



The Relationship of Student Learning Motivation Against Student Learning Independence on Dynamic Electric Material

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Abstract

This study analyses the relationship between student' learning motivation and student learning independence on dynamic electrical material in class IX SMP Negeri 7 Sungai Raya. The research method used is descriptive, with a correlative form of research. The population is 117 student from all grade IX students of SMP Negeri 7 Sungai Raya, the sample used in this study was 89 students. The sampling technique uses simple random sampling. Values used for independent and bound variables use a questionnaire. The Values analysis technique used is descriptive statistics and correlations with the coefficient of determination at a significant level of 5%. The result of research found that (1) student motivation in class IX SMP Negeri 7 Sungai Raya in the good category; (2) the independence of student learning was in a good category; and (3) there was a positive and significant relationship between student motivation on student learning independence. So it can be concluded that the greater the student's learning motivation, the greater their learning independence.

Keywords: dynamic electricity; learning independence; learning motivation

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INTRODUCTION

The success of the education system can come from the ongoing teaching and learning process. Besides, teaching and learning activities can run well if students can pay attention to the teacher's explanation. In every learning, the teacher always motivates students to feel motivated when going to the lesson. With motivated students eating, it will be easy to incite students' independence to learn. In line with the government's

reforms, for that reason, the government organized a national education system, as stated in Law No.22 of the year 2003 concerning the national education system. Increasing human resources for the better requires attention, guidance, and motivation from the family environment, parents, teachers, and the community so that students can compete in learning achievement. Sjukur (2012), says the term motivation has the meaning impulse, desire and will.

motivation is an internal process to activate, guide, and maintaining behaviour over time. There are many types, intensities, goals and different motivational direction-different. Motivation to learn immensely plays an essential role for students and teacher. Valente & Nyeneng (2012), says every student have additional motivation to learn. Therefore every teacher is required to understand this in order activity learning is not wrong. Teachers who ignore problems difference in motivation are likely to experience failure in carrying out duties class teaching.

Other statements from (Putri, Lesmono & Aristya, 2017) stated that student learning motivation would have an effect positive when provided the environment learning right so students can learn to the maximum, ultimately impacting learning outcomes. When a student is faced with incompatible conditions with motivation, the student cannot learn to the maximum. So that negatively impacted the result learn. Uno (2011) says that the nature of motivation to know is internal and external encouragement to students who are learning to hold a change of behaviour. So learning motivation of student in education is essential.

Natural Sciences are considered very important to be taught in schools as from the science that must be dealt with the 21st-century era full of developments in information and technology. Natural science is a systematic collection of knowledge, and in general, its use is limited to natural phenomena. Its development is marked by the collection of facts and the existence of scientific methods and scientific attitudes. According to Supardi, Leonard, Suhenri, & Rismurdiyanti (2012), physics is a lesson that provides knowledge about the universe to practice thinking and reasoning. However, one continued reasoning abilities trained so that the more developed, the person will increase

thinking power and knowledge. On this basis, physics is obligatory to be taught to every student. This phenomenon is a serious problem and deserves attention from all parties, including government, schools, communities/parents, and students. Learning science, especially physics, on dynamic electric material learning motivation and learning independence is necessary. In dynamic electric material, many formulas require perseverance and interest in learning it so that motivation in learning will grow motivation in students do will be easy to be independent in learning. Students to have independent learning, students must have learning motivation (Damayanti, Siregar, & Harahap, 2015). The learning motivation is a series of efforts to provide certain conditions so that someone wants and wants to do something and if he does not like it will try to negate or avoid the feeling of dislike (Sardiman, 2011). Thus, it can be concluded that learning motivation can cause someone to like the lessons faced. That likeness further fosters enthusiasm and excitement from within each individual in real activities to achieve a specific goal. With the growth of learning motivation in these students is valuable capital, students will participate in various activities, and students will independently carry out their duties and obligations.

Student independence is an absolute requirement for students to achieve satisfying learning achievement; this can be understood because learning activities are the students' responsibility. Learning independence is seen to achieve learning goals, regularity and discipline in learning, understanding learning material, critical and challenging methods and advice, confident and optimistic about the expected results, questionable and questionable. Independence is a strong foundation for student learning in science, especially physics in dynamic electric material.

At Yamin (2011), independent learning is a way of active learning and participating in developing each individual who is not bound by learners' presence in a face-to-face class meeting or other study partners' fact. Besides learning independence, motivation in learning can determine whether or not good in achieving learning goals (Djamarah, 2011). The greater the motivation, the greater the success in learning to increase student learning achievement. Teachers need to motivate students because someone who has no motivation in learning, will find it challenging to do learning activities.

Motivation is a determining factor and functions to cause, underlie and direct the actions or desires to learn. Learning motivation can determine whether or not good in achieving goals so that if the greater the motivation of student learning, the greater the student learning independence caused. Students who have high motivation to learn will look like a persistent effort do not want to give up and actively read sources related to physics to improve learning achievement. Conversely, if students have low motivation, the learning independence generated will also below.

Based on interviews conducted with science teachers at SMP Negeri 7 Sungai Raya, it was found that students still lacked confidence, initiative, and responsibility. This causes students' interest in science, especially physics to decrease. Decreasing student interest will have an impact on student motivation and learning independence. Also, student learning outcomes in science subjects, especially dynamic electric material, on average are still below the Minimum Completeness Criteria (MCC), while the average value of daily tests of dynamic electricity obtained is 52.62. this value can be attributed to the still low motivation for student learning and independence to impact their learning outcomes.

This research is supported by research conducted earlier, by (Malik, Nuraeni, Samsudin, & Sutarno, 2019), which shows a positive and significant influence on learning independence and learning motivation together on learning outcomes. Also, Damayanti et al (2015) shows that learning independence has a positive and significant relationship to student motivation. From the two studies above, it can be concluded that student learning independence influences student motivation.

Based on the problem and background description above the research is interested in a conducting a study with the title of "The Relationship of Student Learning Motivation Against Student Learning Independence on Electric Material Dinamis in Class IX SMP Negeri 7 Sungai Raya". This aims to find out how about the relationship between motivation and student learning independence.

METHOD

This research is correlational that consists of independent variables and dependent variables. Can be described as in Figure 1 (Simple Correlation Relationship).

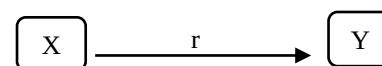


Figure 1 Simple correlation relationship

Information:

X = Learning Motivation

Y = Learning Independence

This study's population were all grade IX students of SMP Negeri 7 Sungai Raya, which consisted of 117 students. This study used a probability sampling technique that is simple random sampling with a sample size of 89 students of class IX SMP Negeri 7 Sungai Raya.

Data collection techniques in this study use indirect communication techniques and data collection tools in this study using a questionnaire with Likert scale namely; for positive question 4 (Always); 3 (often); 2 (rare); 1 (Never), while for negative statements to the contrary.

In this study, the questionnaire used was a modification of the results of 2 previous researchers. The learning motivation questionnaire from Yuniarti has a reliability value of 0.98 Then modified according to researchers' needs as for the number of statements that is 24 statements and questionnaire independence learning from Barri Dameanus has a reliability value of 0.95. Then the questionnaire was modified following the needs of researchers while the number of statements is 29 statements.

This research has a hypothesis, namely:

Ha: there is no positive and significant relationship between students' learning motivation and students' learning independence in class IX SMP Negeri 7 Sungai Raya.

Ho: there is a positive and significant relationship between student learning motivation and student learning independence in class IX SMP Negeri 7 Sungai Raya.

The hypothesis test used is the Kendall Tau test. This study uses the Kendall tau test because the Kendall tau test can measure the relationship between two variables. And the data used is an ordinal scale and does not have to be normally distributed. The equation is as follows:

$$\tau = \frac{\Sigma A - \Sigma B}{\frac{N(N-1)}{2}} \quad (1)$$

Information:

τ = correlation coefficient
 RA = Top ranking
 RB = number of bottom ranks
 N = number of sample members
 (Sugiyono, 2017)

Correlation coefficient categories according to the correlation coefficient interpretation criteria in Table 1.

Tabel 1 Interpretasi Correlation coefficient

Interval coefficient	Relationship Level
0.00 – 0.199	Very Low
0.20 – 0.399	Low
0.40 – 0.599	Enough
0.60 – 0.799	Strong
0.80 – 1.000	Very good

(Sugiyono, 2017)

Descriptive analysis that includes calculating the average of the data of learning motivation and learning independence by the equation:

$$\bar{X} = \frac{\sum_{i=1}^n X_i}{n} \times 100 \quad (2)$$

Information:

$\bar{X}$ = Average value
 $\sum_{i=1}^n X_i$ = Sum of all value
 N = All value
 (Sugiyono, 2017)

RESULT AND DISCUSSION

The results obtained in this study is student motivation which is presented in Table 2.

Table 2 Description of student learning motivation data

Information	Value	Total student	Percentage
Very good	80.0 – 100	10	11.24%
Good	60.0 – 79.9	64	71.91%
Medium	40.0 – 59.9	15	16.85%
Less	20.0 – 39.9	0	0
Very less	0.00 – 19.9	0	0

Based on Table 2, Student motivation in dynamic electrical material in class IX SMP Negeri 7 Sungai Raya is in a Good category. The number of students, 64 students, has a percentage of 71.91%. This condition indicates that the learning motivation of grade IX students of SMP

Negeri 7 Sungai Raya can already be said to support student learning independence.

The motivation for student learning based on each indicator can be seen in Table 3.

Table 3 Percentage by learning motivation indikator

Indicator	Percentage	Category
Intention and desire to succeed	61.12	Good
Encouragement and learning needs	52.42	Enough
Hopes and ideals of the future	88.69	Very good
Appreciation in learning	65.17	Good
Learning activities	72.68	Good
Conducive learning environment	78.65	Good
Average	69.79	Good

Based on Table 3, it can be seen that learning motivation has an average percentage of 69.79 with a good category. Learning motivation has six indicators: a conducive environment, activities in learning, appreciation in learning, hopes and ideals of the future, encouragement and needs in learning and the desire to succeed. Based on Table 1, it can be seen that the indicator that has the largest percentage is the existence of hopes and aspirations for the future—the existence of a conducive environment, the existence of interesting activities and the appreciation of learning. In comparison, the learning needs have the lowest percentage of 52.42% with the medium category.

This shows that students' motivation is good, but not all students are

motivated, and their learning needs are fulfilled. The conclusion is that a good student learning motivation will facilitate students in learning so that it affects learning independence because learning motivation has a positive and significant relationship to learning independence.

This study's results are in line with Sari, Muhsin, & Rozi (2017), which states that there is a significant influence between student learning motivation on student learning independence. In line with previous research, according to Sudarwo, Yusuf, & Anfas (2018) states that learning motivation provides a positive and significant effect on learning independence.

The results obtained in this study is student learning independence which is presented in Table 4.

Table 4 Distribution of student learning independence data

Information	Score	Total students	Percentage
Very good	80-100	7	7.87
Good	70-79,99	34	38.20
Enough	60-69,99	45	50.56
Less good	40-59,99	3	3.37
Not good	30-39,99	0	0.00
Very bad	0-29,99	0	0.00

Based on Table 4, the distribution of student learning independence data shows that the learning independence of class IX students of SMP Negeri 7 Sungai Raya is in the Fairly Good

category with 45 students with a percentage of 50.56%. The independence of student learning based on indicators is presented in Table 5 as follows.

Table 5 Percentage per indicator of student learning independence

Indicator	Percentage	Category
Not dependent on other	64.74	Less good
Have confidence	70.96	Good
Behave discipline	73.60	Good
Have a sense of responsibility	73.88	Good
Behave on their initiative	66.57	Less good
Exercise self- control	72.61	Good
Average	70.39	Good

Table 4 shows that the independence of student learning has an average value of 70.39 with either category. This proves that student learning's independence is influenced by student learning motivation which can be seen in Table 2 has a good learning motivation; it will have good independence as well. Table 4 shows that the indicators that have the lowest percentage are indicators of independence from others and disciplined behaviour. This shows that the independent learning of grade IX students of SMP Negeri 7 Sungai Raya still needs improvement. This is because students who have good learning independence will lead to independent learning ability, responsibility, and full

initiative and control. This study's results are in line with Isroah & Sumarsih (2013), which states that students who have to learn independence actively participate in what they know and how they learn. Two factors affect learning independence, namely, internal factors and external factors. Internal factors that affect student learning independence are aspects of discipline, motivation, responsibility. In comparison, external factors that affect independence are aspects of the school environment, family environment, learning facilities, and teachers' professional competence (Aisah, 2018).

Data from the Kendal Tau correlation analysis are shown in Table 6.

Table 6 Kendal Tau correlation analysis

No.	Correlation Coefficient	Value					Conclusion
		τ	τ^2	Determinant Coefficient	Z_h	Z_t	
1	X.Y	0.38	0.14072	14.07%	5.14	1.96	There is a Positive and Significant Relationship

Based on Table 6, namely, Kendall correlation analysis, it is found that the hypothesis in this study is acceptable; namely, student motivation has a

positive and significant relationship to student learning independence. This study's results are in line with Damayanti et al (2015) study, which states that there

is a positive and significant relationship between learning motivation and learning independence. This means that the greater the motivation of student learning, the greater the independence of student learning, and vice versa, the smaller the motivation of student learning to eat the smaller the student's learning independence.

This can be seen in Table 5 the correlation coefficient of 0.38 and Z_{count} it of 5.14 > Z_{table} 1.96. This correlation coefficient indicates a positive direction thus a positive relationship occurs with learning motivation with learning independence, meaning that the higher the motivation of student learning, the higher the student's learning independence, so the student's learning motivation has a relationship to independence. In line with research conducted according to Sudarwo et al (2018) also states that there is a positive and significant effect of learning motivation on learning independence, which means learning motivation positively and significantly affect on learning independence.

A significant level of 5% shows a significant relationship between learning motivation and student learning independence on dynamic electrical material in class IX. Student learning motivation affects student learning independence in class IX SMP Negeri 7 Sungai Raya, by 14.07%, and the rest is influenced by other factors that are equal to 85.93%. The results of this study are in line with Sari et al (2017) which states that there is a significant influence between student learning motivation on learning independence of students in the office administration of SMK Slamet Nusantara Nusantara with the magnitude of the effect of learning motivation on learning independence at 13.18%. Factor others that contribute are endogenous and exogenous factors, where these endogenous factors come from within students who are physiologically and

psychologically strung. In contrast, exogenous factors come from the outside, which includes the family and the community environment. This finding is in line with the research results conducted by Hamdu & Agustina, (2011), who concluded that the motivation to learn a student's learning achievement has a significant effect.

CONCLUSION

Student motivation in dynamic electrical material in class IX SMP Negeri 7 Sungai Raya is in a good category. Student learning independence in dynamic electric material in class IX SMP Negeri 7 Sungai Raya is relatively good. Kendall Tau correlation in this study is relatively low. There is a positive relationship between students' learning motivation and students' learning independence on dynamic electrical material in class IX SMP Negeri 7 Sungai Raya.

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