

The Influence of Learning Motivation and Parental Attention on Biology Learning Outcomes of Students at State High School 1, Komodo District, West Manggarai Regency

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Abstract

This research aims to determine the influence of learning motivation and parental attention on the biology learning outcomes of science class students at Komodo State High School. This type of ex-post facto research is quantitative descriptive. The independent variables in this research are learning motivation (X1), parental attention (X2) while the dependent variable is learning outcomes (Y). The sample for this research was 206 students in class X and XI Science at SMA Negeri 1 Komodo using a supportive random sampling technique. This research was carried out in August - September 2024. The research data was obtained using a questionnaire on learning motivation and parental attention. The data analysis technique is analysis (descriptive statistics) with the help of the SPSS (Statistical Package for Social Science) version 25 for Windows program. Based on the results of inferential statistical analysis, a significance value of $0.000 < 0.05$ was obtained. It can be concluded that learning motivation and parental attention have a positive and significant effect on the biology learning outcomes of class X and XI IPA students at SMA Negeri 1 Komodo.

Keywords: Learning Motivation, Parental Attention, Learning Results

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INTRODUCTION

The learning process is closely related to learning and teaching assumptions. Learning is a process of interaction between students and educators along with sources of knowledge in a learning environment (Fadilah, E.S., et al, 2022). Learning can also be interpreted as assistance distributed by educators in order to gain knowledge and know-how, to master skills and to shape students' attitudes and beliefs (Fajarwati., et al, 2022).

In the learning process, many people believe that achieving high achievement in learning must be supported by a good learning environment, which is meant in this case the external environment. In fact, in the learning process it is often found that students cannot achieve optimal learning achievements with the external environmental conditions supporting the learning process. Sudjana (quoted in Ihsan et al., 2024) states that the proportion of each factor (internal and external) in learning is 70% influenced by internal abilities and 30% influenced by the external environment.

The results obtained by students after going through a learning process are achievement. Everyone definitely wants to have achievements in their life. However, achievement is not obtained easily, there must be an effort made by each individual to achieve it. One of the impacts that causes problems in learning is learning motivation. Learning motivation is an important factor in the learning process. Learning motivation is the overall driving force within students which gives rise to learning activities. Students who study seriously will be able to achieve good learning results if they have motivation from their family and from teachers. Motivation is something that encourages students to learn or master the material being studied and be able to achieve the expected achievements. (Fathurrohman and Sulistyorini, 2012).

Apart from the problems that students often face in learning motivation, it is usually also influenced by parental support. have an influence on student learning outcomes, because parents are the first and main place where education takes place and are responsible for the child's growth and development. The family is the smallest social institution and the place where humans interact for the first time as social creatures. In the family environment, the role of parents is very important in forming children's character, intelligence, instilling values, norms and culture in society. The family is also the main and first center of education for a child before receiving formal education at Taufiq school (quoted in Ummah et al., 2024)

Every parent definitely wants their child to have good achievements, and one of them is academic achievement. However, all of this cannot be separated from the attention, encouragement and motivation of parents, because parents are the first educational figures who really have an influence on children in the future. The forms of parental attention are as follows: 1) Providing guidance and advice, 2) Supervising children's learning, 3) Fulfilling learning needs, 3) Creating a comfortable learning atmosphere, 4) Providing rewards and punishments. (Arifudin et al., 2020).

The influence of parental motivation and attention is an important aspect to pay attention to, especially in the context of achievement and development of students in class X and XI Science at SMA Negeri 1 Komodo. The importance of this research also lies in the contribution it can make to scientific literature in the field of education and parenting. It is hoped that the results of this research can provide a deeper understanding of the influence of parental motivation and attention, such as supporting children during the learning period and always providing direction, support in the learning process and always paying attention to their children in their growth and development. In this way, it is hoped that this research can provide valuable input for parents to always support and always provide support to their children.

RESEARCH METHOD

This research is a quantitative ex-post facto type of correlational research which aims to determine the influence of learning motivation and parental attention on learning outcomes. The population in this study were all students in class X and XI Science at SMA Negeri 1 Komodo. The sample for this research was taken from a population of 206 students X and XI. The sampling

technique used was supportive random sampling technique. by taking as many as the population to be studied. The research instruments used in this research were a learning motivation questionnaire and a parental attention questionnaire. The variables in this research consist of three variables, namely learning motivation (X1) and parental attention (X2) as independent variables and biology learning outcomes (Y) as the dependent variable. The relationship between variables can be seen in the following picture:

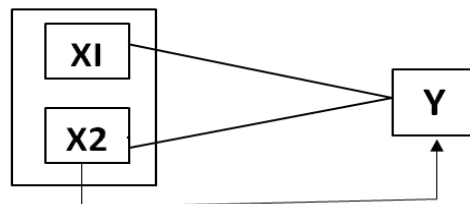


Figure 1. Relationship between variables

Information:

X1: Motivation to learn

X2: Parental Attention

Y: Biology learning outcomes

The instrument used in this research was a questionnaire about learning motivation and parental attention. Data analysis used multiple linear regression analysis with the help of SPSS Version 25.0 for Windows. Before carrying out multiple regression analysis, a prerequisite test is first carried out.

RESEARCH RESULTS AND DISCUSSION

Results

Statistical Analysis Description

Motivation to learn

It is known that the minimum value is 61, the maximum value is 120, the average value is 82.42, the standard deviation is 6.70, the median is 83 and the mode is 83. The distribution of students' self-efficacy values can be seen in table 1.

Table 1. Distribution of students' learning motivation at Komodo State High School

Intervals	Frequency	Percentage (%)	Category
105 < score	1	0,5	Very high
95 < score ≤ 105	3	1,5	High
85 < score ≤ 95	127	61,7	Moderate
76 < score ≤ 85	43	20,8	Low
score ≤ 76	32	15,5	Very Low
Total	206	100	

Based on table 1, it can be seen that the distribution of the highest level of learning motivation is in the interval $85 < \text{score} \leq 95$ with a total frequency of 127 and a percentage of 61.7%, so it can be concluded that the level of learning motivation is in the medium category. After seeing the number of students in the interval $85 < \text{score} \leq 95$ with a frequency of 127, it can be concluded that the learning motivation score of students in class X and IX of SMA Negeri 1 Komodo is in the medium qualifications.

Parental Attention

It is known that the minimum value is 71, the maximum value is 136, the average value is 98.47, the standard deviation is 8.75, the median is 99 and the mode is 99. The distribution of students' self-efficacy values can be seen in table 2.

Table 2. Distribution of Levels of Attention from Parents of Class X and IX Science Students at SMA Negeri 1 Komodo

Intervals	Frequency	Percentage (%)	Category
$119 < \text{score}$	1	0,5	Very high
$108 < \text{score} \leq 119$	14	6,8	High
$97 < \text{score} \leq 108$	124	60,2	Moderate
$87 < \text{score} \leq 97$	45	21,8	Low
$\text{score} \leq 87$	22	10,7	Very Low
Total	206	100	

Based on table 2, it can be seen that the distribution of the highest level of parental attention is in the interval $97 < \text{score} \leq 108$ with a total frequency of 124 and a percentage of 60.2% so it can be concluded that it is in the medium category. After seeing the number of students in the interval $97 < \text{score} \leq 108$ with a frequency of 124, it can be concluded that the parental attention score for students in class X and IX of SMA Negeri 1 Komodo is in the medium qualifications.

Learning outcomes

It is known that the results of the descriptive analysis of biology learning outcomes at SMA Negeri 1 Komodo show a minimum score of 65, a maximum score of 90, an average score of 4.7, a median of 79, a standard deviation of 4.7 and a mode of 80. The distribution of student learning outcome scores can be seen. in table 3.

Table 3. Distribution of Biology Learning Results at SMA Negeri 1 Komodo

Learningoutcomes	Frequency	Percentage (%)	Category
90-100	1	0,4	Very high
81-89	98	47	High
70-79	103	50	Moderate
60-69	6	2,6	Low
0-59	0	0	Very Low

Based on table 3. above, it is known that the frequency distribution above shows the results of studying biology at SMA Negeri 1 Komodo, showing that the distribution of the highest level of learning outcomes is in the interval $70 < \text{score} \leq 79$ with a total frequency of 103 and a percentage of 50% so it can be concluded that the level of results learning is in the medium category. After seeing the number of students in the interval 70-79 with a frequency of 103, it can be concluded that the learning outcomes scores of students in classes X and IX of SMA Negeri 1 Komodo are at medium qualifications.

Infrential Statistical Analysis

The normality test is used to determine whether the data is normally distributed or not. Normality test results can be seen in table 4.

Tabel 4. Hasil Uji Normalitas peserta didik kelas biologi di SMA N 1 Komodo

S	N	Sig. (2-tailed)	Information
Unstandardized Residual	206	0,076	Normally Distributed

(Source: Analysis results of the SPSS version 25.0 for Windows program)

Based on table 4 above, the significance value of 0.076 is greater than 0.05. So it can be concluded that the data shows that the data on self-efficacy, learning motivation and parental attention are normally distributed.

The linearity test is used to determine whether or not there is a linear relationship between each variable. the results of the linearity test between variables using the SPSS program can be seen in table 5.

Tabel 5. Hasil Uji Linearitas Peserta Didik Kelas IPA di SMA N 1 Komodo

Variable	Significance	Information
X1 To Y	0,068	Linear
X2 To Y	0,081	Linear

(Source: Analysis results of the SPSS version 25.0 for Windows program)

Based on table 5, it can be seen that the results of the linearity test analysis on the correlation between learning motivation and learning outcomes show a significance value of 0.068 and parental attention to learning outcomes shows a significance value of 0.081. The correlation model between these variables has a Sig value. which is greater than the Sig level. $\alpha = 0.05$ (Sig. > 0.05), so it can be concluded that the data on the influence of learning motivation and parental attention on learning outcomes is linear.

The influence of learning motivation on learning outcomes

Table 6. Results of Regression Analysis of Learning Motivation on Learning Outcomes

Coefficient correlation	Coefficient terminated	Coefficient A	Coefficient B	T-Count	T-table	Sig.
0,142	0,240	73,368	0,018	18,996	1,971	0,000

(Source: Analysis results of the SPSS version 25.0 for Windows program)

Based on table 6, the influence of learning motivation (X1) on learning outcomes (Y), the regression coefficient value $b = 0.057$ and the constant value $a = 81$. A simple regression equation is obtained, namely $Y = 73.368 + 0.018X_2$. To find out whether the regression equation model can be used to draw conclusions about whether the regression equation has been obtained as significant or not, it can be determined using analysis of variance (F-test). The assessment criteria is that if the significance value (probability) is less than 0.05 then the regression equation is significant, and vice versa.

Table 7. Analysis of Variance for Regression Model $Y = Y = 73.368 + 0.018 X_1$

	Amount square	Degrees free	Average square	F count	F table	Sig.F
Regresi	3,085	1	3,085	0,135	1,971	0,042
Residual	4677,832	204	22,931			
Total	4680,917	205				

(Source: Analysis results of the SPSS version 25.0 for Windows program)

The results of the analysis using the SPSS program obtained Fcount of 4.174 with a significance level of $0.042 < \alpha = 0.05$, thus the regression equation model obtained can be declared significant. The regression equation $Y = 73.368 + 0.018X_2$ can be used to explain and draw further conclusions regarding the influence of learning motivation on learning outcomes. The regression equation $Y = 73.368 + 0.018 X_1$ can be estimated at 0.018 in constant units of 73.368. A simple correlation calculation of the data pair of learning motivation variables (X1) with learning outcomes (Y), produces a correlation coefficient (r) of 0.20

The influence of parental attention on learning outcomes

Table 8. Results of Regression Analysis of Parental Attention to Learning Outcomes

Coefficient correlation	Coefficient terminated	Coefficient A	Coefficient B	T-Count	T-table	Sig.
0,143	0,088	77,030	0,002	20,383	1,971	0,000

(Source: Analysis results of the SPSS version 25.0 for Windows program)

Based on table 8, the influence of parental attention (X2) on learning outcomes (Y), the regression coefficient value $b = 0.002$ and the constant value $a = 77.030$. A simple regression equation is obtained, namely $Y = 77.030 + 0.002X_2$. To find out whether the regression equation model can be used to draw conclusions about whether the regression equation has been obtained as significant or not, it can be determined using analysis of variance (F-test). The assessment criteria is that if the significance value (probability) is less than 0.05 then the regression equation is significant, and vice versa.

Table 9. Analysis of Variance for Regression Model $Y = Y = 77.030 + 0.002 X_2$

	Amount square	Degrees free	Average square	F count	F table	Sig.F
Regresi	30,303	1	30,303	4,288	1,971	0,032

Residual	1441,585	204	7,067
Total	1471,888	205	

(Source: Analysis results of the SPSS version 25.0 for Windows program)

The results of the analysis using the SPSS program obtained Fcount of 4.288 with a significance level of $0.040 < \alpha = 0.05$, thus the regression equation model obtained can be declared significant. The regression equation $Y = 77.030 + 0.002X_3$ can be used to explain and draw further conclusions regarding the influence of parental attention on learning outcomes. The regression equation $Y = 77.030 + 0.002 (Y)$ can be estimated at 0.002 in constant units of 77.030.

The influence of learning motivation and parental attention on learning outcomes

Table 10. Regression analysis results of the relationship between self-efficacy, learning motivation and learning outcomes

Coefficient Correlation	Coefficient Determination	Regression Coefficients			T Count	T Table	Sig.
		A	b 1	b 2			
0,271	0,009	76,596	0,018	0,002	12,320	1,971	0,000

(Source: Analysis results of the SPSS version 25.0 for Windows program)

Based on table 10, the influence of learning motivation (X1) and parental attention (X2) on learning outcomes (Y) shows that the regression coefficient value $b_1 = 0.018$, $b_2 = 0.002$ and the constant value $a = 76.596$. The multiple regression equation is obtained, namely $Y = 76.596 + 0.034X_1 + 0.018X_2 + 0.002X_3$. To find out whether the regression equation model can be used to draw conclusions or whether the equation that has been obtained is significant or not, it can be determined using analysis of variance (F-test). The assessment criteria is that if the significance value (probability) is less than 0.000 then the regression equation is significant, and vice versa. The results of variance analysis for the regression model $Y = 76.596 + 0.018X_1 + 0.002X_2$ can be seen in table 10.

DISCUSSION

The Influence of Learning Motivation on Biology Learning Outcomes of State High School 1 Students, Komodo District, West Manggarai Regency

The results of testing the first hypothesis were accepted that learning motivation had a positive and significant influence on the learning outcomes of class X and XI students at SMA Negeri 1 Komodo. This finding is in line with the results of previous research by Likur et al. (2022); Anggraini et al. (2024); Hilmi & Nurhayati, (2024). which shows that there is a positive and significant influence of learning motivation on student learning outcomes. High learning motivation not only encourages students to learn more, but also improves the quality of their learning. Highly motivated students tend to be more actively involved in the learning process, remember information more easily, and are better able to apply the knowledge they gain in different situations, without having to rely on

instructions from teachers or encouragement from parents. In the research of Triwiratman et al. (2023), explained that learning motivation also plays a role in forming students' learning independence. If students' motivation to achieve is higher, the impact on learning independence will also increase (Sari et al., 2017; Miranda et al., 2022).

Based on these results, it was found that learning motivation has a significant positive influence on student learning outcomes, so school institutions need to develop programs that increase motivation, such as awards for achievement, teacher training for interactive teaching techniques, and the creation of a conducive learning environment. In addition, parental involvement in supporting learning motivation at home is very important, as well as providing constructive feedback that focuses on the learning process. Implementation of this strategy will improve student learning outcomes, have a positive impact on learning outcomes, and create a more effective educational environment.

The Influence of Parental Attention on the Learning Outcomes of State High School 1 Students, Komodo District, West Manggarai Regency

The results of testing the second hypothesis were accepted that parental attention had a positive and significant influence on the learning outcomes of class X and XI students at SMA Negeri 1 Komodo. The better the parents' attention, the better the students' learning outcomes will be. In line with several studies from Sihombing et al., (2020), Paramansyah et al., (2021) and Zulaikha, S. (2024). There is a positive and significant influence between parental attention on student learning outcomes.

Apart from that, parental involvement in educational activities is a factor that improves learning outcomes for students. The facts found in the field show that students really need parental attention to support success in achieving goals, besides that it can have a big influence on learning outcomes and attitudes both in the school, family and social environment, this is shown in the results of the parental attention questionnaire. given to students which shows that students tend to feel happy if they get parental attention. Apart from that, parental attention can foster a more efficient spirit than teachers at school. The results of this research are strengthened by several studies regarding the relationship between parental attention and learning outcomes conducted by Satria (2021); Mahmudi et al., (2020) and Soegeng et al., (2014), stated that the application of parental attention is correlated with the learning process and the achievement of learning outcomes.

The Influence of Learning Motivation and Parental Attention on the Learning Outcomes of State High School 1 Students, Komodo District, West Manggarai Regency

The results of testing the third hypothesis show that there is an influence between learning motivation and parental attention together with the biology learning outcomes of students at SMA Negeri 1 Kec. Komodo, West Manggarai Regency. The positive direction shows that the better the learning motivation and parental attention, the better the learning outcomes. Vice versa, the lower the learning motivation and parental attention, the lower the learning

outcomes obtained by students. The results of this research are strengthened by research by Ummah et al., (2024), there is a positive and significant influence on student achievement, so that parental motivation and attention remain important factors in improving children's learning achievement. Because parents are the first teachers in their children's lives and mentor at home the extra activities their children do.

The influence of the three variables above on learning outcomes, namely, with different levels of encouragement possessed by students, the learning process, both in terms of strategies or learning models, should be adjusted to their respective abilities. Parental involvement in the education process both at home and at school influences the learning outcomes obtained by students, especially in the case of biology learning which requires students to have a responsive role in learning material as well as how to study it and efforts to deepen the material. The influence obtained between these variables cannot be separated from physiological, psychological and social factors that influence student learning outcomes, according to Khodijah (2014) factors that influence learning outcomes include: 1) physiological factors, namely physical factors and sensory health, 2) psychological factors, namely interest, motivation, intelligence, memory and emotions, and 3) social factors, namely parents, teachers and friends or people around the learning environment.

CONCLUSION

Based on the results of the research and discussion, the conclusion that can be drawn from this research is that learning motivation and parental attention simultaneously have a positive and significant influence on the biology learning outcomes of SMA Negeri 1 students, Komodo District, West Manggarai Regency.

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