OPEN ACCESS
Journal of Advances in Education and Philosophy
Abbreviated Key Title: J Adv Educ Philos
ISSN 2523-2665 (Print) |ISSN 2523-2223 (Online)
Scholars Middle East Publishers, Dubai, United Arab Emirates
Journal homepage: https://saudijournals.com/jaep

Original Research Article

Influence of Parents Education Level, Learning Styles and Student Interest on Learning Achievement

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DOI: 10.36348/jaep.2020.v04i06.004 | **Received:** 30.05.2020 | **Accepted:** 08.06.2020 | **Published:** 12.06.2020

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Abstract

The purpose of this study was to determine the effect of: (1) the level of parental education on student achievement, (2) learning style on student achievement, (3) interest in learning towards student learning achievement, (4) learning style on student learning interest, and (5) student learning styles towards student achievement in science subjects through student learning interest in SMP Negeri 1 Martapura Timur. This type of research is included in the quantitative approach with descriptive methods. The population in this study were all students in SMP Negeri 1 Martapura Timur, totaling 157 people. The sample was determined using the Slovin formula, so as many as 143 people were obtained. The distribution of the number of samples of each grade level is determined by proportional random sampling. Data collection techniques used are using a questionnaire that has been tested for validity using Pearson Product Moment correlation and reliability using the split half method. The data obtained were analyzed descriptively and path analysis, after testing the classical assumptions namely normality, homogeneity, multicollinearity, and autocorrelation. The results of this study indicate that there is an influence: (1) the level of parental education on student achievement, (2) learning style on student achievement, (3) interest in learning towards student learning achievement, (4) learning style on student learning interest, and (5) student learning styles towards student achievement in science subjects through student learning interest in SMP Negeri 1 Martapura Timur.

Keywords: Integrated science module, critical thinking, effectiveness.

INTRODUCTION

The development of science and technology is very closely related to the development of education, where education has a strategic role in determining the direction of the development of science and technology. Can be felt when an educational institution in carrying out education is really good and quality, then the results achieved are also maximum. In contrast to educational institutions that carry out education that is only modest, the results will not be optimal in supporting the development of science and technology.

Considering the important role of education as an effort to create quality human resources, an education system for the Indonesian people as required by the Republic of Indonesia Law No. 20/2003 concerning the National Education System is needed.

In Chapter I Article 1 Paragraph 1 of Law Number 20 Year 2003 concerning the National Education System it is stated that education is a conscious and planned effort to create an atmosphere of learning and learning process so that students actively develop their potential to have religious spiritual power, self-control, personality, intelligence, noble character, and the skills needed by himself, society, nation, and country.

One of the subjects taught in junior high school and has an important role in the mastery of science and technology is natural science subjects. According to Powler [1], science is a science that deals with natural phenomena and systematic material arranged regularly, generally applies in the form of a collection of observations and experiments. At present, the development of natural sciences has been advancing rapidly because it is closely related to technological developments. In general, the purpose of learning science in junior high school is that students understand the basic understanding of science which is interrelated with scientific life that is simple and systematic, so that

science is not only a collection of knowledge that are facts, concepts, and principles, but also a process of discovery. Science education is expected to be a vehicle for students to learn about themselves and the natural environment, as well as further development in its application in daily life.

Science is a science that has specificity, the location of its specialty is the method used by scientists to obtain this knowledge. Science method, which is a scientific process or activity that has specific steps and procedures namely observation and experiment. Therefore, teaching science does not only provide scientific information to students, but trains students to work like scientists work. In other words, students must live the science method and practice while learning science.

Learning success, including science learning, one of which is measured through the achievements of students. Therefore, learning achievement is the most important part in learning. Suryabarata [2] states that learning achievement as a value is a form of the final formulation given by the teacher related to the progress or student achievement during a certain time. Evidence of a person's success after gaining learning experience or learning something is a learning achievement achieved by students in a certain time. Furthermore, explained by Suryabarata that learning achievement is the final formulation that can be given by the teacher regarding the progress or student achievement during a certain period. So, achievement is the result of students' efforts during a certain period of doing activities.

Children's achievements are inseparable from the education they get from their families. Education in the family is the first education that parents do for their children. In the family, parents educate their children, instill courtesy and existing norms and instill cultural values that exist in society and so on. Parents also have an important role as educators, caregivers, protectors in the child's development process, because in the family parents are responsible for fostering their children's education and in the family also as a vehicle for early socialization of development in order to be able to lay the foundation of character and personality. The application of education in the family is very influential on children's behavior, both at home and at school.

RESEARCH METHODS

The design of this study uses path analysis. According to Ghozali [3], path analysis is an extension of multiple linear analysis, or path analysis is the use of regression analysis to estimate causality relationships between variables (causal models) that are predetermined based on theory. In this study there are 4 (four) variables, namely two independent variables including the level of parental education (X1) and student learning styles (X2), one dependent variable (intervening) namely student interest (X3), and one variable dependent (dependent) namely student achievement in science subjects (Y). The population of this study was all students in SMP Negeri 1 Martapura Timur, which totaled 157 students with a total sample of 143 students.

The technique used in data collection in this study is to use a questionnaire and field documentation. The analysis technique uses a number of classic assumptions namely normality test, homogeneity test, multicollinearity test, autocorrelation test. The learning device developed was tested for validity using Product Moment correlation from Pearson. This research instrument will be tested on 30 respondents. The testing criteria are done by comparing r arithmetic and r table = 0.361 at the level of $\alpha = 0.05$ and N = 30 respondents. The results of the validity of the learning style questionnaire and student interest show that both types of questionnaires are valid on all items. Then proceed with the reliability test using the split half method by correlating using the Spearman Brown formula.

Table-1: Research Questionnaire Reliability Test Results

No.	Research Questionnaire	Spearman Brown Coefficient	Information
1.	Student Learning Styles	0,948	Reliable
2.	Student Learning Interest	0,938	Reliable

RESEARCH RESULTS AND DISCUSSION

Description of Research Variables

Parents' Education Level

Based on the results of the study, it is known that the level of education of parents of SMPN 1 martapura Timur students can be briefly presented through the following table.

Table-2: Module Validation Results

No.	Level of education	Frequency	Percentage (%)
1.	Elementary	85	59,44
2.	Junior High	41	28,67
3.	Senior High	17	11,89
	Total	143	100

Learning Styles

Student learning styles analyzed in this study there are 3 (three) types, namely visual learning, auditory learning, and kinesthetic learning. Statistical description of the visual, auditory, and kinesthetic learning style scores of students at SMP Negeri 1 Martapura Timur is briefly presented in the following table.

Table-3: Description of Learning Style Scores

Descriptive Statistics							
	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
VISUAL	143	35.00	35.00	70.00	52.0839	6.13636	37.655
Valid N (listwise)	143						
AUDITORY	143	36.00	16.00	52.00	32.9790	5.89278	34.725
Valid N (listwise)	143						
KINESTHETIC	143	32.00	18.00	50.00	32.5385	5.77485	33.349
Valid N (listwise)	143						

Based on the average scores and standard deviations, a classification of visual, auditory, and kinesthetic learning styles can be formed for students at SMP Negeri 1 Martapura Timur, as follows.

Table-4: Classification of Visual Learning Styles

No.	Interval	F	%	Classification
1.	Score ≥ 61,288	7	4.90	Very high
2.	55.152 ≤ Score < 61.288	34	23.78	High
3.	49.016 ≤ Score < 55.152	56	39.16	Is
4.	42.879 ≤ Score < 49.016	41	28.67	Low
5.	Score < 42.879	5	3.50	Very low
	Total	143	100	

Table-5: Auditorial Learning Style Classification

No.	Interval	F	%	Classification
1.	Score ≥ 41.818	11	7.69	Very high
2.	35.925 ≤ Score < 41.818	38	26.57	High
3.	30.033 ≤ Score < 35.925	42	29.37	Is
4.	24.140 ≤ Score < 30.033	42	29.37	Low
5.	Score < 24,140	10	6.99	Very low
	Total	143	100	

Table-6: Classification of Kinesthetic Learning Styles

No.	Interval	F	%	Classification
1.	Score ≥ 41.201	9	6.29	Very high
2.	35.426 ≤ Score < 41.201	37	25.87	High
3.	29.651 ≤ Score < 35.426	51	35.66	Is
4.	23.876 ≤ Score < 29.651	40	27.97	Low
5.	Score < 23.876	6	4.20	Very low
	Total	143	100	

Student Interest

A brief description of the statistical scores of students' interest in learning at SMP Negeri 1 Martapura Timur is presented in the following table.

Table-7: Description of Student Interest Scores

Descriptive Statistics							
	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
INTEREST	143	68.00	75.00	143.00	115.5105	13.25315	175.646
Valid N (listwise)	143						

Based on the average score and standard deviation scores of students 'interest in learning above, it can be formed the classification of students' interest in learning at SMP Negeri 1 Martapura Timur, as follows.

Table-8: Classification of Student Learning Interests

No.	Interval	F	%	Classification
1.	Score ≥ 135.390	8	5.59	Very high
2.	122.137 ≤ Score < 135.390	43	30.07	High
3.	108.884 ≤ Score < 122.137	47	32.87	Is
4.	95.631 ≤ Score < 108.884	38	26.57	Low
5.	Score < 95.631	7	4.90	Very low
	Total	143	100	

Student Achievement

Statistical description of student achievement scores in SMP Negeri 1 Martapura Timur in Natural Sciences subjects is briefly presented in the following table.

Table-9: Description of Student Learning Achievement Scores

Descriptive Statistics							
	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
ACHIEVEMENT	143	27.00	71.00	98.00	81.7203	7.34598	53.963
Valid N (listwise)	143						

Based on the classification of student achievement in accordance with the 2013 Curriculum, it can be formed the classification of student achievement in science subjects in SMP Negeri 1 Martapura Timur, as follows.

Table-10: Classification of Student Learning Achievement

No.	Interval	Frequensy	Percentage (%)	Classification
1.	91 – 100	26	18,18	Very good
2.	80 – 90	45	31,47	Good
3.	69 – 79	72	50,35	Pretty good
4.	< 69	0	0,00	Not good
	total	143	100	

Classical Assumption Test

Normality test

The normality test of this research data is through the normal probability plot of regression standardized residual. The results of data normality testing using SPSS Version 20 can be seen in the following graphic image.

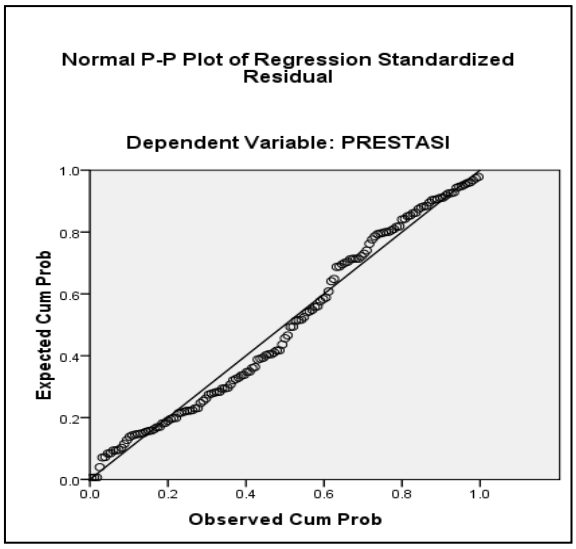

Fig-1: Multiple Regression Normality Test

Homogeneity Test

Homogeneity test data is done by looking at the distribution of points in the SPSS Version 20 scatter plot output between the predicted value of the dependent variable (ZPRED) and the residual (SRESID). Homogeneity test results of data using SPSS Version 20 can be seen in the following figure.

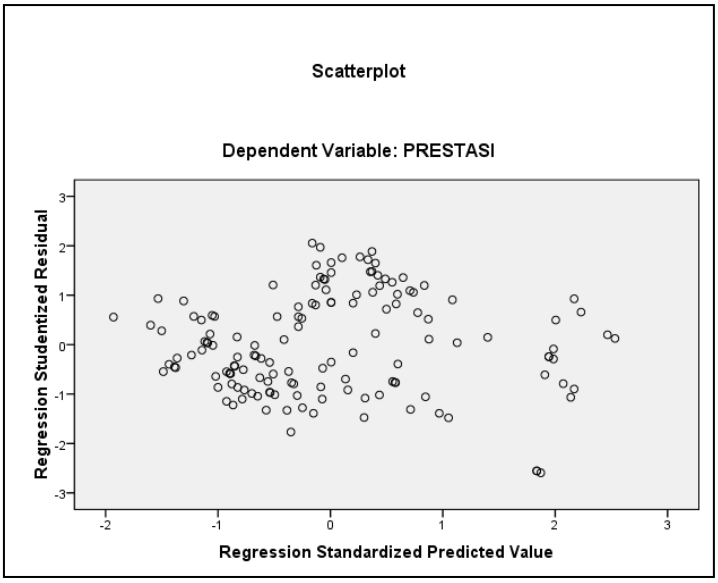

Fig-2: Homogeneity Test for Multiple Regression

Multicollinearity Test

Multicollinearity test is done by looking at the value of Variance Inflating Factor (VIF). If the VIF value of the regression model is less than 10, then the regression model can be declared free from multicollinearity cases. The results of multicollinearity test data can be seen in the following table.

Table-11: Multicollinearity Test of Multiple Regression

No.	Sub Variable	VIF Score
1.	Visual Learning Style	1,128
2.	Auditorial Learning Style	1,102
3.	Kinestatic Learning Style	1,198

Autocorrelation Test

To detect the presence or absence of autocorrelation cases in a regression model is done through testing of the Durbin-Watson value or commonly called the DW test. The results of autocorrelation testing using the DW test using SPSS Version 20 are as follows.

Table-12: DW Multiple Regression Test Results

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.735[a]	.540	.530	5.03619	1.609
a. Predictors: (Constant), INTEREST, STYLE, EDUCATION					
b. Dependent Variable: ACHIEVEMENT					

Hypothesis Testing

Based on the results of the analysis of structural models 1 and 2, a path analysis summary can be made as shown in the following table.

Table-13: Summary of Path Analysis Results

Structure Model 1: X_1,X_2 Against X_3						
Variable	Path coefficient	t	SIG	R^2	F	SIG
X_1	0.286	3.645	0.000	0.166	13.891	0.000
X_2	0.245	3.124	0.002			
Structure Model 2: X_1, X_2, X_3 Against Y						
Variable	Path coefficient	t	SIG	R^2	F	SIG
X_1	0.516	8.448	0.000	0.540	54.374	0.000
X_2	0.162	2.679	0.008			
X_3	0.298	4.738	0.000			

Based on the table above, can be described the path coefficient of each variable through the following diagram.

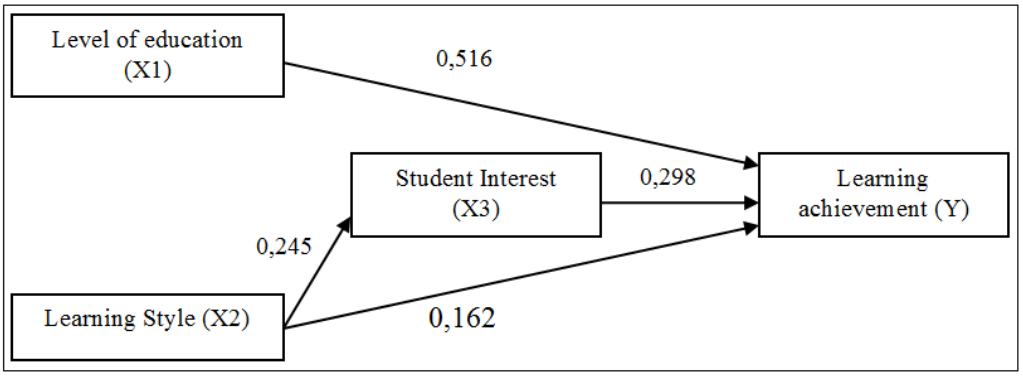

Fig-3: Path coefficient diagram

RESEARCH DISCUSSION

Effect of Parents Education Level on Learning Achievement

Based on the research results it is known that most of the education level of parents of students at SMP Negeri 1 Martapura Timur is basic education which is as much as 59.44%. While the rest are respectively secondary education as much as 28.67% and as high as 11.89%. Whereas for student learning achievement in science subjects, it is known that most of them are classified as good enough which is equal to 50.35%. While the remaining small part is in the good classification that is equal to 31.47% and as high as 18.18%. Then the results of the path analysis show that there is an influence on the level of education of students' parents on student achievement in natural science subjects at SMP Negeri 1 Martapura Timur.

Furthermore, the path analysis results show that the path coefficient of the parents 'level of education of students' learning achievement ($P_{x1.Y}$) is 0.516 with a significance of 0.000. Because GIS ($P_{x1.Y}$) = 0,000 <0.05, it was concluded that there was an influence on the level of education of students' parents on student learning achievement in science subjects at SMP Negeri 1 Martapura Timur.

The results of the study above indicate student achievement, especially in science subjects, is not solely the result of the learning process at school, but is supported by the role of parents at home. Parents have a share in the success of their children. Sometimes the responsibility is not realized by parents, so it often appears that the lack of success of a child is the result of a lack of attention and responsibility from parents. Parents who have a high level of education tend to be more aware that their children's learning success depends not only on the teacher and school, but is also influenced by the family and parents' environment, so parents will prepare a good education, environment, and supporting facilities to facilitate their children in study.

The results of this study are in line with the opinion expressed by Setiadi [4], that the educational experience possessed by parents, both obtained through formal and non-formal institutions will affect the mindset of children in looking at life problems. The higher the level of education possessed by parents, they will have a better life principle to realize the welfare and success of children.

Furthermore the opinion expressed by Ahmadi and Supriyono [5] that the family is the main and first center of education. Starting from the attention of parents, economic conditions, and relationships between family members become an important part in giving influence to children's learning achievement. Therefore, families who have higher education better understand what their children need as a student in meeting their equipment and learning needs.

The results of this study are also in line with research conducted by Yuliana [6] show that the level of parental education greatly influences learning outcomes the student. Furthermore Cholifah's research [7] show that there is a positive and significant influence between the background of parents' educational level on student learning outcomes in Class IV SDN in Sananwetan Sub-district, Blitar City with a large influence of 67.6%.

Effect of Learning Style on Student Learning Achievement

Based on statistical tests it is known that the visual learning style has a t value of 3.058 with a significance of 0.003. Because the value of t arithmetic (3.058) > t table (1.960), it was concluded that visual learning style has a positive and significant partial effect on student achievement in natural science subjects. For the auditory learning style known to have a t value of 2.345 with a significance of 0.020. Because the value of t arithmetic (2,345)> t table (1,960), it was concluded that auditory learning style has a positive and significant partial effect on student achievement in natural science subjects. As for the kinesthetic learning style, it is known to have a calculated value of t 2.118 with a significance of 0.036. Because the value of t arithmetic (2.118) > t table (1.960), it is concluded kinesthetic learning style has a positive and significant partial effect on student achievement in natural science subjects.

The magnitude of the effect of each learning style on student achievement in science subjects is determined through effective contributions (SE) and relative contributions (SR). The effective contribution of visual learning style variable is 8.258, auditory learning style is 6.853, and kinesthetic learning style is 5.251. While the relative contribution to the visual learning style is 40.679%, the auditory learning style is 33.757%, and the kinesthetic learning style is 25.867%. Based on the effective and relative contribution of these three learning styles, it is seen that the visual learning style has the most dominant influence on student achievement in natural science subjects at SMP Negeri 1 Martapura Timur compared to the auditory learning style or kinesthetic learning style. Although in the implementation of science learning in schools, the teacher tries to use methods and learning media (power point, learning animation, chart, practicum) that support all learning styles, both auditory, visual, and kinesthetic.

Based on the results of the study it appears that the visual learning style is the most dominant learning style affecting student achievement in natural science subjects at SMP Negeri 1 Martapura Timur. Visual learning style is a learning style that focuses on vision. When learning new things, usually this type needs to see things visually to make it easier to understand and comprehend. This is in accordance with the concept of science learning that has been applied in SMP Negeri 1 Martapura Timur, where science learning is more prioritizing the practice and use of multimedia (videos, pictures, and the like), so that children can see and more easily understand abstract scientific concepts.

Because visual learning styles have the most dominant influence on student achievement in natural science subjects, these learning styles represent other learning styles for further analysis using path analysis. The results of the path analysis show that the path coefficient for student learning style variables to student learning achievement ($P_{x2.Y}$) is 0.162 with a significance of 0.008. Because GIS ($P_{x2.Y}$) = 0.008 < 0.05, it is concluded that there is an influence of student learning styles on student achievement in natural science subjects at SMP Negeri 1 Martapura Timur.

The results of this study are in line with the opinions of experts, who say that one of the factors that supports learning success is the learning style. The opinion of Ghufron and Risnawita [8], that learning sometimes cannot be achieved optimally due to various internal and external factors, including: student conditions, teacher explanations, learning strategies and methods, learning environment and environment, student intelligence, and learning styles.

Then the opinion of Marton *et al*., [8], where a person's ability to know his own learning style and the learning styles of others in his environment will increase his effectiveness in learning, so that it will also affect his learning achievement.

The results of this study are in line with research conducted by Khoeron, I. R [9] showing that student learning styles have a significant effect on student achievement in SMK Negeri 8 Kota Bandung with a large influence of 52%. Research conducted by Rahmawati [10] that there is a relationship between learning styles on student GPA at the Faculty of Medicine, University of Lampung. Furthermore, research conducted by Wulandari [11] shows that there is a significant relationship between learning styles and student learning achievement in the D4 Midwifery Study Program, Sebelas Maret University.

Effect of Student Learning Interests against Student Learning Achievement

Based on the results of the study note that most of the learning interests of students in SMP Negeri 1 Martapura Timur are in the medium interval of 32.87% and high 30.07%. Some are at low intervals of 26.57%. very high as 5.59% and very low 4.90%. Descriptively student interest in learning which is dominated in the medium classification is in line with student achievement in natural science subjects, where most student achievement is in the classification is quite good at 50.35%. While the rest are partly classified as good at 31.47% and 18.18% as high.

The results of statistical tests using path analysis show that the path coefficient of students' interest in learning variables towards student achievement ($P_{x3.Y}$) is 0.298 with a significance of 0,000. Because the amount of GIS ($P_{x3.Y}$) = 0,000 <0.05, it can be concluded that there is an influence of student learning interest on student achievement in natural science subjects at SMP Negeri 1 Martapura Timur.

The results of the above study indicate that interest in learning has a very close relationship with student achievement. This is in accordance with the definition of interest in learning itself, that is, constant interest and tendency to pay attention and engage in learning activities because of realizing the importance or value of the things learned. Therefore, interest is one of the factors that influence learning success. In the case of learning if students have an interest in a particular subject, students will feel happy and can pay attention to the lesson, giving rise to an attitude of involvement in learning. This is because something that attracts the interests and needs of children, will attract attention, so they will be serious in learning. Thus, if students learn something with high interest, it can be expected that the results will be better. However, if a student is not interested in learning something, it cannot be expected that he will succeed well in learning it. The usual problem is how to make things presented as learning experiences attract students' attention to study.

The results of this study are in accordance with the opinions expressed by experts, including opinions that have been submitted by Slameto [12] that interest has a very large influence on learning, because if the learning material learned is not in accordance with the interests of students, then students do not will study as well as possible, because there is no attraction for him.

The above opinion is reinforced by the opinion expressed by Hawley [13] that students who have high interest in learning will do more and faster activities, compared to students who are less motivated in learning. Achievements will be better if they have a high interest in learning.

The results of this study are also in line with research conducted by Suwardi [14] entitled "The Effect of Learning Interest on Student Achievement in Islamic Education Subjects at SMK Negeri 1 Sengkang, Kab. Wow. The results of his research indicate that there is a significant influence of interest in learning on student achievement. With the price of a = 83.284 and the price of the regression coefficient of 0.058 in other words each addition to the score of learning interest will increase learning achievement by 0.058. Furthermore, research conducted by Rusmiyati [15] with the title "The Influence of Learning Interests Against Learning Achievement in the Field of Economic Studies MA Al Fattah Sumbermulyo Students". The results of his research indicate that students' interest in learning has a moderate or sufficient influence on the learning achievement of the field of economic studies of Madrasah Aliyah Al Fattah Sumbermulyo students.

Effect of Learning Style on Student Learning Interests

Based on the results of the study note that the visual learning style has the most dominant influence on student achievement in natural science subjects in SMP Negeri 1 Martapura Timur compared with the auditory learning style or kinesthetic learning style. According to Subini [16], visual learning style is a learning style by seeing so the eyes play an important role. Visual learning style can be done by someone to obtain information such as seeing pictures, diagrams, maps, posters, graphs, and so on.

The results of statistical analysis using multiple linear regression showed that the magnitude of the path coefficient of students' learning style variables on student learning interest ($P_{x2.x3}$ = 0.245) was 0.002. Because GIS ($P_{x1.x3}$) = 0.002 <0.05, it can be concluded that there is an influence of student learning styles on students' interest in learning at SMP Negeri 1 Martapura Timur.

From these results it can be seen that the learning style has a very important role in student interest in learning. Therefore, a teacher must understand the learning styles possessed by their students. By understanding the learning style, it will be easier for students to learn and the teacher to apply appropriate and maximum techniques and strategies in learning. Only with the appropriate application will it foster student interest in learning, so students will be eager to learn and the level of success in learning will be maximized. This condition also applies in SMP Negeri 1 Martapura Timur, where the use of multimedia in KBM has an impact on students' interest in learning quite well.

Knowing the style of students is very beneficial, including the ability to create a learning style that is fun for students, increase interest in learning, generate motivation to learn and reduce conflicts that arise as a result of learning. This is consistent with the opinion expressed by Gunawan [17] that the knowledge of student learning styles is very important for teachers, parents and students to know, because this knowledge of learning styles can be used to help maximize the learning process so that results learning can be achieved in accordance with the expected goals.

The results of this study are also in line with research conducted by Asikin, I. [18] entitled "The Effect of Learning Style and Emotional Intelligence on Learning Interests of Class X and XI Students of SMK Bina Utama Depok", where the results of the study showed that there was a partial influence of learning styles on interest in learning of Class X and XI students of SMK Bina Utama Depok. Oktavia Research, R. [19] entitled "The Relationship between Learning Style and Learning Interest of Class VIII Students at SMPN 17 Bandar Lampung". The results of his research showed that there was a significant relationship between learning styles with the learning interest of students in class VIII at SMPN 17 Bandar Lampung.

Effect of Learning Style on Student Achievement through Student Interest

The influence of learning styles on student achievement through student interest is determined using indirect path coefficients. Statistical test results show that the coefficient of the indirect path of learning styles on learning achievement through student interest is 0.235. This indirect path coefficient is greater than the direct path coefficient of learning style on achievement ($P_{x2.y}$ = 0.162) with GIS = 0.008 <0.05. Thus, it is ascertained the significance value of learning styles on learning achievement through learning interest is also <0.05. So it can be concluded that there is an influence of learning styles on student achievement in science subjects through the learning interest of students of SMP Negeri 1 Martapura Timur.

Student success in learning is influenced by several factors, namely internal factors that originate from within students and external factors that come from outside themselves, factors from within students, including physical and psychological factors, including

learning styles and student interest in learning. From the description it can be seen that the learning style has a strong influence on student achievement. Basically, every student has a tendency to one particular learning style. However, there are also students who tend to be balanced between learning styles with one another, or even integrate various kinds of learning styles in the learning process. In addition, interest also plays a very important role in student achievement. Because, if a student does not have a great interest and attention to the object being studied, it is difficult to expect the student to be diligent and obtain good results from the results of his study. Conversely, if students learn with great interest and attention to the object being studied, the results obtained are better.

This research is in line with opinions expressed by experts, including those of Marton *et al*., [8], where a person's ability to know his own learning style and the learning styles of others in his environment will increase his effectiveness in learning, so that it will also affect his learning achievement. Then the opinion expressed by Hamdani [20], that the factors that influence learning achievement can be classified into two parts, namely factors from within (internal) and factors from outside (external). Internal factors are factors that come from students. These factors include: intelligence (intelligence), physical factors or physiological factors, attitudes, interests, talents, and motivation. From this opinion, it can be seen that students' learning styles and interests have an important role in influencing student achievement, including student learning achievement in science subjects.

The results of this study are also in line with previous research, including research conducted by Maulia, D [21] entitled "The Effect of Learning Styles and Learning Interests on Learning Achievement of Economic Subjects in Class XI IIS Students in SMA Negeri 7 Surakarta". The results showed that there was a significant influence between learning styles and interest in learning partially and simultaneously on the learning achievement of economic subjects of class XI IIS students in SMA Negeri 7 Surakarta. The magnitude of the effect of learning style variables and learning interest in learning on simultaneous learning achievement obtained from the calculation of R2 is 49.9%.

CONCLUSION

Based on the results of research and discussion, a number of conclusions can be made as follows:

1. The level of parental education has a positive effect on student achievement in natural science subjects at SMP Negeri 1 Martapura Timur, as evidenced by the results of the path analysis showing that the path coefficient ($P_{x1.Y}$) is 0.516 with a significance of 0.000. Because GIS ($P_{x1.Y}$) = 0,000 <0.05. This shows that the level of parental education affects student achievement.
2. Learning style has a positive effect on student achievement in natural science subjects at SMP Negeri 1 Martapura Timur, as evidenced by the results of the path analysis showing that the path coefficient for student learning style variables on student achievement ($P_{x2.Y}$) is 0.162 with a significance of 0.008 . Because GIS ($P_{x2.Y}$) = 0.008 <0.05. This shows that learning styles affect student learning achievement.
3. Interest in learning has a positive effect on student achievement in natural science subjects at SMP Negeri 1 Martapura Timur, as evidenced by the path coefficient of variable students' interest in student achievement ($P_{x3.Y}$) is 0.298 with a significance of 0,000. Because the size of GIS ($P_{x3.Y}$) = 0,000 <0.05. This shows that interest in learning affects student achievement.
4. Learning style has a positive effect on student learning interest in science subjects at SMP Negeri 1 Martapura Timur, as evidenced by the results of the path coefficient of student learning style variables on student interest ($P_{x2.x3}$ = 0.245) is 0.002. Because GIS ($P_{x1.x3}$) = 0.002 <0.05. Show that learning styles affect student learning interest.
5. Student learning styles have a positive effect on student achievement in natural science subjects through student interest in learning at SMP Negeri 1 Martapura Timur. Statistical test results show that the coefficient of the indirect path of learning styles on learning achievement through student interest is 0.235. This indirect path coefficient is greater than the direct path coefficient of learning style on achievement ($P_{x2.y}$ = 0.162) with GIS = 0.008 <0.05. Thus, it is ascertained the significance value of learning styles on learning achievement through learning interest is also <0.05. . Shows that together student learning styles and learning interests influence student learning achievement.

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