

## EFFECTS OF DIGITAL BOOKS AND INTERACTIVE VIDEOS ON ISLAMIC RELIGIOUS EDUCATION: A QUASI-EXPERIMENTAL STUDY

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### ABSTRACT

*This study examines the effects of digital books and interactive instructional videos on students' learning outcomes in Islamic Religious Education (IRE). Employing a quantitative approach with a quasi-experimental nonequivalent control group design, the study involved 68 eleventh-grade students selected through purposive sampling from a population of 209 students. Data were collected using achievement tests and questionnaires and analyzed through descriptive and inferential statistics. The findings reveal that the use of digital books resulted in a mean score of 42.53 and demonstrated a significant effect on IRE learning outcomes ( $t = 2.140 > 2.037$ ;  $R^2 = 0.250$ ), indicating a 25% contribution to learning improvement. In contrast, interactive instructional videos produced a higher mean score of 55.24 and showed a stronger significant effect ( $t = 2.631 > 2.037$ ;  $R^2 = 0.770$ ), contributing 77% to the variance in learning outcomes. Furthermore, the independent samples test indicated a statistically significant difference between the two groups ( $p = 0.000 < 0.05$ ), with interactive video instruction outperforming digital books. These findings demonstrate that interactive digital media characterized by audiovisual integration and learner engagement provide greater pedagogical impact in IRE instruction compared to text-based digital resources. The study contributes to the development of digital Islamic education by providing empirical evidence on the comparative effectiveness of structured digital textbooks and interactive multimedia approaches. It offers a data-driven foundation for integrating adaptive and interactive technologies into IRE classrooms to enhance academic achievement and promote more effective technology-supported religious education.*

## INTRODUCTION

Education is an effort to gain knowledge, both formally through school and informally from education in the home and society (Irsalulloh & Maunah, 2023). Education is also a conscious and

systematic effort, carried out by people who are given responsibility to influence students so that they have the nature and character in accordance with the ideals of education (Anggarawan et al., 2023). Ardiyansyah et al. (2025) From the definition above, it can be seen that the emphasis is on students developing their potential through the learning process or other methods that are known and recognized by society (Khasanah et al., 2023). This learning is expected to produce quality humans who have spiritual strength, religiousness, self-control, personality, intelligence, noble morals, and life skill (Abadiyah & Hidayah, 2024). In today's digital era, information and communication technology (ICT) has become an integral part of everyday life, including in the world of education (Huraerah et al., 2024). One of the innovations that has emerged in the field of education is digital books, which are a form of book that can be accessed via digital devices such as computers, tablets, or smartphones (A. A. Putri et al., 2025). Digital books offer various advantages, such as ease of accessing information, the ability to save notes directly in the book, and the possibility to customize the content according to individual learning needs (Mustari, 2023).

The development of digital technology in the modern era has had a major impact on all aspects of life, including the world of education (Hakim & Yulia, 2024). The learning process is now required to be more adaptive, innovative, and in line with the needs of students who grow up in a technology-based environment (Permana et al., 2024). In this context, teachers as educators have an important role to provide learning experiences that are relevant, interesting, and able to improve students' understanding through the use of various digital learning media (Putra & Pratama, 2023). The subject of Islamic Religious Education (IRE) as an integral part of the national curriculum has the aim of not only providing religious knowledge, but also shaping the character, moral values, and religious attitudes of students (Judrah et al., 2024). IRE learning is often considered challenging because it contains abstract concepts that require in-depth explanations, real examples, and interesting delivery methods (Barokah et al., 2025). Therefore, the use of creative and technology-based learning media is very important to help students understand the material more effectively and meaningfully. One form of digital media that is developing rapidly is the Islamic Religious Education digital book (e-book) (Fitriani et al., 2023). Digital books allow for a more interactive presentation of material, equipped with images, audio links, and illustrations that can enrich the learning experience (Ali et al., 2024). In addition, e-books are easily accessible anytime and anywhere, thus supporting students' independent learning outside the classroom (Ratnasari et al., 2024).

These features can help students understand materials such as faith, morals, jurisprudence, and the history of Islamic culture more comprehensively (Miranda et al., 2024). In addition to digital books, interactive Islamic Education learning videos are also becoming a medium that is increasingly used in modern learning (Purnomo et al. 2025). Interactive videos can display worship simulations, historical illustrations, explanations of verses from the Qur'an, as well as examples of moral behavior in everyday life (Amin, 2023). With an attractive visual display and interactive features such as quizzes, material choices, or step-by-step explanations, the video is considered capable of increasing students' motivation, attention, and understanding (Mahrita et al., 2024). This is very relevant at the 11th grade high school level, when students are at a stage of cognitive development that demands more dynamic and applicable material delivery (Adedo & Deriwanto, 2024).

However, the use of digital media in Islamic Religious Education learning does not always provide optimal results if it is not supported by appropriate learning strategies. Some students may be less familiar with digital books, experience concentration problems when using electronic devices, or do not understand the video content in depth without guidance from the teacher (Prayetno, 2025). Therefore, research is needed to determine the extent to which the use of digital books and interactive learning videos influences the Islamic Religious Education learning outcomes of grade IX high school students. This research is important because it is relevant to the need to improve the quality of Islamic Religious Education and Character Education in the digital era. Technological developments demand

innovation in the learning process to make it more interesting, effective, and in accordance with the characteristics of today's students (Ambarwati et al., 2021). Interactive learning media, such as digital books and interactive learning videos, are very necessary to help students understand Islamic Religious Education and Character Education materials that are not only cognitive, but also emphasize the formation of attitudes and moral values (Muharrani et al., 2025). By using interesting and interactive media, it is hoped that students can be more motivated, active, and able to internalize religious values and character more meaningfully (Purnomo et al., 2025b). Therefore, this research is important to examine the extent to which the use of digital media can contribute to improving learning outcomes students (Purnomo et al., 2025c).

The development of digital technology has driven significant transformations in learning practices, including in Islamic Religious Education (IRE). Theoretically, the use of learning media is seen as a strategic instrument to increase the effectiveness of the teaching and learning process (Sinaga et al., 2024). From the perspective of cognitive learning theory, presenting information through text, images, and visualizations helps students process information more systematically and strengthens the knowledge structure in long-term memory (Atamou et al., 2025). Furthermore, constructivism theory asserts that knowledge is actively constructed through meaningful learning experiences, interactions, and reflection (Casfian et al., 2024). Therefore, digital books and interactive learning videos have the potential to encourage active involvement of students in building their own understanding of the learning material (Marlina, 2025). In the context of digital pedagogy, learning media is no longer understood simply as a tool, but rather as a learning ecosystem that enables active participation, interactivity, and a more contextual learning experience. This becomes increasingly relevant in Islamic Religious Education (IRE) and Character Education (Budi Pekerti), which emphasize not only cognitive aspects but also the internalization of values and character building. Interactive digital media has the potential to help students understand Islamic values in a more concrete and applicable way through visualizations of worship practices, role models, and illustrations of moral situations (I. M. Putri et al., 2026). Thus, theoretically, the integration of digital books and interactive learning videos has a strong conceptual basis in improving the quality of Islamic Education learning.

The urgency of integrating digital media into Islamic Religious Education (IRE) is further reinforced by the characteristics of Generation Z as digital natives who grew up in a technology-based environment (Sarinah et al., 2025). This generation tends to prefer visual, fast-paced, interactive, and multimedia-based learning. Conventional learning approaches, which are predominantly lecture- and printed-text-based, often fail to accommodate these characteristics, resulting in low learning engagement. Therefore, the use of digital textbooks and interactive learning videos is not only theoretically relevant but also responsive to the needs and learning styles of today's students. Although a number of previous studies have demonstrated the effectiveness of digital media in improving learning outcomes, most studies have focused on the use of one type of media in isolation and have not examined the comparative strength of the influence of digital textbooks and interactive learning videos in the context of Islamic Religious Education (IRE) (Fauzi et al., 2025; Kausar et al., 2025). Furthermore, studies using quasi-experimental designs to test the differences in effectiveness of these two media in Islamic Religious Education learning at the secondary school level are still relatively limited. Therefore, this study plays an important role in enriching the literature on digital pedagogy in Islamic education by providing empirical evidence regarding the contribution and comparative effectiveness of two forms of digital media on Islamic Religious Education learning outcomes. Contextually, initial observations at SMAN 1 Polewali Mandar indicate that the use of digital textbooks in learning has not been optimal and has not been systematically integrated into Islamic Religious Education (IRE) learning. The use of learning media is still dominated by conventional methods, resulting in relatively low student engagement and impacting learning

outcomes. Although most students have personal digital devices, their use is directed more towards entertainment activities than as a learning tool.

On the other hand, interactive learning videos have not been adequately implemented, even though this medium has the potential to aid understanding of abstract Islamic Religious Education (IRE) material through visualization and concrete examples. Limited digital readiness and competency, both among educators and students, also contribute to the suboptimal use of technology in learning. Based on these conditions, research is needed that systematically examines the effect of the use of digital textbooks and interactive learning videos on Islamic Religious Education (IRE) learning outcomes of 11th-grade students at SMAN 1 Polewali Mandar. This research is expected to not only provide an empirical contribution to the effectiveness of digital media in Islamic Religious Education (IRE) learning but also strengthen the development of values-based digital pedagogy in Islamic education.

## **METHODS**

This research uses a quantitative approach with an experimental research type (Yusuf, 2016). The design applied is a Quasi-Experimental Design with a non-equivalent control group design model (Zuriah, 2005). This design was chosen because the research subjects were not randomly assigned, but still involved an experimental group and a control group given different treatments under controlled conditions. This design consisted of two groups: the experimental group and the control group. The experimental group (grade XI F1) received a digital textbook, while the control group (grade XI F4) received an interactive learning video. Both groups were given pretests and posttests to measure changes in learning outcomes before and after the treatment. This research design allowed researchers to compare the effects of both types of learning media on Islamic Religious Education (IRE) learning outcomes. The use of digital textbooks in this study was implemented by providing Islamic Religious Education (IRE) materials in digital format (interactive PDF) that could be accessed through students' mobile devices. The digital textbooks contained text, illustrative images, summaries, and practice questions that could be studied independently or in a directed manner during the learning process. The teacher acted as a facilitator by providing direction, discussions, and assignments based on the material in the digital textbooks. Meanwhile, interactive learning videos were used in the form of audiovisual displays containing explanations of Islamic Religious Education (IRE) material, illustrations of religious practices, examples of morality, and reflective questions that encouraged active student participation. The video was shown in class, followed by a discussion and evaluation session. This approach was designed to simultaneously integrate visual and auditory elements to enhance students' conceptual understanding. The population in this study was all 209 11th-grade science students at SMA Negeri 1 Polewali Mandar. (Supangat, 2017; Tiro, 18 C.E.). The research sample consisted of two classes, namely XI F1 and XI F4, each with 34 students, resulting in a total sample of 68 students. The sampling technique used purposive sampling, which is a sampling technique based on certain considerations relevant to the research objectives (Sugiyono & Lestari, 2021). The research instruments used included: Learning outcome tests to measure students' cognitive achievement before and after treatment. A questionnaire with a Likert scale to measure students' responses and perceptions regarding the use of learning media (Yusuf, 2016). Documentation to complete administrative data and support research validity (Cahyanto et al., 2025; Saat & mania, 2020). Data processing is carried out through two stages of analysis, namely descriptive analysis and inferential analysis. Descriptive analysis was used to describe the average value, standard deviation, and categories of student learning outcomes in each group. Inferential analysis was conducted to test the research hypothesis with the following stages: Normality test, to determine whether the data is normally distributed. Homogeneity test, to ensure equality of variance between groups. t-test (Independent Samples t-test), to test for significant differences in learning outcomes between the group using digital books and the group using interactive learning videos. All statistical tests were conducted at a significance level of 0.05 ( $\alpha =$

0.05). The results of the inferential test were used to determine whether or not there was a significant effect of the use of digital books and interactive learning videos on Islamic Religious Education learning outcomes (Sugiyono & Lestari, 2021).

## RESULTS AND DISCUSSION

This section will discuss the research results in detail using a statistical analysis approach. This study uses descriptive and inferential analysis to answer the formulation of problems 1, 2, and 3 as well as answer the existing hypotheses with the help of the Statistical Packages For Social Science (SPSS) version 27 program. This study was conducted to determine the effect of the use of digital books and interactive learning videos on the IRE learning outcomes of grade XI students at SMA Negeri 1 Polewali Mandar. The following are the research results obtained by the researcher after conducting the study, namely:

### **The Influence of the Use of Digital Books on the Learning Outcomes of Islamic Education and Character Education of Class XI Students at SMAN 1 Polewali Mandar.**

The research results obtained were data processed using SPSS using descriptive analysis to determine the use of digital books. A t-test was then conducted. *IRE red sample t test* to determine student learning outcomes. After that, a hypothesis test was conducted using SPSS using inferential analysis, namely a simple regression test, to determine whether there was an effect of digital textbook use on Islamic Religious Education (IRE) learning outcomes for grade XI students at SMA Negeri 1 Polewali Mandar. The research data are as follows:

#### **Use of Digital Books for Learning Outcomes**

To assess the impact of digital textbook use on Islamic Religious Education (IRE) learning outcomes in eleventh-grade students at SMA Negeri 1 Polewali Mandar, a questionnaire was administered to students. Students were instructed to complete the questionnaire by selecting answers from the provided alternative answer criteria as follows:

SS = If you strongly agree with the statement

S = If you agree with the statement

TS = If you disagree with the statement

STS = If you strongly disagree with the statement

The data obtained on the control class questionnaire sheet, namely the use of digital books, is in the following table:

Table 1: Results of the Digital Book Usage Questionnaire

No.	NAME	SCORE
1.	Responden 1	60
2.	Responden 2	41
3.	Responden 3	40
4.	Responden 4	40
5.	Responden 5	48
6.	Responden 6	40

7.	Responden 7	39
8.	Responden 8	44
9.	Responden 9	37
10.	Responden 10	44
11.	Responden 11	43
12.	Responden 12	43
13.	Responden 13	48
14.	Responden 14	43
15.	Responden 15	43
16.	Responden 16	43
17.	Responden 17	44
18.	Responden 18	44
19.	Responden 19	42
20.	Responden 20	48
21.	Responden 21	43
22.	Responden 22	33
23.	Responden 23	40
24.	Responden 24	39
25.	Responden 25	43
26.	Responden 26	44
27.	Responden 27	42
28.	Responden 28	42
29.	Responden 29	40
30.	Responden 30	37
31.	Responden 31	40
32.	Responden 32	42
33.	Responden 33	46
34.	Responden 34	41

The data was then analyzed in terms of maximum score, minimum score, average score, and standard deviation. The data presentation aims to provide a general overview of the use of digital books on Islamic Religious Education (IRE) learning outcomes of grade XI students at SMA Negeri 1 Polewali Mandar, as follows:

Table 2: Descriptive Statistics of Digital Book Usage

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Number of Samples	34
Maximum Score	60
Shoes Minimum	33
Rate-Rate (Mean)	42,53
Standard Deviation	4,405

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Based on table 2 above, the research results obtained from 34 students in the control class who were taught using digital books show that the maximum score was 60 and the minimum score was 33 with an average value of 42.53 and a standard deviation of 4.405. Furthermore, the categorization of the use of digital books on the IRE learning outcomes of class XI students at SMA Negeri 1 Polewali Mandar is presented in the following table:

Table 3: Categorization of Digital Book Use

No.	Category	Interval	Frequency	Percentage (%)
1.	Very less	0-36	1	2,9%
2.	Not Good	37-41	12	35,3%
3.	Enough Bik	42-45	16	47,1%
4.	Good	46-49	4	11,7%
5.	Very good	50-60	1	2,9%
Amount			34	100%

Data source: Analysis of Digital Book Usage

The data in table 3 obtained the results of the study there was 1 respondent who rated very poor with a percentage of 2.9%, there were 12 respondents who rated less good with a percentage of 35.3%, there were 16 respondents who rated quite good with a percentage of 47.1%, there were 4 respondents who rated good with a percentage of 11.7%, and there was 1 respondent who rated very good with a percentage of 2.9%. Based on the average value obtained it can be concluded that the use of digital books on the IRE learning outcomes of class XI students at SMA Negeri 1 Polewali Mandar amounted to 55.24 in the fairly good category.

### Islamic Education Learning Outcomes of Students

The learning process using digital books was implemented in the control class and tested. pretest 1 time, after that the treatment was carried out 3 times and given posttest. Processed using SPSS software application ver. 27 to find out the results pretest And post-tes students. Test pretest And post-test, the number of questions was 15. The number of students tested was 34 people, namely class XI F1 students.

Based on pre-test And post-test given to students who were taught using digital books in the control class were as follows:

Table 4: Control Class Learning Outcomes Data

No.	NAME	EVALUATION					
		PRE-TEST			PRE-TEST		
		JS	JB	MARK	JS	JB	MARK
1.	Responden 1	11	4	20	6	9	60
2.	Responden 2	10	5	33	5	10	60
3.	Responden 3	11	4	26	7	8	53
4.	Responden 4	10	5	33	5	10	66
5.	Responden 5	11	4	26	7	8	53
6.	Responden 6	7	8	53	5	10	66
7.	Responden 7	6	9	60	5	10	66
8.	Responden 8	10	5	33	5	10	66
9.	Responden 9	11	4	26	5	10	66
10.	Responden 10	10	5	33	4	11	73
11.	Responden 11	11	4	26	4	11	66
12.	Responden 12	8	7	46	5	10	66
13.	Responden 13	7	8	53	4	11	66
14.	Responden 14	8	7	46	5	10	66

15.	Responden 15	11	4	26	5	10	73
16.	Responden 16	8	7	46	5	10	60
17.	Responden 17	7	8	53	5	10	53
18.	Responden 18	6	9	60	4	11	53
19.	Responden 19	10	5	33	6	9	46
20.	Responden 20	11	4	26	7	8	66
21.	Responden 21	10	5	33	7	8	66
22.	Responden 22	11	4	26	8	7	73
23.	Responden 23	8	7	46	5	10	60
24.	Responden 24	7	8	53	5	10	86
25.	Responden 25	8	5	46	4	11	66
26.	Responden 26	11	6	26	6	9	66
27.	Responden 27	8	7	46	2	13	86
28.	Responden 28	10	5	33	5	10	66
29.	Responden 29	9	6	40	5	10	66
30.	Responden 30	8	7	46	3	12	80
31.	Responden 31	7	8	53	3	12	80
32.	Responden 32	9	6	40	4	11	73
33.	Responden 33	9	6	40	5	10	66
34.	Responden 34	7	8	53	4	11	73

From the table above, we can see the learning outcomes in the control class which was taught using digital books from the total sum of the scores. pretest And posttest. After that, it is entered into the application. In this case, we use the SPSS version 27 computer program. To find out the IRE learning outcomes of class XI students at SMA Negeri 1 Polewali Mandar, see the following table:

Table 5: Learning Outcome Values Pretest And Posttest Control Class

Parameter	PreTest	PostTest
Sample	34	34
Maximum Value	60	86
Minimum Value	26	46
Rate-rate	39,56	66,21
Standard Deviation	11,236	8,380

Based on the table above, it can be seen that the maximum score obtained by the pretest taught using digital books in the control class was 60, while the minimum score was 26. The average value obtained was 39.56 with a standard deviation of 11.236. Meanwhile, the maximum score obtained by the posttest taught using digital books in the control class was 86, while the minimum score was 46. The average value obtained was 66.21 with a standard deviation of 8.380. The following is a categorization table pretest And posttest Student learning outcomes in the control class:

Table 6: Categorization PreTest And PostTest Control Class

No.	Category	Test Results <i>Pretest</i>	Test Results <i>Posttest</i>
1.	Very Low	0-23	0-54
2.	Low	24-34	55-62
3.	Currently	35-45	63-70
4.	High	46-56	71-79
5.	Very high	57-60	80-86

Calculation of the percentage of assessment for the testpretest And posttest using the following:

$$P = \frac{f}{N} \times 100\%$$

After determining the category, the following are the test result categories.pretestand test result categoriespost-test in the control class are shown in table above as follows:

Table 4.7: Test Result CategoriesPre-Test Control Class

Score Range	Category	Digital Books	
		Frequency	Percentage
0-23	Very Low	0	0%
23-34	Low	16	47%
35-45	Currently	3	8,8%
46-56	High	13	38,2%
57-60	Very high	2	5,8%
		34	100%

Based on the table above, it can be seen that the percentage of learning outcome scorespre-test Those taught using digital books are 0 and are in the very low category, meaning there are no students in this category. 16 students are in the low category with a percentage of 47%. 3 students are in the medium category with a percentage of 8.8%, 13 students are in the high category with a percentage of 38.2% and 2 students are in the very high category with a percentage of 5.8%. In addition, according to the average score of student learning outcomes of 39.56, if converted into the table above, it turns out to be in the medium category. This means that the average student learning outcomes inpre-test in the control class is in the medium category.

Table 8: Test Result CategoriesPost-Test Control Class

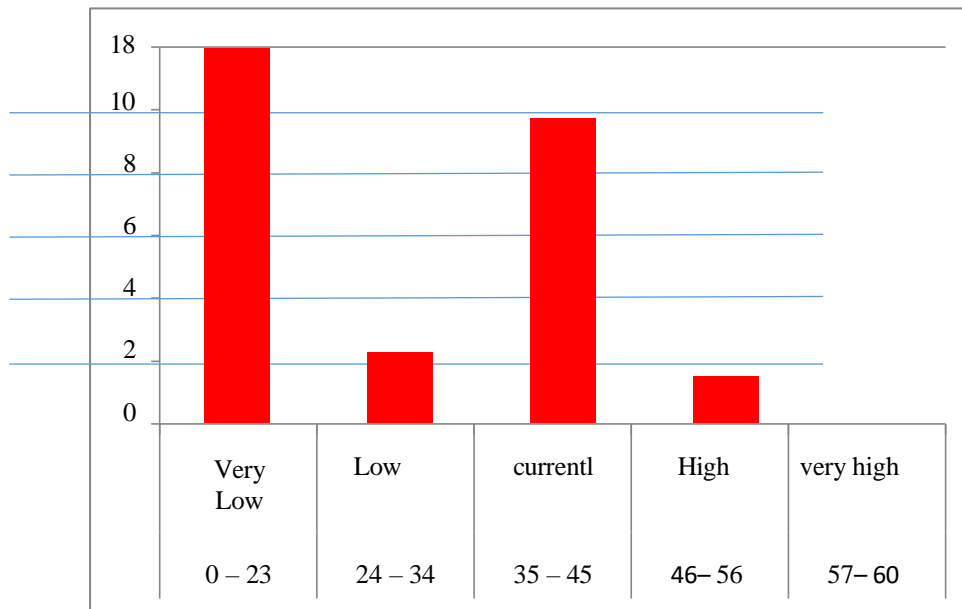
Score Range	Category	Digital Books	
		Frequency	Percentage
0-54	Very Low	5	14,7%

55-62	Low	3	8,8%
63-70	Currently	16	47%
71-79	High	7	20,5%
80-86	Very high	3	8,8%
		34	100%

Based on the table above, it can be seen that the percentage of learning outcome scores post-test Those taught using digital books are 5 in the very low category with a percentage of 14.7%, 3 students are in the low category with a percentage of 8.8%. 16 students are in the medium category with a percentage of 47%, 7 students are in the high category with a percentage of 20.5% and 3 students are in the very high category with a percentage of 8.8%. In addition, according to the average score of student learning outcomes of 66.21, if converted into the table above, it turns out to be in the medium category. This means that the average student learning outcomes in post-test in the control class is in the medium category.

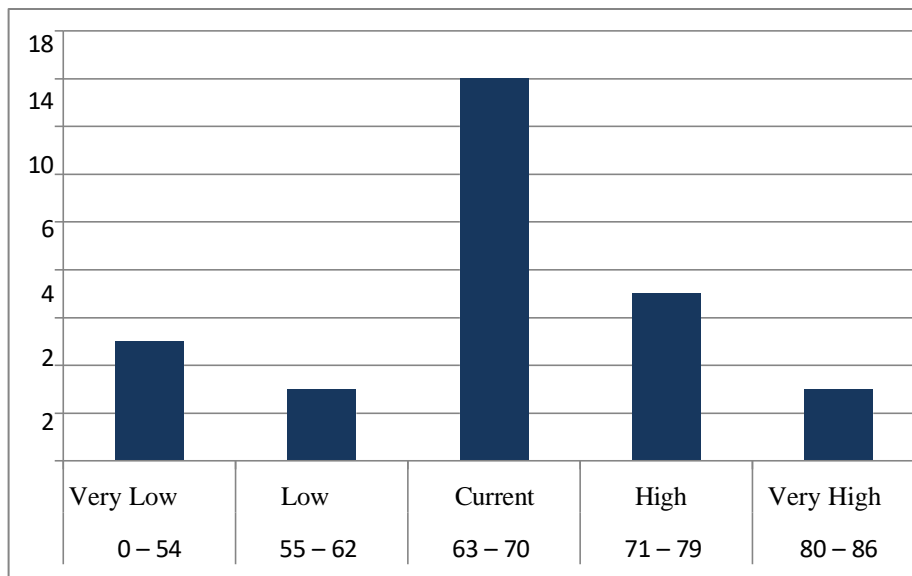
Next, the author presents the results pretest And posttest in the control class in the form of a bar chart to show the IRE learning outcomes of class XI students at SMA Negeri 1 Polewali Mandar in control class 1 as follows:

Diagram 1: Results Pretest Control Class



Based on the table above, the learning outcomes of the control class in pretest with a frequency of 4 in the very low category and a frequency of 8 in the low category, a frequency of 11 in the medium category, a frequency of 8 in the high category and a frequency of 3 in the very high category.

Diagram 2: Results PostTest Control Class



Meanwhile, in the post-test, the learning outcomes of the control class were non-existent, with 11 being in the low category, 12 being in the medium category, 6 being in the high category, and 5 being in the very high category. Furthermore, to determine whether there were differences in the pre-test and post-test learning outcomes of 11th-grade students in Islamic Religious Education at SMA Negeri 1 Polewali Mandar, a IREred sample t-test was used. This test is used to determine whether there is a difference in the average between two IREred or related samples. The results of the IREred sample t-test calculation for the pre-test and post-test results in the control class are shown in the following table:

Tabel 9: Test IRE red Sample Test Control Class

Control Class(X1)	df	Sig (2-tailed)
Pretest - Posttest	33	0,000

In the table above, the results of the IREred sample t-test calculation for the experimental class (X1) obtained the results of data processing with a Sig (2-tailed) value = 0.000, thus there is a real difference between the learning outcomes of students in the pretest and posttest scores taught using digital books in IRE learning for class XI at SMA Negeri 1 Polewali Mandar.

### The Influence of Using Digital Books on the IRE Learning Outcomes of Class XI Students

Before conducting the regression test, the prerequisite tests must be carried out, including the following:

#### Normality Test

The normality test aims to test whether in the regression model, the residual variable has a normal distribution or not. The normality test aims to determine whether the variables of digital book usage (X1) and student learning outcomes (Y) are normally distributed or not. The data normality test is used to determine whether the data used by researchers comes from a normally distributed population or not. Data is normally distributed if  $\text{sig} > \alpha = 0.05$  and vice versa, the data is said to be

not normally distributed if  $\text{sig} < \alpha = 0.05$ . Data normality testing was carried out using the SPSS version 27 for Windows application. Based on the analysis of the prerequisite tests obtained, the conclusions of the normality test results can be seen in the table below:

Tabel 10: Normality Test Results *Kolmogorof Smirnov* (X1-Y)

Variabel	K-Smirnov	Information
X1-Y	0,200	Normal

Based on table 4.10, the results of the normality test of the use of digital books on student learning outcomes show that the Kolmogorov-Smirnov significance value is 0.200 using a significance level of 0.05. The significance value obtained is greater than ( $0.200 > 0.05$ ). Therefore, it can be concluded that the data on the use of digital books on student learning outcomes in grade XI at SMA Negeri 1 Polewali Mandar is normally distributed. The following is a picture of the normality test curve.

#### Linearity Test

The second prerequisite test is the linearity test. The linearity test aims to determine the relationship formed between the independent variable and the dependent variable partially and linearly. The linearity test is used to determine whether the data fits a linear line or not. This linearity test is used to determine whether the relationship between the use of digital books (X1) and student learning outcomes (Y) is linear or not. The criteria for linearity testing with SPSS version 27 for Windows are if the sig deviation from linearity value  $> \alpha$  then there is a linear relationship and if the sig deviation from linearity value  $< \alpha$  then there is no linear relationship. The results of the linearity test for the use of the zoom meeting application and student learning outcomes are presented in the following table:

Table 11: Hasil Uji Linearitas (X1-Y)

Variabel	F	Sig.	Information
X1-Y	8,035	0,592	Linear

Based on table 4.11, the results of the SPSS version 27 for Windows analysis obtained a linearity test of the regression line equation from the Deviation from Linearity row, namely  $F_{hit} (T_c) = 8.035$  and  $F_{table} = 3.30$  with a significance value of 0.592 and using a level of 0.05. The significance value obtained is greater than ( $0.592 > 0.05$ ). So it can be concluded that there is a linear relationship between the use of digital books and the learning outcomes of students in class XI at SMA Negeri 1 Polewali Mandar.

#### Simple Linear Regression Test

A simple linear regression test is used to test whether one independent variable influences the dependent variable. In this case, it tests whether the use of digital textbooks influences student learning outcomes in Islamic studies in grade 11 at SMA Negeri 1 Polewali Mandar. The results of the simple linear regression test are as follows:

Table 12: Linear Regression Test

Variabel	Unstandardized Coefficients	t	Sig.	Information
Constant	66,037	2,140	0,008	There is an

Use of Digital Books (X1)                      0,315                      Influence

Dependent Variable: Learning Outcomes (Y)

From the SPSS output above, in the constant column a is 66.037 and in column b 0.315, so the regression equation is:  $\hat{y} = a + bx$  or  $66.037 + 0.315X$ . From the results of the analysis, the real level (and the table value of  $\alpha = 5\% = 0.05 \rightarrow = 0.05/2 = 0.025$  and degrees of freedom (df) =  $n - k - 1 = 34 - 1 - 1 = 32$  are obtained. Then the results of the t analysis are obtained  $t_{count} = 2.631$  while the t table value = 2.037 means the t value  $t_{count}$  greater than the t value  $t_{table}$  ( $t_{count} > t_{table} = 2.140 > 2.037$ ). Thus, the use of digital books has a positive impact on the Islamic Religious Education learning outcomes of class XI students at SMA Negeri 1 Polewali Mandar.

Table 13: Regresi Significance Test of Regression Equation

Model	F	Sig.	Information
Regression	3,835	0,008 <sup>b</sup>	Significant

Dependent Variable: Variable Y (Learning Outcomes)

Predictors: (Constant), Variable X1 (use of digital books)

The significance test of the regression line equation is obtained from the Regression row, namely  $F_{hit} (b/a) = 3.835$  and p value/Sig. =  $0.008 < 0.05$  or  $H_0$  is rejected and  $H_a$  is accepted or the significance is smaller than the specified error level. Thus, the regression of Y on X2 is significant or there is an influence of the use of digital books on the IRE learning outcomes of students in class XI at SMA Negeri 1 Polewali Mandar.

Table 14: Model Summary (X<sub>1</sub>-Y)

Variables	R	R Square	Information
Use of Digital Books	0,159 <sup>a</sup>	0,250	There is an influence of 25.0%

From the SPSS output above, it explains the value of the coefficient/relationship (R) which is 0.159. From this output, the coefficient of determination (R Square) is obtained at 0.250. To determine the magnitude of the correlation value and the percentage of the influence of the use of digital books on students' IRE learning outcomes, it can be seen from the R Square value in table model summary of = 0.250, which means that the percentage of the influence of the use of interactive learning videos on the IRE learning outcomes of class XI students at SMA Negeri 1 Polewali Mandar is 75.0%, while the remaining 25.0% is influenced by other factors outside the variables.

### The Influence of Interactive Learning Videos on Islamic Education Learning Outcomes of Class XI at SMAN 1 Polewali Mandar

The research results obtained were data processed using SPSS by conducting descriptive analysis to determine interactive learning videos. uji t IRE red sample t test to determine student learning outcomes. After that, a hypothesis test was conducted using SPSS by conducting an inferential analysis, namely a simple regression test, to determine whether there was an effect of the use of interactive learning videos on the Islamic Religious Education learning outcomes of grade XI students at SMA Negeri 1 Polewali Mandar. The research data are as follows:

#### Use of Interactive Learning Videos for Learning Outcomes

To assess the impact of interactive video learning on Islamic Religious Education (IRE) learning outcomes in eleventh-grade students at SMA Negeri 1 Polewali Mandar, a questionnaire was

administered to students. Students were instructed to complete the questionnaire by selecting answers from the provided alternative answer criteria as follows:

SS = If you strongly agree with the statement

S = If you agree with the statement

TS = If you disagree with the statement

STS = If you strongly disagree with the statement

The data obtained on the experimental class questionnaire sheet was the use of learning videos in the following table:

Table 15: Interactive Learning Video Questionnaire Results

No.	NAME	SCORE
1.	Responden 1	56
2.	Responden 2	54
3.	Responden 3	68
4.	Responden 4	65
5.	Responden 5	47
6.	Responden 6	58
7.	Responden 7	46
8.	Responden 8	47
9.	Responden 9	55
10.	Responden 10	55
11.	Responden 11	50
12.	Responden 12	59
13.	Responden 13	60
14.	Responden 14	60
15.	Responden 15	52
16.	Responden 16	67
17.	Responden 17	56
18.	Responden 18	59
19.	Responden 19	55
20.	Responden 20	58
21.	Responden 21	53
22.	Responden 22	59
23.	Responden 23	59
24.	Responden 24	48
25.	Responden 25	51
26.	Responden 26	52
27.	Responden 27	45
28.	Responden 28	63
29.	Responden 29	55
30.	Responden 30	52
31.	Responden 31	55
32.	Responden 32	56
33.	Responden 33	49
34.	Responden 34	54

The data were then analyzed in terms of maximum score, minimum score, average score, and standard deviation. The data presentation aims to provide a general overview of the interactive learning video's impact

on Islamic Religious Education (IRE) learning outcomes of 11th-grade students at SMA Negeri 1 Polewali Mandar, as follows:

Table 16: Descriptive Statistics of Interactive Learning Videos

Number of Samples	34
Maximum Score	68
Shoes Minimum	45
Rate-Rate (Mean)	55,24
Standard Deviation	5,716

Based on table 4.2 above, the research results obtained from 34 students in the experimental class taught using interactive learning videos show that the maximum score is 68 and the minimum score is 45 with an average value of 55.24 and a standard deviation of 5.716. Furthermore, the categorization of interactive learning videos on the IRE learning outcomes of class XI students at SMA Negeri 1 Polewali Mandar is presented in the following table:

Table 17: Categorization of Interactive Learning Videos

No.	Category	Interval	Frequency	Percentage (%)
1.	Very less	0-47	4	11,7%
2.	Not Good	48-52	7	20,4%
3.	Enough Bik	53-58	13	38,2%
4.	Good	59-64	7	20,6%
5.	Very good	65-68	3	8,7%
	Amount		34	100%

Data source: Interactive Learning Video Analysis

The data in table 4.3 obtained the results of the study there were 4 respondents who rated very poor with a percentage of 11.7%, there were 7 respondents who rated less good with a percentage of 20.4%, there were 13 respondents who rated quite good with a percentage of 38.2%, there were 7 respondents who rated good with a percentage of 20.6%, and there were 3 respondents who rated very good with a percentage of 8.7%. Based on the average value obtained it can be concluded that the interactive learning video on the IRE learning outcomes of class XI students at SMA Negeri 1 Polewali Mandar amounted to 55.24 in the fairly good category.

### Student Learning Outcomes

The learning process using interactive learning videos was implemented in the experimental class with a pretest once, followed by 3 treatments and a posttest. Processed using SPSS ver. 27 software to determine the results of the pretest and posttest of students. The pretest and posttest consisted of 15 items. The number of students tested was 34, namely students of class XI F4.

Based on pre-test And post-test given to students who were taught using interactive learning videos in the experimental class are as follows:

Table 18: Experimental Class Learning Outcomes Data

No.	NAME	EVALUATION					
		PRE-TEST			POST-TEST		
		JS	JB	MARK	JS	JB	MAR K
1.	Responden 1	7	8	53	2	13	86
2.	Responden 2	5	10	66	2	13	86
3.	Responden 3	4	11	73	0	15	100
4.	Responden 4	5	10	66	2	13	86
5.	Responden 5	6	9	60	2	13	86
6.	Responden 6	4	11	73	1	14	93
7.	Responden 7	5	10	66	2	13	86
8.	Responden 8	6	9	60	1	14	93
9.	Responden 9	4	11	73	2	13	86
10.	Responden 10	7	8	53	1	14	93
11.	Responden 11	6	9	60	2	13	86
12.	Responden 12	8	7	46	3	12	80
13.	Responden 13	7	8	53	3	12	80
14.	Responden 14	5	10	66	2	13	86
15.	Responden 15	3	12	80	0	15	100
16.	Responden 16	2	13	86	0	15	100
17.	Responden 17	4	11	73	1	14	93
18.	Responden 18	10	5	33	3	12	80
19.	Responden 19	7	8	53	3	12	80
20.	Responden 20	10	5	33	0	15	100
21.	Responden 21	6	9	60	3	12	80
22.	Responden 22	9	6	40	3	12	80
23.	Responden 23	6	9	60	2	13	86
24.	Responden 24	8	6	46	0	100	100
25.	Responden 25	9	6	40	2	13	86
26.	Responden 26	8	7	46	1	14	93
27.	Responden 27	8	7	46	1	13	86
28.	Responden 28	3	12	80	1	14	93
29.	Responden 29	10	5	33	3	12	80
30.	Responden 30	7	8	53	2	13	86
31.	Responden 31	6	9	60	3	12	80
32.	Responden 32	10	5	33	3	12	80
33.	Responden 33	8	7	46	4	11	73
34.	Responden 34	9	6	40	3	12	80

The table above shows the learning outcomes of the experimental class taught using interactive learning videos, based on the total pretest and posttest scores. These scores were then entered into the application, using the SPSS version 27 computer program. To determine the IRE learning outcomes of 11th-grade students at SMA Negeri 1 Polewali Mandar, see the following table:

Table 19: Learning Outcome Values Pretest And Posttest Experimental Class

Parameter	PreTest	PostTest
Sample	34	34
Maximum Value	86	100
Minimum Value	33	73
Rate-rate	56,15	87,15
Standard Deviation	14,701	7,299

Based on the table above, it can be seen that the maximum score obtained by the pretest taught using digital books in the experimental class was 86, while the minimum score was 33. The average value obtained was 56.15 with a standard deviation of 14.701. Meanwhile, the maximum score obtained by the posttest taught using interactive learning videos in the experimental class was 100, while the minimum score was 73. The average value obtained was 87.15 with a standard deviation of 7.299. The following is a categorization table pretest And posttest Student learning outcomes in the experimental class:

Table 20: Categorization PreTest And PostTest Experimental Class

No.	Category	Result Tes <i>Pretest</i>	Result Tes <i>Posttest</i>
1.	Very Low	0-34	0-76
2.	Low	35-49	77-84
3.	Currently	50-63	85-91
4.	High	64-78	92-98
5.	Very high	79-86	99-100

Calculation of the percentage of assessment for the test *pretest* And *posttest* using the following:

$$P = \frac{f}{N} \times 100\%$$

After determining the category, the following are the test result categories. pretest and test result categories post-test in the experimental class are shown in table 4 and table 5 as follows:

Table 21: Test Result Categories Pre-Test Experimental Class

Score Range	Category	Interactive Learning Videos	
		Frequency	Percentage
0-34	Very Low	4	11,8%
35-49	Low	8	23,5%
50-63	Currently	11	32,3%
64-78	High	8	23,5%

79-86	Very high	3	8,8%
		34	100%

Based on the table above, it can be seen that the percentage of learning outcome scores pre-test taught using interactive learning videos, 4 students are in the very low category with a percentage of 11.8%, 8 students are in the low category with a percentage of 23.5%. 11 students are in the medium category with a percentage of 32.3%, 8 students are in the high category with a percentage of 23.5% and 3 students are in the very high category with a percentage of 8.8%. In addition, according to the average score of student learning outcomes of 56.15 when converted into the table above, it turns out to be in the medium category. This means that the average student learning outcomes in pre-test in the experimental class is in the medium category.

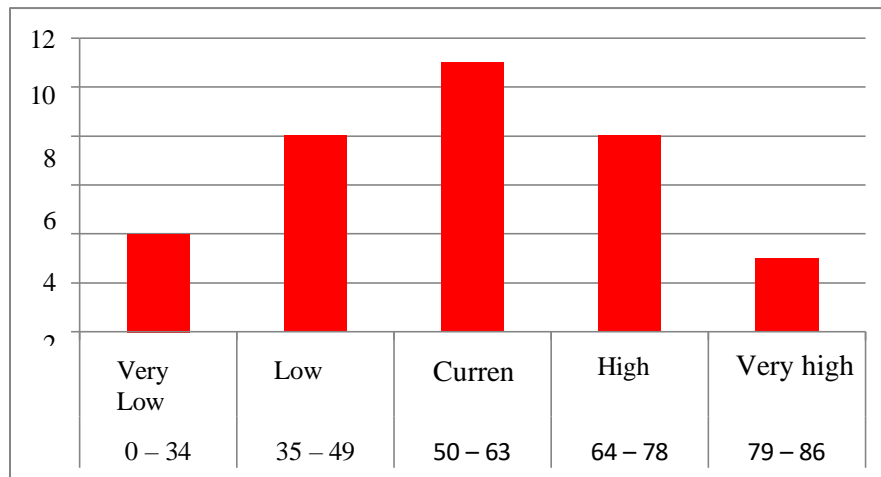
Table 22: Test Result Categories Post-Test Experimental Class

Score Range	Category	Interactive Learning Videos	
		Frequency	Persentase
0-76	Very Low	0	0%
77-84	Low	11	32,3%
85-91	Currently	12	35,3%
92-98	High	6	17,6%
99-100	Very high	5	14,7%
		34	100%

Based on the table above, it can be seen that the percentage of learning outcome scores post-test which was taught using interactive learning videos, namely no students gave a very low score, 11 students are in the low category with a percentage of 32.3%. 12 students are in the medium category with a percentage of 35.3%, 6 students are in the high category with a percentage of 17.6% and 5 students are in the very high category with a percentage of 14.7%. In addition, according to the average score of student learning outcomes of 87.15, if converted into the table above, it turns out to be in the medium category. This means that the average student learning outcomes in the post-test in the experimental class are in the medium category.

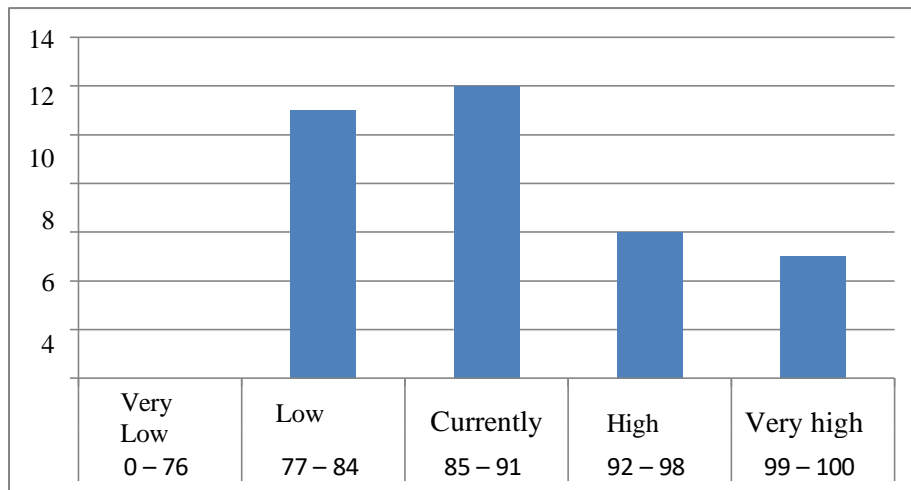
Next, the author presents the results pretest And posttest in the experimental class in the form of a bar chart to show the learning outcomes of students in Islamic Religious Education learning in class XI at SMA Negeri 1 Polewali Mandar in experimental class 1 as follows:

Diagram 3; Experimental Class Pretest Results



Based on the table above, the learning outcomes of the experimental class inpretest with a frequency of 4 being in the very low category and a frequency of 8 being in the low category, a frequency of 11 being in the medium category, a frequency of 8 being in the high category and a frequency of 3 being in the very high category.

Diagram 4; Results Pretest Experimental Class



Meanwhile, in the post-test, the experimental class' learning outcomes were non-existent, with 11 being in the low category, 12 being in the medium category, 6 being in the high category, and 5 being in the very high category.

Furthermore, to determine whether there were differences in the pre-test and post-test learning outcomes of students in Islamic Religious Education at SMA Negeri 1 Polewali Mandar, a IREred sample t-test was used. This test is used to determine whether there is a difference in the average between two IREred or related samples. The results of the IREred sample t-test calculations for the pre-test and post-test results in the experimental class are shown in the following table:

Table 23: TestIREred Sample Test Experimental Class

Eksperimen Class (X2)	Df	Sig (2-tailed)
PreTes – PosTest	33	0,000

In the table above, the results of the IREred sample t-test calculation for the experimental class (X2) obtained the results of data processing with a Sig value (2-tailed) = 0.000, thus there is a real difference between the learning outcomes of students in the pretest and posttest scores taught using the zoom meeting application facilitated by Google Classroom in Islamic Religious Education learning in class XI at SMA Negeri 1 Polewali Mandar.

The Effect of Using Interactive Learning Videos on the IRE Learning Outcomes of Class XI Students Before conducting the regression test, the prerequisite tests must be carried out, including the following: 1) Normality Test

The normality test aims to test whether in the regression model, the residual variable has a normal distribution or not. The normality test aims to determine whether the variables of interactive learning video usage (X2) and student learning outcomes (Y) are normally distributed or not. The data normality test is used to determine whether the data used by researchers comes from a normally distributed population or not. Data is normally distributed if  $\text{sig} > \alpha = 0.05$  and vice versa, the data is said to be not normally distributed if  $\text{sig} < \alpha = 0.05$ . Data normality testing was carried out using the SPSS version 27 for Windows application. Based on the analysis of the prerequisite tests obtained, the conclusions of the normality test results can be seen in the table below:

Table 24: Normality Test Results Kolmogorov Smirnov (X2-Y)

Variabel	K-Smirnov	Information
X1-Y	0,200	Normal

Based on table 4.10, the results of the normality test of the use of interactive learning videos on student learning outcomes show that the Kolmogorov-Smirnov significance value is 0.200 using a significance level of 0.05. The significance value obtained is greater than ( $0.200 > 0.05$ ). Therefore, it can be concluded that the data on the use of interactive learning videos on student learning outcomes in grade XI at SMA Negeri 1 Polewali Mandar is normally distributed.

**Linearity Test**

The second prerequisite test is the linearity test. The linearity test aims to determine the relationship formed between the independent variable and the dependent variable partially and linearly. The linearity test is used to determine whether the data fits a linear line or not. This linearity test is used to determine whether the relationship between the use of interactive learning videos (X2) and student learning outcomes (Y) is linear or not. The criteria for linearity testing with SPSS version 27 for Windows processing are if the value  $\text{sig deviation from linearity} > \alpha$  then there is a linear relationship and if the  $\text{sig deviation from linearity} < \alpha$  then there is no linear relationship. The results of the linearity test for the use of interactive learning videos and student learning outcomes are presented in the following table :

Table 25: Linearity Test Results (X1-Y)

Variabel	F	Sig.	Information
X1-Y	8,067	0,615	Linear

Based on table 4.11, the results of the SPSS version 27 for Windows analysis obtained a linearity test of the regression line equation from the Deviation from Linearity row, namely  $F_{hit} (T_c) = 8.067$  and  $F_{table} = 3.30$  with a significance value of 0.615 and using a level of 0.05. The significance value obtained

is greater than ( $0.615 > 0.05$ ). So it can be concluded that there is a linear relationship between the use of interactive learning videos and student learning outcomes in class XI at SMA Negeri 1 Polewali Mandar.

### Simple Linear Regression Test

A simple linear regression test is used to test whether one independent variable influences the dependent variable. In this case, it tests whether the use of interactive learning videos influences student learning outcomes in Islamic studies in grade 11 at SMA Negeri 1 Polewali Mandar. The results of the simple linear regression test are as follows:

Tabel 26: Simple Linear Regression Test

Variabel	Unstandardized Coefficients	t	Sig.	Information
Constant	45,544	2,631	0,003	There is an Influence
Video Pembelajaran Interaktif (X2)	0,469			

Dependent Variable: Learning Outcomes (Y)

From the SPSS output above, in the column constant a is 45.544 and in column b 0.469, so the regression equation is:  $\hat{y} = a + bx$  or  $45.544 + 0.469X$ . From the results of the analysis, the real level (and table value of  $\alpha = 5\% = 0.05 \rightarrow 0.05/2 = 0.025$  and degrees of freedom (df) =  $n-k-1 = 34-1-1 = 32$ . Then the results of the analysis obtained  $t_{hitung} = 2.631$  while the t tabel value = 2.037 means the  $t_{hitung}$  value is greater than the t tabel value ( $t_{hitung} > t_{tabel} = 2.631 > 2.037$ ). Thus, the use of interactive learning videos has a positive effect on student learning outcomes in Islamic Religion learning in class XI at SMA Negeri 1 Polewali Mandar.

Table 27: Significance Test of Regression Equation

Model	F	Sig.	Information
Regresi	3,660	0,003 <sup>b</sup>	Significant

Dependent Variable: Variable Y (Learning Outcomes)

Predictors: (Constant), Variable X2 (Interactive Learning Video)

The significance test of the regression line equation is obtained from the Regression row, namely  $F_{hit} (b/a) = 3.660$  and p value/Sig. =  $0.003 < 0.05$  or  $H_0$  is rejected and  $H_a$  is accepted or the significance is smaller than the specified error level. Thus, the regression of Y on X1 is significant or there is an influence of the use of interactive learning videos on student learning outcomes in Islamic Religion learning in class XI at SMA Negeri 1 Polewali Mandar.

Table 28: Model Summary (X<sub>1</sub>-Y)

Variables	R	R Square	Information
Use of Digital Books	0,277 <sup>a</sup>	0,770	There is an influence of 77.0%

From the SPSS output above, it explains the value of the coefficient/relationship (R) which is 0.277. From this output, the coefficient of determination (R Square) is 0.770. To find out the value of the correlation and the percentage of the influence of the use of interactive learning videos on student learning outcomes in Islamic learning can be seen in the R Square value in the model summary

table of = 0.770 which means that the percentage of the influence of the use of interactive learning videos on student learning outcomes in Islamic learning at SMA Negeri 1 Polewali Mandar is 77.0% while the remaining 23.0% is influenced by other factors outside the variable.

**Differences in the Influence of Using Digital Books and Interactive Learning Videos on IRE and Character Education Learning Outcomes for Class XI Students at SMAN 1 Polewali Mandar**  
**Differences in the Influence of Using Digital Books and Interactive Learning Videos on IRE and Character Education Learning Outcomes for Class XI Students at SMAN 1 Polewali Mandar**

Furthermore, to find out whether there is a difference in the Islamic Religious Education learning outcomes of students who received treatment using digital books compared to interactive learning videos in Islamic Religious learning at SMA Negeri 1 Polewali Mandar, an analysis was carried out using inferential analysis, namely the t-test (Independent Sample T-Test).

TestIndependent Sample T-Test used to determine whether there is a difference in the average of two unIREred samples. The testIndependent Sample T-Test This study was conducted to determine the differences in learning outcomes between the experimental class, namely students taught using digital books and interactive learning videos. The absolute requirement for the Independent Sample T-Test is that the research data must be normally distributed and homogeneous. The calculation of normality and homogeneity tests uses the SPSS 27 for Windows software application.

Normality Test

The data normality test is used to determine whether the data used by researchers comes from. population is normally distributed or not. Data is normally distributed if  $\text{sig} > \alpha = 0.05$  and vice versa, data is said to be not normally distributed if  $\text{sig} < \alpha = 0.05$ . Data normality testing was carried out using the SPSS version 27 for Windows application. Based on the analysis of the prerequisite tests obtained, the conclusions of the normality test results can be seen in the table below:

Table 29: Calculation of Normality Test for Control Class and Experimental Class

Test of Normality	Kolmogorov-Smirnov Eksperimen		Kolmogorov-Smirnov Eksperimen Kontrol		Ket
	Statistic	Sig.	Statistic	Sig.	
	PreTest	0,066	0,200	0,140	
PostTest	0,146	0,063	0,130	0,072	Normal

From table 4.29, the results of the data normality test calculation obtained significance values (sig) in the pretest and posttest in the experimental class and in the control class indicate that the research data is declared normally distributed because the significance value obtained through the Kolmogorov test is  $> 0.05$ . As in the pretest, the control class obtained a significance value of 0.062, the experimental class obtained a significance value of 0.200. Then, in the posttest, the control class obtained a significance value of 0.072, the experimental class obtained a significance value of 0.063. This proves that the data is normally distributed.

### Homogeneity Test

The homogeneity test is a test of whether the variances of two or more distributions are equal. Data distribution is homogeneous if  $\text{sig} > \alpha = 0.05$  and vice versa, data is said to be inhomogeneous if  $\text{sig} < \alpha = 0.05$ . The data homogeneity test is performed using the SPSS version 27 for Windows application as follows:

#### Pre-Test and Experimental Classes

Table 30: Homogeneity Test of Pretest of Control Class and Experimental Class

Testing	Levene Statistic	Sig.	Information
Pretest	2,084	0,154	Homogen

Based on the table above, the results of the homogeneity test using the variance test type. If the significance value is greater than 0.05 (the significance level), it means that the variance of the two data sets being compared is homogeneous.

The analysis results above show that the significance value for student learning outcomes in Islamic studies is 0.154, which is greater than 0.05. Therefore, a significance value greater than 0.05 indicates that the variances of the two sets of data being compared are homogeneous. 2)Post-Test Control and Experimental Classes.

#### Post-Test Control and Experimental Classes

Table 31: Eksperimen Homogeneity Test Post-Test Control and Experimental Classes

Pengujian	Levene Statistic	Sig.	Information
PostTest	0,041	0,840	Homogen

Based on the table above, the results of the homogeneity test using the variance test are as follows: If the significance value is greater than 0.05 (the significance level), it means that the variances of the two sets of data being compared are homogeneous.

The analysis results above indicate that the significance value for student learning outcomes in Islamic studies is 0.840, which is greater than 0.05. Therefore, a significance value greater than 0.05 means that the variances of the two sets of data being compared are homogeneous.

### Hypothesis Testing

Based on the normality and homogeneity tests, the statistics used were parametric statistics with an independent sample t-test. This test was conducted to determine the preliminary hypothesis formulated by the author. The following is the hypothesis the author previously established:

Ho: applies if there is no difference in the learning outcomes of students who receive treatment using digital books compared to using interactive learning videos together at SMA Negeri 1 Polewali Mandar.

Ha: applies if there is a difference in learning outcomes of students who receive treatment using digital books compared to using interactive learning videos together at SMA Negeri 1 Polewali Mandar.

Hypothesis testing was conducted on student learning outcomes in Islamic religious learning between the control class, which is the class taught using digital books, and the experimental class, which is the class taught using learning videos. The significance level applied previously was  $\alpha = 0.05$ . Hypothesis testing using the independent sample t-test was conducted using the SPSS version 27 for Windows application as follows:

Table 32: Independent Sample T-Test for Control Class and Experimental Class

Class	T	Mean	Sig. (2-tailed)
Experiment (Interactive Learning Video)	8,424	71,44	0,000
Control (Digital Book)	8,424	52,65	0,000

Based on data processing with SPSS version 27, Sig = 0.000 was obtained, because sig (2-tailed) <  $\alpha$  or (0.000 < 0.05). This means that there is a difference in learning outcomes of students who received treatment taught using digital books compared to using interactive learning videos together in class XI at SMA Negeri 1 Polewali Mandar.

**DISCUSSION**

**The Effect of Using Digital Books and Learning Videos on IRE Learning Outcomes and Character Development of Grade XI Students at SMAN 1 Polewali Mandar**

Based on the descriptive and inferential analysis, the use of digital textbooks demonstrated improved Islamic Religious Education and Character Education (Culture). The average pretest score of 70.67 increased to 76.52 in the posttest. Statistically, these findings indicate that digital textbooks positively contribute to students' cognitive achievement. However, these findings require more in-depth theoretical analysis to avoid merely numerical descriptions. From a constructivist perspective, these improvements in learning outcomes can be explained through students' active involvement in constructing knowledge. Digital books allow students to flexibly access materials, revisit concepts they haven't yet grasped, and independently complete quizzes or exercises. This process aligns with the principle that knowledge is built through meaningful and interactive learning experiences. Digitizing learning materials also enriches the variety of learning resources, thereby broadening students' cognitive schemata, as found in research by Khairunnisa et al. and Nurfadiya & Susilo, which showed that e-books and online reading platforms improve learning outcomes and reading motivation (Arif, Nasir, et al., 2025; Khairunnisa et al., 2025; Nurfadiya & Susilo, 2025). However, when compared to the use of interactive learning videos (which in the next section are proven to be more effective), it is necessary to explain why digital books still provide improvements but are not as optimal as interactive videos. Based on multimedia learning theory (Mayer), learning will be more effective when information is presented through the simultaneous integration of text, images, animation, and audio because it utilizes two information processing channels (dual-channel processing) (Vu et al., 2022) Digital books are generally still predominantly text-based and static visuals, while interactive videos combine audio narration, animation, moving visuals, and more cognitively rich participatory stimuli. This allows for the reinforcement of information encoding in long-term memory.

From an affective perspective, the questionnaire showed that students responded positively to the use of digital textbooks. They felt it was easier to access materials, they could study anytime and anywhere, and they found it easier to engage in discussions and complete assignments. These findings align with those of Fauziyah & Anistyasari and Paling, who emphasized that digital learning media increases motivation and engagement in learning (Arif, Zekkari, et al., 2025; Fauziyah & Anistyasari, 2020; Paling et al., 2024) In the context of Islamic Religious Education, the affective aspect is very important because the formation of attitudes and internalization of values does not only depend on cognitive understanding, but also on interest, awareness, and a positive attitude towards the learning material.

In the psychomotor domain, the use of digital books in the "Social Media Etiquette" material demonstrates that students are able to operate devices, access materials, complete digital quizzes, and engage in discussions in an orderly and polite manner. When linked to psychomotor indicators, according to Fitriawan, Fitrianti, and Triwiyono & Munadi, the ability to use tools, speed in completing tasks, and accuracy of responses can be categorized as indicators of skills developed through digital learning (Fitriani et al., 2023; Fitriawan et al., 2021; Triwiyono & Munadi, 2018). This shows that digital books not only have an impact on cognitive aspects, but also train digital literacy as part of 21st century skills. However, analytically, it can be understood that the effectiveness of digital textbooks still depends heavily on students' digital literacy levels and their content design. If digital textbooks merely serve as electronic versions of printed textbooks without the integration of multimedia and reflective activities, their impact on Islamic Religious Education values learning tends to be limited. Therefore, the difference in effectiveness between digital textbooks and interactive videos can be explained by the level of cognitive and emotional stimulation each medium provides.

In the context of Islamic Religious Education in the digital era, these findings imply that digital media is not merely a technical tool, but a strategic tool to support the internalization of values and character formation. Digital textbooks can serve as a foundation for technology-based Islamic literacy, but they need to be combined with a more multimodal and reflective approach so that values such as etiquette, responsibility, and social media ethics are not only conceptually understood but also internalized and practiced. Thus, the use of digital books has been proven to have a positive influence on Islamic Religious Education and Character Education learning outcomes, but its effectiveness needs to be analyzed within the framework of constructivism theory, multimedia learning, and Islamic character education so that its contribution to digital learning becomes more comprehensive and not merely descriptive.

### **The Effect of Interactive Learning Videos on Islamic Religious Education Learning Outcomes and Character Building of Grade XI Students at SMAN 1 Polewali Mandar**

The results showed that the use of interactive learning videos resulted in a more significant improvement in learning outcomes compared to the pre-treatment condition. The average pretest score of 69.70 increased to 82.96 in the posttest. Statistically, this increase indicates that interactive learning videos have a strong influence on students' cognitive abilities in Islamic Religious Education and Character Education subjects (Kausar et al., 2025). Theoretically, the effectiveness of interactive learning videos can be explained through multimedia learning theory (Mayer), which states that students learn better when information is presented through a combination of words (verbal) and images (visual) compared to just through text alone (Vu et al., 2022). Interactive videos integrate audio, moving visuals, and text, sometimes accompanied by questions or reflective pauses, thus activating two channels of information processing (dual coding). This strengthens the encoding process and retention of information in long-term memory. Therefore, the increase in posttest scores is not solely due to exposure to the material, but also to a presentation design that better aligns with the cognitive functioning of students.

Compared to digital textbooks, interactive videos have the advantage of providing a more concrete context and learning experience. In Islamic Religious Education and Character Building, particularly in topics such as manners, ethics, and social behavior, visualizing real-life situations through video helps students understand the contextual application of values. Normative Islamic values are more easily internalized when presented in the form of simulations or behavioral illustrations, rather than simply narrative text. This finding is in line with research by Putri and Nuranggraini which shows that video media has a positive impact on learning outcomes, with the note that its implementation must be designed strategically (Nuranggraini et al., 2022; D. N. S. Putri

et al., 2022). Integration of video in learning allows for more dynamic interactions between educators and students (Eltmany et al., 2025). In fact, Harrison cites Hopkins' view that the use of video can build personal closeness and more open communication in the learning process (Harrison, 2020). This is relevant to the characteristics of Generation Z, who tend to be more responsive to visual-audio media and technology-based learning.

From a constructivist perspective, interactive learning videos not only convey information but also facilitate the reconstruction of learning experiences. Learners who previously lacked confidence in direct communication become more able to express their opinions after receiving clear visual stimuli. The process of "retelling" learning experiences, as Santrock suggests, contributes to the development of critical and reflective thinking skills (Hastari & Hartono, 2019). In the context of Islamic Education, this ability to reflect is very important because internalizing values requires a process of personal meaning, not just memorizing concepts. On the affective side, questionnaire responses indicated that students felt happier and more motivated when the lesson ended with an interactive video. They stated that the video helped them remember the material, facilitated summarization, and encouraged them to ask questions. This increased motivation served as a mediator in improving learning outcomes, as a positive emotional state strengthens attention and engagement during the learning process.

Furthermore, in the context of Islamic Religious Education in the digital age, interactive learning videos have strategic implications for character formation. Values such as social media etiquette, honesty, responsibility, and tolerance can be visualized through scenarios that approximate the students' real-life situations. This allows for a more effective modeling process, in line with social learning theory, where individuals learn through observing behavior. Thus, analytically, it can be concluded that the effectiveness of interactive learning videos is not solely due to their technological elements, but also due to their ability to integrate multimedia principles, constructivism, emotional engagement, and value contextualization. In Islamic Religious Education and Character Education (Culture), this media not only improves cognitive achievement but also strengthens the process of reflection, internalization of values, and character formation of students in the digital era.

### **Differences in the Effect of Using Digital Books and Interactive Learning Videos on Islamic Religious Education Learning Outcomes and Character Education of Grade XI Students at SMAN 1 Polewali**

The comparative analysis revealed a significant difference between classes using digital textbooks and those using interactive learning videos. In the classes using digital textbooks, the average learning outcomes were in the medium category with relatively moderate improvement. Meanwhile, in the classes using interactive learning videos, the average learning outcomes were in the higher category with a more optimal posttest score range (73–100). The results of the independent sample t-test showed a significance value (2-tailed) of  $0.000 < 0.05$ , thus rejecting  $H_0$  and accepting  $H_a$ . This means there is a significant difference between the learning outcomes of students using digital textbooks and those using interactive learning videos. Statistically and empirically, interactive learning videos have been proven more effective in improving Islamic Religious Education (IRE) and Character Education (Culture). However, it is more important to explain why this difference occurs.

Based on multimedia learning theory (Mayer), learning will be more effective when students receive information through a combination of text, images, animation and audio that are integrated simultaneously (Vu et al., 2022) Interactive learning videos meet the following principles: Multimedia principle: The combination of words and images is more effective than words alone. Temporal contiguity principle: The simultaneous presentation of visuals and audio enhances understanding. Modality principle: Audio narration reduces cognitive load compared to long texts. In

contrast, digital textbooks tend to be predominantly text-based and static visual, so their potential for cognitive stimulation is more limited. Thus, differences in learning outcomes can be explained by differences in the level of activation of students' cognitive processing systems.

In a constructivist perspective, learning occurs when students actively construct meaning from experiences (Gogus, 2012). Interactive learning videos provide a more contextual, concrete, and relatable learning experience for students. In Islamic Religious Education materials such as social media etiquette, visualizations of correct and incorrect behavior provide an observational experience that enriches the construction of meaning. Students not only read about the concept of etiquette but also see its practical representation. This process strengthens cognitive and emotional engagement, ultimately improving learning outcomes (Ningsih & Zalisman, 2024). This difference in effectiveness can also be analyzed from the characteristics of Generation Z who are digital natives, accustomed to audiovisual content, responsive to dynamic visuals, and have a relatively short attention span for long texts (Pluskota et al., 2025). Interactive videos better align with this generation's learning preferences than reading-based digital books.

This has implications for Islamic Religious Education learning and the internalization of values. In the context of Islamic Religious Education, the learning objective is not only to improve cognitive achievement but also to shape character and internalize values. Interactive learning videos enable the following processes: Modeling (exemplification) through visualization of Islamic behavior; Reflection on values through post-viewing discussions; and Affective reinforcement through emotional experiences arising from the broadcast. Digital books still serve an important function as a source of literacy and conceptual reinforcement, but contextual and multimodal media tend to be more effective in shaping attitudes and internalizing values.

Overall, the differences in learning outcomes between the two media can be explained by three main factors: Differences in the level of cognitive stimulation (multimedia theory), differences in the level of emotional involvement and contextualization of values (constructivism and social learning theory), and the suitability of the media to the characteristics of the digital generation. Thus, interactive learning videos are more effective in improving Islamic Religious Education (IRE) (Arif et al., 2023) and Character Building learning outcomes because they are able to integrate cognitive, affective, and psychomotor aspects more comprehensively. The implication is that the development of Islamic Religious Education (IRE) learning in the digital era should not only focus on the digitization of teaching materials (for example, converting printed books into digital books), but also on multimodal learning designs that allow the internalization of Islamic values to take place in a reflective, contextual, and meaningful manner.

## **CONCLUSION**

This study concludes that there is a significant difference between the use of digital books and interactive learning videos on the learning outcomes of Islamic Religious Education and Character Building of 11th-grade students at SMA Negeri 1 Polewali Mandar. Both digital-based media have been shown to have a positive effect on improving learning outcomes, but interactive learning videos show higher effectiveness than digital books. These findings confirm that the characteristics of pedagogical media, especially the integration of visual, audio, and interactivity elements, contribute significantly to improving cognitive abilities, learning engagement, and strengthening the understanding of Islamic values. Theoretically, the results of this study reinforce the view that digital transformation in Islamic Religious Education learning cannot be achieved solely through the digitization of teaching materials, but requires a digital pedagogical design that holistically integrates cognitive, affective, and psychomotor aspects. Interactive learning videos are more effective because they provide contextual, reflective learning experiences that are tailored to the characteristics of

learners in the digital age. Meanwhile, digital textbooks continue to play a significant role in supporting material literacy and independent learning. The implications of this research indicate that Islamic Religious Education teachers need to strategically and proportionally integrate various digital learning media in accordance with learning objectives. Schools need to support the strengthening of teachers' digital pedagogical competencies and provide adequate infrastructure to ensure sustainable technology-based learning innovations. At the policy level, the development of interactive multimedia-based Islamic Religious Education learning models needs to be part of the educational transformation agenda, particularly in efforts to strengthen the internalization of values and the formation of students' religious character. This research is still limited to a specific context and sample size, so further research is recommended to expand the scope of subjects and variables, as well as explore blended learning models, the use of artificial intelligence-based technology, and the influence of digital media on strengthening religious character in the long term. Thus, the development of technology-based Islamic Religious Education learning can be carried out in a more comprehensive, adaptive, and relevant manner to the dynamics of education in the digital era.

## REFERENCES

- Abadiyah, S., & Hidayah, U. (2024). EFEKTIFITAS MATERI AQIDAH AKHLAK DALAM MENINGKATKAN KECERDASAN SPIRITUAL DAN EMOSIONAL SISWA. *AL-MUADDIB: Jurnal Kajian Ilmu Kependidikan*, 6(2), 373–384. <https://doi.org/10.46773/muaddib.v6i1.1031>
- Adedo, E., & Deriwanto, D. (2024). *Perkembangan Media Digital Dan Pemanfaatannya Dalam Pembelajaran Pendidikan Agama Islam*. Institut Agama Islam Negeri Curup.
- Ali, A., Maniboey, L. C., Megawati, R., Djarwo, C. F., & Listiani, H. (2024). *Media Pembelajaran Interaktif: Teori Komprehensif dan Pengembangan Media Pembelajaran Interaktif di Sekolah Dasar*. PT. Sonpedia Publishing Indonesia.
- Ambarwati, D., Wibowo, U. B., Arsyiadanti, H., & Susanti, S. (2021). Studi literatur: Peran inovasi pendidikan pada pembelajaran berbasis teknologi digital. *Jurnal Inovasi Teknologi Pendidikan*, 8(2), 173–184. <https://doi.org/10.21831/jitp.v8i2.43560>
- Amin, M. (2023). Strategi Pembelajaran Pendidikan Agama Islam Berbasis Teknologi. *Jurnal Ilmu Pendidikan Muhammadiyah Kramat Jati*, 4(2), 351–359. <https://doi.org/10.55943/jipmukjt.v4i2.275>
- Anggarawan, A., Herawati, B. C., Wardhana, H., Suhendra, E., Soraya, S., & Dasriani, N. G. A. (2023). Membangun Cita-Cita Siswa Sekolah Dasar Melalui Kelas Inspirasi. *Jurnal Edukasi Dan Pengabdian Kepada Masyarakat*, 2(2), 95–102.
- Ardiyansyah, A., Zamroni, M. A., Rahmat, R., & Chalim, A. S. (2025). Internalisasi Nilai-Nilai Moderasi Beragama Melalui Kearifan Lokal Bugis Makassar: Studi Multi-Situs di Sekolah Menengah Atas Islam. *MUMTAZ: Jurnal Pendidikan Agama Islam*, 5(2), 289–320. <https://doi.org/10.69552/mumtaz.v5i2.3534>
- Arif, M., bin Abd Aziz, M. K. N., Harun, M., & Maarif, M. A. (2023). Strengthening The Sense of Patriotism in Madrasah Ibtidaiyah, Indonesia Based on The Islamic Boarding School System. *Tafkir: Interdisciplinary Journal of Islamic Education*, 4(1), 1–21.
- Arif, M., Nasir, R., & Ma'arif, M. A. (2025). The Kitab Kuning Learning Model in the Development of Student Expertise in Pesantren-Based Higher Education. *Nazhruna: Jurnal Pendidikan Islam*, 8(1), Article 1. <https://doi.org/10.31538/nzh.v8i1.8>

- Arif, M., Zekkari, M., & Addawiyah, R. (2025). Enhancing Santriwati's Islamic Literacy Through the LIT-CON Model of Women's Fiqh Learning in Pesantren. *Tafkir: Interdisciplinary Journal of Islamic Education*, 6(4), 966–992.
- Atamou, M. L., Kadjakoro, J. D. M., Woli, I. S. B., Nafie, R. M. H., Tafuli, Y. M., & Sesfao, M. I. (2025). PEMANFAATAN MEDIA PEMBELAJARAN BERBASIS KOGNITIF UNTUK MENINGKATKAN PROSES BERPIKIR SISWA. *ADIBA : JOURNAL OF EDUCATION*, 4(4), 113–125. <https://wikep.net/index.php/ADIBA/article/view/204>
- Barokah, N., Annisa, K. N., Saputri, T. L., & Mukmin, M. (2025). Peran Strategis Metode Khusus Pembelajaran PAI dalam Mengoptimalkan Pemahaman Ajaran Agama Pada Siswa. *Journal of Instructional and Development Researches*, 5(1), 141–149. <https://doi.org/10.53621/jider.v5i1.465>
- Cahyanto, B., Dina, L. N. A. B., Cholifah, T. N., Arif, M., & Farahdilla, A. (2025). Innovation of Islamic Elementary School in Strengthening Religious Character: Adaptive Strategy in the Digital Era. *Terampil: Jurnal Pendidikan Dan Pembelajaran Dasar*, 12(1), 134–155.
- Casfian, F., Fadhillah, F., Septiaranny, J. W., Nugraha, M. A., & Fuadin, A. (2024). Efektivitas pembelajaran berbasis teori konstruktivisme melalui media e-learning. *Jurnal Pendidikan Sosial Dan Humaniora*, 3(2), 636–648.
- Eltsany, A. zahrul A., Fuadi, I., & Apriliantoni, A. (2025). EFEKTIVITAS TIK DALAM MENINGKATKAN INTERAKSI EDUKATIF ANTARA MURID DAN GURU. *Jurnal Manajemen Pendidikan Al Hadi*, 5(2), 44–47. <https://doi.org/10.31602/jmpd.v5i2.19276>
- Fauzi, A., Arif, M., & Mustofa, A. (2025). Realizing the Ideal Model of Digital Islamic Boarding Schools: A Systematic Literature Review Analysis. *MUMTAZ: Jurnal Pendidikan Agama Islam*, 5(2), 259–288.
- Fauziyah, D. N., & Anistiyasari, Y. (2020). STUDI LITERATUR PENGARUH IMPLEMENTASI MEDIA E-BOOK TERHADAP MOTIVASI BELAJAR DAN RESPON SISWA PADA PENDIDIKAN TINGGI. *IT-Edu : Jurnal Information Technology and Education*, 5(3), 406–416. <https://doi.org/10.26740/it-edu.v5i3.37758>
- Fitriani, R. A., Aeni, A. N., Nur'Azizah, R., & Ramadhanty, A. R. (2023). Pengembangan E-Book BUDINKAH (Buku Digital Infaq dan Sedekah) sebagai Media Pembelajaran PAI untuk Siswa Kelas VI SD. *Al-Madrasah: Jurnal Ilmiah Pendidikan Madrasah Ibtidaiyah*, 7(2), 812–826. <https://doi.org/10.35931/am.v7i2.2091>
- Fitriawan, D., Wardah, Siregar, N., & Pasaribu, R. L. (2021). PROBLEMATIKA DALAM MENILAI SIKAP PESERTA DIDIK PADA PEMBELAJARAN DARING. *Prosiding Penelitian Pendidikan Dan Pengabdian 2021*, 1(1), 67–70. <https://prosiding.rcipublisher.org/index.php/prosiding/article/view/113>
- Gogus, A. (2012). Constructivist Learning. In *Encyclopedia of the Sciences of Learning* (pp. 783–786). Springer, Boston, MA. [https://doi.org/10.1007/978-1-4419-1428-6\\_142](https://doi.org/10.1007/978-1-4419-1428-6_142)
- Hakim, A. N., & Yulia, L. (2024). DAMPAK TEKNOLOGI DIGITAL TERHADAP PENDIDIKAN SAAT INI. *Jurnal Pendidikan Sosial Dan Humaniora*, 3(1), 145–163. <https://publisherqu.com/index.php/pediaqu/article/view/800>
- Harrison, T. (2020). How distance education students perceive the impact of teaching videos on their learning. *Open Learning: The Journal of Open, Distance and e-Learning*, 35(3), 260–276. <https://doi.org/10.1080/02680513.2019.1702518>

- Hastari, T., & Hartono. (2019). *Improving Students' Speaking Skill and Self Confident Using Retelling of Fifth Grade Students*. 489–496. <https://doi.org/10.2991/iccie-18.2019.85>
- Huraerah, A. J. A., Abdullah, A. W., & Rivai, A. (2024). PENGARUH TEKNOLOGI INFORMASI DAN KOMUNIKASI TERHADAP PENDIDIKAN INDONESIA. *Journal of Islamic Education Policy*, 8(2). <https://doi.org/10.30984/jiep.v8i2.2715>
- Irsalulloh, D. B., & Maunah, B. (2023). Peran Lembaga Pendidikan Dalam Sistem Pendidikan Indonesia. *Pendidkas: Jurnal Pendidikan Dasar*, 4(2), 17–26.
- Judrah, M., Arjum, A., Haeruddin, H., & Mustabsyirah, M. (2024). Peran Guru Pendidikan Agama Islam Dalam Membangun Karakter Peserta Didik Upaya Penguatan Moral. *Journal of Instructional and Development Researches*, 4(1), 25–37. <https://doi.org/10.53621/jider.v4i1.282>
- Kausar, S., Arif, M., & Sebgag, S. (2025). Transformational Leadership and the Challenges of Educational Digitalization: A Systematic Literature Review (2020–2025). *Nidhomul Haq: Jurnal Manajemen Pendidikan Islam*, 10(2), 312–332.
- Khairunnisa, S., Lubis, Y., Siregar, E. J., & Nazib, A. (2025). Pemanfaatan Literasi Digital dalam Meningkatkan Minat Baca Siswa Abad 21 di SMA Swasta Sinar Husni. *PEMA*, 5(3), 822–829. <https://doi.org/10.56832/pema.v5i3.2324>
- Khasanah, F. N., Inayah, H., Hajar, S., & Bahrodin, A. (2023). PERAN GURU KELAS DALAM MENINGKATKAN POTENSI DIRI PESERTA DIDIK. *Al-Adawat : Jurnal Pendidikan Madrasah Ibtidaiyah*, 2(01), 47–57. <https://doi.org/10.33752/aldawat.v2i01.3726>
- Mahrita, M., Ningsih, E. D., Adilla, R., & Aziz, A. (2024). PENGEMBANGAN MEDIA AUDIO-VISUAL BERBASIS PLOTAGON DAN QUIZ BERBASIS WORDWALL PADA PEMBELAJARAN SKI KELAS VIII DI MTS. *JOURNAL SAINS STUDENT RESEARCH*, 2(5), 325–339. <https://doi.org/10.61722/jssr.v2i5.2674>
- Marlina, S. (2025). Model Pembelajaran Mikro (Microlearning) Berbasis Multimedia untuk Meningkatkan Retensi Materi di Sekolah Menengah. *Jurnal Pendidikan Dasar Dan Inovasi Pendidikan (JPDIP)*, 1(1), 8–14. <https://jurnal.samudrailmu.com/index.php/jpdip/article/view/11>
- Miranda, M., Sutarto, S., & Siswanto, S. (2024). *Media Audio Visual Dalam Pembelajaran Dan Implementasi Terhadap Pemahaman Siswa Pada Mata Pelajaran Al-Qur'an Penggunaan Hadis*. Institut Agama Islam Negeri Curup.
- Muharrani, M., Murhayati, S., & Zaitun. (2025). Optimalisasi Penggunaan Multimedia Sebagai Sumber dan Bahan Pembelajaran Pendidikan Agama Islam (PAI). *Al-Mutharahah: Jurnal Penelitian Dan Kajian Sosial Keagamaan*, 22(01), 12–25. <https://doi.org/10.46781/al-mutharahah.v22i01.1089>
- Mustari, M. (2023). *Teknologi informasi dan komunikasi dalam manajemen pendidikan*. Gunung Djati Publishing Bandung.
- Ningsih, W., & Zalisman, Z. (2024). *Pembelajaran Pendidikan Agama Islam (PAI) dalam Konteks Global*. PT. Sonpedia Publishing Indonesia.
- Nurangraini, I. Y., Puspita, A. M. I., & Nurmalasari, W. (2022). KEEFEKTIFAN MEDIA VIDEO PEMBELAJARAN INTERAKTIF BERBASIS KEARIFAN LOKAL TERHADAP HASIL BELAJAR KOGNITIF SISWA. *Pedagogi: Jurnal Penelitian Pendidikan*, 9(2), 155–163. <https://doi.org/10.25134/pedagogi.v9i2.6662>

- Nurfadiya, D., & Susilo, J. (2025). *Persepsi Siswa terhadap Media Pembelajaran Let's Read sebagai Sarana Literasi Digital* / WIDYANTARA. <https://widyantara-ikaprobsi.org/index.php/widyantara/article/view/117>
- Paling, S., Fatqurhohman, Makmur, A., Yati, Albar, M., Susetyo, A. M., Putra, Y. W. S., Rajiman, W., Djamilah, S., Ratnadewi, Suhendi, H. Y., & Irvani, A. I. (2024). *Media Pembelajaran Digital*. TOHAR MEDIA.
- Permana, B. S., Hazizah, L. A., & Herlambang, Y. T. (2024). Teknologi pendidikan: Efektivitas penggunaan media pembelajaran berbasis teknologi di era digitalisasi. *Khatulistiwa: Jurnal Pendidikan Dan Sosial Humaniora*, 4(1), 19–28.
- Pluskota, P., Słupińska, K., Wawrzyniak, A., & Wąsikowska, B. (2025). The Design of Informational and Promotional Messages by Cooperative Banks and Their Perception Among Young Consumers—An Eye-Tracking Analysis Versus Conscious Identification Based on Empirical Research. *Applied Sciences*, 15(17), 9635. <https://doi.org/10.3390/app15179635>
- Prayetno, I. (2025). Tantangan Dan Solusi Dalam Pembelajaran PAI Di Era Digital. *Jurnal Kajian Islam Dan Sosial Keagamaan*, 2(3), 616–622.
- Purnomo, D., Marta, M. A., & Gusmaneli, G. (2025a). Pemanfaatan Media Interaktif dalam Strategi Pembelajaran PAI untuk Meningkatkan Motivasi Belajar Peserta Didik. *JURNAL PENDIDIKAN DAN ILMU SOSIAL (JUPENDIS)*, 3(2), 414–427. <https://doi.org/10.54066/jupendis.v3i2.3237>
- Purnomo, D., Marta, M. A., & Gusmaneli, G. (2025b). Pemanfaatan Media Interaktif dalam Strategi Pembelajaran PAI untuk Meningkatkan Motivasi Belajar Peserta Didik. *JURNAL PENDIDIKAN DAN ILMU SOSIAL (JUPENDIS)*, 3(2), 414–427. <https://doi.org/10.54066/jupendis.v3i2.3237>
- Purnomo, D., Marta, M. A., & Gusmaneli, G. (2025c). Pemanfaatan media interaktif dalam strategi pembelajaran PAI untuk meningkatkan motivasi belajar peserta didik. *Jurnal Pendidikan Dan Ilmu Sosial (JUPENDIS)*, 3(2), 414–427.
- Putra, L. D., & Pratama, S. Z. A. (2023). Pemanfaatan Media dan Teknologi Digital Dalam Mengatasi Masalah Pembelajaran. *Journal Transformation of Mandalika*, e-ISSN: 2745-5882, p-ISSN: 2962-2956, 4(8), 310–317. <https://doi.org/10.36312/jtm.v4i8.2005>
- Putri, A. A., Sindiyani, S., Salim, H. E., Aminah, S., & Budiana, N. (2025). Peran Penggunaan Buku Digital terhadap Literasi Membaca Anak Sekolah Dasar di Era Digital. *Leksikon: Jurnal Pendidikan Bahasa, Sastra, Dan Budaya*, 3(2), 61–68. <https://doi.org/10.59632/leksikon.v3i2.481>
- Putri, D. N. S., Islamiah, F., Andini, T., & Marini, A. (2022). ANALISIS PENGARUH PEMBELAJARAN MENGGUNAKAN MEDIA INTERAKTIF TERHADAP HASIL BELAJAR SISWA SEKOLAH DASAR. *Jurnal Pendidikan Dasar Dan Sosial Humaniora*, 2(2), 363–374. <https://doi.org/10.53625/jpdsh.v2i2.4290>
- Putri, I. M., Nuraisyah, S., Sidik, M. F., & Nazib, F. M. (2026). Penerapan Nilai-Nilai Moderasi Beragama Pada Peserta Didik Berbasis Media Pembelajaran Pendidikan Agama islam. *Al-Ilmiya: Jurnal Pendidikan Islam*, 1(4), 1424–1435. <https://journal.al-afif.org/index.php/al-ilmiya/article/view/743>
- Ratnasari, F. E., Sucipto, & Kusmiyati. (2024). PENGEMBANGAN MEDIA E-BOOK BERBASIS MULTIMEDIA INTERAKTIF DENGAN QR-CODE UNTUK MENINGKATKAN MINAT BELAJAR DAN KEMAMPUAN BERPIKIR KRITIS PADA PESERTA DIDIK TINGKAT

SEKOLAH DASAR. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, 9(3), 542–546. <https://doi.org/10.23969/jp.v9i3.17809>

Saat, S., & mania, siti. (2020). *Pengantar Metodologi Penelitian*. Pustaka Al-Maida.

Sarinah, S., Fattah, A., & Ulviani, M. (2025). Transitioning from Screen to Scripture: Reclaiming Generation Z through Islamic Education and Moral Development in Indonesian Educational Institutions. *Progresiva: Jurnal Pemikiran Dan Pendidikan Islam*, 14(01), 147–162. (Pendidikan Agama Islam di SMP Unismuh Makassar Pembentukan Karakter Generasi Z melalui Pendidikan Agama Islam Tantangan dan Inovasi dalam Pembelajaran PAI Peran Teknologi dalam Pembelajaran Agama Islam Kerjasama antara Sekolah dan Keluarga dalam Pendidikan). <https://doi.org/10.22219/progresiva.v14i01.39381>

Sinaga, M. N., Ringo, S. S., & Netrallia, M. C. (2024). TEORI BELAJAR SEBAGAI LANDASAN BAGI PENGEMBANGAN TEKNOLOGI PENDIDIKAN. *Jurnal Pendidikan Indonesia: Teori, Penelitian, Dan Inovasi*, 4(1). <https://doi.org/10.59818/jpi.v4i2.646>

Sugiyono, S., & Lestari, P. (2021). *Metode penelitian komunikasi (Kuantitatif, kualitatif, dan cara mudah menulis artikel pada jurnal internasional)*. Alfabeta.

Supangat, A. (2017). *Statistika Dalam Kajian Deskriptif, Inferensi, dan Nonparametrik*. Kencana Prenada Media Group.

Tiro, M. A. (18 C.E.). *Dasar-Dasar Statistika*. Andira Publisher.

Triwiyono, E., & Munadi, B. A. (2018). IMPLEMENTATION PROBLEM BASED LEARNING ON IMPROVING ACTIVITY AND PSYCHOMOTORIC STUDENTS VOCATIONAL HIGH SCHOOL. *Journal of Mechanical Engineering and Vocational Education (JoMEVE)*, 1(1), 49–52. <https://doi.org/10.20961/jomeve.v1i1.19810>

Vu, N. N., Hung, B. P., Van, N. T. T., & Lien, N. T. H. (2022). Theoretical and Instructional Aspects of Using Multimedia Resources in Language Education: A Cognitive View. In R. Kumar, R. Sharma, & P. K. Pattnaik (Eds.), *Multimedia Technologies in the Internet of Things Environment, Volume 2* (pp. 165–194). Springer. [https://doi.org/10.1007/978-981-16-3828-2\\_9](https://doi.org/10.1007/978-981-16-3828-2_9)

Yusuf, A. M. (2016). *Metode Penelitian Kuantitatif, Kualitatif & Penelitian Gabungan*. Prenada Media.

Zuriah, N. (2005). *Metodologi Penelitian Sosial dan Pendidikan Teori dan Aplikasi*. Bumi Aksara.