

## THE RELATIONSHIP OF PARENTAL PARTICIPATION IN LEARNING WITH STUDENT ACHIEVEMENT ON BIOLOGY SUBJECTS

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**Abstract.** Parental participation is a factor that plays a very important role. This is inseparable from the fact that parental participation plays a role in the formation of student attitudes and achievement. This study aims to determine the relationship between parental participation and the learning achievement of Science-Biology grade VII students at SMP Negeri 4 Medan. The type of research used is correlational. The number of samples used was 29 people taken using cluster random sampling. The instruments used are tests and questionnaires. Tests are used to determine student achievement through report card scores and questionnaires are used to determine parental participation in student learning. The data analysis used is Product Moment Correlation analysis. The results showed that there was a strong relationship between parental participation and the achievement of science-biology learning of grade VII students at SMP Negeri 4 Medan with a large influence of 59.31%, and 40.69% influenced by other factors.

**Keywords:** Parent Participation, Student Learning Achievement

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## INTRODUCTION

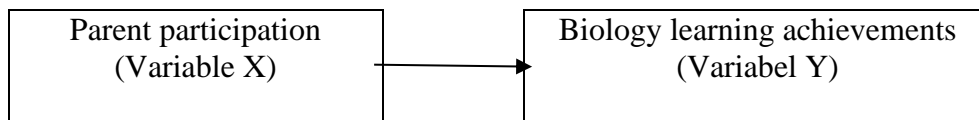
One indicator that can be used as a benchmark for the success of an educational institution in producing quality graduates is reflected in the learning achievements achieved or grades obtained in each subject (Hendrawijaya, 2022; Suarsana et al., 2019). Factors that affect the learning process and achievement are factors from within students and factors from outside students. Factors from within students include psychological and physiological conditions, while external factors include the family environment and community environment as well as the completeness of various facilities and infrastructure in learning (Awal et al., 2018). Factors that affect the learning process and student achievement have an interrelated relationship (Deke, 2020). The talents that exist in students, for example, in order to develop well, there needs to be encouragement from family and society. Conversely, a less supportive environment can hinder the development of students themselves (Soeprijanto et al., 2022; Wawan & Retnawati, 2022).

Based on the description above, it can be stated that of several factors that can affect student achievement, parental participation is one factor that plays a very important role. This is due to the participation of parents (Albez & Ada, 2017) who play a role in the formation of students' attitudes and sufficient and quality achievements as well as democratic and wise attitudes (Kurnia et al., 2022). Parents can increase the desire to study harder, in order to achieve high learning achievement (Supriani & Arifudin, 2023). Everyone participates in their children's learning activities in different ways. The existence of these differences is due to different family backgrounds (Gao & Xue, 2021). The background intended here is parental work, parental education, parental education, parental education, socioeconomic level of parents, parental insights, and communication between parents and children (Kurt & Taş, 2018).

Based on the background that has been stated above, it shows that parental participation can affect student achievement including in Biology subjects. To prove this, this study will study things related to parental participation and Biology learning achievement in grade VII students at SMP Negeri 4 Medan. The selection of grade VII students at SMP Negeri 4 Medan as the object of this research is based on the fact that students at that grade level are in transition. That is, that grade VII students who will go to the level of education in secondary school, of course, are very different if they still remain at the basic education level. Therefore, parental participation is very necessary to control children's behavior, especially in terms of learning needs serious attention (Sakamoto, 2020; Sumarsono et al., 2016). This study aims to determine the relationship between parental participation in learning with student achievement in Biology subjects.

## **METHOD**

The type of research used in this study is quantitative descriptive research. This research is an "Ex-post facto" research that is correlational. It is called ex-post facto research because the research is not given special treatment, but only reveals facts naturally and has been ongoing. Furthermore, it is said that correlation research will be investigated because the relationship between research variables will be investigated, namely the relationship between parental participation as an independent variable with Biology learning achievement as a dependent variable.



**Figure 1.** Diagram of relationships between variables

The population of this study is the total number of grade VII students at SMP Negeri 4 Medan. The population in this study was all grade VII students of SMP Negeri 4 Medan which amounted to 88 people and consisted of class VII<sub>1</sub> with 29 students, VII<sub>2</sub> with 29 students, and VII<sub>3</sub> with 30 students. The sampling technique in this study uses cluster random sampling, where the sampling process is carried out randomly between classes VII<sub>1</sub>, VII<sub>2</sub>, VII<sub>3</sub>. Based on the results of sampling, class VII<sub>2</sub> was obtained, class VII<sub>2</sub> was obtained which was the sample in this study with a total sample of 29 people.

The variables in this study are independent variables (X), namely in the form of parental participation with indicators, parental attention in the form of, paying attention to the value of Biology subjects, asking lessons, checking report cards, facilities in the form of learning places, completeness of learning, attitudes in the form of, if there are schoolwork, suggesting group learning, while encouragement in the form of, giving praise, and rewards if successful, helps if there are difficulties. The dependent variable (Y) is, Biology learning achievement with indicators, learning outcomes achieved by students. Data collection in the study using questionnaires. The questionnaire in this study was used to obtain data on the variable participation of parents of grade VII students at SMP Negeri 4 Medan. The questionnaire used in this study was called by the researcher himself as many as 30 items. The questionnaire is arranged in the form of an attitude scale accompanied by four answer choices, namely: (a) Always, (b) Often (c) Rarely (d) Never. While the grading system carried out follows the Likert Scale assessment procedure. The documentation in this study was used to obtain data on the variables of Biology learning achievement of grade VII students at SMP Negeri 4 Medan for this purpose, then the report card scores of biology subjects were used.

Data analysis consists of descriptive analysis and and inferential analysis. Descriptive statistical analysis is used to describe the characteristics of each research variable. Inferential statistical analysis is used to test research hypotheses that have been proposed. Hypothesis testing was carried out using product moment correlation analysis at a significance level of 95%.

## RESULTS

### Descriptive Analysis Results

#### *Results of Distribution of Parent Participation Questionnaire*

The results of the descriptive analysis of the distribution of questionnaires distributed to all respondents are presented in the following table.

**Table 1.** Descriptive analysis results

Variable	Minimum Value	Nilai Maksimum	Mean	Standar Deviasi	Varians
X	80,00	85,83	83,39	1,82	3,32

#### *Student Learning Achievement*

Student achievement obtained based on student report card scores in the implementation of the end-of-semester test can be seen in Table 2 below:

**Table 2.** Student learning achievement data

Qualification	Frequency	Percentage	Letter Value	Predicate
80 – 100	29	100,00%	A	Excellent
66 – 79	0	0,00%	B	Good
56 – 65	0	0,00%	C	Enough
40 - 55	0	0,00%	D	Less
0 – 39	0	0,00%	E	Fail
<b>Sum</b>	<b>29</b>	<b>100%</b>		

Based on Table 2. Above, it can be seen that student learning achievement obtained on the implementation of the final test of biology subjects obtained excellent test results. This can be seen from the report card scores obtained by students who are overall in the very good category. This can be caused by the learning methods used by teachers in the learning process, facilities and infrastructure, as well as the participation of parents who are very concerned about the quality of school education and their children.

### Inferential Analysis Results

Hypothesis testing in this study is by using the Product Moment Correlation formula. Testing the hypothesis in this study using Product Moment Correlation, namely:

$$r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{(N \sum X^2 - (\sum X)^2)(N \sum Y^2 - (\sum Y)^2)}}$$

**Table 3.** Results of correlation analysis

Variable	$r_{\text{calculate}}$	$r_{\text{table 5\%}}$
X dan Y	0,7701	0,367

Based on the table above, there is a relationship between parental participation in learning and Biology learning achievement of grade VII students at SMP Negeri 4 Medan. This is evidenced by the results of the Product Moment Correlation analysis between variable X and variable Y which is then consulted with the  $r_{\text{table}}$  value at the real level of 5% so that it is clearly seen that the value of  $r_{\text{calculate}} = 0.7701$ , and  $r_{\text{table 5\%}}$  is 0.367. From the interpretation table, the value of  $r = 0.7701$  is included in the strong or high category.

Based on the value of the Coefficient of Determination ( $KD = r^2 \times 100\%$ ), the value of the coefficient of determination is 59.31%. Thus, the magnitude of the relationship between parental participation and Biology learning achievement of grade VII students at SMP Negeri 4 Medan was 59.31%. While 40.69% is influenced by other factors. The results of the trial through the correlation test  $r_{xy} = 0.7701$ . To prove the hypothesis rejected or accepted by the criterion if  $r_{\text{calculate}} \leq r_{\text{(table)}}$  then  $H_0$  is accepted and  $H_a$  is rejected, on the contrary  $r_{\text{calculate}} \geq r_{\text{(table)}}$  then  $H_0$  is rejected and  $H_a$  is accepted. Thus the 5%  $r_{\text{table}}$  with is 0.367. So that it can be written into a calculation of  $\geq r_{\text{(table)}}$  or  $0.7701 \geq 0.367$  at the level of 5%. Based on these data, it can be concluded that  $H_a$  was accepted, so it can be concluded that "there is a relationship between parental participation in learning and the achievement of Biology learning of grade VII students at SMP Negeri 4 Medan.

## DISCUSSION

Schools as a means of formal education require many things that support, including the interests and good qualities of the principal and teachers, the active role of the education office or school supervisor, the active role of parents and the active role of the community around the school (Abdellahi & Stonier, 2021). However, parents also cannot fully hand over their children's education to the school (Rahtawu et al., 2018). Children's education starts from the education of parents at home and parents who have the main responsibility for the future of their children, schools are only institutions that help the process. So that the active role of parents is very necessary for the success of children in school (Gani & Suriyawati, 2019).

Parental participation plays an important role in children's education at school. The success or failure of students in the learning process at school depends on the extent of parental participation in guiding, supervising, and teaching children when the student is in the family environment (Appiah-Kubi & Amoako, 2020). Parents are the most important part of the child's education process, because a student will have more time when at home when compared to children's learning time when studying at school (Rochana & Bungsu, 2019). Therefore, parental participation has a very large contribution to the education and learning achievement of students in school. Based on the results of research obtained from student report cards in biology subjects in grade VII SMP Negeri 4 Medan, it can be seen that the scores obtained by students are very good. This is evidenced by the students' report card scores, namely from 29 students, students who obtained test results in the very good category amounted to 29 people or with a percentage of 100%.

The results of the study above show that there is a strong influence between the participation of elders and student achievement in biology learning. This is because if parents participate actively in paying attention to their children's learning, children will also be serious in learning (İlik & Er, 2019; Kurnia et al., 2022). Parents have a very important role when students are at home, so they need to be controlled and paid attention to their daily activities. There are several ways to increase the role of parents in children's education, namely (1) controlling learning time and how children learn. Children are taught to study regularly, not just study when they get homework from school or will face tests. Every day children are taught to repeat the lessons given by the teacher that day (Chandra & Humaedi, 2020). Monitor the development of children's academic abilities. Parents are asked to examine their child's test scores and assignments, (2) monitor personality development which includes children's attitudes, morals and behavior (Roesli et al., 2018). This can be done by parents by communicating with homeroom teachers to find out the child's development, and (3) monitoring the effectiveness of learning hours at school. Parents can ask about the activities their child did during school. And what tasks are given by their teachers (İlik & Er, 2019).

## CONCLUSION

Based on the results of the study, it can be concluded that there is a strong relationship between parental participation in learning and the achievement of learning Biology grade VII students at SMP Negeri 4 Medan. The relationship between parental participation in learning and the achievement of Biology learning of grade VII students at SMP Negeri 4 Medan is

0.7701 or with a coefficient of determination of 59.31%, while the remaining 40.69% is influenced by other factors.

## RECOMMENDATIONS

Based on the conclusions above, there are several things that can be recommended, namely expected to all parents to be able to increase their participation, especially in paying attention, guiding, and directing students about the importance of education and the learning process. It is expected for students to further increase perseverance in learning to maintain and improve learning achievement, especially in biology subjects. To other researchers to be able to carry out research in a broader research context.

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