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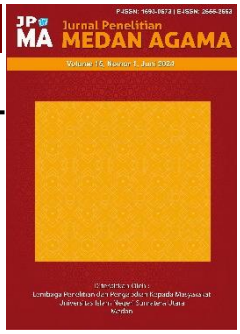

The Influence of Visual Learning Styles on Learning Outcomes in PAUD Tegar Tangguh Kampung Gunung, Simalungun Regency

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Abstract

This study aims to determine the effect of visual learning style on visual learning style on early childhood learning outcomes at PAUD Tegar Tangguh hamlet II village Bandar Jawa, Bandar Sub-district, Simalungun Regency. this research is motivated by the results of observations conducted and found interesting facts that the majority of learning activities still use auditory learning styles. The results of this observation revealed that learning methods that focus on hearing, such as listening to stories or verbal explanations, are not the main preference for students in absorbing information. The type of research conducted by researchers in this study is quantitative research with multiple linear regression methods. This research was conducted at PAUD Tegar Tangguh hamlet II village Bandar Jawa, Bandar District, Simalungun Regency with a sample of 30 students out of 120 students. Data collection was done by giving a questionnaire with a Likert scale model. Data analysis used is using multiple regression analysis. The results of this study indicate that visual learning styles have an effect on learning outcomes. early childhood, this can be seen from the significance value which is worth (Sig 0.000 <0.05) and for the value of F count> F table (28.830 > 3.34). The coefficient of determination of the effect of visual learning style variables on early childhood learning outcomes is 59.7% while the rest is influenced by other variables

Keywords: visual learning style, learning outcomes, early childhood

1. INTRODUCTION

Education involves the process of transferring knowledge, skills and values from one generation to the next. More than simply passing on information, the purpose of education is to develop individuals' potential and personality, help them understand the world around them and become productive members of society. Educational approaches cover a wide range of levels, including formal education in schools as well as informal education that takes place at home, in the community or through everyday experiences.

Early childhood education is an educational process provided to children starting from an early age, namely from infancy to before entering primary school. This education aims to develop children's potential holistically, including physical, cognitive, language, social and emotional development.

Early childhood education programs usually include a variety of activities tailored to the child's developmental level, such as playing, singing, colouring, role-playing and sensory activities. The main goal is to prepare children to enter the next level of education

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better prepared physically, mentally and emotionally. The methods used are usually highly interactive, play-orientated and support the child's exploration of the world around them.

Education is considered a centre of excellence in shaping superior human character, encouraging people to be ready to face Global challenges. Therefore, education is seen as the best place to prepare oneself to develop attitudes, behaviours, characters, and leadership abilities (Arsyad, 2013).

Education from an Islamic perspective is not just a transfer of knowledge and skills, but a process of character building and noble morals (Aminah & Nursikin, 2023). Islam places education as one of the important values in human life, as illustrated in various verses of the Qur'an and the traditions of the Prophet Muhammad SAW which provide guidance for Muslims in terms of education.

Islam teaches that education is an obligation for every individual, both men and women. Allah SWT says in Surah Al-Zumar (39:9):

قُلْ هَلْ يَسْتَوِي الَّذِينَ يَعْلَمُونَ وَالَّذِينَ لَا يَعْلَمُونَ ۗ إِنَّمَا يَتَذَكَّرُ أُولُو الْأَلْبَا

Meaning: ‘Say: ‘Are those who know equal to those who do not know?’ Verily, it is the intelligent who are capable of learning.’ (Qur'an in Word Version 1.3).

According to Depoter and Hernacki in Wulandari, there are three types of learning styles, namely visual, auditory, and kinesthetic learning styles. The characteristics of this learning style are that visual students learn through what they see, auditory students learn through what they hear, while kinesthetic students learn through movement and touch.

Student Learning Style is the way an individual feels comfortable, enjoys and feels safe during the learning process, both in terms of time and substance. A learning style is the preference one chooses to acquire information or knowledge during learning. Given that each individual has different learning needs, processing information can be difficult. Learning needs and ways of processing information are different for everyone. According to Dr Rita and Dr Kenneth Dunn, learning styles include the way individuals begin to focus, absorb, process and integrate new and difficult information. For example, some people prefer to study at night because the atmosphere is quieter, while others may be more comfortable studying while eating a snack, lying down, watching TV, listening to music, or choosing a quiet environment (Asnawi et al., 2023).

This shows that each student has unique learning needs, learns in different ways, and processes information in different ways. Therefore, it is important for teachers to pay attention to the specific learning needs of each student so that the learning process can run smoothly:

a. Irham argues that learning style is a process of behaviour, appreciation, and a tendency to learn or acquire knowledge in a student's own way (Irham & Ardy, 2014);
b. Learning style is the typical way of learning of a student (Yuniar & Umami, 2023);
c. A learning style is the consistent method in which a student responds to stimuli or information, remembers it, processes it cognitively, and solves problems (Diananda, 2019);
d. A person's learning style is a combination of how they absorb, organise and process information (De Porter & Hernacki, 2007);
e. Learning style is not only related to the way an individual processes information such as seeing, listening, writing and speaking, but also relates to the way an individual processes information, either analytically or holistically, or using the

left and right brain. One other important aspect is how individuals react to the learning environment, both abstractly and concretely.

From the definition of learning styles, it can be concluded that students' learning styles are individual preferences in absorbing information or knowledge during the learning process. Each individual has a unique and diverse learning style. There is no one learning method that is better or worse than another. By recognising students' primary learning styles, they can find more effective learning methods. Thus, when one can utilise their learning abilities to the fullest, their learning outcomes will reach their optimum potential.

Although each student has a different learning style, students usually tend to adhere to one of these learning styles (V-A-K). Each child's learning style will affect his/her academic achievement by the student (Prihatin, 2017).

In addition to understanding students' learning styles, teachers can also develop moral values that can shape positive behaviour in students by instilling discipline in students. According to Singgih and Pardiman, Discipline is student autonomy over written and unwritten rules that have been implemented by related students as well as a form of awareness of one's own duties and responsibilities in that learning. For example, going to school on time, doing homework given by the teacher, not cheating when doing homework, and wearing uniforms according to school regulations. To develop the values that exist in students, the role of teachers is very important in instilling and improving discipline in students.

A good teacher will organise all his work to facilitate his students' learning, not to make his work easier. Good teachers understand how their students learn (Yani & Jazariyah, 2020).

Teachers must continue to expand their knowledge of the latest teaching methods, participate in training and participate in professional networks. Continuous professional development helps them stay relevant and effective in the face of the changing world of education. (Muhammad Wahyudi, Helda Jolanda Pentury, 2023).

There are several types of learning styles for students, such as active and reflective students, visual and sensory students, visual and verbal students, sequential and global students. Just like everyone's personality, everyone has a different way of learning (Happy Ayu, 2015). Learning through audio makes it easier to absorb information in the form of visual displays. There are also people who find it easier to absorb information through movement.

Visual learning style is the way a person is more effective in processing and remembering information when it is presented visually. People with a visual learning style tend to understand and remember information more easily if it is presented in the form of pictures, diagrams, graphs, or videos, compared to information presented verbally or in writing.

Article 1 of Law No. 14/2005 on Teachers and Lecturers stipulates that professional educators have the main tasks of educating, teaching, guiding, directing, training, assessing, and evaluating students in the fields of preschool education, formal education, primary education, and junior secondary education. One of the duties of a teacher is education, which includes educating students to behave in a disciplined manner. Student discipline also affects student academic achievement (De Porter & Hernacki, 2007).

In the initial research at Paud Tegar Tangguh, the researcher found an interesting fact that the majority of learning activities still use auditory learning styles. The results revealed that auditory-focused learning methods, such as listening to stories or verbal explanations, are not the primary preference for students in absorbing information. These findings provide valuable insights for curriculum development and teaching strategies at

Paud Tegar Tangguh, as well as demonstrating the importance of tailoring learning methods to individual learning styles to maximise learning effectiveness. Therefore, the researcher conducted an initial trial to introduce visual learning styles.

Through initial observations made after using visual learning styles in the teaching and learning process at PAUD Tegar Tangguh, it was found that learning through this learning style made the learning system more efficient. Among the many factors that influence academic achievement or learning outcomes, researchers are interested in understanding the various visual learning styles that predominate success in early childhood achievement or learning outcomes.

2. METHOD

This research uses a quantitative approach. The quantitative approach was chosen to see the effect of visual learning style on learning outcomes. The quantitative approach was also chosen by the author because through this approach the author can obtain accurate and measurable data in the form of numbers and analysed using statistics.

Population is an object/subject taken from a data source in a study and has certain qualities and characteristics. In this study, the subject is the population of Paud Tegar Tangguh Huta II Kampung Gunung Nagori Bandar Jawa Simalugun Regency with a total of 120 students from 3 classes with 53 male students 47 female students.

The sample is part of the number and characteristics of a population. If the research population is less than 100 people, then the entire sample is taken. However, if the population is more than 100 people, then the sample can be taken between 10 to 15% or 20 to 25% or more (Sugiyono, 2016). So, the number of samples in this study were 30 students in group B Horse PAUD Tegar Tangguh Dusun II Kampung Gunung Bandar Jawa Village, Simalungun Regency.

Table 1
Population Data

School Year	Butterfly Group		Horse Group		Tiger Group		Total		Total
2023/2024	M	F	M	F	M	F	M	F	120
	21	24	12	18	26	19	59	61	

Source: Observation Results of Tegar Tangguh PAUD

The sample determination is calculated using the Slovin formula, which is as follows:

Sample formula $n = \frac{N}{1+N.e^2}$

Description:

n = Sample Size
N = Research Sample
e = Error/error rate used (25%)

The following is a sample calculation using the Slovin formula above, then:

$$n = \frac{N}{1+N.e^2}$$

$$n = \frac{120}{1+120(0,25)^2}$$

n = 30,25 = rounded to 30,

From the results of the sampling technique obtained, namely 30.25 which was then rounded up to 30 people. The sampling technique is to use a simple random sampling technique in the form of a simple random sample. For the sake of the analysis carried out, 30 students were taken from a population of 100 students.

3. RESULT AND DISCUSSION

1. Results

a. Validity Test Results

The validity test was carried out using a two-sided test with a significant level of 0.05 by comparing r count or pearson correlation value and comparing r table. If r count> r table (two-sided test with sig. 0.05) then the question items in the questionnaire are declared valid. But if r count < r table (two-sided test with sig. 0.05) then the question items in the questionnaire are declared invalid.

There are 30 questionnaires that have been tested by each respondent. The r table value for a two-sided test with a significant 0.05 then Df = n-2 or df = 30-2 = 28 then obtained an r table of 0, 306. The validity test results can be seen from the following table:

Table 2
X Variable Validity Test Results

Question Item	R-Count	R-Table (Sig. Level 5%)	Description
1	0, 702	0, 306	Valid
2	0, 477	0, 306	Valid
3	0, 306	0, 306	Valid
4	0, 408	0, 306	Valid
5	0, 720	0, 306	Valid

Source: primary data processed with SPSS 24

Based on the table above, it is known that the results of the validity test calculation r count> r table. This shows that the five questions on variable X1 are declared valid so that they are free from the requirements of a good linear regression test.

Table 3
Y Variable Validity Test Results

Question Item	R-Count	R-Table (Sig. Level 5%)	Description
1	0, 670	0, 306	Valid
2	0, 499	0, 306	Valid
3	0, 453	0, 306	Valid
4	0, 353	0, 306	Valid
5	0, 660	0, 306	Valid

Source: primary data processed with SPSS 24

Based on the table above, it is known that in variable Y the first question item is (0.670> 0, 306), the second is (0.499> 0, 306) the third (0.453> 0, 306) the fourth (0.353> 0, 306) and the fifth (0.660> 0, 306) then the results of the validity test calculation r

count> r table. This shows that the five questions on variable Y are declared valid so that they are free from the requirements of a good linear regression test.

b. Normality Test Results

The normality test is carried out to test whether the results of the residual values in the regression model are normally distributed or not. If it has a normally distributed residual value, the regression model is good. The normality test method is by looking at the distribution of data on the normal P-P Pot Of Regression Standartdized residual graph.

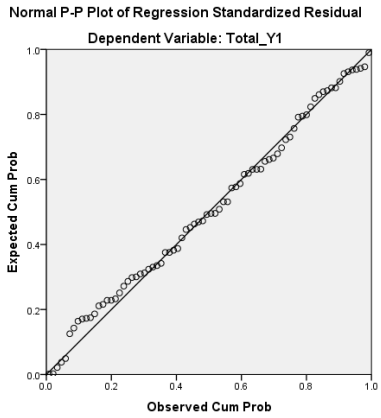

Figure 1
Normality Test Results With P Plot

Based on the results of the Normality Test image above, it can be seen that the data has a normal distribution or distribution and is in accordance with a good regression model. This can be seen from the points or patterns spreading around the diagonal line and parallel to the diagonal. Next are the results of the normality test using a histogram.

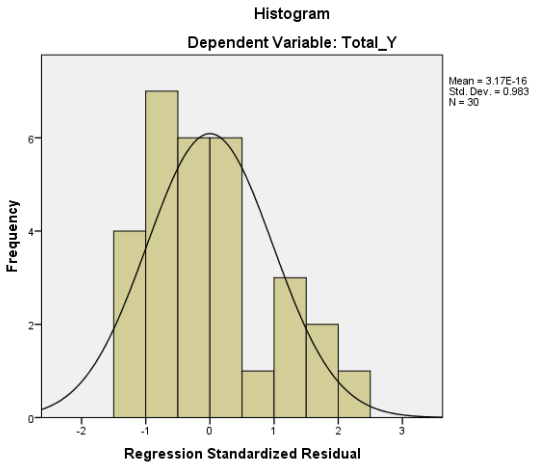

Figure 2
Normality Test Results Using Histograms

Based on the results of the Normality Test image with Histogram, it can be seen that all variables are normally distributed because the histogram curve above corresponds to a parabolic shape.

c. Hypothesis Test Results

1) T Test

In the t test, if the Sig value is <0.05 or the t value> t table, then there is an influence of variable X on Y. The t table value will be tested at a significance level of 0.05 (two-sided test) with degrees of freedom df (n-k-1) or 30 - 2 - 1 = 27 (n is the amount of data and k is the number of independent variables). With a significance test = 0.05, it is known that the t table obtained is 1.703.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.414	1.855		3.458	.002
	Variabel_X	.655	.122	.712	5.369	.000

a. Dependent Variable: Y

Source: primary data processed with SPSS 24

Figure 3
Results of the t test Coefficients[a]

From the table above shows that sig (0.00 <0.05) or the value of t count> t table (5.369> 1.703). then there is an influence of variable X on Y.

2) F Test

In the F test, if the sig value is <0.05, then simultaneously there is an influence of variable X on variable Y. The value of the F table to be tested at a significant level is 0.05, then the way to determine the F table is df (n1) = k - 1 or 2 - 1 = 1 and df (n2) = n - k or 30 - 2 = 28. So that it can be obtained F table of.

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	24.689	1	24.689	28.830	.000[b]
	Residual	23.978	28	.856		
	Total	48.667	29			

a. Dependent Variable: Y
b. Predictors: (Constant), Variable_X

Source: primary data processed with SPSS 24

Figure 4
ANOVA[a] F Test Results

From the table above shows that in the F test the sig value (0.00 <0.05) or F count> F table (28.830> 3.34) then simultaneously there is an influence of variable X on variable Y.

3) R^2 Determination

The coefficient of determination (R2) is a value used to determine how the variation in the value of the dependent variable is influenced by the variation in the value of the independent variable.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.712[a]	.597	.490	.925

a. Predictors: (Constant), Variable_X

Source: primary data processed with SPSS 24

Figure 5

The result of determination R^2 Model Summary

The table above shows that the coefficient of determination R2 Square is 0.59.7% or 57%. So it can be seen that the independent variable is able to explain the dependent variable 59.7%, the remaining 40.3% is explained by other variables outside the regression model in this study.

2. Discussion

Based on the table above about the indicators of early childhood learning outcomes in Paud Tegar Tangguh Dusun II Kampung Gunung, Bandar Jawa Village, Bandar District, Simalungun Regency.

a. It can be seen from the results of the validity test which shows that of the five questions submitted to students, the two variables are valid because the R-count exceeds the R-table so that the questions and answers have a significant effect;
b. It can be seen from the results of the normality test which shows that the histogram image is normally distributed so that it has fulfilled good regression;
c. It can be seen from the results of the Hypothesis test, including the calculated f test and the calculated t test which is greater than the f table and t table. That means it shows that the hypothesis test has a significant effect.

The data that researchers obtained with research conducted by Fairus Suryani Munir in a journal entitled Anallisis of student learning styles (Visual, Auditory, and Kinesthetic) on student learning outcomes in 2021 with the results of the adjusted coefficient of determination (Adjusted R Square) of 46.7 which means that the Learning Outcome Dependent Variable explained by Learning Style as an Independent Variable is 51.1%. While 48.9% is explained by variables outside the variables used in the research, it is not much different from the data that researchers produce.

4. CONCLUSION

Based on hypothesis testing and discussion of research results in the previous chapter, it can be concluded that, Visual learning style affects the learning outcomes of early childhood in PAUD Tegar Tangguh Huta II Kampung Gunung Nagori Bandar Jawa District Bandar Simaungun Regency. This situation can be seen from the test results which show that the posttest treated with a visual learning style has significant results.

The results of the research conducted show that from the validity test, namely R count> R table or (R count> 0.306), then the normality test using a histogram with the results of a regression model that has been normally distributed, then the hypothesis test where the t test count> t table (5.369> 1.703), f count> f table (28.830> 3.34) as well as residuals with a level of 59.7%, it shows that the research results have a significant positive effect.

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