THE EFFECT OF THE USE OF INTERACTIVE VIDEO LEARNING MEDIA ON THE SCIENCE LEARNING OUTCOMES OF GRADE IV STUDENTS OF STATE ELEMENTARY SCHOOL 040470 LINGGA JULU

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ABSTRACT

Background: The use of interactive learning media is important in improving students' understanding, especially in IPAS learning that contains abstract concepts such as energy transformation. At SD Negeri 040470 Lingga Julu, several students still had difficulty understanding IPAS material through conventional teaching methods. Objective: This study aimed to determine the effect of using interactive video learning media on the IPAS learning outcomes of fourth-grade students at SD Negeri 040470 Lingga Julu . Methods: This study used a quantitative, quasi-experimental design with a pretest-posttest control group. The sample consisted of 30 fourth-grade students, divided into an experimental class of 15 and a control class of 15. The experimental class learned using interactive video media, while the control class learned through conventional teaching. Data were collected using a multiple-choice test consisting of 20 valid and reliable items. The data were analyzed using normality and homogeneity tests, and an independent-samples t-test in SPSS version 22. Results: The experimental class's average score increased from 56.33 in the pretest to 92.67 in the posttest. Meanwhile, the control class obtained an average posttest score of 79.40. The independent-samples t-test showed a p-value of 0.000 < 0.05, indicating a significant difference between the experimental and control classes. Conclusion: Interactive video learning media had a significant positive effect on students' IPAS learning outcomes. This media helped students understand energy transformation material more effectively than conventional teaching methods.

Keywords: interactive video media, learning outcomes, IPAS, elementary school, quasi-experiment

ABSTRAK

Latar Belakang: Penggunaan media pembelajaran interaktif penting dalam meningkatkan pemahaman siswa, terutama dalam pembelajaran IPAS yang mengandung konsep abstrak seperti transformasi energi. Di SD Negeri 040470 Lingga Julu, beberapa siswa masih mengalami kesulitan memahami materi IPAS melalui metode pengajaran konvensional. Tujuan: Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan media pembelajaran video interaktif terhadap hasil belajar IPAS siswa kelas empat di SD Negeri 040470 Lingga Julu. Metode: Penelitian ini menggunakan desain kuantitatif, quasi-eksperimental dengan kelompok kontrol pretest-posttest. Sampel terdiri dari 30 siswa kelas empat, dibagi menjadi kelas eksperimen sebanyak 15 siswa dan kelas kontrol sebanyak 15 siswa.

Kelas eksperimen belajar menggunakan media video interaktif, sedangkan kelas kontrol belajar melalui pengajaran konvensional. Data dikumpulkan menggunakan tes pilihan ganda yang terdiri dari 20 item valid dan reliabel. Data dianalisis menggunakan uji normalitas dan homogenitas, serta uji t sampel independen dalam SPSS versi 22. Hasil: Rata-rata skor kelas eksperimen meningkat dari 56,33 pada pretest menjadi 92,67 pada posttest.Sementara itu, kelas kontrol memperoleh rata-rata skor posttest sebesar 79,40. Uji t sampel independen menunjukkan nilai p 0,000 < 0,05, yang mengindikasikan perbedaan signifikan antara kelas eksperimen dan kontrol. Kesimpulan: Media pembelajaran video interaktif memiliki pengaruh positif yang signifikan terhadap hasil belajar IPAS siswa. Media ini membantu siswa memahami materi transformasi energi secara lebih efektif daripada metode pengajaran konvensional.

Kata kunci: media video interaktif, hasil belajar, IPAS, sekolah dasar, kuasi-eksperimen

A. Pendahuluan

Education is a key factor in producing quality human resources. Through education, students can develop knowledge, creativity, and a sense of responsibility in their daily lives.

"Education describes a structured, prepared action by educators to create effective learning conditions, in order to encourage students to develop their abilities, both intellectually, personally, morally, and skillfully" (Ovartadara et al., 2022). The goal of education is to shape an intelligent society while encouraging personal awareness and continuous effort in the intellectual, moral, and social aspects. Various factors, such as teacher readiness, student conditions, the school environment, learning methods, and facilities and infrastructure that support the learning process, play a role in determining the quality of education.

(Pendidikan & Pendidikan, 2021)Interactive media can be defined as a learning tool that combines the senses of sight and hearing. Through this medium, material can be presented simultaneously in both image and sound, making it easier to understand. According to (Lalisu et al., 2024), the availability of interactive learning media enables students to learn independently anytime, anywhere, thereby resulting in more effective learning.

On the other hand, interactive learning media facilitates students' understanding of the subject matter. This is because the attractive features

in the learning process can attract students' interest and encourage them to participate. The study above utilized a variety of learning media, including Wordwall, Quizizz, animated videos, comics, PowerPoint presentations, and educational games.

Widyastuti (2024) explained that the use of interactive media, such as audio and visual media, during learning has the potential to attract students' attention because it is engaging, thus increasing their interest in learning by providing a more easily understood understanding. Furthermore, for teachers, this provides a more in-depth classroom teaching process.

According to Ina (Ridha et al., 2025) (Sartika, 2022), learning outcomes refer to students' academic achievements obtained through the teaching and learning process, which result in changes and the formation of individual behaviour.

According to (Octavia, 2021), learning outcomes are the endpoint of a series of learning processes. This is realized primarily through teacher assessment. It encompasses both the primary and secondary influences of teaching, which benefit both students and educators. For students, this marks the end of the semester and the culmination of learning efforts. For teachers, it marks the end of the teaching of the material.

According to (Rosnawati, 2021) define learning outcomes as a series of competencies achieved by students after undergoing a learning experience. These competencies encompass the cognitive, affective, and motor domains. These achievements are reflected in measurable changes in student behaviour, including progress in knowledge, attitudes, and practical skills.

In the Karo region, education is an effort to pass on knowledge, skills, traditional values, and morals through family and social environments to foster responsible character. Karo education broadly encompasses more than formal schooling; it also involves the transmission of customs, morality, and survival skills from parents to children. Learning is an integral element of education. The quality of the learning process measures educational success. The primary determinant of learning is the teacher's skill in facilitating students, given that they are the ones directly interacting with them. Facilitating

student learning reflects the teacher's ability to use strategies, techniques, and learning aids that positively impact students.

Encouraging student engagement in learning is no easy task. Teachers must be creative in creating a variety of learning methods. They must be agile in addressing student challenges during the learning process. Furthermore, teachers need to foster a fun learning environment to increase student interest and enthusiasm, ultimately boosting student participation. This aligns with the basic principles of teaching. In learning, teachers act as facilitators who create optimal learning conditions, enabling students to learn independently through active learning.

IPAS stands for Natural and Social Sciences, an elementary school subject that combines science with social studies. The goal is to help students conceptualize natural and social phenomena in an integrated manner, enabling them to understand the interconnectedness of the environment, society, and scientific developments. Chronologically, IPAS was launched in 2021 alongside the Merdeka Curriculum from the Ministry of Education, Culture, Research, and Technology. Previously, in the 2013 Curriculum, science and social studies were taught separately. The Merdeka Curriculum now merges the two into IPAS for more relevant, contextual, and life-affirming teaching. In 4th grade, IPAS combines the natural and social sciences to train students in environmental science, natural phenomena, and societal aspects.

From the researcher's initial survey on October 15, 2025, namely an interview with Mrs Yuyun Fatmala, S.Pd. (grade IV A teacher), Several obstacles were found for teachers in classroom teaching. The interview revealed that students often remained silent and hesitated to ask questions when confused, out of embarrassment or fear, resulting in suboptimal learning: the majority were passive, with only a few actively participating. Follow-up interviews with students showed a weak understanding of the material because the learning method was less exciting, making students bored and inactive.

Observations at Lingga Julu Public Elementary School 040470 indicate that several grade IV A students are still below the Minimum Competency (KKM) for science learning outcomes. This is evident

from the low daily test scores in the first semester of the 2024/2025 academic year, 64% of fourth-grade students have not completed their science (KKTP ≥70), with only 36% passing. Observations found monotonous, ineffective learning models to be the root cause of low achievement. At Lingga Julu Public Elementary School 040470, the contributing factors include lack of student motivation, unattractive teaching media, traditional methods, difficult-to-understand abstract material, and minimal student activity. The solution: implement interactive media to encourage engagement and improve learning outcomes.

According (Lubis et al., 2024) indicated that the lecture method leads to one-way learning, limiting teacher-student dialogue and making students mere passive listeners. As a result, active participation decreases, and students are less involved in forming their own concepts from the material. Related research indicates that this method is not optimal for training critical thinking and innovation, because students are rarely given space for questions and answers, discussions, or free exploration of ideas. (Tristina et al., 2025) also expressed a similar sentiment, finding that Canva, an interactive learning medium, significantly impacted elementary school students' academic achievement. Interactive Canva helps students better understand the material through its attractive visuals, which are easy to process and retain. Research also conducted by (Amalia et al., 2024)(Siahaan et al., 2026)(Nadyah, 2025) found that students who use interactive learning tools are more interested and motivated to learn than those who do not. These tools effectively improve learning outcomes through engaging, efficient visual teaching experiences that help students master the material. However, adapt them to specific learning needs and manage them well to maximize their benefits.

From the discussion above, the conclusion is that interactive video teaching media has the potential to optimize students' science achievement. Therefore, researchers plan a study at SD Negeri 040470 Lingga Julu to analyze the impact of interactive video on fourth-grade learning outcomes in . It is hoped that this research will provide concrete data on the benefits of interactive

video in improving conceptual understanding and enthusiasm for learning. The results can serve as a reference for teachers developing engaging 21st-century learning methods. At Lingga Julu Public Elementary School 040470, this study focused on exploring the influence of interactive media on fourth-grade achievement in . It is hoped that this insight will encourage the school to implement engaging teaching innovations to boost student learning outcomes. The results of the problems described above indicate that using interactive video as a learning medium is expected to improve student learning outcomes. Therefore, the title of this research proposal is"The Effect of Using Interactive Video Learning Media on the Learning Outcomes of Grade 4 Students of SD Negeri 040470 Lingga Julu"

B. Methods

This study used a quantitative, quasi-experimental design. The design used was a pretest-posttest control group design, as this study compared student learning outcomes before and after treatment across two groups: the experimental and control classes. The experimental class received treatment through interactive video media in science learning, while the control class used conventional instruction.

The research was conducted at SD Negeri 040470 Lingga Julu on fourth-grade students in . The research was conducted in January 2026. The selection of the research location was based on the condition of the school that utilizes technology in learning. However, the use of interactive video media in science subjects remains limited. In addition, interviews with fourth-grade teachers revealed that some students still have difficulty understanding the science material, especially changes in energy forms in everyday life.

The population in this study consisted of all fourth-grade students at SD Negeri 040470 Lingga Julu. The research sample consisted of two classes: class IV A, the experimental class, and class IV B, the control class. The total sample comprised 30 students, with 15 in the experimental class and 15 in the control class. The sampling technique used was purposive sampling, namely the selection of samples based on specific criteria. These considerations include similarity of class levels, student

characteristics, and the suitability of the classes to the research objectives.

The independent variable in this study was the use of interactive video media. The dependent variable was students' science learning outcomes. The experimental class was given treatment through interactive video instruction, while the control class followed conventional learning methods. Both groups were given a pretest before the lesson and a posttest after the lesson to assess learning outcomes.

The instrument used in this study was a multiple-choice science learning outcome test. The test consisted of 20 questions with four answer choices. The material examined concerned changes in energy forms in everyday life. Each correct answer was given a score of 1, while each incorrect answer was given a score of 0. The final score was calculated using the following formula:

$$\text{Nilai Akhir} = \frac{\text{Skor yang Diperoleh}}{20} \times 100$$

Before use, the test instrument was tested for validity and reliability. The validity test was conducted by examining the Pearson correlation for each item. The question item was declared valid if the calculated r value was greater than the table r. The validity test results showed that all 20 questions had a calculated r value greater than the table r value of 0.279. Thus, all questions were declared valid. The reliability test was conducted using Cronbach's alpha in SPSS version 22. The reliability test yielded a Cronbach's Alpha value of 0.738. This value is greater than 0.70, indicating that the instrument is reliable and suitable for use as a data collection tool.

Data collection was conducted through tests. A pretest was administered prior to the treatment to assess students' initial abilities. A posttest was administered after the treatment to determine students' learning outcomes. Data obtained from the pretest and posttest were then analyzed quantitatively.

The data analysis was carried out using SPSS version 22. The analysis began with prerequisite tests, namely the normality and homogeneity tests. The normality test was carried out using the Shapiro-Wilk Test because the sample size was less than 100 respondents. Data were considered normally distributed if the p-value was greater than 0.05. The

homogeneity test was performed using Levene's Test to assess variance equality between the experimental and control groups. Data were declared homogeneous if the significance value was greater than 0.05.

After the data met the prerequisite tests, the Independent Samples t-Test was used for hypothesis testing. This test was used to determine differences in science learning outcomes between students who learned through interactive video media and those who learned through conventional methods. The decision-making criteria were based on significance values. If the 2-tailed Sig. If the value is less than 0.05, then there is a significant difference between the experimental and control classes. Conversely, if the 2-tailed Sig. If the value is greater than 0.05, then there is no significant difference.

C. Results and Discussion

RESEARCH RESULT

Description of Research Results

This research was conducted at SD Negeri 040470 Lingga Julu, Simpang Empat District, Karo Regency, with fourth-grade students. Class IV A (15 students) was designated as the treatment group, and Class IV B (15 students) as the comparison group.

Data collection was conducted through learning outcome tests administered before and after the treatment (pretest and posttest), each consisting of 20 multiple-choice questions. The instrument used underwent feasibility testing for validity and reliability using SPSS. Of the 25 questions compiled, 20 met the study's criteria for use.

Pretest and Posttest Results in the Experimental Class

The following are the results of the pretest and posttest for class IV-A students at SD Negeri 040470 Lingga Julu using Interactive Video Learning Media in the learning process, including;

Table 1: Frequency Distribution of Pretest Scores for Class IV-A (Experimental Class)

No	Value Interval	Frequency (f)	Percentage
1	40-49	2	13.33%
2	50-59	7	46.67%
3	60-69	4	26.67%
4	70-79	0	0%
5	80-89	0	0%
6	90-100	0	0%
	Amount	15	100%

Based on the frequency distribution of pretest scores for class IV-A (experimental class), students' initial proficiency remains moderate. The majority of students obtained scores in the 50–59 range, with 7 students (46.67%), followed by 4 students (26.67%) in the 60–69 range and 2 students (13.33%) in the 40–49 range. At this stage, no students have achieved scores above 70.

The average pretest score of 56.33 indicates that students' initial abilities in the science subject, especially the topic of energy transformation, are still not optimal, and most of the students' learning outcomes have not yet reached the completion standard, so it is necessary to use interactive video media as an alternative to improve these achievements.

Table 2. Frequency Distribution of Posttest Scores for Class IV-A (Experimental Class)

No	Value Interval	Frequency (f)	Percentage
1	80 – 84	0	0%
2	85 – 89	4	26.67%
3	90 – 94	4	26.67%
4	95-100	7	46.67%
	Amount	15	100%

Based on the frequency distribution of posttest scores for class IV-A (experimental class), there was an increase in learning outcomes after the use of interactive video media. Most students obtained scores in the 95–100 range, with 7 students (46.67%), while 4 students (26.67%) were in the 90–94 range and 4 students (26.67%) were in the 85–89 range. No students obtained scores below 85.

The average posttest score was 92.67, indicating a significant increase from the pretest. This indicates that the use of interactive video media has a positive influence on student learning outcomes in material related to changes in energy forms in Class IV-A of SD Negeri 040470 Lingga Julu.

Pretest and Posttest Results of the Control Class

The following are the results of the pretest and posttest of class IV-B students at SD Negeri 040470 Lingga Julu using the lecture method in the learning process, including:

Table 3. Frequency Distribution of Posttest Scores for Class IV-B (Control Class)

No	Value Interval	Frequency (f)	Percentage
1	70–74	3	20%
2	75-79	6	40%
3	80-84	4	26.67%

4	85-100	2	13.33%
	Amount	15	100%

Based on the frequency distribution of pretest scores for class IV-B (control class), students' initial abilities were classified as quite good. Most students were in the 75–79 range (6 students (40%), followed by 4 students (26.67%) in the 80–84 range, 3 students (20%) in the 70–74 range, and 2 students (13.33%) in the 85–100 range. The average value obtained was 79.40, indicating that students in the control class already had an initial understanding in the fairly high range before learning took place.

Table 4 Frequency Distribution of Pretest Scores for Class IV-B (Control Class)

No	Value Interval	Frequency (f)	Percentage
1	70-74	4	26.67%
2	75-79	6	40%
3	80-84	4	26.67%
4	85-100	1	6.67%
	Amount	15	100%

Based on the frequency distribution of pretest scores of class IV-B (control class), students' initial abilities before learning using the lecture method were in the sufficient category. Most students obtained scores in the range of 75–79, with 6 students (40%); 4 students (26.67%) each in the ranges of 70–74 and 80–84; and 1 student (6.67%) in the range of 85–100. The average pretest score of 74 indicates that students' initial abilities were quite strong before treatment.

Normality Test

Based on the results of the normality test using SPSS version 22, the pretest significance score for the control class was 0.064, and the posttest significance score was 0.050. These values indicate that the pretest data were normally distributed, while the posttest data remained within normality limits. In the experimental class, the pretest significance value was 0.266, and the posttest significance value was 0.056, both of which were greater than 0.05, indicating the data were normally distributed.

In general, the results show that the distributions of pretest and posttest scores in the control and experimental groups fell within a reasonable range. With this assumption met, the data set can be used for further analysis using parametric statistical methods to

evaluate the effects of learning media on student learning outcomes.

Table 5. Results of Normality Test Using SPSS

		Kolmogorov-Smirnova			Shapiro-Wilk		
	Class	Statistics	df	Sig.	Statistics	df	Sig.
Results	Pretest A (Control)	.203	15	.095	.889	15	.064
	Posttest A (Control)	.225	15	.040	.881	15	.050
	Pretest B (Experiment)	.167	15	.200*	.929	15	.266
	PosttestPosttest B (Experiment)	.202	15	.101	.885	15	.056

The results of the normality test showed that the pretest and posttest scores in both the control and experimental groups were normally distributed. Next, a homogeneity-of-variance test was conducted to assess the uniformity of variance across groups. The findings from this test were used to determine the appropriate statistical analysis technique for hypothesis testing.

Homogeneity Test

After the data was collected, the initial step was a normality test. The test results showed a p-value greater than 0.05, confirming that the data were normally distributed. Therefore, the research data met the assumption of normality.

Although the data met the assumption of normality, a homogeneity test was performed to ensure equal variances between the experimental and control classes. This test used Levene's Test with SPSS version 22.

The analysis results show a significance value (Sig.) of 0.477 (based on the mean). Since this value is greater than 0.05, the variances of the two groups are homogeneous. The complete results of the homogeneity test are presented in the following table.

Table 6. Results of the Homogeneity Test using SPSS 22

Test of Homogeneity of Variance					
		Levene Statistics	df1	df2	Sig.
The results of the study	Based on Mean	.521	1	28	.477
	Based on Median	.318	1	28	.577

Based on Median and with adjusted df	.318	1	27,770	.577
Based on the trimmed mean	.553	1	28	.463

Based on Table 6, the research data exhibit homogeneous variance. This is indicated by the significance value (Sig.) in the Levene's Test of 0.477, which is greater than 0.05. Thus, the data is declared homogeneous, and hypothesis testing can proceed using parametric analysis.

Hypothesis Testing

This study used an independent samples t-test. The proposed hypothesis states that the use of interactive video media influences the learning outcomes of fourth-grade students at SD Negeri 040470 Lingga Julu.

The results of Levene's Test showed an F value of 0.374 with Sig. = 0.546 (> 0.05), so the variances of both groups were considered equal (equal variances assumed). Furthermore, the t-test yielded a t value of -9.405 with df = 28 and a significance value (2-tailed) of 0.000 (< 0.05). The average difference between the experimental and control classes was -16.333, with a 95% confidence interval between -19.891 and -12.776.

Based on the testing criteria, the significance value obtained was less than 0.05, so H0 was rejected, and Ha was accepted. Therefore, it can be concluded that the use of interactive video learning media has a significant effect on fourth-grade students' learning outcomes.

Table 7. Hypothesis Test Results

Variabel	Keterangan	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Hasil	Equal variances assumed	.374	.546	-9.405	28	.000	-16.333	1.737	-19.891	-12.776
Hasil	Equal variances not assumed			-9.405	27.849	.000	-16.333	1.737	-19.892	-12.775

The independent samples t-test significance value of 0.000 (<0.05) indicates a difference in learning outcomes between the experimental and control classes. This indicates that interactive video use has a positive impact on student learning outcomes.

Discussion

This study aims to analyze the effect of interactive video media on student learning outcomes in Natural Sciences (IPAS) subjects in grade IV at SD Negeri 040470 Lingga Julu. Based on the study's results, there is a significant difference in learning outcomes between students who use interactive video media and those who use conventional learning methods (lectures).

The pretest and posttest results showed a significant improvement in the experimental class after treatment with interactive video media. Before the treatment, the majority of students had average initial abilities, with an average pretest score of 56.33. However, after using interactive video media in learning, the average posttest score increased significantly to 92.67. This indicates that interactive video media is effective at improving students' understanding of changes in energy forms, a key topic in science.

The majority of students in the experimental class (46.67%) scored between 95 and 100 on the posttest, indicating that nearly half experienced a significant increase in understanding after using more interactive learning media. This improvement indicates that interactive video can help students better understand abstract material, such as the concept of energy transformation, more engagingly and understandably.

These results are consistent with previous research showing that the use of interactive media in learning can increase students' motivation and help them better understand difficult material (Nusroh et al., 2024)(Asyamsi & Fauzi, 2025). Interactive videos provide opportunities for students to actively engage in learning, both visually and auditorily, allowing them to understand the material more deeply.

Meanwhile, in the control class using the conventional lecture method, the pretest results showed that students' initial abilities were already strong, with an average score of 74. However, after participating in learning using the lecture method,

students' average posttest score increased only slightly, with most (40%) scoring between 75 and 79. The average posttest score in the control class was 79.40, which indicates that although there was an increase, it was not as significant as that in the experimental class.

This indicates that while the lecture method remains widely used, it has limitations in significantly impacting student learning outcomes. Lecture-based learning tends to be passive, making it difficult for students to internalize and understand abstract concepts without more interactive and visual media. This limitation aligns with previous findings that the lecture method is less effective at addressing understanding complex material, particularly at the elementary level (Tafonao et al., 2024).

Normality and homogeneity tests were conducted to ensure that the data used in the analysis met the basic assumptions of parametric statistics. The results of the normality test showed that the data in both groups (experimental and control) were normally distributed, allowing for further analysis using parametric statistical techniques, such as the t-test. The homogeneity test showed that the variances of both groups were homogeneous, meaning that comparisons between the experimental and control groups could be made without any significant differences in data variability.

Hypothesis testing using an independent-samples t-test revealed a significant difference in student learning outcomes between the experimental and control classes. The t-test significance value of 0.000 ($p < 0.05$) indicates that the use of interactive video media significantly improved student learning outcomes. These results indicate that interactive video media not only improve student learning outcomes in the short term but also positively impact deeper understanding of the material.

The results of this study are supported by several studies, namely (Pratiwi et al., 2025). This study applies interactive video story media to science learning in elementary schools. The results of the pretest-and posttest showed a significant increase in learning outcomes ($p < 0.05$). This media also increased student motivation and engagement in the learning process.(Hanif, 2020) An experimental study with fifth-grade students showed that motion graphic

video media was effective in improving science learning achievement, with significant differences between the experimental and control groups.(Suryani et al., 2024)quantitative with pretest design-A posttest-posttest in grade IV found that the use of animated video media had a significant effect on students' science learning outcomes after treatment.(Pamungkas & Koeswanti, 2021) This meta-analysis concluded that learning via video media consistently improves elementary school students' learning outcomes from pretest to posttest.(Hasnawiyah & Maslena, 2024) This experiment compared the experimental and control classes and showed that interactive learning media improved students' science achievement, increased student engagement, and enhanced their understanding of science concepts.

The results of this study have significant implications for elementary school learning. The use of interactive video media can be an effective way to improve student learning outcomes, particularly in materials that involve abstract concepts such as energy transformation. Interactive videos allow students to directly see the application of scientific concepts in everyday life, making learning more relevant and engaging.

Furthermore, this study shows that the use of more innovative and interactive learning media can increase student motivation, which, in turn, will lead to improved learning outcomes. Therefore, teachers must utilize technology in the learning process to improve the quality of education, especially in today's digital age.

D. Conclusion

The learning outcomes of fourth-grade students at SD Negeri 040470 Lingga Julu who did not use interactive video media tended to be lower, as the learning process remained conventional. As a result, students’ understanding of the topic of energy transformation in the IPAS subject was not optimal. In contrast, students who used interactive video media showed better improvement in learning outcomes, as indicated by higher post-test scores compared to pre-test scores. Data analysis revealed that the data were normally distributed, and the homogeneity test yielded a significance value of 0.477 (> 0.05), indicating that the data were

homogeneous. Furthermore, hypothesis testing using an independent samples t-test resulted in a significance value of 0.000 (< 0.05), leading to the rejection of Ho and acceptance of Ha. Based on these findings, it can be concluded that the use of interactive video learning media has a positive effect on the learning outcomes of fourth-grade students at SD Negeri 040470 Lingga Julu. Students who learned using this media achieved better results compared to those who did not use it.

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