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## **The Influence of Power-Point Media on Student Learning Outcomes Fifth Grade students at SDIT Adzkie II Padang**

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**Abstract:** The problem in this study is the low student learning outcomes in science learning. The difficulty can be seen from the lack of use of media in learning activities. Based on this, the researchers took the initiative to test a teaching aid media to improve student learning outcomes. The design of this study uses a Quasi Experimental Design with a design form Nonequivalent Control Group Design. The population in this study were fifth grade students at SDIT Adzkie II Padang, for the 2022/2023 academic year, with a total of 64 students. Sampling used probability sampling technique with Saturated Sampling method, which resulted in class V Thoif 1 as the experimental class, class V Thoif 2 as the control class. Based on the results of hypothesis testing with the t-test method, the data value  $t_{count} = 2.6772$  with a difficulty level of 5% with the test criteria if  $t_{count} > t_{table}$  then  $H_1$  is accepted and  $H_0$  is rejected. Where the number of test takers in the experimental class was 32 students with an average of 74.0 while in the control class the number of test takers was 32 students with an average of 62.3. The standard deviation of the experimental class ( $S=15.6$ ) is greater than the standard deviation of the experimental class 2 ( $S=20.5$ ). The acquisition of the t-test value is  $t_{count}=2.6771$  and  $t_{table} = 1.999$ . The results showed There is an effect of the use of media power point on student learning outcomes in science material in the experimental class is better than student learning outcomes in science material in the control class SDIT Adzkie II Padang.

**Keywords:** Fifth Grade, Learning Outcomes; Power-Point

### **INTRODUCTION**

Advances in modern technology are one of the factors that support renewal efforts in learning (Rangkuti, 2016). The role of technology is so prominent, especially in society in developing countries. The government and society pay maximum attention to technological developments, because they realize the role and function of technology is very influential for life.

Modern technology in the field of communication with products in the form of hardware and software equipment presented has affected all sectors including education (Deebak & Al-Turjman, 2022). Utilization of communication technology for educational activities, educational technology, and educational media is very necessary in teaching and learning activities, because educational media will continue to develop in the future. That's why we must be able to take advantage of every sector and existing developments. With so many educational media that already exist, it will make the learning process even more varied, so

that in the learning process it can increase student learning outcomes and increase students' deeper understanding.

Different levels of student understanding require teachers or educators to be more creative in delivering material. Viewed as education has a very large role in shaping the character, development of knowledge, and the mentality of a child, who will later grow into an adult who will interact and do many things with his environment, both individually and as a social being. Referring to the National Education System (law No.20 of 2003), it is stated that: Education is 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, intelligence, noble character, and the skills needed for themselves, society, nation and state (Gaol & Sitepu, 2020; Maulida & Ahmad, 2021).

Education related to the Development of Science and Technology (Science and Technology) in the era of globalization has

experienced rapid progress. Moreover, faced with a shift in characteristics compared to the previous century, namely the age of information and communication. This is what requires the entire community to establish themselves in improving their quality so that they are able to be competitive in facing life's increasingly difficult challenges. To improve the quality of education, the government is trying to make various efforts including perfecting the curriculum, completing facilities and infrastructure, and improving the quality of teachers so that teachers are able to use various media and models in the learning process (Maryanti et al., 2020).

Natural Sciences is one of the subjects taught in elementary schools from grade I to grade VI whose material is continuous (Weston et al., 2019). So that it is expected that students can develop their knowledge and skills that will be utilized in everyday life. Ministry of National Education states that "Science relates to how to systematically find out about nature so that Science is not only mastery of a collection of knowledge in the form of factors, concepts or principles, but also shows a process of discovery".

Wisudawati et al. (2014) states that science is a scientific group that has special characteristics, namely studying factual natural phenomena. Science learning tends to focus on the process of research and problem solving. Based on this opinion, science is one of the important subjects to be taught. Science trains children to think critically and objectively in conducting research and solving problems. Science is also in accordance with the level of development of elementary school students, where children still think realistically. The concept of science subjects which are abstract but packed with direct discoveries when studying existing concepts makes students always think before processing a material.

Through science subjects in elementary schools, students are expected to have scientific knowledge, skills, attitudes and values (Suchyadi et al., 2020). Thus, during the learning process students are required to be active in it so that students can master and develop potential and useful knowledge in everyday life. To create an active and creative learning atmosphere, teachers can use media in schools for learning purposes. Through the media, teachers are expected to be more creative and innovative in providing learning to students. Media is used as a means of

teaching and learning in schools aiming to improve the quality of education. Media is something that has the character of convincing messages and can stimulate the thoughts, feelings, and willingness of the audience or students so that it can encourage the learning process in these students (Hobbs, 2020; Sodakh et al., 2022).

The use of media can arouse students' interest in learning in a focused manner. It is undeniable that learning media also has psychological influences on students. The use of learning media is very helpful for student activity in the learning process and makes it easy for teachers to convey messages and content of learning material.

Based on the results of observations and discussions of researchers with class teachers in the fifth grade science subject at SDIT Adzkie II Padang which was held on August 15, 16, 2022, it showed that there were problems that arose including that the teacher had not used media in the learning process, because the teacher did not use enough media so as to make learning less interesting, less stimulating students' motivation to learn. The method used is still conventional, and students pay less attention to the teacher in the learning process. The student learning process like this has an impact on learning outcomes so that there are still students who score below the KKM.

That there are still many grade V students at SDIT Adzkie II Padang who have not reached the KKM (Minimum Completeness Criteria), where the KKM at SDIT Adzkie II Padang is 75. This error is not entirely the student's fault, but all aspects in the field of education must be addressed so that results student learning can increase. One way to improve student learning outcomes is to use teaching aids.

Based on these problems, it is time for an update in science learning, which is expected to improve students' memory skills, conceptual understanding of the science material presented, as well as high learning outcomes in science learning. Media visual aids that can increase the absorption of information in memory have not been implemented optimally. In addition, the use of visual aids media has not been optimally implemented. The use of visual aids is expected that students can have a desire and desire to learn that is conducive and more focused on the material and assignments given by the teacher, so that the use of teaching aids in learning can

stimulate students to find out more information about the teaching material being presented, the object displayed looks concrete (real).

Based on this description, the researcher has conducted a study entitled *The Effect of Using Teaching Power-point on Student Learning Outcomes*.

## METHODS

### Research design

In this study the research design used was experimental research, where experimental research according to Arikunto (2016), experimental research is research that is intended to determine whether there is a result of "something" imposed on the investigated subject (Pandey & Pandey, 2021). In other words, experimental research tries to examine whether there is a causal relationship or not. The research used by researchers is quantitative research with a quasi-experimental research design. The experimental design used is a Nonequivalent Control Group design, which is a form of quasi-experimental research method. This study involved two classes, namely the experimental class and the control class. The experimental class and the control class received the same learning treatment in terms of objectives, content, learning materials and study time.

### Population

The population in this study were all fifth grade students at SDIT Adzkie II Padang

consisting of two classes enrolled in 2022/2023. The reason for the researcher taking the population in this class is because the two classes are in the same school which has variable classes so that the learning characteristics and abilities of the students are the same. The distribution of students for each class can be seen in Table 1.

**Table 1.** Distribution of fifth grade students

Class	Amount of students (Person)
V Thoif 1	32
V Thoif 2	32
Total	64

### Sample

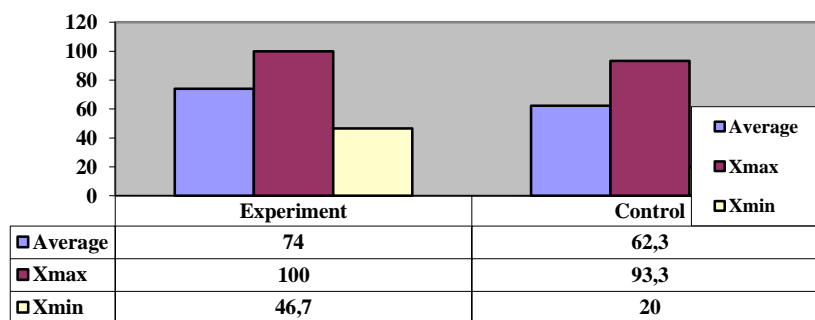
Determination of sample selection the sampling technique used in this study is probability sampling, with saturated sampling technique. Probability sampling is a sampling technique that provides equal opportunities for each element (member) of the population to be selected as a member of the sample (Sugiyono, 2012).

## FINDINGS AND DISCUSSION

### Findings

#### Study Test Results (Posttest)

This final test was attended by 64 students, 32 students of the experimental class and 32 students of the control class. From the final test, the average value ( $\bar{X}$ ), the highest score ( $X_{max}$ ) and the lowest score ( $X_{min}$ ) are shown in the Figure 1.



**Figure 1.** Calculation Results of Student Posttest Data

Based on Figure 1, it can be seen that there is a difference in the average value between the experimental class and the control class. The average obtained by the experimental class is 74.0, while the control class has an average of

62.3. So, the average in the experimental class is higher than the control class. In addition, the number of students' completeness in the experimental class was higher than in the control class.

**a. Normality test**

**Table 2.** Data Tests of Normality<sup>a</sup>

Class	Kolmogorov-Smirnov <sup>b</sup>			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
VA	.120	32	.200*	.959	32	.252
VB	.148	32	.074	.936	32	.058

\*. This is a lower bound of the true significance.

a. There are no valid cases for NILAI when KELAS = .000. Statistics cannot be computed for this level.

b. Lilliefors Significance Correction

Based on the table 2, the posttest data for the experimental group has a sig value = 0.074 while the value  $\alpha = 0.05$ , so the sig value  $> \alpha$  so that the data is declared normal. Meanwhile, the calculation of the posttest data for the control

class has the same sig value so that a sig = 0.200 value is obtained while the value  $\alpha = 0.05$ , then the sig value  $> \alpha$  so that the data in the control class is declared normal.

**b. Homogeneity Test**

**Table 3.** Data Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
2.382	1	62	.128

Table 3 show that Sig value is 0.128 while at the significant level  $\alpha = 0.05$ , the Sig value is obtained  $> \alpha$ , so that the data from the two sample

data classes are declared homogeneous. Thus, it can be concluded that the data from both sample classes are homogeneous.

**c. Hypothesis test**

**Table 4.** Hypothesis Test Results Learning Outcomes Material to Manually Describe the Structure of the Earth Class Samples

Class Sample	N	$\bar{X}$	S	$t_{count}$	$t_{table}$	$\alpha$
Experiment	32	74.0	15.6	2.6771	1.999	0.05
Control	32	62.3	20.5			

Based on Table 15 the results of hypothesis testing using the t-test method, the data value  $t_{count} = 2.6771$  with a difficulty level of 5% with the testing criteria if  $t_{count} > t_{table}$  then H1 is accepted and H0 is rejected. Where the number of test takers in the experimental class was 32 students with an average of 74.0 while in the control class the number of test takers was 32 students with an average of 62.3. The experimental class standard deviation (S=15.6) is greater than the experimental class standard deviation (S=20.5). Acquired t-test values, namely  $t_{count} = 2.6771$  and  $t_{table} = 1.999$ .

2.6771 and  $t_{table} = 1.999$ , where  $t_{count}$  is greater than  $t_{table}$ .

Those it means that H0 is rejected and H1 is accepted which reads "The learning outcomes of students who use PowerPoint media are better than students who do not use PowerPoint media." accepted. With the acceptance of H1, the use of PowerPoint media can be applied in schools to improve students' understanding and learning outcomes of science. As stated by Muhroghibi quoted by Mulyawan (2013) in learning media the Microsoft Powerpoint program has several advantages, including:

**Discussion**

The average value of the experimental class is 74.0 while the average value of the control class is 62.3. This difference can be seen through hypothesis testing, namely using the t test. From the results of the analysis obtained  $t_{count}$

- 1) The presentation is interesting because there are games of colors, letters, and animations, both animated pictures and photos.
- 2) It stimulates children to find out more information about the teaching materials presented.
- 3) Visual information messages are easy for students to understand.
- 4) Educators do not need to explain much of the teaching materials being presented.

5) Can be reproduced according to needs, and can be used repeatedly. 6) Can be stored in the form of optical or magnetic data (CD, floppy disk, flash disk) so that it is practical to carry.

Power-Point media does not only use words with writing that can be varied, but this PowerPoint media uses visualizations such as pictures, animation, audio, graphics, video, and so on (Munawaroh, 2022; Fatikha et al., 2022; Rahman et al., 2022). It aims to clarify facts, concepts, principles, and procedures. Visualization is more than words. That is, if it can be visualized, why do it have to be in words. Learning using power-point media has its own advantages and can be a trigger or motivation for students to learn science, because power-point media is an application created to handle the design of slide presentations in the form of images, video, sound, and accompanied by text so as to facilitate the learning process. Besides that, the use of power-point media in science learning on the structure of the earth material also influences student learning outcomes, where students actively participate in the learning process and dare to express opinions. When asked questions about the material being taught, students immediately raised their hands to provide answers to questions posed by the teacher or when expressing opinions during group discussions. In contrast to the control class which studied with conventional methods. This class has a weakness where students are less motivated and not active in learning.

This can be seen when the teacher explains the subject matter, it seems that many students are bored following the learning process. It can be concluded that the learning process using PowerPoint learning media is well applied to science learning in the material describing the structure of the earth. Those the use of powerpoint media is suitable for use in learning science in elementary school. Especially in learning to describe the structure of the earth, because the material on the structure of the earth is one of those lessons that we cannot teach directly in the field, for that we use a learning media that can concretize a lesson. With this PowerPoint media, students can understand each part of the earth's structure. Because this PowerPoint media, as explained in the previous chapters, has an attractive appearance on each slide, so that students more easily understand each discussion material that is taught by the teacher in front of the class.

## CONCLUSION

Based on the results of the research conducted and by looking at the results of hypothesis testing with the t-test method, it is concluded that  $t_{count}$  is 2.6771 and  $t_{table} = 1.999$ . From the results of the study it was proven that: "There is an effect of the use of powerpoint media on student learning outcomes in the science material of the earth structure in the experimental class is better than student learning outcomes in the science material of the earth structure in the control class of SDN 36 Gunung Sarik Padang". Judging from the advantages of PowerPoint media itself, PowerPoint media is a complex media that can encapsulate all comparisons of acquisition of learning outcomes through the senses, be it the sense of sight, hearing and so on, the following advantages of PowerPoint media are as follows: attractive, stimulating students, easy visual display understandable, easy for teachers, conditional, and practical.

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## REFERENCES

- Arikunto, S. (2016). *Prosedur Penelitian: Suatu Pendekatan Praktik*. Jakarta: Rineka Cipta.
- Deebak, B. D., & Al-Turjman, F. (2022). Digital-twin assisted: Fault diagnosis using deep transfer learning for machining tool condition. *International Journal of Intelligent Systems*, 37(12), 10289-10316.
- Fatikha, N. A., Setiawan, F., & Afiani, K. D. A. (2022). Interactive Power Point Analysis as a Learning Media during Limited Face-to-Face Meeting in Class 1 SD Muhammadiyah 13 Surabaya. *Edumas pul: Jurnal Pendidikan*, 6(2), 2451-2457. DOI: <https://doi.org/10.33487/edumas pul.v6i2.4269>
- Gaol, R. L., & Sitepu, A. (2020). The Influence of Used Good-Based Learning Media on the Value of Character Education and Student's Motivation to Study. *Budapest International Research and Critics in*

- Linguistics and Education (BirLE) Journal*, 3(4), 1696-1703. Retrieved from <https://scholar.archive.org/work/cff3ezgdnvb4bexezgt43pnnum/access/wayback/https://bircu-journal.com/index.php/birle/article/download/1299/pdf>
- Hobbs, R. (2020). *Mind over media: Propaganda education for a digital age*. WW Norton & Company.
- Maryanti, N., Rohana, R., & Kristiawan, M. (2020). The principal's strategy in preparing students ready to face the industrial revolution 4.0. *International Journal of Educational Review*, 2(1), 54-69. DOI: <https://doi.org/10.33369/ijer.v2i1.10628>
- Maulida, Y., & Ahmad, R. (2021). THE CONCEPT OF EDUCATION AND SOCIAL CHANGE CHANGE, MODERNIZATION AND DEVELOPMENT. *Literasi Nusantara*, 2(1), 121-128. Retrieved from <http://journal.citradharma.org/index.php/literasinusantara/article/view/268>
- Mulyawan (2013). Pengembangan Media Audiovisual Untuk Kecakapan Memasang Jaringan Computer Pada Pembelajaran Teknologi Informasi dan Komunikasi Kelas XI Sekolah Menengah Atas. *Tesis*. Pontianak: Program Pascasarjana Teknologi Pendidikan FKIP Universitas Tanjungpura Pontianak.
- Munawaroh, M. (2022). The Effect Of Perception Of Video Media Use And Power Point On Participant's Learning Independence Educate In Class Xi Pai Subjects Sinjai 6 State High School. *JICSA (Journal of Islamic Civilization in Southeast Asia)*, 11(1), 1-25. DOI: <https://doi.org/10.24252/jicsa.v11i1.27896>
- Pandey, P., & Pandey, M. M. (2021). *Research methodology tools and techniques*. Bridge Center.
- Rahman, A. D., Musa, M. M., & Rini, J. (2022). Interactive Learning Media Innovation Ppt Video Animation in Improving Critical Thinking Mi/Sd Students in The 21st Century Era. In *Proceeding International Conference on Islam and Education (ICONIE)*, 2(1), pp. 151-163). Retrieved from <https://proceeding.iainpekalongan.ac.id/index.php/iconie/article/view/649>
- Rangkuti, U. (2016). *PERAN GURU PKn DALAM MENERAPKAN MEDIA PEMBELAJARAN POWERPOINT PADA SISWA KELAS X SEMESTER GENAP SMA AL AZHAR MEDAN TAHUN PEMBELAJARAN 2015/2016* (Doctoral dissertation, UNIMED). Retrieved from <http://digilib.unimed.ac.id/20221/>
- Sondakh, D. S. I., Rahmatullah, A. S., Adiyono, A., Hamzah, M. Z., Riwayatiningih, R., & Kholifah, N. (2022). Integration of language, psychology, and technology and the concept of independence learning in reading characters in indonesian children's films as media and learning materials in character building for elementary school students-indonesia. *Linguistics and Culture Review*, 6(1), 70-88. Retrieved from <https://appliedtranslation.nyc/index.php/journal/article/view/1358>
- Suchyadi, Y., Safitri, N., & Sunardi, O. (2020). The Use of Multimedia as an Effort to Improve Elementary Teacher Education Study Program College Students'comprehension Ability and Creative Thinking Skills in Following Science Study Courses. *JHSS (Journal of Humanities and Social Studies)*, 4(2), 201-205. DOI: 10.33751/jhss.v4i2.2549
- Sugiyono (2012). *Metode Penelitian Pendidikan (Pendekatan Kuantitatif Kualitatif, dan R&D)*. Bandung: Alfabeta.
- Weston, T. J., Seymour, E., Koch, A. K., & Drake, B. M. (2019). Weed-out classes and their consequences. *Talking about leaving revisited: Persistence, relocation, and loss in undergraduate STEM education*, 197-243. Retrieved from [https://link.springer.com/chapter/10.1007/978-3-030-25304-2\\_7](https://link.springer.com/chapter/10.1007/978-3-030-25304-2_7)
- Wisudawati, Asih W., & Eka Sulistyowati (2014). *Metodolodi Pembelajaran IPA*. Jakarta: Bumi Aksara.