International Journal of Science and Applied Science: Conference Series P-ISSN: 2549-4635
Int. J. Sci. Appl. Sci.: Conf. Ser., Vol. 8 No. 2 (2024) E-ISSN: 2549-4627
https://jurnal.uns.ac.id/ijsascs doi: 10.20961/ijsascs.v7i1.95174

Bringing the Audio Visual Learning Media to Enhance the Cognitive Learning Outcomes: A Case Study on Cattari Ariya Saccani Chapter of Buddhist Religious Lesson Material at School

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Abstract: The variables of audio-visual learning media with cognitive learning outcomes were examined to determine the strength and magnitude of the influence. The problem among students was that using media made them understand the material better if there were pictures. It is more enjoyable to use media because of examples of the material. The approach used in this research is quantitative involving 34 respondents with a survey method. The study was conducted in junior high schools with student respondents. Before conducting a simple linear regression test, the initial stage is tested with a validity test and then a reliability test. This result shows that the significance value is less than 0.05 and the R square value is 0.499. This means that audio-visual-based learning media affects cognitive learning outcomes with a nominal amount of 49.9%, as well as other influencing factors by 50.1%.

Keyword: Learning Media, Cognitive, Learning Outcomes

1. Introduction

Education is essential in building a country or nation because, without the support of education, the development process of a country or nation will not be able to run smoothly. The achievement of education is anticipated to be capable of independently and comprehensively advance the caliber of Indonesia's resources now and in the future, especially human resources.

Schools where learning activities occur must make changes and improvements to change wrong assumptions. Education is said to be successful if school learning activities produce positive changes for individuals in skills, knowledge, attitudes, and behaviors that can be applied in community life [1]. Education is essential because it can provide new knowledge and build students' character. Learning is not always centered on teachers; students can learn materials by talking and exchanging opinions [2]. Over time, learning will be more boring for students. With the development of science and technology, teachers do not utilize media as one of the learning processes, and teachers still provide materials monotonously or directly in order for pupils to will become

disinterested in the process of learning [3]. Based on a preliminary study using the interview method on August 15, 2024, the researcher found that "students said that by using media, they understand the material better if there are pictures." It is more enjoyable to use media because you can see examples of the material. Therefore, in learning, it is necessary to apply Audiovisual educational resources. The application of learning materials based on audiovisual in education has received considerable attention in recent decades. This media works well for raising student understanding and involvement within the classroom [4][5].

According to [6] Supporting the offline and online learning processes requires the use of learning materials with an audio-visual component. The use of these media fosters student motivation; students are active and enthusiastic in carrying out learning. It is in line with what was conveyed by [7] that audio-visual learning media on hydrosphere material is stated to be valid, very practical, and very good to be used in science learning in junior high schools, including those that are Islamic. This media can be used in hydrosphere material to measure the learning outcomes of Islamic junior high school students. Therefore, this study intends to determine the extent of influence audio-visual learning media impacts pupils' cognitive learning results, especially on the material of *Cattari Ariya Saccani.* Consequently, it is essential to have learning using audio-visual media so that students will more quickly grasp the teaching given in class.

2. Method

This study uses a quantitative survey method by distributing to a predetermined sample [12], [13]. The design in this research carried out by the researcher includes conducting observations, compiling the background of the problem, using instrument validity tests to identify problems, creating theoretical foundations or searching for theories related to audio-visual-based learning media and cognitive learning outcomes, and creating research methods.

3. Results and Discussion

3.1. Results

Based on data processing using SPSS 26 computer software, it is known that the audio-visual-based learning media variable (X) from the survey completed by 34 respondents obtained a range score of 75.00, a minimum score of 99.00, a maximum score of 174.00, a mean score of 136.2941, a standard deviation score of 18.58890, and a variance score of 345.547. The audio-visual-based learning media variable comprises 35 statement items divided into four indicators. The following are the criteria for each indicator and a recapitulation of the student's cognitive learning outcome variables.

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Table 1. Statistical Description

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Media Learning Audio Based Visual	34	75.00	99.00	174.00	136.2941	18.58890	345.547
Valid N 34 (listwise)							

(Source:2024 research data processing using SPPS 26.0)

3.1.1. *Normality Test*

The normality test was carried out by testing one Kolmogorov-Smirnov sample. It is said that normal data if it meets the requirements the significance value is greater than 0.05. The results of data processing showed the number 0.200 which means that the data is normally distributed. The output of data processing is presented in the table below.

Table 2. Normality Test

One-Sample Kolmogorov-Smirnov Test		
		X_Y
N		34
Normal Parametersa,b	Mean	269.5000
	Std. Deviation	33.55434
Most Extreme Differences	Absolute	.098
	Positive	.098
	Negative	-.084
Test Statistics		.098
Asymp. Sig. (2-tailed)		,200c,d
a. Test distribution is Normal.		

(Source:2024 research data processing using SPPS 26.0)

3.1.2. Hypothesis Testing and Simple Linear Regression Analysis

The research hypothesis is tested with the criteria of rejection Ho if tcount > ttable or significance < 0.05. Based on the data analysis, the tcount value is 5.647, and the ttable value with df = n-2 is df = 32 of 1.693 with sign value 0.002. This means that there is a very good influence of audio-visual-based learning media variables on the cognitive learning outcomes of junior high school students.

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Table 3. Regression Equation Output

Coefficientsa					
		Unstandardized Coefficients		Standardized Coefficients	
Model		B	Std. Error	Beta	T Sig.
1	(Constant)	37,657	17,618		2.137.040
	Audio-visual-based learning media	.740	.131	.706	5,647.000
a. Dependent Variable: Learning Outcomes					

(Source:2024 research data processing using SPPS 26.0)

Based on the output results by reading the coefficient, a constant value of 37.657 was obtained, meaning that if the audio-visual media has a value of 0, then the consistent value of cognitive learning outcomes is 37.657. The regression coefficient of student cognitive learning outcomes is 0.740, meaning that if audio-visual-based learning media improves, it means that student learning outcomes will increase by 0.476. Here is the regression equation as follows. Y = a + bx = 37.657 + .740X.

Based on the anova analysis, the Fcount value was obtained at 31,886 with a significance of 0.000, so there is no need to match the Ftable because SPSS has given a significance value. This shows that the independent variable has an effect on the dependent variable. For more details, please refer to the following anova table.

Table 4. Anova Analysis Output

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5691.349	1	5691.349	31,886	,000b
	Residual	5711.710	32	178,491		
	Total	11403.059	33			
a. Dependent Variable: Audio Visual Learning Media						
b. Predictors: (Constant), Learning Outcomes						

(Source: 2024 research data processing using SPPS 26.00)

The determination coefficient in the table below is R Square, which has a value of 0.499, which means that 44.9% of audio-visual-based media affect cognitive learning outcomes ,while other variables affect the remaining 50.1%.

Table 6. Determination Coefficient ValueR Square

Model Summaryb				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,706a	,499	,483	13.36005
a. Predictors: (Constant), Audio Visual Learning Media				
b. Dependent Variable: Learning Outcomes				

(Source: 2024 research data processing using SPPS 26.0)

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3.2. Discussion

The results of data analysis and hypothesis testing found that audio-visual-based learning media had a positive influence on students' cognitive learning outcomes. It might be interpreted that learning materials with an audiovisual component have been used to develop Cognitive learning outcomes for students when learning using media [8]. Cognitive learning objectives are influenced by basic knowledge, teacher and peer tutor expertise, equivalent language/communication, and practical knowledge transfer [9]. In the process of learning in the classroom, students are still less urged to sharpen their cognitive abilities, and The goal of the educational process is students' capacity for memorization; kids' brains are compelled to retain and compile the different elements they recall. [10][11]. Anything that can be utilized to stimulate students' ideas, feelings, attention, and abilities or skills in order to promote the learning process is considered learning media. This restriction is nonetheless rather extensive and profound, encompassing knowledge of sources, the environment, people, and learning strategies. Typically, learning media refers to items that are introduced into the classroom to enhance the efficiency of the teaching and learning process [12][13]. The cognitive perspective that the learning process involves a transfer of knowledge from teachers to students, mostly in the classroom, has an impact on this limited understanding. In essence, media is a part of the educational system. Media should be a crucial component of the educational process [14] [15].

Data analysis shows that the level of learning through audiovisual means media for junior high school Pupils fall into the upper category. a percentage of 78%. The content quality indicator shows that junior high school students can answer in the high category with a percentage of 67%, meaning that junior high school students can understand cognitive learning outcomes. The visual and animation quality indicators show that junior high school students can answer in the high category with a percentage of 81%, meaning that junior high school students can understand cognitive learning outcomes. In the audio quality indicator, students can answer in the high category with a percentage of 81%, and the class usage method indicator with a high category with a percentage of 75%. It can be interpreted that junior high school students can understand cognitive learning outcomes by incorporating audio-visual learning into the educational process [15]–[17]. The outcomes of data analysis on the variable of cognitive learning outcomes of pupils using the knowledge indicator show a percentage of 76% in the high category. The details of each indicator answer the average in the high category with the percentage of answers, namely: 1) knowledge 76% in the high category; 2) Understanding 81% in the high category; 3) application with an average answer in the high category of 81%; 4) conceptual errors with an average of 75% of respondents answering in the high category. The simple linear regression data analysis indicates the t-value is 5.647, as well as the importance of (p) is 0.000 <0.05. From these results, It might be interpreted that educational media that is based on audiovisual positively affects the cognitive learning objectives of junior high school students. The magnitude of the influence can be seen from the results of the simple linear test analysis, which found a determination value of

R-squared 0.499, it indicates that audio-visual-based 49.9% of cognitive learning outcomes are impacted by learning media, with the remaining 50.1% being influenced by unstudied factors.

4. Conclusion

The study concluded that audio-visual learning media significantly positively affected students' cognitive learning outcomes. It indicates that using such media can improve students' comprehension and retention of the material taught. The influence of audiovisual materials on learning outcomes related to cognition was measured through the R Square value, which was reported at 49.9%. It means that about half of The learning objectives of the students can be attributed to the use of audio-visual media, while the rest of 50.1% is influenced by other factors not examined in the study. The study emphasized that the instruments used to measure the effectiveness of audio-visual media and cognitive learning outcomes were reliable. This dependability indicates that the findings are credible and reflect the actual impact of the media on students' learning. Understanding and utilizing various media types effectively in the learning process is essential. It suggests that teachers should be well informed about the selection and application of media to ensure that educational messages are delivered clearly and effectively. The beneficial role of audio-visual media in improving cognitive learning outcomes among students indicates the need for careful selection and application of media in educational settings.

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