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The Effectiveness of Android-Based Learning Media on Science Lesson Content to Increase Motivation and Digital Literacy of Grade V Elementary School Students

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Abstract

Information and communication technology has become an important role in education, one of which is Android. Android-based application development in the form of Android-based learning media with science content. The goal of this study is to examine the effectiveness of Android-based learning media in science lesson content in terms of increasing students' motivation and digital literacy. The participants in this study were fifth-grade students in Mijen District, Semarang, during the even semester of the 2021/2022 academic year. This study's sample consists of fifth-grade students from SDN Polaman as the experimental group and fifth-grade students from SDN Karangmalang as the control group. Questionnaires and exams of students' digital literacy skills were used to collect data. To determine the increase in students' learning motivation and digital literacy, the data analysis technique included descriptive analysis, completeness test, paired test, N-gain, and independent t-test. The findings revealed that 1) students' learning motivation was indicated by an average score of 84.58 percent in the post-learning experimental class, which was classified as very high, 2) The descriptive test on the pretest received a score of 74.00 and the posttest received a score of 90.40, 3) the test completeness resulted in 92 percent completion, and 4) the improvement test resulted in a sign. two-tailed value of 0.000 indicates that Ha was accepted or that there was a significant difference, 5) The average N-Gain in the experimental class was 0.66, which was in the medium group, while in the control class was 0.142 categorized as low. 6) The comparative test yielded a positive result with a sign. 2-tailed score of 0.000 or Ha was accepted, indicating that the average posttest score differed. According to the above-mentioned test results, Android-based learning media in scientific lesson content is effective for enhancing students' motivation and digital literacy.

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INTRODUCTION

For students to have scientific understanding about both themselves and the natural world, science education in elementary schools is crucial. According to Waseso (2018), students will find it simpler to accept accepted theories and the outcomes of their observations of the natural surroundings as a result of their interest and curiosity about the natural environment. According to Handayani (2019), good stimulation will also result in good learning motivation.

The Great Indonesia Dictionary (KBBI) defines motivation as an urge that develops in a person, whether consciously or unconsciously, to execute a particular activity with a particular goal. Dewi, Syamsuri, and Khaerunnisa (2019) claim that there are two types of motivation for learning: intrinsic motivation and extrinsic motivation. In contrast to extrinsic motivation in learning, which comes from sources other than the students themselves, intrinsic motivation in learning is a drive that comes from within a person to learn something, claim Setiyadi, Zaenuri, and Mulyono (2018). Extrinsic motivation is motivation that originates from sources other than the student, such as parental expectations, a relaxing learning atmosphere, friendly study partners, and both engaging and challenging coursework (Puspitarini, 2019).

Based on Permendikbud Number 22 of 2016 concerning Standards for Primary and Secondary Education, it urges that educational activities be interactive, inspiring, enjoyable, and challenging, encouraging students to participate actively and providing enough space for their physical and psychological development. The instructor must cultivate motivation in the classroom by paying attention to the requirements of the students; by doing so, the teacher will find it simpler to stimulate learning through innovation so that both intrinsic and extrinsic motivation can be established (Setiyadi, 2021).

This innovation in learning may take the form of new instructional strategies, resources, or media. Human existence will always coexist with technology in the era of the fourth industrial revolution, which calls for humans to be able to employ technology in daily life (Cahyaningrum, Nisa & Diantoro, 2021). Technology plays a significant role in schooling nowadays, so this is not all that different. Digital literacy is a key component of technology's significant contribution to the field of education.

According to Suryanti and Wijayanti (2018), individuals must understand digital literacy as a critical need in order to engage in today's modern world. Digital technology enables speedier communication and information delivery (Dermawan, Saputra & Hutagalung, 2021. The National Literacy Movement is now being activated as one of the initiatives taken by the Ministry of Education and Culture. Each educational unit develops activities related to one of the six fundamental literacys, which includes digital literacy.

The ability to use digital media, communication tools, or networks to search, evaluate, use, create, and utilize information in a healthy, wise, intelligent, careful, exact, and law-abiding manner in order to promote communication and engagement in daily life is known as digital literacy. Since the 2013 curriculum mandates the use of digital media during the learning process, educational institutions have started to implement digital literacy initiatives (Jessica, Harmianto & Mareza, 2020).

The 2013 curriculum, which is being used as a guide for learning, does not always proceed without challenges or difficulties. According to Infantry, Nisa, and Dewi (2022), the creation of learning material was the main challenge instructors experienced when implementing the thematic learning of the 2013 Curriculum.

Another challenge is the inadequate infrastructure and facilities, which results in teachers not fully grasping the curriculum (Basar, 2021). Additionally, a small percentage of teachers are still unable to effectively use digital and electronic media, such as computers, LCDs, and the internet.

Huda (2020) claims that at the moment, instructors must be able to employ learning

materials, both ones they create themselves and ones they can find online that make use of information and communication technology. Things on the ground indicate that many teachers would rather use learning materials that are already available online than create their own.

Although the learning materials that are available online may not always match the qualities of students or learners, their use is nevertheless seen as useless. In accordance with Setiyadi, Munjaji, and Naimah (2022), learning materials that do not reflect the characteristics of students would result in students being less excited and motivated while studying. Learning outcomes are subpar when learning motivation is absent.

Rahmawati (2018) claims that the issues with learning media in elementary schools include teachers' limited ability to apply the 2013 curriculum, which differs from the previous curriculum, the use of media, methods, and learning techniques that change only occasionally when teaching material in accordance with the 2013 curriculum, and the underutilization of IT-based media in learning in accordance with the 2013 curriculum (Krissandi, 2018).

According to the PISA 2018 results, Indonesia is ranked poorly. Out of 79 nations that took part in the PISA test, Indonesia came in at number 71 with a score in the Science category of 396. This demonstrates the need for increased learning quality in order to improve student learning results in Indonesia.

Several issues were discovered in relation to the learning media utilized for providing science learning materials, according to the findings of observations and conversations with educators at SDN Polaman. The only media used during learning, according to Setiyadi, Fortuna, and Ramadhan (2022), are those that are accessible online, such those taken from YouTube and Google.

Other learning tools that teachers create themselves by modifying the features of their students are not available to them. According to a survey done on fifth graders, as many as 65.2%, or 15 out of 23, kids, were not interested in receiving information through YouTube and would consume a lot of quota if they watched it all the way through.

Students looked less eager to participate in the learning in the beginning of online learning and virtual face-to-face using the zoom meeting or google meet application. Many students remained silent when the teacher inquired, but some responded that they did. The instructor did not appear to get that many students were still having trouble. Setiyadi, Rohyana, and Muttaqin (2022) assert that in order to motivate students to acquire the information being taught, students anticipate learning to take place utilizing engaging learning materials, and parents also have this expectation.

According to Baihaqi, Mufarroha, and Imani (2020), the media's involvement won't be apparent if its use is inconsistent with the established educational objectives' content. Therefore, when using the media, it is important to keep the educational objectives in mind. When disregarded, the media ceases to serve as a teaching tool and instead becomes a barrier to effectively and efficiently reaching objectives.

Quality learning media, according to Sari (2019), can be seen from: (1) being able to create a meaningful learning experience; (2) being able to facilitate the process of interaction between students and teachers; and (3) being able to enrich students' learning experiences; (4) through learning media, being able to change the learning environment from passive students to active discussions and information seeking.

Based on observations of the currently available learning resources, it is frequently discovered that these resources are less engaging and do not depict the actual (concrete) scenario. According to Piaget, children in primary school between the ages of 6 and 12 are in the period of concrete operational development, which means that even if their brains can adequately process anything tangible, they still require the assistance of learning materials to help them think abstractly.

Teachers can use the advancement of more advanced technology to innovate and be

more creative in order to produce engaging learning materials in the form of audio, visual, and motion.

Cellphones are electronic gadgets that individuals frequently use for daily communication. Yunus & Fransisca (2020) claim that smartphones, which are presently primarily based on Android and equipped with internet connectivity and applications that may be utilized to generate engaging learning media in the form of audiovisuals, have replaced mobile phones as the most common form of handheld device. A learning resource with an Android operating system is one of the media that can be created with this smartphone.

In the midst of the Covid-19 pandemic, the role of Android-based learning media has grown in significance since it may assist students when they are studying at home and unable to interact in person with teachers, allowing for the continued delivery and simple comprehension of learning materials.

The study by Rohmah, et al. (2020), whose findings were based on student replies, found that 86.33 percent of students concurred that using android-based e-magazine media can facilitate simple comprehension of the subject matter.

Hanafri, et al. (2019) conducted similar research and found that (1) using technology as a learning tool can boost students' motivation to learn. The android application for computer introduction is expected to make it simpler for students to learn computer recognition, especially in recognizing hardware computers. Based on the results of the questionnaire, it is proven that respondents gave it a positive response. Out of 20 respondents, 90% of students felt helped by the application. Students can use the Android app to study at home with parental supervision aside from studying at school.

Hutabri & Putri (2019) did more pertinent study that demonstrates how interactive learning media increase students' motivation to learn and how media that runs on Android-based smartphones enable students to learn independently from home with the support of their parents.

It is anticipated that an appealing presentation in this media will make it simpler for students to embrace science educational materials. Additionally, it is anticipated that the availability of this medium will make it easier to deploy online learning from home during the Covid-19 pandemic. The benefits that have been discussed should motivate students more. It is also anticipated that using android-based instructional resources will help pupils become more digitally literate.

The goal of this study is to investigate the usefulness of Android-based learning media in science lesson content to raise students' motivation and digital literacy, as well as to design Android-based learning media to increase primary school students' motivation and digital literacy. The goal of this study is to investigate the effectiveness of Android-based learning media in science lesson content to increase students' motivation and digital literacy, as well as to design Android-based learning media to increase primary school students' motivation and digital literacy.

The benefits of this research include: 1) serving as a reference or support for future research. 2) Including android-based learning resources, particularly in science classes for grade V elementary school.

METHODS

This study is an experimental investigation. True experimentation was used in the research design. Two groups were selected at random for the pretest-posttest control design, which was used. The participants in this study were fifth graders in Mijen District, Semarang, during the even semester of the 2021–2022 academic year. The experimental class for this study is the fifth graders at SDN Polaman, and the control class is the fifth graders at SDN Karangmalang.

Using questionnaires and assessments of students' digital literacy abilities to gather data. The descriptive analysis, completeness test,

paired test, N-gain, and independent t-test were employed in the data analysis technique to ascertain the rise in students' learning motivation and digital literacy. Table 1 displays the outcomes of the prerequisite test.

Table 1. Result of Prerequisite Test

Prerequisite Test	Score	Sign.	Interpretation
Normality Test	0.121	0.05	Data is in normal distribution
Homogeneity Test	0.221	0.05	Data is homogeneous

RESULTS AND DISCUSSION

The Effectiveness of Android-Based Learning Media in Increasing Learning Motivation of Grade V Elementary School Students

In general, the descriptive of the students' learning motivation in the control class and the experimental class after learning is presented in the following Table 2.

Table 2. Descriptive of Learning Motivation

	N	Min	Max	Mean	Std. Deviation
E	25	76.47	92.65	84.587	3.91821
K	25	61.76	88.24	75.47	7.14933
N	25				

Explanation
E : Experimental Class
K : Control Class
N : Valid N (listwise)

According to Table 2, the experimental class students' learning motivation scores range from a minimum of 76.47 percent to a maximum of 92.65 percent, with an average value of 84.58 percent. While the learning motivation of students in the control class ranges from 61.76 to 88.24 percent, the average score is 75.47 percent. The post-learning experiment class's average learning motivation score was > 82 percent, indicating that the level of students' motivation to learn is quite high. Even though the average level of learning motivation is considered to be strong, the value of learning motivation among students in the experimental class is higher than that of the control class.

The descriptive results are also strengthened by the percentage distribution of the frequency distribution of students' motivation categories which is presented in Figure 1.

Figure 1. Frequency Distribution of Students Learning Motivation Categories

According to Figure 1, the majority of students in the experimental class (21 students) have extremely high motivation levels of 84 percent, whereas the majority of students in the control class have high motivation levels of 72 percent (18 students).

The Effectiveness of Android-Based Learning Media in Increasing Digital Literacy Skills for Grade V Elementary School

The descriptive data of the research results on the digital literacy ability of experimental class students are presented in Table 3.

Table 3 Descriptive Statistic of Experimental Class

	N	Min	Max	Mean	Std. Deviation
P1	25	50	90	76.00	12.25
P2	25	70	100	90.40	9.78
N	25				

Explanation
P1 : Pretest
P2 : Posttest
N: Valid N (listwise)

Based on Table 3, it is known that the experimental students' average pretest score for digital literacy is 76.00, with a minimum score of 50 and a maximum score of 90. The experimental class's average posttest score on digital literacy, with a minimum score of 70 and a maximum score of 100, is 90.40. While Table 4 presents the findings of the descriptive study of the digital literacy abilities of the control class.

Table 4 Descriptive Statistic of Control Class

	N	**Min**	**Max**	**Mean**	**Std. Deviation**
P3	25	50	90	72.00	11.18
P4	25	60	90	79.20	11.87
N	25				

Explanation

P3 : Pretest

P4 : Posttest

N: Valid N (listwise)

Based on Table 4, it is known that the control class students' average pretest score for their level of digital literacy is 72.00, with a minimum score of 50 and a maximum score of 90. While the control class students' average posttest value for their level of digital literacy is 79.20 with a score of 79.20. The value ranges from 50 to 90 with 50 being the lowest. The results of the preetest and posttest can be seen in Figure 2 dan Figure 3.

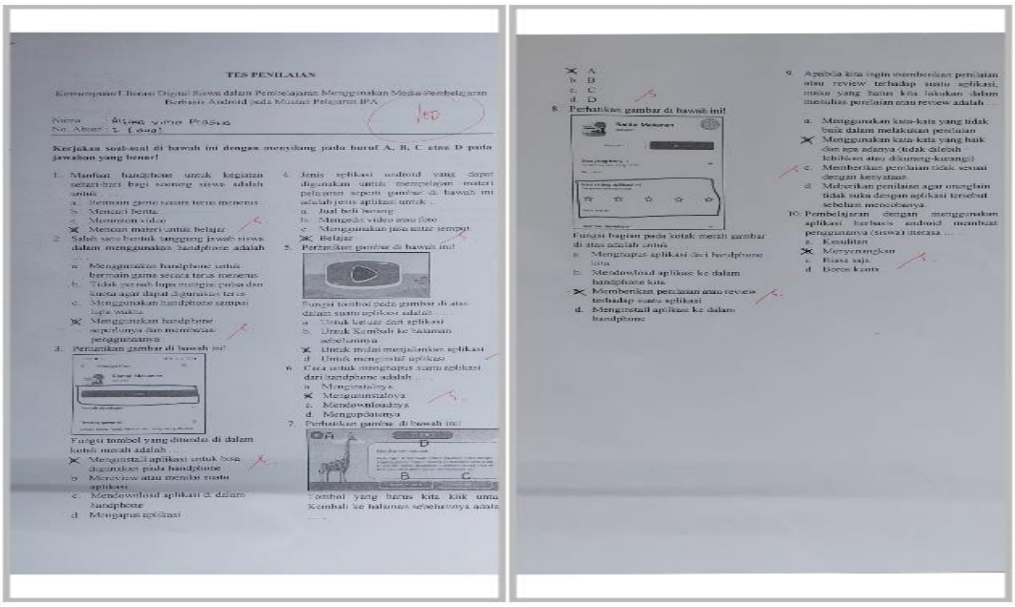

Figure 2. Result of the pretest

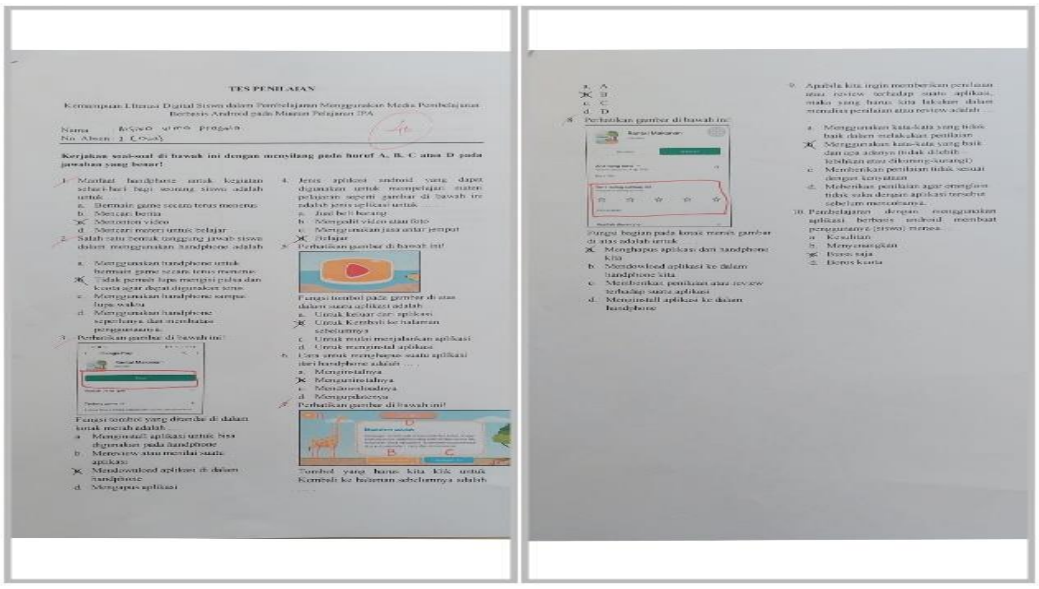

Figure 3. Result of the posttest

Completeness Test

The KKM was completed by 14 of the 25 experimental class students (56 percent) in the pretest data and by 23 students (92 percent) in the posttest data, according to the completeness test of the students' digital literacy abilities. The control class students' proficiency with digital literacy can be demonstrated by the fact that, out of the 25 students, 10 students (or 40%) completed the KKM on the pretest data and 16 students (or 64%), on the posttest data. Figure 4 displays the experimental class and the control class.

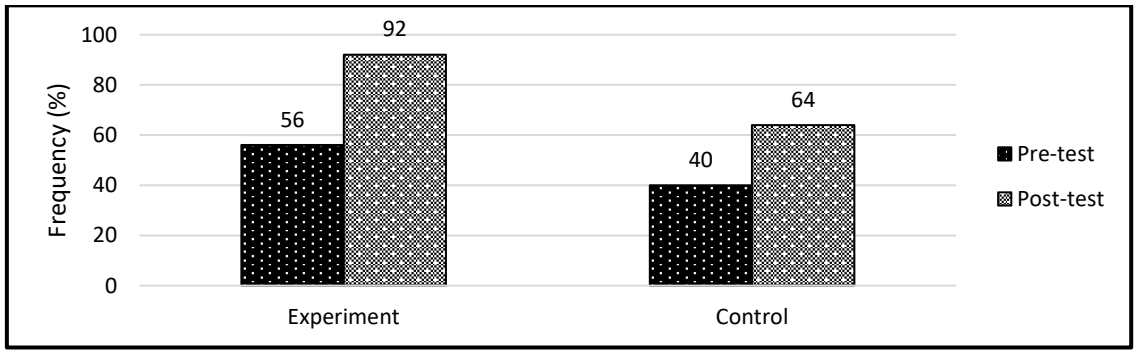

Figure 4. Graph of Students' Digital Literacy Completion Ability

Improvement Test

Tests for improving students' digital literacy skills using Android-based learning media, using a paired-sample test with the hypothesis used, as follow:

$H_0: \mu_1 = \mu_2$ (There is no difference in students' digital literacy skills before and after learning in the experimental class/control class)

$H_1: \mu_1 \neq \mu_2$ (There are differences in students' digital literacy abilities before and after learning in the experimental class/control class)

The results of the difference test output can be seen in Table 5.

Table 5. Improvement Test of Pretest dan Posttest Students' Digital Literacy Ability

Data	T Count	Sig	Conclusion
pre-post Control	-2,571	0,017	There is a significant difference
pre-post Experiment	-11,066	0,000	There is a significant difference

Based on the results of the difference test performed using SPSS 20 using a paired sample test and a significance threshold of 0.05 in Table 5, it is determined that Ho is not accepted since the significant value for the control class and the experimental class is 0.000 < 0.05. This demonstrates that there are variations in students' levels of digital literacy before and after receiving treatment. As a result, it can be said that in the experimental class, students' digital literacy skills significantly improved both before and after using android-based learning media, whereas in the control class, there were differences between students' digital literacy skills both before and after using traditional learning models.

Figure 5 illustrates that while both the control class and the experimental class had significant growth, the average gain in students' digital literacy abilities varied.

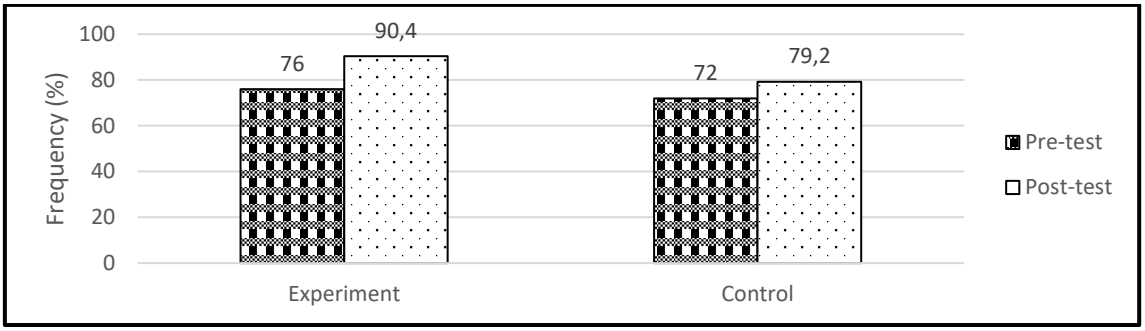

Figure 5. Score of Digital Literacy Ability

Figure 3 demonstrates that the experimental class's average score for better digital literacy skills increased from 10 to 18.95 percent, as compared to only 10 percent for the control group.

N-Gain Test

The N-Gain test was used to compare the pretest and posttest results of students in the experimental class and the control class. In order to determine the degree of effectiveness of the adoption of android-based learning, N-Gain analysis can classify the improvement in students' digital literacy abilities based on the categories of low, medium, and high improvement. Figure 6 provides a summary of the N-Gain study' findings.

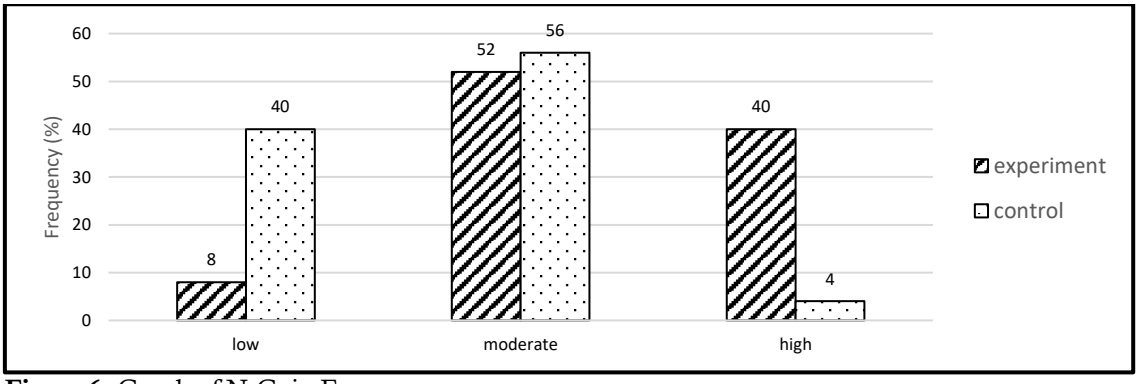

Figure 6. Graph of N-Gain Frequency

Distribution of Students' Digital Literacy Ability

Figure 6 illustrates the N-Gain in the experimental class, showing that 8% of students fall into the low category, 52% fall into the middle category, and 40% fall into the high category. In contrast, 40% of students in the control group fell into the low category, 56% fell into the medium category, and 4% fell into the high category. The control class has a lower N-Gain value of 0.142, which is in the low category, compared to the experimental class, which has an average N-Gain of 0.66, which is in the medium group. This demonstrates that improving students' digital literacy skills in the experimental class is more successful than improving skills in the control class using traditional approaches.

Comparative Test

The average gap between students who take lessons using Android-based learning and students who take lessons using traditional learning techniques is calculated using comparative testing. The following hypotheses were tested in this study's comparative testing utilizing an independent t-test:

$H_0: \mu_1 = \mu_2$ (There is no difference in the digital literacy ability of the control class and experimental class students in science lessons)

$H_1: \mu_1 \neq \mu_2$ (There are differences in the digital literacy abilities of control class and experimental class students in science lessons)

If either the Sig value or the t count exceed the t table, the hypothesis is rejected. The independent sample t-test findings in this study revealed sig. of 0.001< 0.05, indicating that there is a difference in the average posttest score of students' digital literacy abilities between the control class and the experimental class during scientific lectures. Further testing was done by examining the average posttest value because there was a substantial difference between the experimental class and the control class.

The experimental class's posttest average is 90.40, while the control group's is 79.20, indicating that after learning, the experimental group's average value of digital literacy abilities in the lesson's subject matter is higher than that of the control group. The conclusion that android-based learning media can effectively improve students' digital literacy skills is supported by the results of previous tests, which show that learning using android-based learning media can improve completeness and average digital literacy skills at a moderate level and has a higher average score than the control class.

Digital Literacy Questionnaire Analysis

The results of the survey on students' perceptions of digital literacy also reflect the test results of the effectiveness of Android-based learning media in improving students' digital literacy abilities. Table 6 displays the findings of the examination of the students' digital literacy surveys during science lectures.

Table 6. Results of Digital Literacy Questionnaire Analysis

Aspects	Experiment		Control	
	Score	Category	Score	Category
The intensity of the application and use of digital literacy in learning activities carried out by students	87.08	Very High	76.92	High
The level of students' understanding in using digital media and the internet	84.09	Very High	78.40	High
Average	85.48	Very High	77.71	HIgh

According to Table 6's findings, the experimental class students' average score on the digital literacy questionnaire was 85.48 percent, which is considered to be very high. The control class had an average score on the digital literacy test that was 77.71 percent, which was considered to be high. Additionally, the average questionnaire results are shown for each aspect, with the experimental class scoring an average of >83 percent on each, which is considered very high. In contrast, the control class scored an average of >75 percent, which is considered high, on each of its features.

These findings suggest that using android-based learning in science lectures encourages students to apply and make better use of digital literacy in order to gain a deeper understanding of the subject matter. Additionally, students feel more comfortable accessing digital media and the internet on Android to enhance educational tasks. The frequency distribution of the categories from Figure 7 of the digital literacy questionnaire is shown below to further support the analysis's findings.

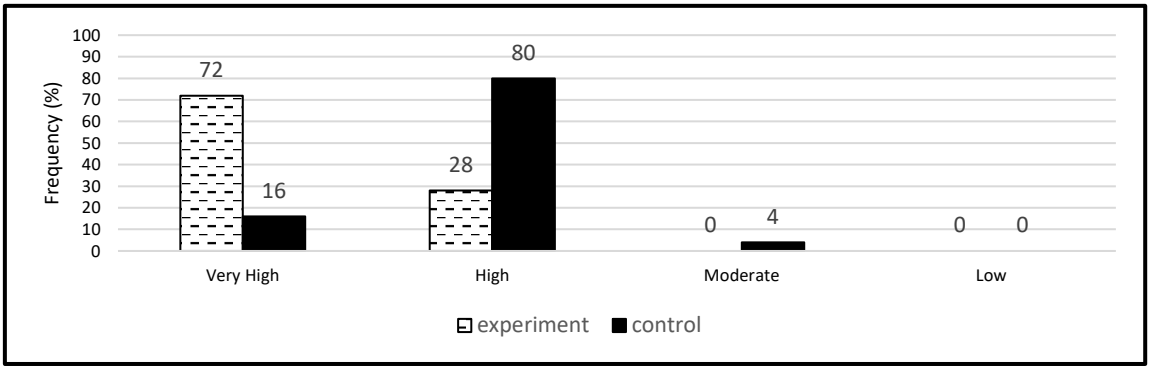

Figure 7. Frequency Distribution of Student Digital Literacy Questionnaire Categories

Figure 7 findings demonstrate that the majority of students in the experimental class have extremely high digital literacy scores of 72% (18 students), whereas the majority of students in the control class have high scores in the category of motivation of 80% (20 students). This shows that students who receive Android-based instruction experience a high level of enjoyment and passion for using digital literacy to learn science.

Analysis of Learning Evaluation Results

To support the findings of the effectiveness of the implementation of the learning model, the analysis of the evaluation of science learning after learning is employed. The Independent sample t-test was used to examine the outcomes of the scientific learning evaluation, and the results are shown in Table 7.

Table 7. Science Learning Evaluation Results

Class	Average	Completeness	T Count	Sig.	Interpretation
E	84.53	84%	3.955	0.000	Signficant
K	69.33	36%			

Explanation
E : Experiment
K : Control

According to the analysis's findings in Table 7, students in the experimental class scored significantly higher on the evaluation of science learning after learning than students in the control class. It is evident from the significance level of 0.000 < 0.05 that the experimental class's average value is greater than that of the control group. These findings are further reinforced by the experimental class's completion rate, which is 84 percent, which is greater than the control class's mastery rate of only 36 percent. This demonstrates that implementing android-based learning is successful in improving students' digital literacy, which can also have a favorable effect on the outcomes of the experimental class students' science learning evaluation results when compared to the results of the control class students' science learning evaluation.

Android-based learning media is implemented in fifth grade students at Polaman State Elementary School which is applied to science subjects as shown in Figure 8.

Figure 8. Homepage of Android Based Learning Media

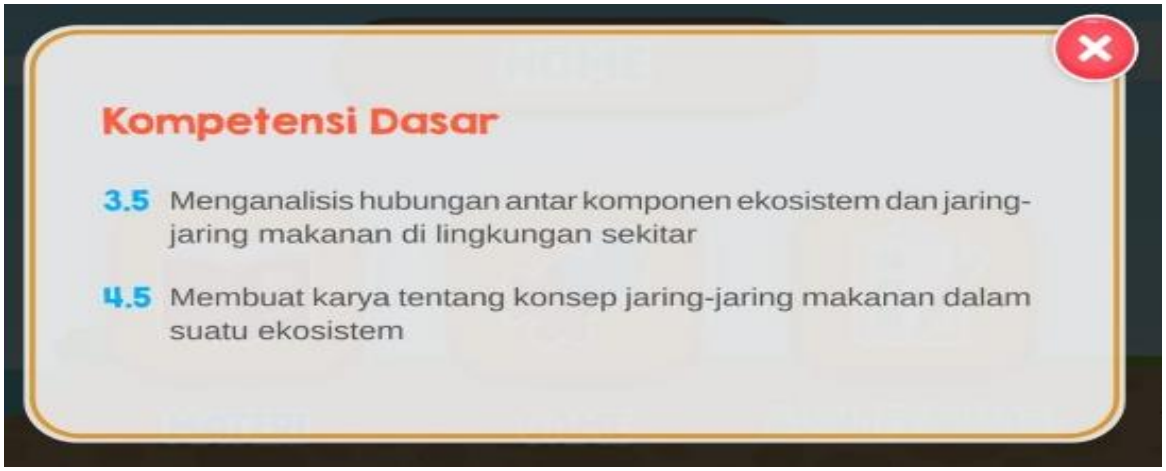

Figure 9. Page of Basic Competence

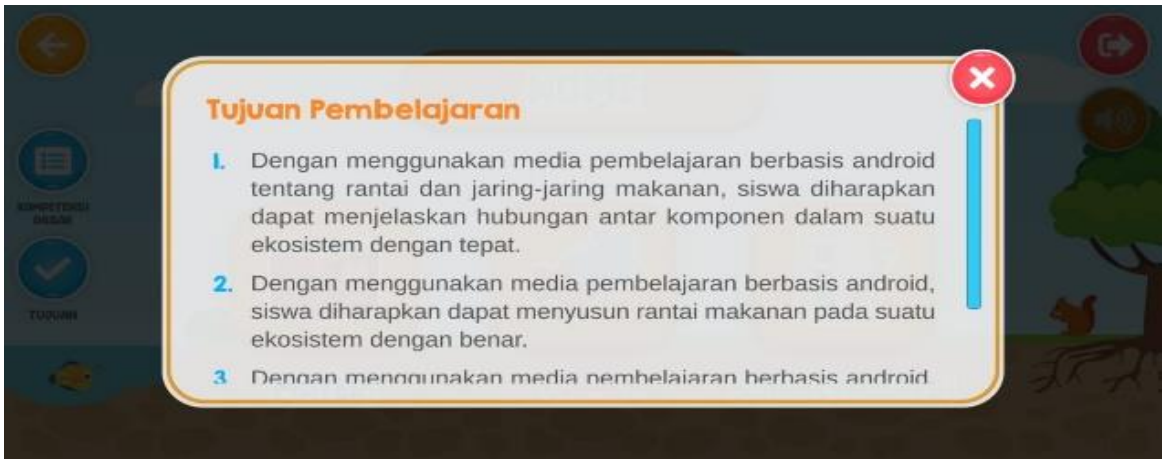

Figure 10. Page of Learning Objective

Figure 11. The page contains material on android-based learning media

Figure 12. Game page on android-based learning media

A gaming page, shown in Figure 8, can be created by dragging and dropping an image of a food chain into the subsequent sequence. The study's findings demonstrate the effectiveness of android-based learning media in increasing students' motivation to learn. The average student learning motivation in the post-learning experimental class reached a value of 84.6 percent, indicating that the results are better than the control class and that the student learning motivation is characterized as extremely high.

These findings are consistent with Putri, et al researche in 2021, which contends that the creation of learning resources based on Android increases students' motivation to learn. Andriani & Suratman (2021) claim that 72% of students are more motivated to learn while using android-based learning media.

Additionally, 84 percent of students shown extremely high motivation to learn science after learning, and students also became more excited, curious, and competent while learning. Hakky, et al. (2018) also came to the conclusion that students responded well to android-based learning media, demonstrating that the content sparked their curiosity, improved their understanding, and motivated them to learn.

Students typically respond very favorably and highly to the indications "there are engaging activities in learning" and "there is a conducive learning environment," with an average score of > 89 percent, when looking at learning motivation indicators. This demonstrates that students are engaged, eager, and not bored when learning science when using android-based learning resources.

Aimana, Saprin, and Basam (2021) define a good learning environment as one that is tidy, calm, distraction-free, and equipped with the necessary infrastructure for learning. This will have a beneficial effect and inspire kids to work

harder to accomplish their future objectives. In contrast, a non-conditional atmosphere will demotivate kids from learning. Observations made during the learning process revealed that several students had previously felt unmotivated, drowsy, and isolated from their classmates.

However, after the introduction of learning resources based on Android, kids began to pay more attention, were happier, and were more upbeat and enthusiastic while learning science. Additionally, a supportive learning environment strengthens students' motivation to learn science by providing factors like approachable and communicative teachers, learning resources that support science learning, and interactions with the outside world that can help students feel more at ease and focused on learning science.

Android-based learning materials can help students study more effectively and have a big impact on their digital literacy abilities when it comes to learning science. This is evident from the paired t-test findings, which indicate a value of sig. of 0.00 < 0.05, indicating that the use of android-based learning media significantly increased students' digital literacy skills by 19%.

The N-Gain value of 0.66, which shows that the improvement in students' digital literacy skills is effective in the medium category, supports these findings. The effectiveness test is strengthened by a comparison between the experimental class and the control class, which shows a significance value of 0.00 < 0.05 and an average value of the experimental class's digital literacy ability that is greater than the control class's digital literacy ability, which is 90.4. This indicates that the learning media based on Android can improve students' digital literacy skills more effectively than traditional learning methods (lectures).

Yessi et al. (2021) claim that using android-based learning resources generally helps students develop their digital literacy, particularly in the areas of processing and evaluating information, disseminating research findings through digital media, and having excellent digital citizenship. The use of technology to locate, utilize, and spread information in the digital environment is another definition of digital literacy. Digital literacy in elementary schools, according to Khotimah, Sutarto, and Nugroho (2021), encompasses more than merely utilizing the internet for research or amusement. But it ought to be a way to mold students' capacity for analytical, synthetic, critical, imaginative, and creative thinking (Indraswati, et al., 2020).

The utilization of android-based learning resources enhances student digital literacy and has a favorable effect on learning. According to Kuswanto & Radiansah (2018), learning may be done anywhere and is made easy to use, fascinating, and straightforward by using Android-based learning material. Additionally, studying through the use of Android interactive learning will be able to pique students' interest and enjoyment and improve learning motivation that is tailored to each student's level of understanding (Muttaqin & Suarni, 2021).

Based on the results of the digital literacy questionnaire in the experimental class, it also demonstrates that the level of students' understanding of using digital media and the internet is also very good, and the percentage score is higher than the control class. The intensity of the application and use of digital literacy in learning activities carried out by students is also categorized as very good.

This demonstrates that students are better able to use digital literacy as a bridge to understand the science material that has been presented after experiencing android-based learning in science sessions.

This result is consistent with the assessment of science learning outcomes, which demonstrates that the experimental class outperformed the control class by a large margin. Thus, it can be concluded that using android-based learning in science lessons as a whole has a significant and effective impact on increasing learning motivation and intensity as well as the students' digital literacy skills, leading to better results on understanding and learning achievement in science.

CONCLUSION

The findings revealed that: 1) the post-learning experimental class students' learning motivation was rated as very high; 2) the descriptive test on the pretest received a score of 74.00 and the posttest received a score of 90.40; 3) the completeness test resulted in 92 percent being completed; and 4) there were differences which is significant, 5) The control class's average N-Gain is 0.142, which is in the low group, compared to the experimental class's average of 0.66, which is in the medium category. 6) There is a variation in the posttest average scores. According to the test results mentioned above, the learning media for Android used in scientific lessons is excellent at increasing students' motivation levels and digital literacy.

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