

The Effect of Teacher Competence on Student Learning Outcomes

Marioga Pardede^{1*}, Selamat Karo-Karo¹, Yona Gulo¹, Fransiskus Gultom¹

¹ Universitas Darma Agung, Indonesia.

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Corresponding Author:

Marioga Pardede

marioga@gmail.com

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Abstract: This study aims to determine the effect of teacher competence on the learning outcomes of grade IX students at SMP Negeri 1 Pulau Rakyat Asahan. The population in this study were all components in the school environment, such as: principals, teachers, administration, and students of SMP Negeri 1 Pulau Rakyat Asahan, namely 185 people. The sample in this study were class teachers and grade IX students totaling 50 people. This type of research is quantitative research with the approach used is correlational. The sampling method is purposive sample, namely a sample determination technique with special considerations so that it is worthy of being used as a sample. The data collection method used by the researcher is observation, questionnaire distribution, and documentation. The collected data were analyzed using statistical analysis techniques, namely the product moment correlation test. The results of hypothesis testing using correlation analysis show that the calculated r value is 0.6514 at a significance level of 5% and the r table is 0.279, meaning that the calculated r value is greater than the r table value, namely $0.6514 > 0.279$. Thus, the working hypothesis (H_a) is accepted and the working hypothesis (H_0) is rejected, meaning that it can be stated that there is an influence of teacher competence on student learning outcomes at SMP Negeri 1 Pulau Rakyat Asahan. The implication of this study is as a reference material to improve teacher competence, especially for science teachers at SMP Negeri 1 Pulau Rakyat Asahan.

Keywords: Learning outcomes; Teacher competence; Students

Introduction

National Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have spiritual strength, religiousness, self-control, habits, intelligence and skills needed for themselves, society, nation and state. The objectives of school institutions can be achieved optimally if the teachers have the competencies as stated in the explanation of government regulation no. 19 of 2005 concerning National Education Standards including pedagogical competency, personality competency, social competency and professional competency (Hidayat et

al., 2012). In the world of education, it is not only students who are required to develop their potential, but the role of teachers is also required to have competence (Arsini et al., 2023; Handayani et al., 2023; Yulianti et al., 2022). Competence according to Uzer (2005) teacher is a position or profession that requires special skills as a teacher. This job cannot be done by people who do not have the skills to carry out activities or work as a teacher (Asmarika et al., 2022; Azwardi, 2021; Baniati et al., 2023; Budiana, 2022; F. R. Rahman et al., 2022).

Competency development according to Hopkins (2010) is "a way for teachers to continuously assess themselves by remaining open to the changes that occur in the era". What is meant is that a teacher must realize

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that humans are figures who easily accept change. By opening themselves to continue to develop, teachers will become competent people in their profession.

Learning outcomes consist of two words, namely results and learning. In the big dictionary of the Indonesian language, results mean the quality obtained from an activity. While learning is a process experienced by someone which is marked by a relatively permanent change in behavior.

Learning outcomes are the maximum benchmark that students have achieved after studying for a specified period of time (Nabillah et al., 2019). In addition, learning outcomes can also be used as a tool to determine the abilities and quality of students after carrying out the learning process (Margiathi et al., 2023; S. Rahman, 2022; Yandi et al., 2023). Student success in learning can be seen from the learning outcomes of the students concerned. Teachers need to conduct learning outcome evaluations to find out student learning outcomes, through this evaluation, the student learning outcomes achieved during the learning process can be seen. High learning outcomes will be very useful as a foundation for students when students will continue to higher education or enter the world of work (Akour et al., 2022; González-Pérez et al., 2022; Grivokostopoulou et al., 2019; Hsiao et al., 2021; Kioupi et al., 2019).

One example of the shortcomings in the learning process is that teachers often teach using lecture methods that students find less interesting, and classroom management is still lacking. These problems will affect student learning outcomes, this is indicated by the lack of enthusiasm of students in participating in learning, this is evidenced by noisy students during learning, and there are also some students who come in and out during class hours.

Method

This research is a quantitative model. The research design carried out is the basic foundation in testing the truth in writing this research. "Methodology is a science that studies the procedure for making observations with precise thinking and is carried out scientifically, through activities of searching, compiling, analyzing, and concluding". The initial step in this research is to determine the object related to the problem being studied. The next step is to determine the population and sample to determine the limitations of the study being carried out. After the sample is determined, it is continued by making a questionnaire design to create quantitative data on teacher competence on student learning outcomes in the research sample. The questionnaire was distributed to a sample of students in class IX of SMP Negeri 1 Pulau Rakyat Asahan. After scoring the questionnaire, the next step is to record the

results of student learning in the odd semester. The continuation is to analyze the data for hypothesis testing to obtain conclusions. In this study, the researcher is guided by Arikunto (2019) that "Population is the entire subject of research". If someone wants to research all the elements in the research area, then the research is a population research". From the quote above, it is known that the population is the object of research, so the population in this study is all grade IX students of SMP Negeri 1 Pulau Rakyat Asahan, a total of 185 students.

Result and Discussion

Teacher Competence (Variable X)

To find out the relationship between teacher competence in schools, researchers distributed questionnaires to 50 students as respondents with 33 question items. Based on the questionnaire data, it is known that the tabulation of teacher competence in class IX of SMP Negeri 1 Pulau Rakyat Asahan, before conducting the hypothesis test, the class interval was first sought. Researchers classified teacher competence with (6) six categories, namely very high, high, sufficient, moderate, low, and very low. Based on the data obtained from the results of the study with a total of 50 respondents, the highest score was 87 and the lowest was 55 with an average ($M = 69.08$) and standard deviation ($SD = 7.166$).

Teacher Competency Change Data (X)

Based on the data obtained from the research results with a total of 50 respondents, the highest score was 87 and the lowest was 55 with an average ($M = 71.52$) and standard deviation ($SD = 6.72$). The distribution of teacher competencies (X) can be seen in Table 1. Based on Table 1, it can be seen that teacher competence (X) is categorized as moderate (24%).

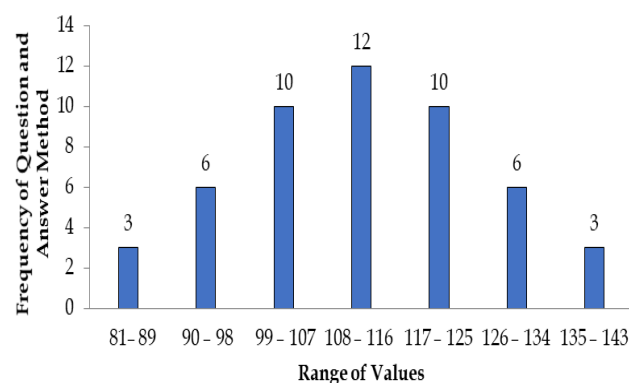


Figure 1. Frequency distribution of teacher competencies (X)

Table 1. Frequency Distribution of Teacher Competencies (X)

Range	Fo	Fr (%)	Category
81 – 89	3	6	Very high
90 – 98	6	12	Tall
99 – 107	10	20	Enough
108 – 116	12	24	Currently
117 – 125	10	20	Low
126 – 134	6	12	Very Low
135 – 143	3	6	Not enough
Amount	50	100	

Student Learning Outcome Change Data (Y)

Based on the data obtained from the results of the study with 50 respondents, the highest score was 90 and the lowest was 50 with an average ($M = 69.08$) and standard deviation ($SD = 7.166$). Distribution of Student Learning Outcomes (Y) can be seen in the Table 2.

Table 2. Frequency Distribution of Student Learning Outcomes (Y)

Range	Fo	Fr (%)	Category
79 – 88	3	6	Very high
89 – 98	6	12	Tall
99 – 108	10	20	Enough
109 – 118	12	24	Currently
119 – 128	10	20	Low
129 – 138	6	12	Very Low
139 – 148	3	6	Not enough
Amount	50	100	

Based on Table 2, it can be seen that Student Learning Outcomes (Y) are categorized as moderate (24%).

Tendency of Teacher Competence in Grade IX Students of SMP Negeri 1 Pulau Rakyat Asahan

The tendency of teacher competence in grade IX students of SMP Negeri 1 Pulau Rakyat Asahan is sufficient (68%). In the question and answer method, it is intended that students can grasp the lesson easily, effectively and can be digested by children well. When connected to education, these steps must be realized in the education process, in order to develop attitudes and mentality and personality so that students receive teaching materials easily and can be digested well. The method can be interpreted as a way used by teachers in establishing relationships with students during the learning processes. Thus, teacher competence is a tool to create a learning process.

There are three principles that need to be considered in an effort to determine a method. The three principles are: a) there is no one learning method that is superior for all purposes in all conditions, b) different learning methods have different and consistent influences on learning outcomes, c) learning conditions can have consistent influences on teaching outcomes. In learning activities, teachers do not have to be fixated on

one method but teachers should use a variety of methods so that teaching is not boring but attracts the attention of students. However, the use of various methods will not benefit learning activities if their use is not appropriate according to the situation that supports it and the psychological conditions of students. Therefore, this is where teacher professionalism is needed in choosing the right method.

Teacher competence is a method used to implement plans that have been prepared in real activities so that the goals that have been prepared are achieved optimally. This means that the method is used to realize the strategy that has been set. Thus, the method in a series of learning systems plays a very important role (Kistiari et al., 2024; Qamarya et al., 2023; Wahyuni et al., 2023).

The Tendency of Learning Outcomes of Class IX Students of SMP Negeri 1 Pulau Rakyat Asahan

The tendency of learning outcomes of grade IX students of SMP Negeri 1 Pulau Rakyat Asahan is high (70%). Results are a feeling of preference and a sense of attachment to something or an activity, without anyone telling them to. Results are basically the acceptance of a relationship between oneself and something outside of oneself. The stronger or closer the relationship, the greater the interest. Results are not innate, but need to be worked on by someone. Results are influenced by internal factors such as concentration, desire, motivation, and needs. Until now, in the learning process, results can affect the quality of achievement of children's or students' learning outcomes in certain fields of study (Hardiansyah et al., 2022).

If a child has results in a particular subject, then it will be easier for him to develop his abilities optimally in that subject. Great results in the field he likes will ultimately make the child focus more attention and time to be more active in achieving the best achievements. However, if he is forced to study a field that is not of interest, the child will face many obstacles, so that the learning results are not optimal and the child may even fail in arithmetic.

The result is related to the style of movement that drives someone to face or deal with people, objects, activities, experiences that are stimulated by the activity itself. The most effective way to generate results on a new subject is to use the student's existing interest-results. So, the result can be expressed through a statement that shows that the student prefers something to another, it can also be manifested through participation in an activity. The result is not brought from birth, but is obtained later.

Student learning outcomes are a process that results in behavioral changes in terms of psychomotor. Behavioral changes are those that appear at that time,

but will appear on another occasion. Changes caused by learning are relative, permanent, meaning that the changes will last for a relatively long time, but the changes will not remain constant, so that at some point it can change again as a result of learning.

The result is a drive that causes the individual's attention to be tied to certain objects such as work, lessons, objects and people. The result is related to cognitive, affective and psychomotor aspects. The result is also related to something that causes satisfaction in him (Arif et al., 2024; Putri et al., 2023; Septyowaty et al., 2023).

Significant Relationship between Teacher Competence and Student Learning Outcomes

The results of this study show that there is a significant relationship between teacher competence (X) and student learning outcomes (Y) in class students IX SMP Negeri 1 Pulau Rakyat Asahan. The significant relationship between teacher competence (X) and student learning outcomes (Y) in grade IX students of SMP Negeri 1 Pulau Rakyat Asahan, shows the meaning that the more often teacher competence is used in schools, the more student learning outcomes increase. It can be understood that using learning based on teacher competence can help improve student learning outcomes (Castelló et al., 2023; McMullen et al., 2023; Tan et al., 2018).

Conclusion

Based on the theoretical description, research results, and discussions conducted, several conclusions can be drawn, including: the competence of teachers in grade IX students of SMP Negeri 1 Pulau Rakyat Asahan is sufficient (68%). In teacher competence, it is intended that students can grasp lessons easily, effectively and can be digested by children well. The tendency of learning outcomes of grade IX students of SMP Negeri 1 Pulau Rakyat Asahan is high (70%). Results are a feeling of preference and attachment to something or an activity, without anyone telling them to. Results are basically the acceptance of a relationship between oneself and something outside of oneself. The stronger or closer the relationship, the greater the interest. Results are not innate, but need to be worked on by someone. A person's results are influenced by internal factors such as concentration, desire, motivation, and needs. Until now, in the learning process, results can affect the quality of achievement of children's or students' learning outcomes in certain fields of study. There is a significant simultaneous relationship between teacher competence and learning outcomes of class IX students of SMP Negeri 1 Pulau Rakyat Asahan, this can be seen from the data showing that r count (0.770) is greater than r table

(0.279) at a significance level of 5%, or can be formulated as $0.770 > 0.279$. When viewed from the interpretation table " r " product moment r count (0.770) is at point 0.70-0.90, then it can be said to have a strong and high relationship or a significant relationship.

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