

The Effect of Parents' Education Level and Learning Motivation on Student's Biology Learning Achievement Class XI SMA Negeri I Panai Hulu

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Abstract

This study aims to determine the effect of parental education level and learning motivation on biology learning achievement of class XI students of SMA Negeri I Panai Hulu. This type of research uses multiple regression analysis studies and was carried out at SMA Negeri I Panai Hulu with a purposive sampling technique for class XI MIPA 1 with 35 students, XI MIPA 2 with 36, and XI MIPA 5 with 31 students. The results showed Calculation of hypothesis testing using the Chi-Square test obtained a significant value of 0.000 less than 0.05. Parents' Education Level and Learning Motivation Influence on Student Achievement in Class XI SMA Negeri I Panai Hulu Year.

Keywords

parents' education level; learning motivation; learning achievement



I. Introduction

Education is a process of preparing individuals to be able to adapt to environmental changes. Education has an important role in national development because education is one way to form quality human resources to achieve national development goals (Sardiman.AM, 2011). The younger generation is the next generation of the nation. The development of the nation's progress is in the hands of the younger generation. Education for the younger generation is expected to support the achievement of national development goals. The educated and motivated young generation is expected to be able to bring this country to face global competition, especially in the field of education (Amen, 2017).

Education can be obtained through formal, formal, and non-formal education. So far, some parents think that education is only the responsibility of the school. Children's learning achievement is not solely the result of the learning process at school. But it is supported by the role of parents at home. The role of parents towards children is felt when it is supported by an adequate educational background. Because the success of a child's education is not solely determined by the school. Parents have a stake in the success of their children. Sometimes this responsibility is not realized by parents so that it often arises that the lack of success of their children is the result of a lack of attention and responsibility of education administrators (Andrayani, 2017).

The background of the educational level of these parents is very positively correlated with the way they take care of their children, while parenting has a relationship with the level of child development and will have an influence on learning achievement in school (Ningsih & Nurrahmah, 2016). This means that the higher the last education of parents, the better the way of parenting their children and as a result, the development of children has a positive effect. On the other hand, the lower the education level of parents, the less good they are in

raising children, so that the child's development is less profitable (Andriani & Rasto, 2019).

Parents who are highly educated will understand that the success of their children's learning does not only depend on the teacher and school, but is also influenced by the family environment and parents, so that parents will prepare a good education, environment, and supporting facilities. This is in accordance with research conducted by (Adawiah, 2017) that "parents with low education do not provide educational encouragement to their children, so children are less motivated to learn which causes low learning achievement". Based on research conducted by (Ibrahim et al., 2020) that "good learning achievement is influenced by the high educational background of parents, so there is a significant effect of parental education on learning achievement".

According to (Darmawati, 2013) motivation is a condition that arises within the individual caused by the interaction between motives and events observed by the individual, thus encouraging activating behavior into real action. In this case, learning motivation is certainly needed to achieve this value. The motivation in question can come from the students themselves and some come from outside the students themselves, such as teachers, environment, family, and others. Motivation is a very important part in a person to achieve achievement. (Chulsum, 2017) agree that learning achievement is the result achieved by students during the teaching and learning process within a certain period of time, generally learning achievement in schools is in the form of giving grades (numbers) from teachers to students as an indication of the extent to which students have mastered the subject matter that is conveyed, usually learning achievement This is expressed by numbers, letters, or sentences and is contained within a certain period.

Broadly speaking, the factors that affect student achievement are divided into two, namely internal factors and external factors. The factors that come from within students (internal) include (1) psychological aspects, such as attitudes, interests, independence, intelligence, talent, discipline, motivation and so on; and (2) physiological aspects which include physical maturity, physical and spiritual health and the state of the senses. Factors originating from outside the student (external) consist of social factors, namely the family environment, school environment and community environment and physical environmental factors, namely the state of the house and learning facilities both at home and at school. The family environment (parents) is the first and foremost education center for a child.

Parents are said to be the first and foremost educators because the education provided by parents is the basis and greatly determines the further development of the child. Cultivation of habits that must begin in the family environment, starting in childhood and continues to grow so that parents must have the ability to educate children and continuous coaching is needed from an early age. Through human development, people will become strong (Badria et al., 2018).

This will be realized through coaching from an early age, from a young age, starting from the family environment through education that is embedded from a young age which is increasingly integrated into him with increasing age (Matus, 2016). Parents are the ones who act as educators in the family. The ability to educate parents is influenced by their level of education to provide assistance in learning school subjects for their children. Parents who have a high level of education will be more confident in providing assistance when their children study (Dasmo et al., 2011).

And on this basis, we are interested in carrying out a research through a literature review with the title "The Influence of Parents' Education Level and Learning Motivation on Biology Learning Achievement of Class XI Students of SMA Negeri I Panai Hulu.

II. Research Methods

This research was conducted at SMA Negeri I Panai Hulu, Labuhanbatu Regency. And when the research was carried out in January 2022. Then the population that we used in this study were all students of class XI IPA SMA Negeri I Panai Hulu, Labuhanbatu Regency, as many as 5 classes with 173 students. And the sample in this study were some students of SMA Negeri I Panai Hulu who received biology subjects, namely 102 students from class XI MIPA 1, XI MIPA 2, XI MIPA 5 SMA Negeri I Panai Hulu. The sampling technique used is purposive sampling. Purposive sampling is a sampling technique with certain considerations. In order to facilitate the research, it is necessary to do a method, so in this study the author uses a quantitative method (Arikunto, Suharsimi.2010).

III. Results and Discussion

3.1 Results

The instrument in this study used a questionnaire instrument for the level of parents' education and learning motivation in learning biology. The questionnaire was compiled based on indicators of learning achievement consisting of 25 valid questionnaires in the form of questions/statements and then tested in class XI for analysis. The validated questionnaires were as many as 30 questions/questionnaire statements, then those that were selected as valid questionnaires were 25 questions/questionnaire statements that were valid and 5 items were declared invalid. The questionnaire which was declared valid as many as 25 questions/questionnaire statements was used in the study.

Table 1. Validation Test

Category	Questionnaire Items	Amount
Valid Questionnaire	1,2,3,4,5,6,8,10,11,12,13,15,16,17,18,19,20,21,22,23,24,25,27,29,30	25
Invalid Questionnaire	7,9,14,26,28	5
Amount		30

a. Description of Answers to the Questionnaire Level of Education and Learning Motivation

The questionnaire given to students was by sending a link through a social media account, namely WhatsApp, to 102 samples and the results were obtained as shown below:

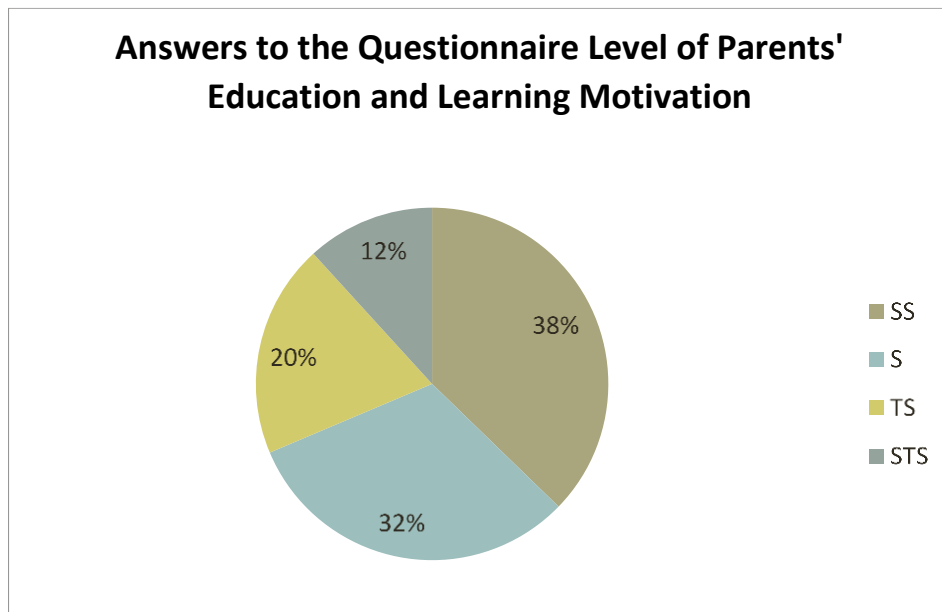


Figure 1. Circle Diagram of the Answer to the Level of Education and Learning Motivation

Based on the figure above, from the entire questionnaire that has been given to the sample, which is 102 samples, the answers obtained from the entire sample who answered SS (Strongly Agree) are 38%, S (Agree) are 32%, and TS (Disagree) are 20% , and STS (Strongly Disagree) which is 12%.

b. Description of Parents' Education Level

From the results of research at SMA Negeri I Panai Hulu there were 102 students who were used as samples in this case. To find out the level of education of parents of students, it is done by recording the level of education of parents through a link sent via a social media account in the form of WA, then the results of collecting data on the level of education of parents can be seen in Figure 2 below this.

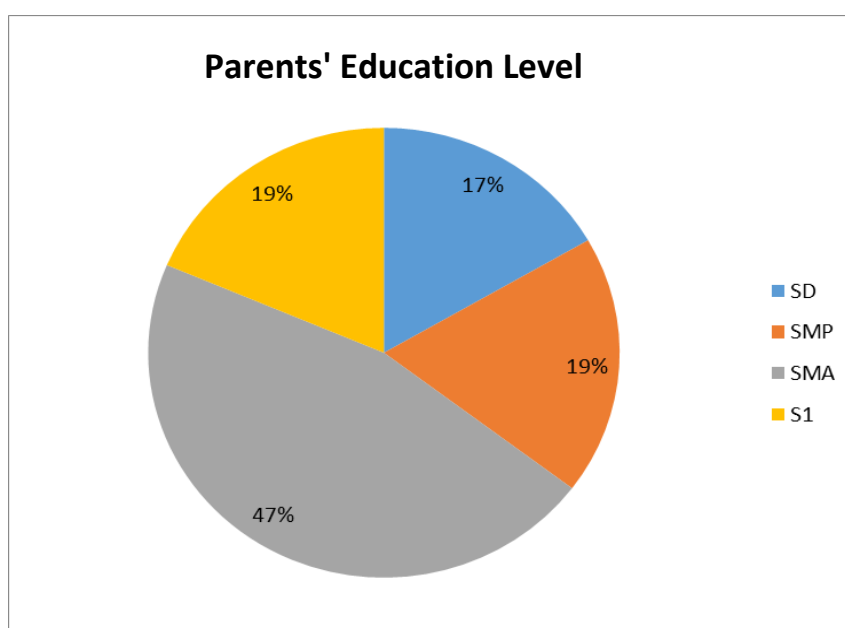


Figure 2. Pie Chart of Parents' Education Level of SMA Negeri I Panai Hulu

Based on the picture above, it can be seen that parents have primary education level as much as 17%, junior high school as much as 19%, and high school as much as 47% and bachelor degree as much as 19%.

c. Data on Parents' Education Level Results and Learning Motivation on Learning Achievement

1. Descriptive Statistics

Table 2. Data on the Results of Parents' Education Level and Learning Motivation on Learning Achievement

	N	Range	Minimum	Maximum	mean	Std. Deviation	Variance
Level_Education_or tu_motivation _bljr	102	35	47	82	72.09	5,222	27,269
Learning achievement	102	15	75	90	82.28	3,422	11,710
Valid N (listwise)	102						

Based on the data above, namely the results of the questionnaire value of parents' education level and learning motivation on learning achievement that the results obtained using SPSS 22 are for the sample there are N = 102 students, Range = 35, minimum value is 47, maximum value is 82, mean = 72.09, and the standard deviation is 5.222 and the variance is 27.269. While the learning achievement is obtained by the number of students N = 102, and range = 15, the minimum value is 75, the maximum value = 90, the mean = 82.28, and the standard deviation = 3.422 and the variance is 11.710.

2. Normality Test

The data normality test was carried out to determine the state of the data distribution, where to test this hypothesis using non-parametric statistics because the data were not normally distributed. The data used are questionnaire data on parents' education level and learning motivation with student achievement. In testing the normality of this data, the Kolmogorov-Smirnov test was used. The data is said to be normally distributed if the significant value is > 0.05 , otherwise if the significant value is < 0.05 , the data is said to be not normally distributed. The calculation results can be seen in the following table.

3. Test of Normality

Table 3. Normality Test Results

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Level_Education_or tu_motivation _bljr	,130	102	,000	,922	102	,000

Learning achievement	,179	102	,000	,950	102	,001
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Based on table 3, it can be seen that for significant data with normal distribution it must be > 0.05 , but from the data above, significant results are obtained, namely 0.000. Then the significant result is stated that is $0.000 < 0.05$ for that the data is said to be not normally distributed. This test uses the help of SPSS version 22.

4. Homogeneity Test

The homogeneity test of the data was carried out to determine the state of the homogeneity of the data, where to test this hypothesis by using non-parametric statistics. The data used are data on the level of parents' education and learning motivation. To test the homogeneity of the data, the F test was used with the help of SPSS version 22. The calculation results can be seen in the following table.

5. Test of Homogeneity of Variances

Table 4. Homogeneity Test Results

Level_Education_ortu_motivation_bljr

Levene Statistics	df1	df2	Sig.
1,631	11	88	,104

Based on table 4 it can be seen that the results of the homogeneity test of parents' education level data and learning motivation obtained a significant value of 0.104, greater than 0.05, so it can be concluded that the data of parents' education level and learning motivation are homogeneous.

6. Hypothesis Test

After testing the requirements analysis, the next step is to perform a statistical analysis of the Chi-Square test. This test is used to determine whether or not there is an effect of two nominal variables and to measure the relationship between one variable and another nominal variable. This test is used with the help of SPSS version 22. Following are the results of hypothesis testing of parents' education level and learning motivation on biology learning achievement.

7. Test Statistics

Table. 5. Hypothesis Test Results of Parents' Education Level and Learning Motivation on Biology Learning Achievement

	Level_education_ortu_motivation_learning
Chi-Square	179.529a
df	29
asyp. Sig.	,000

From the above calculation, a significant value of 0.000 is obtained with $\alpha = 0.05$. H_a is accepted if the value of $\text{sig.} < 0.05$ while H_0 is rejected if the value of $\text{sig.} > 0.05$. From the results of this study, it was found that the value of $\text{sig.} < 0.05$ ($0.000 < 0.05$) then H_0 was rejected, meaning that there was an influence of parents' education level and learning motivation on biology learning achievement of class XI students of SMA Negeri I Panai Hulu. H_a was accepted because parents' education level and learning motivation influenced student achievement at SMA Negeri I Panai Hulu. In accordance with the data obtained at SMA Negeri I Panai Hulu, namely class XI, there are 5 classes, namely class XI MIPA 1, XI MIPA 2, XI MIPA 3, XI MIPA 4, and XI MIPA 5, with the number of samples in this study taken as many as 3 classes, namely class XI MIPA 1, XI MIPA 2, and XI MIPA 5 with a total sample of 102 students.

3.2 Discussion

Based on the data that has been obtained by researchers from the results of hypothesis testing using the SPSS version 22 program to see the effect of parents' education level and learning motivation on biology learning achievement in class XI SMA Negeri I Panai Hulu. This is shown from the calculation results obtained a significant value of $0.000 < 0.05$, thus H_a is accepted. The acceptance of H_a was due to the parents' educational level and learning motivation having an effect on student achievement at SMA Negeri I Panai Hulu. In accordance with the data obtained at SMA Negeri I Panai Hulu, namely class XI, there are 5 classes, namely class XI MIPA 1, XI MIPA 2, XI MIPA 3, XI MIPA 4, and XI MIPA 5, with the number of samples in this study taken as many as 3 classes, namely class XI MIPA 1, XI MIPA 2, and XI MIPA 5 with a total sample of 102 students.

From the results of the data obtained, namely that the average level of education of parents whose parents' education level is low has an effect on learning achievement seen from the final exam scores of SMA Negeri I Panai Hulu students. It means that it can be concluded that parents with low education do not provide educational encouragement to their children, so that children are less motivated to learn which causes low learning achievement. The level of education of parents in educating their children has different levels. Parents are educated ranging from Elementary School, Junior High School, High School, to College. Parents who have an elementary school background in educating their children have limited knowledge when compared to parents with junior high school education (Mawarsih et al., 2013). Education is something important and cannot be separated from a person's life, both in the family, society and nation (Sari, 2021). Education has a very strategic role in determining the direction of the forthcoming of the nation's quality of community knowledge (Musdiani, 2019). This compulsory education program is expected to provide minimum education for Indonesian citizens to be able to develop their potential so that they can live independently in a community environment or continue their education to a higher level (Martono, 2020).

The higher a person's level of education, the higher the knowledge he has so that the various behaviors of parents in guiding, giving direction and motivating children are indirectly related to their children's school achievements. Students whose parents have a higher level of education will have high confidence and motivation in learning so that their achievement is high, and conversely students whose parents have a low level of education will have low confidence and motivation so that their learning achievement is low. (Panjewati & Tarigan, 2015). It is in the end Parents' Education Level and Learning Motivation on Students' Biology Learning Achievements at SMA Negeri I Panai Hulu. This is the same as research conducted (Siregar, 2018) About Improvement and Student Learning Outcomes in Biology Subjects at SMA Negeri I Torgamba, Labuhan Batu Selatan Regency. This is in line with research (Harahap et al., 2021) also states the level of education of parents affect student achievement.

IV. Conclusion

Based on the results of research and discussions that have been carried out by researchers regarding the level of parental education and learning motivation on biology learning achievement for class XI students at SMA Negeri I Panai Hulu, it can be concluded that:

There is a simultaneous influence of parental education level and learning motivation on learning achievement in biology subjects of class XI SMA Negeri I Panai Hulu, as evidenced by the results of the Chi-Square F test count = 179.529 with a significant $0,000 < 0.05$ so that H_0 is rejected and H_a accepted.

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