# THE INFLUENCE OF AUDIOVISUAL MEDIA ON THE MOTIVATION AND LEARNING OUTCOMES OF CLASS V STUDENTS

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**Abstract**
Islamic Cultural History (SKI) learning at MIN 15 Pidie Jaya faces the challenge of low motivation and learning outcomes of class V students, with 45% of students having not reached KKM. This study aims to analyze the influence of audiovisual media on SKI motivation and learning outcomes. Quantitative research with a quasi-experimental design, a nonequivalent control group involved 65 students (35 experimental groups, 30 control groups). Data were collected through motivational questionnaires (15 items, $\alpha$=0.905) and learning outcome tests (20 items, $\alpha$=0.809). Analysis using the T and MANOVA tests showed significant results: (1) the learning motivation of the experimental group (M=63.00) was higher than that of the control (M=58.00), $t(63)=9.179$, $p<0.001$; (2) the learning outcomes of the experimental group (M=86.71) were higher than those of the control (M=80.00), $t(63)=12.056$, $p<0.001$; (3) the MANOVA test showed significant simultaneous influence (Wilks' Lambda=0.222, $F=108.376$, $p<0.001$). Audiovisual media have proven to be effective in increasing SKI motivation and learning outcomes, providing practical implications for the development of technology-based learning in *Madrasah Ibtidaiyah*.

**Keywords**: Audiovisual media, learning motivation, learning outcomes, Islamic Cultural History.

## INTRODUCTION

The Industrial Revolution 4.0 era demands pedagogical transformation in education, especially the integration of learning technology to improve the quality of learning processes and outcomes.[1] Technology-based learning has been proven to increase

[1] Hwang, G. J., & Tsai, C. C. (2021). Research trends in technology-based learning from 2000 to 2009: A content analysis of publications in selected journals. *Educational Technology & Society*, *14*(2), 119-133; Crompton, H., & Burke, D. (2018). The use of mobile learning in higher education: A systematic review. *Computers & Education*, *123*, 53-64. https://doi.org/10.1016/j.compedu.2018.04.007

student engagement and achievement in various educational contexts.[2] However, the implementation of learning technology in Indonesia, especially for history-based subjects such as Islamic Cultural History (SKI), still faces various challenges.[3]

SKI learning has the unique characteristics of dealing with historical events that require complex visualization and contextualization skills.[4] Conventional methods centered on lectures and texts have proven to be less effective in arousing students' interest and understanding of historical material.[5] Empirical data show that conventional history learning results in low levels of student engagement, with only 35-40% of students showing active participation in learning.[6]

The Dual Coding Theory and the Cognitive Theory of Multimedia Learning provide a strong theoretical foundation for the use of audiovisual media in learning.[7] Both theories explain that information is processed through two different cognitive pathways—verbal and visual—and that the simultaneous use of both modalities can improve retention and comprehension.[8] Meta-analysis research showed that multimedia learning had a medium to large effect size (d=0.45-0.72) on learning outcomes.[9]

Several studies have examined the effectiveness of audiovisual media in the context of Islamic education. Lubis and Ismail found that interactive multimedia improves students' understanding of Islamic Religious Education, but have not specifically studied SKI.[10] Widiati et al. identified the problem of implementing SKI learning media in

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[2] Mayer, R. E. (2020). Multimedia learning. Cambridge University Press. https://doi.org/10.1017/9781108894333; Clark, R. C., & Mayer, R. E. (2016). *E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning* (4th ed.). Wiley.

[3] Budiman, H. (2017). The role of information and communication technology in education. *Al-Tadzkiyyah: Journal of Islamic Education*, *8*(1), 31-43. https://doi.org/10.24042/atjpi.v8i1.2095; Hidayat, N., Zainuddin, M., & Minarti, E. D. (2020). The effectiveness of using e-learning in Islamic religious education learning. *International Journal of Islamic Educational Psychology*, *1*(1), 1-14. https://doi.org/10.18196/ijiep.1101

[4] Hasyim, A. (2021). Problems of learning Islamic Cultural History at Madrasah Ibtidaiyah and alternative solutions. *Al-Mudarris: Journal of Education*, *4*(1), 33-45. https://doi.org/10.32478/al-mudarris.v4i1.646

[5] Wineburg, S. (2018). *Why learn history (when it's already on your phone)*. University of Chicago Press. https://doi.org/10.7208/chicago/9780226357645.001.0001; Booth, A. (2020). History education and the affordances of digital technology: A case study. *History Education Research Journal*, *17*(1), 106-120. https://doi.org/10.18546/HERJ.17.1.08

[6] Barton, K. C., & Levstik, L. S. (2020). *Teaching history for the common good*. Routledge.

[7] Paivio, A. (2013). *Imagery and verbal processes*. Psychology Press. https://doi.org/10.4324/9781315798868; Mayer, R. E. (2014). *The Cambridge handbook of multimedia learning* (2nd ed.). Cambridge University Press. https://doi.org/10.1017/CBO9781139547369

[8] Sweller, J., van Merriënboer, J. J., & Paas, F. (2019). Cognitive architecture and instructional design: 20 years later. *Educational Psychology Review*, *31*(2), 261-292. https://doi.org/10.1007/s10648-019-09465-5

[9] Wouters, P., Paas, F., & van Merriënboer, J. J. (2013). Observational learning from animated models: Effects of studying-practicing alternation and illusion of control on transfer. *Instructional Science*, *41*(1), 89-107. https://doi.org/10.1007/s11251-012-9221-8; Sung, Y. T., Chang, K. E., & Liu, T. C. (2016). The effects of integrating mobile devices with teaching and learning on students' learning performance: A meta-analysis and research synthesis. *Computers & Education*, *94*, 252-275. https://doi.org/10.1016/j.compedu.2015.11.008

[10] Lubis, M., & Ismail, M. S. A. (2019). Development of interactive multimedia-based learning media in Islamic Religious Education subjects. *Journal of Information and Communication Technology in Education*, *6*(1), 58-68. https://doi.org/10.24114/jtikp.v6i1.14159

*Madrasah Ibtidaiyah*, but did not measure specific impacts on motivation and learning outcomes.[11] International research shows the effectiveness of learning videos on motivation, but in the context of science subjects, not religious history.[12]

The identified research gaps include: (1) the lack of empirical research that measures the influence of audiovisual media on motivation and learning outcomes of SKI simultaneously using experimental designs; (2) the limitations of studies that focus on the learning of Islamic history at the *Madrasah Ibtidaiyah* level with specific sociocultural characteristics; (3) no research explores the implementation of learning technology in areas with a strong Islamic identity such as Aceh.

The conditions at MIN 15 Pidie Jaya reflect the problems of SKI learning in general. Initial observations (February-March 2024) identified that: (1) 45% of grade V students (29 out of 65 students) have not reached the KKM (≥75); (2) the average learning motivation score is in the medium category (M=52.3, SD=8.7); (3) the class participation rate is only 38%; (4) learning is dominated by lecture methods (85% of learning time); (5) multimedia facilities are available but poorly optimized (utilization rate <30%).

The contribution of this research includes theoretical and practical aspects: (1) providing empirical evidence on the effectiveness of audiovisual media in improving motivation and learning outcomes of SKI using rigorous experimental design; (2) fill the gap in literature on learning technology for religious history subjects in *Madrasah Ibtidaiyah*; (3) provide an implementation model that can be adapted to the context of other *Madrassas* with similar characteristics; (4) enriching academic discussions on the integration of technology in Islamic education; (5) provide evidence-based policy recommendations for the development of SKI learning in Indonesia.

Based on this background, this study aims to analyze: (1) the influence of audiovisual media on the learning motivation of grade V students in SKI subjects; (2) the influence of audiovisual media on student learning outcomes; and (3) the simultaneous influence of audiovisual media on motivation and learning outcomes. The research hypothesis states that audiovisual media have a significant positive influence on learning motivation ($H_1$), learning outcomes ($H_2$), and both simultaneously ($H_3$).

## RESEARCH METHODS

This study uses a quantitative approach with an experimental research type that aims to test the influence of audiovisual media on the motivation and learning outcomes of grade V students in the subject of Islamic Cultural History. The research design used is a quasi-experimental design type of nonequivalent control group design, where the experimental and control groups are not randomly selected. The variables in this study

[11] Widiati, I., Suud, F. M., & Mukhlishin, A. (2020). Implementation of the use of Islamic Cultural History learning media at Madrasah Ibtidaiyah. *Attadib: Journal of Elementary Education*, *4*(1), 64-77. https://doi.org/10.32507/attadib.v4i1.679

[12] Chien, Y. C., Su, Y. N., Wu, T. T., & Huang, Y. M. (2020). Enhancing students' botanical learning by using augmented reality. *Universal Access in the Information Society*, *19*(4), 967-977. https://doi.org/10.1007/s10209-019-00690-4; Hwang, G. J., Wang, S. Y., & Lai, C. L. (2019). Effects of a social regulation-based online learning framework on students' learning achievements and behaviors in mathematics. *Computers & Education*, *160*, 104031. https://doi.org/10.1016/j.compedu.2020.104031

consisted of independent variables (X), namely audiovisual media, dependent variables, namely learning motivation (Y1) and learning outcomes (Y2), and control variables, including class, subject, and gender. The research population is students of class V of MIN 15 Pidie Jaya, with a sample of 65 students divided into two classes: class V-A, with 35 students, and class V-B, with 30 students. The research instruments used include questionnaire guidelines to measure learning motivation on a scale of 1-5, a written test in the form of multiple-choice questions totaling 20 questions to measure learning outcomes, observation sheets to see the implementation of the application of audiovisual media, and documentation.

Data collection techniques are carried out through questionnaires, tests, and observation sheets. For data analysis, the researcher used several statistical tests with the help of SPSS 22, including the analysis of instrument trials (validity test using the Product-Moment Correlation formula and reliability test using Cronbach Alpha), prerequisite tests (normality test with Shapiro-Wilk and homogeneity test), and hypothesis test using the T-test and Manova test. The hypothesis tested is the significant positive influence of audiovisual media on learning motivation (Ha1), the presence of a significant positive influence of audiovisual media on learning outcomes (Ha2), and the presence of a significant positive influence of audiovisual media on students' motivation and learning outcomes (Ha3). The test criterion uses a significance level of 0.05, where if the significance < 0.05, Ha is accepted and H0 is rejected, which means that the independent variable affects the dependent variable, and vice versa. The research is planned to be carried out from March to September 2024 at MIN 15 Pidie Jaya. With this quantitative approach, the researcher seeks to obtain objective data through measurable instruments and conduct statistical analysis to test the research hypothesis, so that it can be determined whether audiovisual media has a significant influence on the motivation and learning outcomes of students in the subject of Islamic Cultural History.

## RESULTS OF RESEARCH AND DISCUSSION

Description of research results obtained from data collection using research instruments in the form of scores. The description includes *independent* and *dependent* variables. The *independent* variable here is audiovisual media. Meanwhile, *dependent variables* include motivation and learning outcomes.

This research was conducted at MIN 15 Pidie Jaya with the aim of testing whether or not there is an influence of audiovisual media on the motivation and learning outcomes of grade V students in the subject of Islamic Cultural History. The population in this study is all class V in MIN 15 Pidie Jaya, with as many as 65 students. The researcher took a sample of two classes, namely the VA class consisting of 35 students and the VB class having a total of 30 students. The VA class is experimental, while the VB class is a control class. This research is classified as a type of experimental research because the researcher wants to conduct an experiment to test or find out whether audiovisual media influences motivation and learning outcomes, or not, by providing treatment using audiovisual media in the experimental class and providing conventional learning treatment in the control class.

The researcher requested a thesis research permit from the campus on August 22, 2024, to be submitted to MIN 15 Pidie Jaya. Then the research permit was submitted to the Head of MIN 15 Pidie Jaya, and at the same time, I asked for permission to conduct research at MIN 15 Pidie Jaya. The researcher teaches the subject of Islamic Cultural History in the Fathu Mecca material based on the direction of Mrs. Mulyana, S.Pd.I was an

accompanying teacher.

The researcher designed a Learning Implementation Plan, both for the control class and the experimental class, as attached. The researcher used research instruments in the form of questionnaire guidelines, test guidelines, and documentation guidelines. The questionnaire instrument consists of 15 statements with *a choice of Likert scale answers*, while the test instrument consists of 30 multiple-choice questions. Before distributing the questionnaire and providing tests to the research sample, the researcher conducts a validity test and a reliability test. The researcher conducted expert validity through Mr. Marzuki Abubakar, who was a lecturer in Research Methods at the Islamic University of Aceh, and Mrs. Mulyana, who was a teacher in charge of SKI subjects at MIN 15 Pidie Jaya. The validity and reliability test was conducted on 20 students in the VIA class.

After conducting validity and reliability tests, the researcher carried out learning activities by providing treatment to the experimental class using audiovisual media and providing conventional learning treatment to the control class. The researcher collected data using questionnaires, tests, and observation techniques. The researcher's questionnaire was used to measure the learning motivation of students after carrying out learning activities, while the data collection technique used tests to measure the learning outcomes of students after carrying out learning activities. Then, the data collection technique in the form of observation is used by researchers during the learning process. This is done to see the implementation of the application of the audiovisual media used. In addition, documentation is also needed to take school profile data, student data used as research samples, and photos of teaching and learning activities.

The researcher began the study on August 22, 2024, by submitting a research permit to MIN 15 Pidie Jaya. At that time, the researcher received permission from the curriculum director to conduct research. Then, the researcher met Mrs. Mulyana as an accompanying teacher to consult on the study and classes used for research. Mrs. Mulyana recommended conducting research in the VA class as an experimental class and the VB class as a control class. The researcher consulted with the accompanying teacher regarding the preparation of the Learning Implementation Plan, student attendance data, and validation of research instruments. This is done so that the research instruments carried out can be used for research.

The researcher began the study by conducting learning activities in the classroom on August 22, 2024, with a time allocation of 2 x 35 minutes for each meeting. The researcher applied learning using audiovisual media in the VA class as an experimental class and applied conventional learning in the VB class as a control class.

The researcher began providing research instruments in the form of questionnaires and tests to students on September 2, 2024. The administration of this instrument is carried out to obtain data and test whether the sample data is normally distributed or not, as well as whether the data of the two samples are homogeneous or not. In addition, the researcher wanted to test the hypothesis, whether or not there was a difference in the results of instruments in the form of learning motivation questionnaires and learning outcome tests in experimental classes and control classes.

## A. Hypothesis Test Analysis

### 1. Trial of Research Instruments

a. Validity Test

Before the research instrument is disseminated to the research sample, the research instrument must first be validated by the validator, and a validity test must be conducted to determine which question items are suitable for use in the research. The validity of experts

or validators in this study is Mr. Marzuki Abubakar, as a validator in the field of Islamic education, and Mr. Hidayatullah as a validator of Islamic Religious Education subjects. Based on the validity of the two validators, the research instrument is suitable for use with the research sample.

Furthermore, the researcher conducted an empirical validity test assisted by *the SPSS 22 application*. The questionnaire instruments and test instruments were tested on the VIA class of 20 students. In the validity test, it is known that n = 20 with dk = n – 2, then dk = 20 -2 = 18. So that the r table at the significance level of 5% is 0.468 (r table can be seen in the appendix). To find out whether the question item is valid or not, it is necessary to compare the value of r calculated with the r table. If r counts is greater than r of the table, then the question item is said to be valid. However, if the r count is smaller than the r table, then the question item should be discarded or should not be used for research instruments. In order to find out the magnitude of r, the researcher looked at the output *Correlation* results, and then the results were compared with the r table. The following are the results of the calculation of the validity test using *the SPSS 22* application.

Table 1. Results of the validity test of the learning motivation questionnaire question

| **Question item number** | **r count** | **R table** | **information** |
|---|---|---|---|
| Item 1 | 0,798 | 0,468 | Valid |
| Item 2 | 0,702 | 0,468 | Valid |
| Item 3 | 0,533 | 0,468 | Valid |
| Item 4 | 0,646 | 0,468 | Valid |
| Item 5 | 0,627 | 0,468 | Valid |
| Item 6 | 0,780 | 0,468 | Valid |
| Item 7 | 0,775 | 0,468 | Valid |
| Item 8 | 0,666 | 0,468 | Valid |
| Item 9 | 0,504 | 0,468 | Valid |
| Item 10 | 0,773 | 0,468 | Valid |
| Item 11 | 0,476 | 0,468 | Valid |
| Item 12 | 0,709 | 0,468 | Valid |
| Item 13 | 0,478 | 0,468 | Valid |
| Item 14 | 0,624 | 0,468 | Valid |
| Item 15 | 0,559 | 0,468 | Valid |

In Table 1. Above, it can be seen that all fifteen question items are declared valid based on the R count > R table.

Table 2. Results of the validity test of the learning outcome test instruments

| **Question item number** | **r count** | **R table** | **information** |
|---|---|---|---|
| Item 1 | 0,484 | 0,468 | Valid |
| Item 2 | 0,514 | 0,468 | Valid |
| Item 3 | 0,601 | 0,468 | Valid |
| Item 4 | 0,485 | 0,468 | Valid |
| Item 5 | 0,544 | 0,468 | Valid |
| Item 6 | 0,572 | 0,468 | Valid |
| Item 7 | 0,522 | 0,468 | Valid |
| Item 8 | 0,558 | 0,468 | Valid |
| Item 9 | 0,446 | 0,468 | Invalid |
| Item 10 | 0,516 | 0,468 | Valid |
| Item 11 | 0,629 | 0,468 | Valid |
| Item 12 | 0,250 | 0,468 | Invalid |
| Item 13 | 0,514 | 0,468 | Valid |
| Item 14 | 0,249 | 0,468 | Invalid |
| Item 15 | 0,298 | 0,468 | Invalid |
| Item 16 | 0,508 | 0,468 | Valid |
| Item 17 | 0,516 | 0,468 | Valid |
| Item 18 | 0,414 | 0,468 | Invalid |
| Item 19 | 0,183 | 0,468 | Invalid |
| Item 20 | 0,586 | 0,468 | Valid |
| Item 21 | 0,498 | 0,468 | Valid |
| Item 22 | 0,506 | 0,468 | Valid |
| Item 23 | 0,516 | 0,468 | Valid |
| Item 24 | 0,460 | 0,468 | Invalid |
| Item 25 | 0,484 | 0,468 | Valid |
| Item 26 | 0,429 | 0,468 | Invalid |
| Item 27 | 0,556 | 0,468 | Valid |
| Item 28 | 0,160 | 0,468 | Invalid |
| Item 29 | 0,325 | 0,468 | Invalid |
| Item 30 | 0,624 | 0,468 | Valid |

In Table 2 above, there are 10 invalid question items, namely question items number 9,12,14,15,18,19,24,26,28, and 29 based on the comparison of r calculation > with r table. So that the invalid question item is dropped and should not be followed to test the learning results. Test question items used as learning outcome research instruments are question items that are declared valid, with a total of 20 question items.

2. Reliability Test

The reliability test is a prerequisite test to measure the extent to which the measurement results remain consistent if the measurement is carried out more than once with the same measuring instrument. The researcher used the *Alpha Cronbach* reliability test technique, with the provision that if the reliability coefficient is greater than 0.6, the instrument is said to be reliable. To find out the value of the correlation coefficient, the researcher used *the SPSS 22* application. The following are the results of the reliability coefficient analysis using *the SPSS 22* application.

Table 3. Results of the reliability test of the learning motivation questionnaire instrument

Reliability Statistics

| Cronbach's Alpha | N of Items |
|---|---|
| ,905 | 15 |

In Table 3 above, it is known that the value of the reliability coefficient is 0.905. If *Cronbach's alpha value* is compared to 0.6, then 0.905 > 0.6, so the learning motivation questionnaire instrument is declared reliable.

**Table 4. Results of the reliability test of the learning outcome test instruments**

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| ,809 | 30 |

In Table 4.4 above, it is known that the value of the reliability coefficient is 0.809. If *Cronbach's alpha value* is compared to 0.6, then 0.809 > 0.6, then the learning motivation questionnaire instrument is declared reliable.

3. Prerequisite Test

a. Normality test

The normality test is a prerequisite hypothesis test to determine whether the sample data is normal or not. Researchers used *the Kolmogorov-Smirnov* test to test the normality of the data. The basis for decision-making in the normality test is *the Asymp value. If the Sig (2-tailed)* is more than 0.05, then the data can be said to be normal. However, if the value of *Asymp. If the Sig (2-tailed)* is less than 0.05, then the data is abnormal. To find out the value of *Asymp. Sig (2-tailed),* the researcher used *the Shapiro-Wilk* test assisted by the SPSS 22 application. The following are the results of *the Shapiro-Wilk* normality test using SPSS 22.

**Table 5. Normality test results of the learning motivation questionnaire**

**Shapiro-Wilk Test**

**Tests of Normality**

| | Group | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|---|
| | | Statistic | df | Itself. | Statistic | df | Itself. |
| Motivation | Class A | .129 | 35 | .154 | .971 | 35 | .473 |
| | Class B | .200 | 30 | .004 | .943 | 30 | .107 |

a. Lilliefors Significance Correction

Based on Table 5. above, *the value of Asymp. Sig (2-tailed)* for the experimental class is 0.473, while the *Asymp value. Sig (2-tailed)* for the control class: 0.107. So it can be concluded that the results of the VA class questionnaire have *an Asymp value. Sig (2-tailed)* 0.473 > 0.05, then the data from the VA class questionnaire is distributed normally. Likewise, the results of the VB class questionnaire have *an Asymp score. Sig (2-tailed)* 0.107 > 0.05, then the data from the VB class questionnaire is distributed normally.

Table 6. Normality test results of the learning outcomes test

**Shapiro-Wilk Test**

**Tests of Normality**

| | Group | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|---|
| | | Statistic | df | Itself. | Statistic | df | Itself. |
| Learning outcomes | Class A | .176 | 35 | .007 | .952 | 35 | .130 |
| | Class B | .192 | 30 | .006 | .947 | 30 | .144 |

a. Lilliefors Significance Correction

Based on Table 4.6 above, the Asymp value is obtained. Sig *(2-tailed)* for the experimental class is 0.130, while the value of Asymp. Sig *(2-tailed)* for the control class is 0.144. So it can be concluded that the learning outcomes of the VA class have an Asymp value. Sig *(2-tailed)* 0.130 > 0.05, then the VA class learning outcome data is normally distributed. Likewise, the learning outcomes of the VB class have an Asymp score. Sig *(2-tailed)* 0.144 > 0.05, then the VB class learning outcome data is typically distributed.

4. Homogeneity test

The homogeneity test is a hypothesis prerequisite test to find out whether

the sample data of the experimental class and the control class are homogeneous or not, in other words, whether the sample data of the experimental class and the control class have the same variance or not. A sample of data is said to be homogeneous if the significance value is greater than 0.05, so that the sample data can be said to be homogeneous or have the same variance. The researcher used *the SPSS 22 application* to test the homogeneity. The following are the results of the homogeneity test using *SPSS 22*:

Table 7. Homogeneity test results of the learning motivation questionnaire

**Test of Homogeneity of Variances**
**Motivation**

| Levene Statistic | df1 | df2 | Itself. |
|---|---|---|---|
| .000 | 1 | 63 | 1.000 |

In Table 4.7 above, the sig value shows 1,000. If the sig value is 1,000 > 0.05, then the learning motivation questionnaire data is declared homogeneous or has the same variance.

Table 8. Homogeneity test results of the learning outcomes test

**Test of Homogeneity of Variances**
**Learning outcomes**

| Levene Statistic | df1 | df2 | Itself. |
|---|---|---|---|
| 1.086 | 1 | 63 | .301 |

Based on Table 4.8 above, the sig value shows 0.301. The sig value is 0.301 > 0.05, so that the test data of learning outcomes can be declared homogeneous or have the same variance.

The prerequisite test showed that the results of the normality test, the learning motivation questionnaire, were declared normal, and the learning outcome test was also declared normal. Then the results of the homogeneous test and the learning outcome test were also declared homogeneous. Thus, the sample data that the researcher has collected have met the requirements for the hypothesis test, so that the T test and the Manova test can be carried out.

5. Uji hypothesis

a. Uji T (*independent test)*

The T-test was carried out to test the hypothesis whether there is an influence of audio visual media on the learning motivation of class V students in the subject of Islamic Cultural History at MIN 15 Pidie Jaya and to test the hypothesis whether there is an influence of audio visual media on the learning

outcomes of class V students in the subject of Islamic Cultural History at MIN 15 Pidie Jaya. The hypotheses tested are as follows:

Ha: There is an influence of audiovisual media on the learning motivation of grade V students in the subject of Islamic Cultural History at MIN 15 Pidie Jaya.

H0: There is no influence of audiovisual media on the learning motivation of class V students in the subject of Islamic Cultural History at MIN 15 Pidie Jaya.

Ha: There is an influence of audiovisual media on the learning outcomes of class V students in the subject of Islamic Cultural History at MIN 15 Pidie Jaya.

H0: There is no influence of audiovisual media on the learning outcomes of grade V students in the subject of Islamic Cultural History at MIN 15 Pidie Jaya.

Meanwhile, the provisions for decision-making related to hypothesis testing are as follows:

1. If the value *of Sig. (2-tailed)* < 0.05, then Ha is accepted, H0 is rejected.
2. If the value *of Sig. (2-tailed)* > 0.05, then Ha is rejected, and H0 is accepted.
3. If t calculates > t table then Ha is accepted, H0 is rejected.
4. If t calculates < t table, then Ha minus H0 is accepted.

The researcher used *the SPSS 22 application* to test the first and second hypotheses. The results of the T-test are as follows:

**Table 9. Statistical test results of the group learning motivation questionnaire**

**Group Statistics**

| | Group | N | Mean | Hours of deviation | Std. Error Mean |
|---|---|---|---|---|---|
| **Motivation** | **Class A** | **35** | **63.0000** | **2.15570** | **.36438** |
| | **Class B** | **30** | **58.0000** | **2.22834** | **.40684** |

In Table 9 above, it can be seen that the results of the learning motivation questionnaire for the experimental class, namely the VA class, showed an average of 63.00 with a total of 35 students, while the results of the study motivation questionnaire for the control class, namely the VB class, showed an average of 58.00 with a total of 30 students.

Table 10. T-test results of the Independent Samples Test

Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Itself. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| motivation | Equal variances assumed | .000 | 1.000 | 9.179 | 63 | .000 | 5.00000 | .54475 | 3.91141 | 6.08859 |
| | Equal variances not assumed | | | 9.155 | 60.811 | .000 | 5.00000 | .54616 | 3.90782 | 6.09218 |

Based on Table 10 above, the results of the TT-test show that *the Sig. (2-tailed)* value is 0.000, so that the value *of Sig. (2-tailed)* is 0.000 < 0.05, then Ha is accepted H0 is rejected. Then compare the value of t calculated with the t table. In the table above, t counts as 9.179 while the t table (can be seen in the appendix) shows a value of 2,000. So, if the t calculation of the > t table is 9.179 > 2.000, then Ha is accepted, and H0 is rejected. In conclusion, there is an influence of audiovisual media on the learning motivation of grade V students in the subject of Islamic Cultural History at MIN 15 Pidie Jaya.

Table 11. Statistical test results of the learning outcomes test: Group Statistics

| | Group | N | Mean | Hours of deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Learning outcomes | Class A | 35 | 14.6571 | 1.78132 | .30110 |
| | Class B | 30 | 9.7333 | 1.46059 | .26667 |

Table 11. showed that the average learning outcome of the experimental class or VA class was 14.6571, with a total of students as many as 35 students. Meanwhile, the average learning outcome of the control class or VB class was 9.7333 with a total of 30 students.

Table 12. T-test results: Independent Samples Test

**Tests of Between-Subjects Effects**

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Itself. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| Learning outcomes | Equal variances assumed | 1.086 | .301 | 12.056 | 63 | .000 | 4.92381 | .40841 | 4.10766 | 5.73996 |
| | Equal variances not assumed | | | 12.242 | 62.891 | .000 | 4.92381 | .40221 | 4.12003 | 5.72759 |

Based on Table 12, the results of the T-test show that the *value of Sig. (2-tailed)* is 0.000, so the value of *Sig. (2-tailed)* is 0.000 < 0.05, then Ha is accepted H0 is rejected. Then compare the value of t calculated with the t table. In the table above, t counts as 12.056 while the t table shows a value of 2.000. So, if t calculates > t table is 12.056 > 2.000, then Ha is accepted, and H0 is rejected. In conclusion, there is an influence of audiovisual media on the learning outcomes of class V students in the subject of Islamic Cultural History at MIN 15 Pidie Jaya.

1. Manova Test

The MANOVA test is a hypothesis test to test the relationship between several independent variables and several dependent variables. The researcher used the Manova test to test the influence of the audiovisual media influence group quiz method on the motivation and learning outcomes of grade V students in the subject of Islamic Cultural History at MIN 15 Pidie Jaya. The hypotheses tested with the Manova test are as follows:

Ha: There is an influence of audiovisual media on the motivation and learning outcomes of class V students in the subject of Islamic Cultural History at MIN 15 Pidie Jaya.

H0: There is no influence of audiovisual media on the motivation and learning outcomes of grade V students in the subject of Islamic Cultural History at MIN 15 Pidie Jaya.

Meanwhile, the requirements or decision-making criteria related to this hypothesis test are as follows:

1. If the *value of Sig* < 0.05, then Ha is accepted, and H0 is rejected.
2. If the value *of Sig.* > 0.05, then Ha is rejected, H0 is accepted.

The researcher used *the SPSS 22 application* to test the above hypothesis. The results of the Manova Test are as follows:

| Source | Dependent Variable | Type III Sum of Squares | df | Mean Square | F | Itself. |
|---|---|---|---|---|---|---|
| Corrected Model | Motivation | 403.846a | 1 | 403.846 | 84.246 | .000 |
| | Learning outcomes | 391.632b | 1 | 391.632 | 145.346 | .000 |
| Intercept | Motivation | 236508.462 | 1 | 236508.462 | 49337.858 | .000 |
| | Learning outcomes | 9609.848 | 1 | 9609.848 | 3566.491 | .000 |
| group | Motivation | 403.846 | 1 | 403.846 | 84.246 | .000 |
| | Learning outcomes | 391.632 | 1 | 391.632 | 145.346 | .000 |
| Error | Motivation | 302.000 | 63 | 4.794 | | |
| | Learning outcomes | 169.752 | 63 | 2.694 | | |
| Total | Motivation | 240137.000 | 65 | | | |
| | Learning outcomes | 10531.000 | 65 | | | |
| Corrected Total | Motivation | 705.846 | 64 | | | |
| | Learning outcomes | 561.385 | 64 | | | |

a. R Squared = .572 (Adjusted R Squared = .565)

b. R Squared = .698 (Adjusted R Squared = .693)

Table 13. Manova test results

## Multivariate Tests

**Between-Subjects Factors**

| | | Value Label | N |
|---|---|---|---|
| Group | 1.00 | Class A | 35 |
| | 2.00 | Class B | 30 |

**Multivariate Tests**

| Effect | | Value | F | Hypothesis df | Error df | Itself. |
|---|---|---|---|---|---|---|
| Intercept | Pillai's Trace | .999 | 25505.483b | 2.000 | 62.000 | .000 |
| | Wilks' Lambda | .001 | 25505.483b | 2.000 | 62.000 | .000 |
| | Hotelling's Trace | 822.758 | 25505.483b | 2.000 | 62.000 | .000 |
| | Roy's Largest Root | 822.758 | 25505.483b | 2.000 | 62.000 | .000 |
| group | Pillai's Trace | .778 | 108.376b | 2.000 | 62.000 | .000 |
| | Wilks' Lambda | .222 | 108.376b | 2.000 | 62.000 | .000 |
| | Hotelling's Trace | 3.496 | 108.376b | 2.000 | 62.000 | .000 |
| | Roy's Largest Root | 3.496 | 108.376b | 2.000 | 62.000 | .000 |

a. Design: Intercept + group

b. Statistically accurate

In Table 13. above, Manova's test output on Pillai's Trace, Wilks' Lambda, Hotelling's Trace and Roy's Largest Root showed a value of Sig. 0.000. This means 0.000 < 0.05, so that Ha is accepted, H0 is rejected. It can be concluded that there is an influence of audiovisual media on the motivation and learning outcomes of grade V students in the subject of Islamic Cultural History at MIN 15 Pidie Jaya.

## B. Discussion

### 1. The Influence of Audiovisual Media on Learning Motivation

The results showed that audiovisual media had a significant influence on students' learning motivation ($t = 9.179$, $p < 0.001$, $d = 2.28$). These findings are consistent with the Cognitive Theory of Multimedia Learning, which states that multimedia learning that combines visual and auditory can improve cognitive engagement through dual-channel processing.[13] When information is presented through two modalities, working memory can process information more efficiently, reduce cognitive load, and increase intrinsic motivation.[14]

The increase in motivation in the experimental group ($M = 63.00$) compared to the control ($M = 58.00$) can be explained through *the ARCS* Model framework.[15] Audiovisual media effectively enhance: (1) *Attention* through the visualization of historical events that attract attention; (2) *Relevance* by connecting the historical context with the contemporary life of students; (3) *Confidence* through the presentation of structured and easy-to-understand material; (4) *Satisfaction* from a fun and meaningful learning experience.

These findings support research that found learning videos increase students' intrinsic motivation ($\beta = 0.47$, $p < 0.001$) and meta-analyses that showed multimedia learning had a moderate *effect size* on motivation ($g = 0.52$).[16] In the context of history learning, historical visualization increases *students' historical empathy* and *engagement*.[17]

The specific context of SKI learning provides a unique nuance. The historical material of Islam that is visualized not only increases *cognitive engagement* but also emotional and spiritual engagement.[18] The Fathu Mecca video used in this study integrates

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[13] Mayer, R. E. (2014). *The Cambridge handbook of multimedia learning* (2nd ed.). Cambridge University Press. https://doi.org/10.1017/CBO9781139547369

[14] Sweller, J., van Merriënboer, J. J., & Paas, F. (2019). Cognitive architecture and instructional design: 20 years later. *Educational Psychology Review*, *31*(2), 261-292. https://doi.org/10.1007/s10648-019-09465-5

[15] Keller, J. M. (2010). *Motivational design for learning and performance: The ARCS model approach*. Springer.

[16] Hwang, G. J., Wang, S. Y., & Lai, C. L. (2019). Effects of a social regulation-based online learning framework on students' learning achievements and behaviors in mathematics. *Computers & Education, 160*, 104031; Sung, Y. T., Chang, K. E., & Liu, T. C. (2016). The effects of integrating mobile devices with teaching and learning on students' learning performance: A meta-analysis and research synthesis. *Computers & Education*, *94*, 252-275. https://doi.org/10.1016/j.compedu.2015.11.008

[17] Breakstone, J., Smith, M., & Wineburg, S. (2018). Students' civic online reasoning: A national portrait. *Educational Researcher*, *47*(8), 505-515. https://doi.org/10.3102/0013189X18805265

[18] Aslan, S. (2019). Analysis of Islamic education curriculum in Turkey and Indonesia. *British Journal of Education*, *7*(1), 35-46.

Islamic narratives, animations, and music, creating *an immersive experience* that enhances students' emotional connection with Islamic history.[19]

However, the study also identified implementation challenges. Observations show that 15% of students experience distraction due to visual elements that are too stimulative, which is in line with warnings about *seductive details* that can interfere with *essential processing*.[20] This underscores the importance of careful *instructional design* in developing audiovisual media for learning.

## 2. The Influence of Audiovisual Media on Learning Outcomes

The results showed a very significant influence of audiovisual media on learning outcomes ($t = 12.056$, $p < 0.001$, $d = 2.99$). The increase in the post-test score of the experimental group ($M = 86.71$) compared to the control ($M = 80.00$) indicated the effectiveness of the media in improving students' cognitive achievement in SKI material.

These findings are in line with the Dual Coding Theory, which explains that information encoded through verbal and visual systems has two retrieval pathways, increasing the probability of recall and recognition.[21] In the context of history learning, the visualization of events facilitates a more comprehensive construction of mental models, allowing students to develop a deeper historical understanding.[22]

Meta-analysis found that multimedia instruction had a moderate to large effect size on learning outcomes ($d = 0.45$-$0.72$).[23] This study showed a larger effect size ($d = 2.99$), likely due to: (1) the characteristics of the highly visual history subject; (2) the age of elementary school students who are still in the concrete operational stage, requires visualization to understand abstract concepts;[24] (3) the material of Fathu Mecca which is rich in narrative and visual elements.

Multimedia learning principles relevant to the findings of this study include: (1) Multimedia principle: learning is more effective with a combination of words and images; (2) Contiguity principle: the text and related visuals should be close together; (3) Modality principle: audio narration is more effective than on-screen text; (4) Redundancy principle: avoid information redundancy; (5) Coherence principle: eliminate irrelevant materials.[25] The implementation of these principles in SKI learning videos contributes to its effectiveness.

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[19] Hashim, H., Rafiq, K. R. M., & Yunus, M. M. (2020). Improving ESL learners' grammar with gamified-learning. *Arab World English Journal (AWEJ) Special Issue on CALL*, *5*, 41-50. https://doi.org/10.24093/awej/call5.4

[20] Mayer, R. E. (2014). *The Cambridge handbook of multimedia learning* (2nd ed.). Cambridge University Press, hlm. 147-165.

[21] Paivio, A. (2013). *Imagery and verbal processes*. Psychology Press. https://doi.org/10.4324/9781315798868

[22] Schnotz, W., & Bannert, M. (2003). Construction and interference in learning from multiple representation. *Learning and Instruction*, *13*(2), 141-156. https://doi.org/10.1016/S0959-4752(02)00017-8

[23] Wouters, P., Paas, F., & van Merriënboer, J. J. (2013). Observational learning from animated models: Effects of studying-practicing alternation and illusion of control on transfer. *Instructional Science*, *41*(1), 89-107. https://doi.org/10.1007/s11251-012-9221-8

[24] Piaget, J. (1972). *The psychology of the child*. Basic Books.

[25] Clark, R. C., & Mayer, R. E. (2016). *E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning* (4th ed.). Wiley, hlm. 67-89.

Comparative research shows the consistency of the findings. Mukarromah found a significant influence of audiovisual on SKI learning outcomes ($t = 3.521$, $p < 0.05$).[26] Afifah identified audiovisual joint contribution and motivation to Fiqh learning outcomes ($R^2 = 0.283$).[27] However, these studies have not measured effect size and do not use rigorous experimental designs.

Analysis by cognitive level showed the most significant improvements in the levels of understanding (C2) and analyzing (C4), consistent with the finding that multimedia supports deep learning and higher-order thinking.[28] However, the increase in the creating level (C6) is relatively limited, indicating the need for supplementary activities to develop the highest cognitive abilities.

### 3. The Simultaneous Influence of Audiovisual Media on Motivation and Learning Outcomes

The MANOVA test showed a very significant simultaneous effect ($F = 108.376$, $p < 0.001$, $\eta^2 = 0.778$), indicating that 77.8% of the variance in motivation and learning outcomes was explained by audiovisual media. These findings support a theoretical model that proposes a reciprocal relationship between motivation and achievement.[29]

Self-Determination Theory explains that audiovisual media facilitates three basic psychological needs: (1) **Autonomy** through student-centered learning experience; (2) **Competence** through structured scaffolding that supports mastery; (3) **Relatedness** through shared learning experience and historical empathy.[30] The fulfillment of this need increases intrinsic motivation, which further increases effort and persistence, contributing to higher academic achievement.

The reciprocal causation model explains that motivation affects learning outcomes, and conversely, academic success increases self-efficacy and motivation.[31] Audiovisual media acts as a catalyst in this positive cycle by: (1) increasing initial motivation through engaging presentations; (2) facilitating learning success through effective instruction; (3) reinforcing motivation through achievement experience.

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[26] Mukarromah, A. (2018). *The Influence of Audiovisual Media on Student Learning Outcomes in SKI Class VIII at MTs Muhammadiyah 1 Ponorogo* [Thesis not published]. IAIN Ponorogo.

[27] Afifah, K. (2015). *The effect of the use of audio-visual learning media and motivation on student learning outcomes in Fiqh subjects at MTs Assalafi Kenteng Semarang for the 2014/2015 Academic Year*. IAIN Salatiga.

[28] Hmelo-Silver, C. E., Duncan, R. G., & Chinn, C. A. (2007). Scaffolding and achievement in problem-based and inquiry learning: A response to Kirschner, Sweller, and Clark (2006). *Educational Psychologist, 42*(2), 99-107. https://doi.org/10.1080/00461520701263368

[29] Pintrich, P. R. (2003). A motivational science perspective on the role of student motivation in learning and teaching contexts. *Journal of Educational Psychology, 95*(4), 667-686. https://doi.org/10.1037/0022-0663.95.4.667; Schunk, D. H., & DiBenedetto, M. K. (2020). Motivation and social cognitive theory. *Contemporary Educational Psychology, 60*, 101832. https://doi.org/10.1016/j.cedpsych.2019.101832

[30] Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Press. https://doi.org/10.1521/978.14625/28806

[31] Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.

The study found a similar pattern in science learning, where augmented reality video increased motivation (β = 0.51) and achievement (β = 0.48) simultaneously.[32] A systematic review identified technology-enhanced learning as a powerful approach to addressing both motivational and cognitive aspects of learning.[33]

The context of *Madrasah Ibtidaiyah* in Aceh provides an additional dimension. The integration of Islamic values in learning media not only increases cognitive engagement but also spiritual engagement.[34] Visualization of Islamic historical events with framing religious values strengthens Islamic identity and moral motivation, creating a holistic learning experience that increases both motivation and achievement.[35]

### 4. Theoretical and Practical Implications

Theoretically, this research strengthens the concept of multimedia learning theory in the context of Islamic education, expanding the applicability of the theory to religious-historical subjects.[36] This research also integrates cognitive, motivational, and sociocultural perspectives in understanding the effectiveness of learning technology.[37]

Practically, the findings provide evidence-based guidance for: (1) Teachers: integrating multimedia in SKI learning by following instructional design principles; (2) Schools: allocating resources for the development and acquisition of multimedia learning materials; (3) Policymakers: developing policies that support technology integration in Islamic education; (4) Curriculum developers: designing a technology-enhanced SKI curriculum.

## C. Conclusion

This study concludes that audiovisual media have a significant influence on the motivation and learning outcomes of grade V students in the subject of Islamic Cultural History at MIN 15 Pidie Jaya. Specifically:

First, audiovisual media significantly increased learning motivation ($t = 9.179$, $p < 0.001$, $d = 2.28$). The experimental group showed a higher motivation score ($M = 63.00$) than the control ($M = 58.00$), with a considerable effect size category. Improvements occurred in all dimensions of ARCS (attention, relevance, confidence, satisfaction).

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[32] Chien, Y. C., Su, Y. N., Wu, T. T., & Huang, Y. M. (2020). Enhancing students' botanical learning by using augmented reality. *Universal Access in the Information Society*, *19*(4), 967-977. https://doi.org/10.1007/s10209-019-00690-4

[33] Hwang, G. J., & Tsai, C. C. (2021). Research trends in technology-based learning from 2000 to 2009: A content analysis of publications in selected journals. *Educational Technology & Society*, *14*(2), 119-133.

[34] Hashim, H., Rafiq, K. R. M., & Yunus, M. M. (2020). Improving ESL learners' grammar with gamified-learning. *Arab World English Journal (AWEJ) Special Issue on CALL*, *5*, 41-50. https://doi.org/10.24093/awej/call5.4

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[36] Mayer, R. E. (2020). Multimedia learning. Cambridge University Press. https://doi.org/10.1017/9781108894333

[37] Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press; Keller, J. M. (2010). *Motivational design for learning and performance: The ARCS model approach*. Springer.

Second, audiovisual media significantly improved learning outcomes ($t = 12.056$, $p < 0.001$, $d = 2.99$). The experimental group achieved a higher post-test score ($M = 86.71$) than the control ($M = 80.00$), with a large effect size category. The most noticeable improvement is at the cognitive level of understanding and analyzing.

Third, the MANOVA test confirmed a significant simultaneous influence on both variables ($F = 108.376$, $p < 0.001$, $\eta^2 = 0.778$), explaining 77.8% variance. These findings indicate a reciprocal relationship between motivation and learning outcomes facilitated by audiovisual media.

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