International Journal of Educational and Psychological Sciences (IJEPS)
Vol. 1, No. 14, 2023: 241-252

The Influence of The Use of Video-Based Audio Visual Media on Learning Outcomes of Class V Students Theme 2 Clean Air for Health Subtema 1 How The Body Manages Air Clean at State Primary School 097805 Red Hair

Eko Rado Purba[1]*, Emelda Thesalonika[2], Radode Kristianto[3]
Universitas HKBP Nommensen Pematang Siantar
ekop59759@gmail.com[1],emeldathesalonika@gmail.com[2],
radodesimarmata0@gmail.com[3]
Corresponding Author: Eko Rado Purba ekop59759@gmail.com

A R T I C L E I N F O

Keywords: Learning Media, Audio Visual Media, Learning Outcomes

Received : 10, July
Revised : 20, August
Accepted: 25, September

A B S T R A C T

This research aims to determine the effect of video-based audio-visual media on the learning outcomes of class V students. The method in this research is a quantitative method, in October 2023, the population in this study is all class V students of SDN 097805 Rambung Merah, totaling 24 people with two The research variables are the dependent variable (x) in the form of learning outcomes, and the independent variable (y) in the form of video-based Audio Visual media. Audiovisual media is media/tools that can be heard, meaning they can be heard, and tools that can be seen, meaning they can be seen. The test results used the Normality test, Homogeneity test, N-Gain test and Anova test with the help of the SPSS version 23 program. Based on the calculation results, the average value was obtained, the mean N-Gain score was 0.7339, meaning the data was included in the medium category. The N-Gain percentage is 73.3911% and from the results of the significance in the anova test it is 0.000, which means the significance value is 0.000 < 0.005. This means that the data shows that there is influence or Ha is accepted.

INTRODUCTION

Education is an activity that is planned for life and is a basic human need. Education takes place not only at school, but also at home and in the community. Education is also an action that allows learning and development to occur. Education is considered successful if an increase in the quality of education is achieved.

According to Heidjrachnan and Husnah (Dini Haryati 2020:317) Education is an activity to increase a person's general knowledge, including increasing mastery of theory and skills, deciding and finding solutions to problems involving activities in achieving goals, be it problems in education or life. daily

According to Law of the Republic of Indonesia Number 20 of 2003 concerning the National Education system, education is defined as: A conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, noble character. as well as the skills needed by himself, society, nation and state.

Based on the opinions of the experts above, researchers can conclude that education is a conscious and planned effort to create a learning atmosphere and learning process so that students are active and easily understand the material presented and are able to develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble morals and skills needed by himself and society.

Based on the researcher's experience when conducting observations during Field Practice Implementation (PPL) at SDN 097805 Rambung Merah, the researcher found that teachers had not focused learning on students as learning subjects. This can be seen from teachers who do not use media when learning takes place in class, that is, teachers tend to use the lecture method, causing students to appear monotonous, such as not taking the initiative to ask about material they don't understand, students just waiting for the teacher to ask before the students have the intention. to answer, and there are still students who just remain silent when asked a question by the teacher.

Based on the problems and data above, one solution that can be done is to use learning media so that students are more active and students can digest and understand the material being taught. So the author will try to apply audio visual media, which allows students to understand the material being taught.

According to Wina Sanjaya (2014) Audio Visual Media is a type of media that apart from containing sound elements also contains image elements that can be seen, such as video recordings, various sizes of film, sound slides and so on. And according to Auderson Audio Visual is a series of electronic images that are accompanied by audio sound elements and have image elements expressed through video, whereas according to Barbahara Audio Visual is a way of producing and conveying material using mechanical and electronic equipment to convey audio-visual messages in accordance with students' needs. Audio visual learning media is used to attract students' attention in improving student learning outcomes. According to (Wati, 2016:5) audio visual

media is one of the media that has interesting and better capabilities (Wati, 2016:54).

CONCEPTUAL FRAMEWORK

A conceptual framework is a relationship or connection between one concept and another concept of various problems to be researched. This conceptual framework is useful for connecting or explaining at length a topic that will be discussed.

To achieve student learning outcomes, researchers first gave *a pretest* to class V in the form of multiple choice questions to determine students' initial abilities. Next, the researcher applied Audio Visual media to the class. The steps used are, finding and understanding problems during learning, explaining problems that arise during teaching and learning activities, solving problems, comparing and discussing answers. Next, the researcher will give *a posttest* with the same questions to determine the effect of Audio Visual Media on student learning outcomes. After the researcher got the students' *pretest* and *posttest scores* , the researcher carried out data analysis to get conclusions.

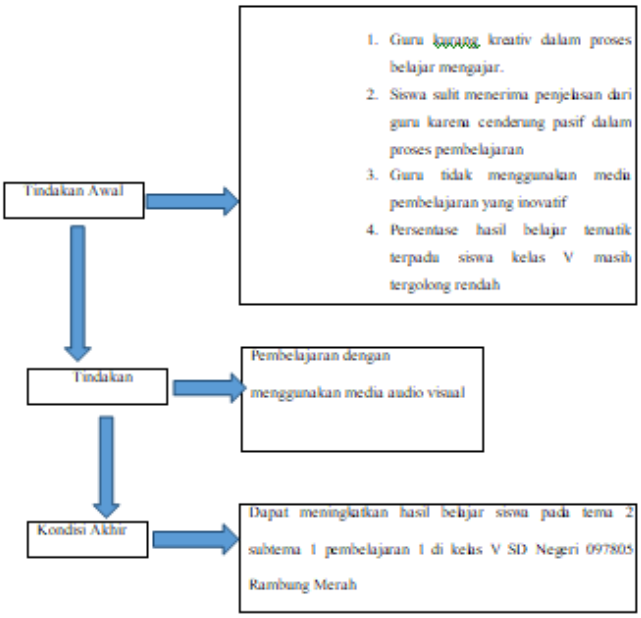

Figure 1. Conceptual Framework

RESEARCH METHODS

This type of research is quantitative research with experimental research methods . According to Syafrida Hafni Sahir (2021:13) Quantitative methods are research with tools for processing data using statistics, therefore the data obtained and the results obtained are in the form of numbers.

This research design is *pre-experimental design* using one group pretest-posttest design. This research design only involved one class by giving a pretest and posttest

Subject	Pretest	Treatment	Posttest
Class V SDN 097805 Rambung Merah	O_1	X	O_2

Figure 1 One-Group Pretest-Posttest Design

Information :

O_1 = *Pretest score* before treatment

X = Treatment given

O_2 = *Posttest score* after treatment

According to Sujarweni (2021:21) Population is the total number consisting of objects or subjects that have certain characteristics and qualities determined by researchers to be studied and then conclusions drawn. This means that the population is the totality of all objects or individuals who have certain, clear and complete characteristics that will be studied (research material).

From the definition above, the population in this study is all 24 class V students at SDN 097805 Rambung Merah.

The population in this study were class III students at SD Negeri 097320 Serapuh for the 2023/2024 academic year.

According to Bahri (2021:22) the sample is a part of the population, or a small group that is observed. The sample used in this research was class V students at SDN Negeri 097805 Rambung Merah. The total number of class V students is 24 students, consisting of 8 male students and 16 female students.

RESULTS AND DISCUSSION

This research is a pre-experimental research using *a one group pretest-posttest design* conducted in Class V at SD Negeri 097805 Rambung Merah with a total of 24 students. The questions given during the research were validated first in class V at a different school, namely at SD Negeri 097320 Serapuh with a total of 27 students. After the validation of the questions was carried out, it was continued with the implementation of research in Class V at SD Negeri 097806 Rambung Merah on Theme 2 "Clean Air for Health" Sub-theme 1 "How the Body Manages Clean Air", the first thing carried out in this research was giving a pretest to students *so* that *can* find out the learning outcomes of students before the Audio Visual Media is implemented, then learning is carried out on theme 2, subtheme 1 in lesson 1 using Audio Visual Media .

Test instrument

1. **Validity test**

Validity test is a test used to state that a question is valid or invalid. Before carrying out research by giving pretest and post-test questions to the sample, the researcher will first carry out tests on students in the classes that will be studied at different school locations. The validity test was carried out on class V students at SD 097320 Serapuh. The test was carried out on class V with a total of 27 students and 30 questions were given to the students. Next, testing will be carried out to find out that this question is valid with the help of the Microsoft Excel data processing application. Of the 30 questions tested, there

are 20 valid questions and 10 invalid questions, so the researcher only uses 20 questions which are declared valid.

No Items	R count (r_{xy})	R table (r_{tab})	Information
Item 1	0.527442052	0.374	Valid
Item 2	0.84630714	0.374	Valid
Item 3	0.1028221	0.374	Invalid
Item 4	0.84630714	0.374	Valid
Item 5	0.9045981	0.374	Valid
Item 6	-0.0569854	0.374	Invalid
Item 7	0.84630714	0.374	Valid
Item 8	0.28908259	0.374	Invalid
Item 9	0.9045981	0.374	Valid
Item 10	0.5053824	0.374	Valid
Item 11	0.050553824	0.374	Invalid
Item 12	0.89835823	0.374	Valid
Item 13	0.9045981	0.374	Valid
Item 14	0.83877693	0.374	Valid
Item 15	-0.582453	0.374	Invalid
Item 16	0.9045981	0.374	Valid
Item 17	0.9045981	0.374	Valid
Item 18	0.9045981	0.374	Valid
Item 19	0.9045981	0.374	Valid
Item 20	0.4098289	0.374	Invalid
Item 21	0.9045981	0.374	Valid
Item 22	0.24592503	0.374	Invalid
Item 23	0.51619745	0.374	Valid
Item 24	0.06035502	0.374	Invalid
Item 25	0.51619745	0.374	Valid
Item 26	0.51619745	0.374	Valid
Item 27	0.20486257	0.374	Invalid
Item 28	0.48867	0.374	Valid
Item 29	0.1482407	0.374	Invalid
Item 30	0.48867	0.374	Valid

2. Reliability Test

Standard Deviation (S)	7.30777778
S^2	63.3874644
Reliability Coefficient	0.88471257
r_{table}	0.374
Conclusion	Reliable

Based on the data obtained above, the reliability coefficient for a total of 20 questions (N=20) at a confidence level of $\propto$= 0.05, price r_{tabel}= 0.374, can be calculated from r_{hitung}=0.88471257. In this way r_{hitung}>$r_{tabel}$the test instrument carried out can be declared reliable.

3. Test Difficulty Level

Item Number	Difficulty Level	Information
Item 1	0.5	Currently
Item 2	0.67857143	Currently
Item 3	0.53571429	Currently
Item 4	0.678571	Currently
Item 5	0.607143	Currently
Item 6	0.642857	Currently
Item 7	0.678571	Currently
Item 8	0.571429	Currently
Item 9	0.607143	Currently
Item 10	0.607143	Currently
Item 11	0.607143	Currently
Item 12	0.642857	Currently
Item 13	0.607143	Currently
Item 14	0.464286	Currently
Item 15	0.571429	Currently
Item 16	0.607143	Currently
Item 17	0.607143	Currently
Item 18	0.607143	Currently
Item 19	0.607143	Currently
Item 20	0.535714	Currently
Item 21	0.607143	Currently
Item 22	0.535714	Currently
Item 23	0.464286	Currently
Item 24	0.607143	Currently
Item 25	0.464286	Currently
Item 26	0.464286	Currently
Item 27	0.5	Currently
Item 28	0.428571	Currently
Item 29	0.714286	Easy
Item 30	0.428571	Currently

(Source: Ms. Excel 2010 output)

4. Question Differential Power Test

Item number	**Different Power of Question Items**	**Information**
Item 1	0.406593	Good
Item 2	0.615385	Good
Item 3	0.032967	Enough
Item 4	0.615385	Good
Item 5	0.769231	Good
Item 6	0.098901	Not enough
Item 7	0.615385	Good
Item 8	0.104396	Not enough
Item 9	0.769231	Good

Item 10	0.324176	Enough
Item 11	0.175824	Not enough
Item 12	0.692308	Good
Item 13	0.769231	Good
Item 14	0.78022	Good
Item 15	-0.04396	Not enough
Item 16	0.769231	Good
Item 17	0.769231	Good
Item 18	0.769231	Good
Item 19	0.769231	Good
Item 20	0.181319	Not enough
Item 21	0.769231	Good
Item 22	0.32967	Enough
Item 23	0.483516	Good
Item 24	0.027473	Not enough
Item 25	0.483516	Good
Item 26	0.483516	Good
Item 27	0.258242	Enough
Item 28	0.412088	Good
Item 29	0.093407	Not enough
Item 30	0.412088	Good

Data analysis

1. Normality test

The normality test is used to determine whether the data obtained comes from a population with a normal or abnormal distribution. This normality test uses the SPSS version 26 program with the *Kolmogrov-Smirnov program*. The decision making data in this test are:

a. If sig > 0.05 then the data is normally distributed
b. If sig < 0.05 then the data is not normally distributed

Tests of Normality

	Kolmogorov-Smirnov [a]			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	Df	Sig.
Pretest	,151	24	,169	,943	24	,189

a. Lilliefors Significance Correction

(Source: SPSS 26 output)

Tests of Normality

	Kolmogorov-Smirnov [a]			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	Df	Sig.
Posttest	,147	24	,193	,937	24	,139

a. Lilliefors Significance Correction

(Source: SPSS 26 output)

Based on the data above, the Normality Test uses *Kolmogrov-Smirnov* because the number of respondents is <30 people, it can be concluded that the data is normally distributed because the significant results are greater than 0.05.

2. Homogeneity Test

Test of Homogeneity of Variances

		Levene Statistics	df1	df2	Sig.
pretestposttest	Based on Mean	3,572	1	46	,065
	Based on Median	2,553	1	46	.117
	Based on Median and with adjusted df	2,553	1	35,372	,119
	Based on trimmed mean	3,555	1	46	,066

Based on the table above, it can be seen that the significant value is 0.065. From these results, significance was obtained greater than the 0.05 significance level. So it can be concluded that Ho is rejected. This means that the data variance is *homogeneous*. The differences in learning outcomes obtained above show that the significance is greater than 0.05, meaning that the data is homogeneous.

3. N-gain test

In this study, a sample test was used to assess the effect of audio-visual media on student learning outcomes in theme 2 clean air for health, sub-theme 1 how the body manages clean air in class V, using SPSS 26. The N-Gain test aims to determine the effectiveness of using a treatment or *treatment.* The N-Gain test is carried out by calculating the difference between *the posttest* and *pretest scores.*

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
NGAINscore	24	.60	.92	.7339	.09187
NGAINpercent	24	60.00	91.67	73.3911	9.18708
Valid N (listwise)	24				

Based on the table above, the mean N-Gain *score* is 0.7339, meaning the data is in the medium category. The N-Gain percentage is 73.3911%, meaning that the data shows that there is influence or Ha is accepted. This means that there is an influence of audio-visual media on the learning outcomes of class V students in theme 2 clean air for health, sub-theme 1 how the body manages clean air at SD Negeri 097805 Rambung Merah.

4. Anova test

In this study, *one way anova* was used to see the significance of the differences between the averages of different groups in one or more response variables in one population using audio-visual media on the learning outcomes of class V students. ON THEME 2 clean air for health subtheme 1 how the body manages clean air, can be seen in the following table:

ANOVA

Mark

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	20418.750	1	20418.750	228,740	,000
Within Groups	4106.250	46	89,266		
Total	24525,000	47			

Based on the table above, the significance results in the anova test are 0.000, which means the significant value is 0.000 < 0.005, soHo is rejected and Ha is accepted. This means that all independent or independent variables have a significant influence on the dependent or dependent variable.

DISCUSSION

pretest results , the average student learning outcome score was 43.125 with all students scoring below the KKM. Based on the existing percentage data, it can be concluded that the level of student learning outcomes before implementing audio-visual media is relatively low. Furthermore, the average value of the *posttest results* was 84.375. After implementing audio visual media, students got better learning outcomes than before implementing audio visual media, as evidenced by the fact that all students (24 students) had achieved scores above the KKM.

pretest and *posttest* Normality Test, the Homogeneity Test was carried out. Based on the Homogeneity Test, a significant value of 0.065 was obtained. Based on the criteria that have been determined, if the sig value is > 0.05, it is concluded that the data has a *homogeneous variance* . In this case it can be seen that 0.065 > 0.05, then the data has the same characteristics or is homogeneous.

The Homogeneity Test has been fulfilled so it continues with the N-Gain Test. Based on data analysis, the mean N-Gain *score* is 0.7339, meaning the data is in the Medium category. The N-Gain percentage is 73.3911%, meaning that the data has an influence, proven by the results of the N-Gain Test that there is an influence of audio-visual media on student learning outcomes. Based on the results of observations, there were changes in student learning outcomes, namely that at the beginning of the activity students were less active in the learning process because the teacher still used interesting media. However, after implementing audio visual media, students become enthusiastic about the learning process, because during learning students can exchange ideas and

work together to solve problems given by the teacher to their study group. Each group member is required to be able to take responsibility for the answers agreed together in the study group.

Based on the results of descriptive analysis and inferential statistics obtained as well as the results of observations that have been made, it can be concluded that there is an influence of audio-visual media on the learning outcomes of class V students in Theme 2 "Clean Air for Health" Sub-theme 1 "How the Body Manages Clean Air" in State Elementary Schools 097805 Red Hair.

CONCLUSION

Based on the data results presented in the previous section, the author draws several conclusions as follows:

1. The learning outcomes of class V students before treatment (*pretest*) received an average score of 43.125 which was categorized as poor and no students had yet achieved a KKM ≥ 70. However, after being given treatment (*posttest*) the learning results of class V students increased and received an average of 84.375 which was categorized as good and all students have reached the KKM.
2. *Pretest* and *posttest* Normality Test Results Normality Test using *Kolmogrov-Smirnov* because the number of respondents was <30 people, it can be concluded that the data is normally distributed because the significant results are greater than 0.05. Then a Homogeneity Test was carried out. Based on the Homogeneity Test, a significant value of 0.065 was obtained. Based on the criteria that have been determined, if the sig value is > 0.05, the data is said to have homogeneous variance. In this case, it can be seen that 0.065 > 0.05, so it can be concluded that the data has the same characteristics or is homogeneous.
3. Based on data analysis, the mean N-Gain *score* is 0.7339, meaning the data is in the Medium category. The N-Gain percentage is 73.3911%, meaning that the data has an influence, proven by the results of the N-Gain Test that there is an influence of audio-visual media on the learning outcomes of class V students on theme 2 clean air for health sub-theme 1 how the body manages clean air in elementary school Negeri 097805 Red Hair.

ADVANCED LESSONS

So further lessons that can be given to make it better in the future are:

1. For Schools
   Based on the data that has been carried out, we should pay more attention to student learning outcomes by implementing audio-visual media in order to improve the quality of education, especially at SD Negeri 097805 Rambung Merah.
2. For Teachers
   Teachers should be more selective in choosing learning media that can increase enthusiasm and improve student learning outcomes.
3. For Researchers

Researchers are expected to be able to develop audio-visual media by applying it to other materials to find out whether other materials are suitable for applying this learning model.

4. For Advanced Researchers
   For advanced researchers who want to apply audio-visual media, they can further develop and strengthen the media so that audio-visual media can be more widespread and students are more interested in applying audio-visual media.

BIBLIOGRAPHY

Arsyad, A. 2013. *Learning Media* .Jakarta: Rajawali Press Bangkinang City. Basicedu Journal. Volume 1 Number 1 of 2017, p 25-26

Djamah and Zain, A. 2016. *Teaching and Learning Strategies.* Jakarta: Rineka Cipta.

Istirani Pulungan, 1. 2019. *Educational excyclopedia* . Medan: Media Parsada.

Jatmiko Sidi, Sudjana, Mukminan. 2016, Use of Audio Visual Media to Improve Social Studies Learning Outcomes in Middle Schools. Journal of Social Sciences. June 2016, Vol 15, No 1

Kadir, A., & Asrohah, H. (nd). *Thematic Learning* . PT RajaGrafindp Persada.

Linawati, Zainuddin, & Suryani. (2013). *Application of Thematic Learning to Improve Learning Activities in Elementary Schools.Equatorial Journal of Education and Learning* , *2* (7), 1–8.

Mahananingtyas, E. (2017). Cognitive, Affective and Psychomotor Learning Results through the use of learning journals for PGSD students. *HDPGSDI Region IV National Seminar Proceedings* , 192–200.

Nabillah, T., & Abadi, AP (2019). *Factors causing low student learning outcomes* . 659–663.

Nahak, KEN, Degeng, INS, & Widiati, U. (2019). *Thematic Learning in Elementary Schools* . 785–794.

Purwanto. 2021. *Evaluation of Learning Results* . Jakarta: Learning Library.

Rizki Ananda. Use of Audio Visual Media to Improve Citizenship Education Learning Outcomes for Class IV Students at State Elementary School 016

Slameto. 2020. *Learning and Factors That Influence* . Jakarta: PT Rineka Cipta

Sugiyono. (2016). *Quantitative, Qualitative, and R&d Research Methods* .Alvabet

Sundayana, HR 2016. *Media and Teaching Aids in Learning* Bandung: Alfabeta.

Yusuf, A. Muri. 2014. *Quantitative, Qualitative and Combined Research Methods* n. Jakarta: Kencana.