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The effect of motivation and learning discipline on student learning outcomes in online-based Buddhist religious education subjects

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ABSTRACT

This study aims to determine the effect of learning motivation and learning discipline on student learning outcomes in the subject of Buddhist education using E-Learning learning. This study uses a quantitative approach with the ex post facto method, the nature of the ex post facto is that there is no control over the variables. The sample of this study consisted of junior high school Buddhist religious education students in Semarang district. The data in this study were obtained through non-test techniques in the form of questionnaires and also documentation techniques in the form of student learning outcomes in Buddhist subjects. The data in this study were analyzed using inferential statistical analysis techniques, namely multiple regression analysis. The results of this study indicate that there is a significant influence between students' motivation and learning discipline simultaneously on student learning outcomes in e-learning-based Buddhist subjects (0.00 <0.05); and the magnitude of the joint contribution between motivation and student learning discipline on student learning outcomes in e-learning-based Buddhist subjects is 75%.

1. Introduction

Education is one of the main pillars in anticipating the future, because education is always oriented towards preparing students to play a role in the future. Education began to adapt to the development of Science and Technology (IPTEK). The learning process in the current era is starting to switch to digital e-learning patterns. Through E-learning, students not only listen to material descriptions from educators but also actively observe, perform, demonstrate, and so on. The Minister of Education and Culture is working with various parties to implement online learning. Several parties that are focused on developing an online education system are Google Indonesia, Smart Class, Microsoft, Quipper, Ruangguru, Sekolahmu, and Zenius. The Ministry of Education and Culture itself has its own learning portal, namely the Learning House. The number of learning accounts that have been prepared by the Ministry of Education and Culture, 529,310 admin accounts, 2,850,424 teacher accounts, and 27,008,332 student accounts. Based on this information data, it states that the government supports the use of e-learning learning media, both from elementary to tertiary level students and education staff. Middle School is one of the school institutions that use e-learning.

Learning motivation and discipline are the most important factors in achieving optimal learning outcomes (Kowitlawakul et al., 2022; Kryshko, Fleischer, Waldeyer, Wirth, & Leutner, 2020). That is, motivation and discipline in learning become supporting factors in the success of learning outcomes (Javadizadeh, Aplin-Houtz, & Casile, 2022). Based on the results of field observations in several junior high schools (SMP) in Semarang Regency, there are already many junior high schools that use E-Learning as a learning medium, such as SMP N 2 Susukan using Quipper School, SMP N 1 Getasan using Google Classroom, SMP N 3 Getasan uses Google Classroom, and SMP N 1 Kaliwungu uses Google Classroom, at SMPN 2 Tuntang uses Quipper School. However, based on the results of using E-Learning, information was obtained that many students whose learning outcomes were in the poor category. This indicates that there is a link between poor student learning outcomes and student learning motivation and discipline during e-learning assisted learning activities.

Motivation is an impulse that arises from internal and external stimuli so that a person wishes to make changes in behavior or certain activities better than before (Addae, 2020; Zamecnik, Kovanović, Joksimović, & Liu, 2022). Indicators of student learning motivation consist of the desire and desire to succeed, the encouragement and need for learning, the hopes or aspirations for the future, the appreciation in learning, the existence of interesting activities in learning, and the existence of a conducive learning environment (Caputo, 2015). Indicators or instructions that can be used as a reference for student learning motivation are as follows: 1) There is a desire and desire to succeed in learning; 2) There is a desire, enthusiasm and need for learning; 3) Have hopes and aspirations for the future; 4) There is an award in the learning process; and 5) There is a conducive environment for good learning (Beymer & Robinson, 2022; Liu, Hau, & Zheng, 2018).

Discipline is a fixed price that must be paid by students through the process of teaching, training, the art of educating, which is in accordance with established procedures, for good behavior, so that when a child does not do that good habit. Discipline in the education process is very necessary because it is not only to maintain the conditions for learning and teaching to run smoothly but also to create a strong personality for each student. Janssens et al. (2022), says that in the world of education, discipline is a fixed price that must be paid by students. With discipline at school, it can train and shape the personality of students who always comply with applicable rules, this is in accordance with the statement that says character education for children should make them accustomed to good behavior, so that when a child does not do that good habit, the person concerned will feel guilty(Strelan, Osborn, & Palmer, 2020; Vettori, Vezzani, Bigozzi, & Pinto, 2020).

Based on the problems previously described, this research specifically aims to test whether there is an influence between student motivation and learning discipline on student learning outcomes in e-learning-based Buddhist religious education subjects. Information from research is expected to be information for stakeholders in formulating policies or programs related to e-learning, especially in Buddhist subjects. In addition, the information from the results of this study also completes the gap in information from the results of previous studies which focused a lot of attention about mathematics, physics, and chemistry (K Kartianom & Retnawati, 2018; Kartianom Kartianom & Ndayizeye, 2017).

2. Method

This type of quantitative survey uses a correlational research design, namely research that looks at the relationship between variables (Little, 2013). This study uses a quantitative approach with the ex post facto method, the nature of the ex post facto is that there is no control over the variables. This research was carried out using inferential descriptive research procedures to examine the effect of the independent variables on the dependent variable (Woltman, Feldstain, MacKay, & Rocchi, 2012). This research was conducted at a junior high school in Semarang Regency.sampling technique of this research uses Simple Random Sampling. So, this study will randomly select several junior high school students in the Semarang Regency area and 30 students will be selected as the sample. The technique used to obtain the data needed in this study was observation and distribution of structured questionnaires to students at junior high school Buddhist education in the Semarang district. The data analysis technique used in this study is regression analysis, both simple regression and multiple regression.

3. Results and Discussion

3.1. Result

Learning motivation in this study has several sub-variables including, 1) The importance of motivation in teaching and learning activities, 2) Internal and external encouragement. While the learning discipline in this study has several sub-variables including, 1) Obligations of students in learning, 2) Teaching process, training, the art of educating 3) Predetermined procedures, and 4) Good ethical recommendations. Student learning outcomes in this study have several sub-variables including, 1) Student success rate, 2) Efforts to achieve learning objectives, 3) Learning experience, 4) Appropriate use of learning methods.

3.1.1 Normality

Test Data normality test in this study was carried out by graphing and looking at the Kolmogorov-Smirnov significant figures with the testing criteria if the significant figures (Sig.) > 0.05, then the data is normally distributed and the significance figures (Sig.) < 0.05, then the data is not normally distributed. The results of the data normality test can be seen in Table 1.

Table 1. Normality Test Results

Variable	Statistic	Sig.	Information
Learning Motivation	0.12	0.2	Normal
Learning Discipline	0.12	0.2	Normal
Learning Outcomes	0.12	0.2	Normal

Based on the information presented in Table 1, the results of the normality test show that data on the variables Learning Motivation (X1), Learning Discipline (X2) and Learning Outcomes (Y) have a significance value greater than an alpha value of 0.05 (0.200 > 0.05). That is, the variables Learning Motivation (X1), Learning Discipline (X2) and Learning Outcomes (Y) are normally distributed (Sig> 0.05).

3.1.2 Linearity

The linearity test aims to test whether there is a linear relationship between the variables of motivation and learning discipline on student learning outcomes. The summary results of the linearity test can be seen in Table 2.

Table 2. Linearity Test Result

Variable	Sig.	Information
Learning Motivation	0.03	Linear
Learning Discipline	0.02	Linear

Based on the information presented in Table 2, the results of the linearity test show that all variables have a significance value that is smaller than alpha 0.05 (0.03 < 0.05 and 0.02 < 0.05). That is, the

variables Learning Motivation (X1) and Learning Discipline (X2) have a linear relationship with the Learning Outcome variable (Y).

3.1.3 Multicollinearity

The multicollinearity test aims to determine whether1) and Learning Discipline (X2 There is a strong relationship. If you have a strong relationship, it is enough to use one of the two variables. The multicollinearity test is carried out by looking at the Tolerance and Variance Inflation Factor (VIF) values. The results of the multicollinearity test can be seen in Table 3.

Table 3. Multicollinearity Test Result

Variable	Tolerance	Sig.	Information
Learning Motivation	0.99	1.00	Non- Multicollinearity
Learning Discipline	0.99	1.00	Non- Multicollinearity

Based on the information presented in Table 3, according to the provisions of the multicollinearity test, if the VIF value is less than 10, there is no correlation. Table 4.20 shows the results that the VIF value on learning motivation (X1) and learning discipline (X2) is 1.004 so it can be concluded that there is no multicollinearity in this research data. These results mean that the variables of learning motivation (X1) and learning discipline (X2) do not influence each other.

3.1.4 Relationship Analysis

Variable learning motivation (X1) consists of two sub-variables namely: the importance of motivation in teaching and learning (X1.1), internal and external encouragement (X1.2). The learning discipline variable (X2) has four sub-variables namely: student obligations in learning (X2.1), teaching, training, and educator processes (X2.2), established procedures (X2.3), good ethical recommendations (X2. 4). The student learning outcomes variable (Y) has four sub-variables namely: level of success (Y1), efforts to achieve goals (Y2), learning experiences (Y3) and the accuracy of learning methods (Y4).

Table 4. Correlation of Variables X1, X2 and Y

R	Y1	Y2	Y3	Y4
X1.1	-0.02	0.05	0.01	0.03
X1.2	0.01	0.05	-0.01	-0.01
X1	0.00	0.05	-0.00	0.00
X2.1	0.78	0.80	0.94	0.77
X2.2	0.74	0.78	0.92	0.75
X2.3	0.77	0.75	0.87	0.67
X2. 4	0.73	0.81	0.93	0.78
X2	0.76	0.80	0.93	0.77

Table 4 shows that the sub-variable X1.2 has the largest correlation coefficient to Y1, which is equal to 0.018. The correlation coefficient of the X1 variable to the Y1 sub-variable is 0.004. The correlation coefficient of the sub-variable X1.1 to Y2 is the largest, which is 0.056. The correlation coefficient of the X1 variable to the Y2 sub-variable is 0.056. The correlation coefficient of the variable X1.1 is the greatest for the sub-variable Y3 of 0.013. The variable X1 has a correlation coefficient to Y3 of -0.006. Sub-variable X1.1 has the largest correlation coefficient to Y4, which is equal to 0.039. The correlation coefficient of the X1 variable that is the largest on the Y4 sub-variable is 0.003. This means that learning motivation is still not too big an influence on student learning outcomes. Table 4 also shows that the sub variable X2.1 has the largest correlation coefficient to Y1, which is equal to 0.785. The greatest correlation coefficient of X2 to Y1 is 0.767. Sub-variable X2.4 has the largest correlation coefficient to Y2, which is equal to 0.811. The greatest correlation coefficient of X2 to Y2 is 0.806. Sub-variable X2.1 has the largest correlation coefficient to Y3, which is equal to 0.944. The greatest correlation coefficient of X2 to Y3 is 0.937. Sub-variable X2.3 has the largest correlation coefficient to Y4, which is equal to 0.788. The greatest correlation coefficient of X2 to Y4 is 0.770.

3.1.5 Hypothesis Testing

Results of hypothesis testing show that Learning Motivation (X1) and Learning Discipline (X2) affect learning outcomes using e-learning learning. The strengthening of this statement is indicated by the calculated (40,544) > F table (3.34), and a significance value (0.000) <0.05. The coefficient of determination is 0.750, which means that the contribution of learning motivation and learning discipline to student learning outcomes using e-learning is 75%. The results of the analysis can be seen in Table 5.

Table 5. Multiple Linear Regression ANOVA

Model	SS	df	MS	F	Sig.
Regression	7692.48	2	3846.24	40.54	0.00
Residual	2561.37	27	94.86		
Total	10253.86	29			

3.1.6 Analysis of the Effective Contribution and Relative Contribution

The calculation of SR and SE will reveal a predictor that has a greater contribution to the formation of variations in the regression criteria units. A summary of the correlation and regression analysis can be seen in Table 6.

Table 6. Correlation and Regression Analysis

Variable	B	r	R^2
Motivasi Belajar	-.04	.01	0.75
Disiplin Belajar	.86	.86	

Calculation of SE and SR for each variable based on the data in table 6 shows that the learning motivation variable (X1) has an effective contribution (SE) of 0.067% and a relative contribution of 0.0008%, while the learning discipline variable has an effective contribution (SE). of 75.08% and a relative contribution (SR) of 100%, the results of these calculations indicate that the learning discipline variable contributes a more dominant influence to the student learning outcomes variable compared to learning motivation.

3.2. Discussion

The results of the first hypothesis test show that the regression direction coefficient of the learning motivation variable (B1) is 0.02, so it can be stated that the learning motivation variable has not affected the understanding of student learning outcomes. The significance test of the multiple linear regression coefficients for the learning motivation variable (B1) shows significance (0.93) > 0.05 with an effective contribution (SE) of 0.06% and a relative contribution of 0.00%. Results Data analysis shows that the better the learning motivation, the better student learning outcomes in using e-learning learning owned by Buddhist education students in the 2022 academic year. These results are relevant to research that learning motivation affects students' economic learning outcomes (r) 0.26 with a calculated t coefficient of 2.12 and sig. 0.03 (Caputo, 2015; Singh, James, Paul, & Bolar, 2022). Motivation to learn has been applied in learning Buddhist education through learning discipline, especially for students at junior high school Buddhist education in Semarang Regency for the 2022 academic year, which is still not going well.

The results of the second hypothesis test show that the regression direction coefficient of the digital literacy variable (B2) is 0.540 so that it can be stated that learning discipline has a positive effect on student learning outcomes using e-learning learning (Vettori et al., 2020; Wilson, Madjar, & McNaughton, 2016). The significance test of the multiple linear regression coefficients for the digital literacy variable (B2) shows tcount (9.127) > ttable (1.701) and a significance value (0.000) <0.05 with an effective contribution (SE) of 75.08% and a relative contribution (SR) of 100% The results of these calculations indicate that the learning discipline variable contributes a more dominant influence on the learning outcome variable compared to the learning motivation variable. The calculation of these results is in accordance with the research by Valle et al. (2021)that the application of learning discipline can influence student learning outcomes with results based on the significance test on the x2y correlation obtained a t value of 10.969. Next, substitute this value into the table with dk = nk = 85-2=83. With dk 83 found ttable 1.988 with an error level of 5%. The result of t count > t table is,

10.969 > 1.667. So, it can be concluded that the correlation of student discipline with Civics learning outcomes is significant and can be applied to the population.

The correlation value (R) between learning motivation (X1) and learning discipline (X2) on learning outcomes (Y) is 0.88. This value can be interpreted that the relationship of the three variables tested is in a very strong category (Franco, Coterón, Gómez, & Spray, 2021; Law, Geng, & Li, 2019; Teig & Nilsen, 2022). The coefficient of determination is 0.75 so that it can be interpreted that learning motivation (X1) and learning discipline (X2) contribute 75% to learning outcomes (Y) (Daumiller et al., 2021). The rest is influenced by other variables not examined in this study. The calculation of these results is in accordance with Ida Bagus Suryana's research, 2014 that the application of motivation and learning discipline can affect student learning outcomes with a contribution of 39.7% and an effective contribution of 23.3%.

The results of multiple linear regression calculations have a constant coefficient value of 39,389, the regression coefficient of the X1 is -0.072, and the regression coefficient of the X2 is 0.542. So, we get the regression equation Y = -0.072X1 + 0.542X2. 39,389. The constant value states that currently learning motivation and learning discipline are 0, then learning outcomes have a value of 39,389. The positive value of -0.027 found in the regression coefficient of variable X1 illustrates that the direction of the relationship between variable X1 and variable Y is unidirectional, where each increase of one unit of variable X1 will cause an increase in variable Y of -0.027. The positive value of 0.542 in the regression coefficient X2 illustrates that the direction of the relationship between variable X2 and variable Y is unidirectional, where each increase of one unit of variable X2 will cause an increase in the dependent variable by 0.542. Learning motivation (X1) and learning discipline (X2) contribute 75% to learning outcomes using e-learning learning (Y), so that the remaining 25% is influenced by other variables not examined in this study. These variables can be in the form of school environment, IQ, and social environment.

4. Conclusion

The results of the descriptive calculation per sub-variable regarding student learning motivation on student learning outcomes with the sub-variable the importance of motivation in teaching and learning activities obtained results in the high category with an average percentage of 35% in the high and sufficient category, internal and external encouragement obtained results in the category high with an average percentage of 34% in the high category. The results of the descriptive calculation per sub-variable regarding student learning discipline on student learning outcomes with the sub-variable student obligations in learning obtained results in the high category with an average percentage of 55% in the very high category, the teaching process, training, the art of educating obtained results with high category with an average percentage of 56% in the very high category, predetermined procedures obtained results in the high category with an average percentage of 56% in the very high category, good ethical recommendations obtained results in the high category with an average percentage average of 57% in the very high category.

There is a significant influence between motivation and learning discipline on learning outcomes by using e-learning for Buddhist Religious Education Junior High School students in Semarang Regency. The significant influence between the three variables is shown from the coefficient of determination of 0.750 which means that the contribution of the influence given by learning motivation and learning discipline on student learning outcomes variables using e-learning learning is 75% so that the remaining 25% is influenced by other variables that are not examined in this study. These variables can be in the form of school environment, IQ, and social environment.

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