
MOTIVASI	.015	.005	.349	3.290	.000	.006	.024

a. Dependent Variable: PRESTASI

From the Coefficient table above, it can be seen that from the regression equation formulated earlier, where the constant value is 2.445 and the learning motivation coefficient is 1.015, the regression equation can be written as:

$$Y = a + bX$$

$$Y = 2.445 + 0.015X$$

From the above linear regression equation, the explanation is as follows:

1. The constant value (a) has a positive value of 2.445. The positive sign indicates a direct effect between the independent and dependent variables. This means that when the independent variable (learning motivation) is 0 or unchanged, the learning achievement value is 2.445.
2. The regression coefficient for the motivation variable has a positive value of 0.015. This indicates that if motivation increases by 1%, the learning achievement will increase by 0.015. The positive sign shows a direct effect between the independent and dependent variables.

The prob. t value for the independent motivation variable is 0.000, which is smaller than 0.05, indicating that the independent variable of motivation has a significant effect on the dependent variable of student learning achievement at a 5% alpha level, or in other words, motivation significantly affects student learning achievement at a 95% confidence level.

Conclusion

After conducting the analysis and hypothesis testing regarding the effect of learning motivation on student achievement, the results and discussion used are in line with the hypothesis goals, which were tested using multiple linear regression analysis. The following conclusions can be drawn:

- a. Partially (individually), learning motivation significantly affects student learning achievement at a 95% confidence level.
- b. The level of influence of learning motivation significantly affects student learning achievement (simultaneously).

References

- Arikunto, Suharsimi. 2006. *Prosedur Penelitian: Suatu Pendekatan Praktek*. Jakarta: Rineka Cipta
- Asmelia, S.P., dan Fitria, Y., (n.d), 2021. Hubungan Motivasi Belajar Dengan Hasil Belajar Siswa Pada Pembelajaran Tematik di Kelas IV Seolah Dasar. Vol.8
- Bhuono, Agung Nugroho, 2005, *Strategi Jitu Memilih Metode Statistik Penelitian dengan SPSS*, Penerbit Andi, Yogyakarta
- Dessler, Gary. 2006. *Manajemen Sumber Daya Manusia Jilid 1*. Jakarta : PT. Indeks
- Ghozali. 2013. *Analisis Multivariate SPSS*. Universitas Diponegoro: Semarang.
- Januarti A, Imran dan Supriadi. 2018. *Analisis Faktor Penyebab Kesulitan Belajar Siswa Pada Mata Pelajaran Sosiologi*.
- Kartika, Sopranita dan Achmad N., 2014. *Pengaruh Gaya Kepemimpinan Terhadap Kinerja Karyawan Dengan Motivasi Kerja Sebagai Variabel Moderating (Studi Kasus PT. Garis Bening Nusantara Serang, Banten)*. Skripsi Universitas Muhammadiyah Surakarta.
- Plangiten, P., 2013. *Gaya Kepemimpinan dan Lingkungan Kerja Pengaruhnya Terhadap Kepuasan kerja Karyawan Pada PT. Pos Indonesia (Persero) Manado*, Jurnal EMBA Vol. 1 No. 4
- Potu, A., 2013. *Kepemimpinan, Motivasi dan Lingkungan Kerja Pengaruhnya Terhadap Kinerja Karyawan Pada Kanwil Ditjen Kekayaan Negara Suluttenggo Dan Maluku Utara di Manado*. Jurnal EMBA Vol. 1 No. 4
- Priyatno, Dwi. 2008. *Mandiri Belajar SPSS Untuk Analisis Data dan Uji Statistik*, Mediakom.
- Revida, Erika. 2009. *Manajemen Personalia Publik di Indonesia*. Medan. Hlm 55
- Riani, Asri Laksmi. 2011. *Budaya Organisasi*. Yogyakarta: Graha Ilmu.
- Riduwan, (2007). *Skala Pengukuran Variabel - Variabel Penelitian*, Cetakan Keempat, Alfabeta, Bandung.
- Riki dan Kusno. 2023. Analisis Motivasi Belajar Siswa Terhadap Prestasi Belajar Matematika. *Jurnal Pendidikan Matematika*. Vol. 7, no. 2, p. 135-140
- Robbi A, Gunardi, dan Sumarno. 2020. Analysis of the Effect of Learning Motivation on Learning Achievement. *Journal of Education Sciences*, vol. 4, no. 1, p.106-115
- Robbins, Stephen. P. 2006. *Perilaku organisasi*. Edisi Bahasa Indonesia. Indeks Kelompok GRAMEDIA. Jakarta.
- Robbins, Stephen. P. dan Mary Coulter. 2005. *Manajemen*. Gramedia. Jakarta.
- Robbins, Stephen P. 2003. *Perilaku Organisasi*. Edisi Sembilan. Jakarta : PT. Indeks. Journal "Acta Diurna" Volume III. No.4. Tahun 2014
- Sopan, S., 2016. *Pengaruh Faktor Kepemimpinan Kasubbag Penyusunan Program Terhadap Kinerja Kerja Pegawai Pada Dinas kelautan dan Perikanan Kabupaten Nias Selatan*.
- Singarimbun, Masri. 1995. *Metode Penelitian Survei*. Jakarta: LP3ES
- Sugiyono. 2016. *Metode Penelitian Kuantitatif, Kualitatif R&D*. Edisi 2016 Bandung.

Alfabeta

- Silaen L.M., dan Jannah N., 2022. Pengaruh Kepemimpinan Terhadap Kinerja Karyawan BSI Dengan Reward Sebagai Variabel Moderating KCP Medan Petisah. *Jurnal Ilmu Komputer, Ekonomi dan Manajemen (JIKEM)*, vol. 2, no. 1, p 979-993
- Siswanti Y., 2018. Pengaruh Kepemimpinan Terhadap Kinerja Karyawan Dengan Motivasi Sebagai Variabel Moderasi. Skripsi Fakultas Ekonomi dan Bisnis. Universitas Lampung.
- Stevani, 2016. Analisis Pengaruh Motivasi Belajar Terhadap Hasil Belajar Ekonomi Siswa Kelas X SMA Negeri 5 Padang. *Journal of Economic and Economic Education (ECONOMICA)*, vol. 4, no. 2, p. 308-314
- Wijanti S.H., Yohanna dan Ariani D., 2017. Penulisan Karya Ilmiah Guru Sekolah Dasar Pasca Pelatihan. *Jurnal Pendidikan Dasar Pekhasa*, Vol. 3, No. 2