

## IMPLEMENTATION OF DIGITAL TECHNOLOGY IN IMPROVING ELEMENTARY SCHOOL STUDENTS' LEARNING INTEREST IN ISLAMIC RELIGIOUS EDUCATION MATERIALS

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### Abstract

Islamic Religious Education (PAI) has a strategic role in shaping the character and morals of students from an early age, as part of the formation of humans with integrity, faith, and piety. However, major challenges are faced in teaching PAI at the elementary school level. One of the main problems that is often encountered is the low interest of students in learning PAI material. This is caused by various factors, including monotonous teaching methods, minimal use of interesting learning media, and the view that PAI material is less relevant to students' daily lives. As a result, the learning process is often not optimal in achieving the expected learning objectives. Along with the development of technology in the digital era, the opportunity to create more interactive and interesting learning is increasingly wide open. Digital technology, such as learning applications, educational videos, online quizzes, and educational-based games, provide new alternatives in designing learning experiences that are not only interesting, but also relevant to the needs of modern students. The use of this technology allows students to learn in a more personal, fun way, and in accordance with their mindset and habits that are already familiar with digital devices. This study aims to analyze the implementation of digital technology in Islamic Religious Education learning at the elementary school level. The main focus is to measure the effectiveness of digital technology in increasing students' interest in learning, as well as identifying supporting and inhibiting factors in its implementation. To achieve these objectives, this study uses a qualitative method with a case study approach. Data were collected through direct observation in class, in-depth interviews with teachers and students, and document analysis related to the implementation of digital technology in Islamic Religious Education learning. The results of the study indicate that the implementation of digital technology has a significant positive impact on students' learning interest. Technology-based learning media not only increases student engagement but also creates a learning experience that is more relevant to the modern era. In addition, this study found that supporting factors, such as the availability of technological devices and student enthusiasm, play an important role in the success of implementing digital technology. On the other hand, obstacles such as lack of teacher training and limited school facilities are challenges that need to be overcome.

**Keywords:** *Islamic Religious Education, digital technology, learning interest, interactive learning, elementary school*

### INTRODUCTION

Islamic Religious Education (PAI) plays an important role in the formation of students' character from an early age, but students' interest in learning this subject in elementary schools is still low. This is due to monotonous teaching methods and the lack of interesting learning media. The development of digital technology presents opportunities to increase interest in learning through innovations such as learning applications and educational videos. This study aims to analyze the implementation of digital technology in Islamic Religious Education learning in elementary schools, evaluate its effectiveness, and identify supporting and inhibiting factors for its implementation. The results are expected to contribute to the development of innovative learning strategies that are in accordance with the needs of modern students. The citation model uses APA style to maintain academic standards. Digital technology has become an inseparable part of modern life, including in the world of education. Digital transformation brings great opportunities to create a learning environment that is more interesting, interactive, and relevant to students' needs. In the context of basic education, especially in Islamic Religious

Education (PAI) learning, the use of digital technology can be a solution to increase students' interest in learning, which is often a challenge for educators. Elementary School (SD) students are a generation that is familiar with technology, so the integration of digital devices in learning can help create a more enjoyable learning experience. PAI materials, which cover aspects of faith, worship, and morals, are often considered abstract by students. This can lead to low interest in learning if the teaching methods used are monotonous and less relevant to their daily lives. The use of digital technology, such as interactive learning applications, educational videos, and e-learning platforms, allows the delivery of Islamic Religious Education materials in a more creative and easy-to-understand way. For example, animations depicting the story of the prophet or interactive simulations of prayer procedures can help students understand religious concepts visually and practically. In addition, technology also allows game-based learning that can motivate students to actively learn.

However, the implementation of technology in Islamic Religious Education learning also faces challenges, such as limited facilities in some schools, lack of teacher training in the use of technology, and supervision of digital content to ensure that it is in accordance with Islamic values. Therefore, collaborative efforts are needed between schools, teachers, parents, and the government to ensure that digital technology can be implemented effectively and ethically. By utilizing digital technology optimally, it is expected that elementary school students will not only have a better understanding of PAI material but also have strong religious values embedded from an early age. Further research and development are needed to evaluate the effectiveness of this strategy and ensure that its implementation runs as expected.

## LITERATURE REVIEW

Islamic Religious Education (PAI) is one of the important components in the education system, which aims to shape the character, morals, and spirituality of students from an early age. Through PAI learning, students are taught the values of honesty, discipline, responsibility, tolerance, and Islamic ethics which are important foundations in community life. However, despite having a noble goal, students' interest in learning this subject, especially at the elementary school level, is still a significant challenge. This challenge arises due to various factors, including less varied teaching methods, lack of interesting learning media, and minimal relevance of the material to students' daily lives.

Previous studies have shown that the use of digital technology in learning can be an effective solution to overcome low student learning interest. Digital technology allows for the creation of more interactive and enjoyable learning experiences through innovations such as game-based learning applications, educational videos, online quizzes, and computer-based simulations. Studies show that learning methods that use this technology not only increase learning motivation but also result in higher student engagement in various subjects. For example, interactive learning applications are able to attract students' attention with attractive visual designs, while educational videos make it easier to understand concepts through visual and audio delivery.

However, although many studies highlight the benefits of digital technology in education, studies that specifically discuss its implementation in Islamic Religious Education learning at the elementary school level are still limited. In fact, Islamic Religious Education learning has unique needs, such as teaching religious values that require a contextual and in-depth approach. Several previous studies have noted that an innovative technology-based approach is needed to meet the needs of modern students, who have become accustomed to digital devices in their daily lives.

The relevant theoretical framework in this study includes constructivism theory, which emphasizes that effective learning occurs through active interaction between students and their environment. Digital technology, in this context, can be a tool that allows students to explore PAI concepts independently through interactive learning experiences. In addition, the theory of learning motivation is also an important foundation, highlighting how interesting learning media can influence student interest and engagement. Digital technology provides a means to deliver learning that is not only relevant but also in accordance with students' learning styles in the modern era.

This study aims to fill the gap in the literature related to the implementation of digital technology in Islamic Religious Education learning in elementary schools. By providing insight into how digital technology can be effectively integrated into Islamic Religious Education learning, this study is expected to make a significant contribution to the development of innovative learning strategies. In addition, this study also aims to evaluate the impact of digital technology on students' interests and learning outcomes, as well as identify supporting and inhibiting factors in its implementation. The results of this study will not only provide practical guidance for teachers and stakeholders in designing technology-based learning, but also contribute to the broader academic literature on technology-based learning in the field of Islamic Religious Education. With a comprehensive

approach, this study seeks to answer the challenges of the digital era in education, as well as create a more relevant, interesting, and effective Islamic Religious Education learning model for elementary school students.

## **METHOD**

This study uses a qualitative approach with a case study design to explore the implementation of digital technology in Islamic Religious Education (PAI) learning at the elementary school level.

### **1. Target Audience**

The research subjects involved elementary school students, Islamic Religious Education teachers, and education stakeholders in the relevant school environment.

- **Elementary School Students:** This group is the main focus because the purpose of the study is to increase their interest in learning Islamic Religious Education through digital technology. The students involved were from grades 5 and 6 in several elementary schools that were the research locations.
- **Islamic Religious Education Teacher:** Teachers are important subjects because of their role in designing, implementing, and evaluating technology-based learning. The teachers selected have at least five years of experience teaching Islamic Religious Education, so they can provide in-depth insights into the application of this method.
- **Education Stakeholders:** This group involves school principals and education supervisors, who provide strategic views on policies and support for the implementation of technology in learning.

### **2. Tools and materials**

The tools used include digital technology devices such as learning applications, educational videos, and interactive quizzes. These learning media are selected based on their relevance and ability to increase student engagement.

This research utilizes various tools and materials relevant to digital technology-based learning, including:

- **Learning Applications:** Used to provide interactive learning experiences, for example game-based quiz applications or simulations.
- **Educational Videos:** Used as visual media to support students' understanding of abstract concepts in Islamic Religious Education.
- **Interactive Quizzes:** Using digital platforms to measure student understanding in a fun way.

These learning media are selected based on their relevance to the needs of modern students and their ability to increase student engagement. These tools are also designed to be easily accessible to both teachers and students with available devices, such as computers or tablets.

### **3. Data collection technique**

Data collection was conducted through various techniques to ensure the accuracy and depth of the findings:

- **Direct Observation:** Researchers observe the learning process in the classroom, record how digital technology is applied, student responses, and challenges faced during implementation. This observation allows researchers to understand class dynamics directly.
- **In-depth Interview:** Conducted with teachers and students to explore their perspectives on the benefits, constraints, and impacts of digital technology in Islamic Religious Education learning. Interviews were also conducted with school principals to gain strategic views.
- **Documentation:** Includes the collection of written data, photos, videos, and digital learning materials used in the research. This documentation provides concrete evidence related to the use of technology in learning.

### **4. Data Analysis Techniques**

Data were analyzed using a thematic analysis approach, which involved the following stages:

- **Data Reduction:** Filtering the data to focus on information relevant to the research objectives. Irrelevant or repetitive data is eliminated at this stage.
- **Data Presentation:** The reduced data is presented in narrative, table, or graphic form to facilitate interpretation. For example, a table is used to compare the level of student learning interest before and after using digital technology.

- **Conclusion Drawing:** The compiled data was analyzed to identify key themes, such as the effectiveness of digital technology, supporting and inhibiting factors, and its impact on students' learning interests.

**Table 1. Description of Research Subjects**

Category	Amount	Information
Elementary School Students	30	Grade 5 and 6 students from Sample school
Islamic Religious Education Teacher	3	PAI Teacher with >5 Years' Experience
Stakeholders	2	Principal and Supervisor



**Figure 1. Research Flow Diagram**

### Flowchart and Research Stages

This research flowchart illustrates the series of research processes from the data collection stage to analysis and drawing conclusions. Each stage is designed systematically to ensure that the data obtained is valid, relevant, and can support the research objectives.

#### 1. Data Collection Stages

##### a. Observation

- Researchers conducted direct observations of the Islamic Religious Education (PAI) learning process that utilizes digital technology in the classroom.
- The focus of observation includes:
  - ✓ How teachers use digital technology in teaching.
  - ✓ Student responses to technology-based learning media.
  - ✓ Obstacles that arise during implementation.
- Observations were conducted in a structured manner using a guide that included indicators of student engagement, level of attention, and participation during learning.

##### b. Interview

- In-depth interviews were conducted with:
  - ✓ **Islamic Religious Education Teacher:** To understand how they design, implement, and evaluate digital technology-based learning.
  - ✓ **Student:** To gain their perspectives on the benefits, conveniences and difficulties they face when using digital technologies.
  - ✓ **Stakeholders:** Principals or supervisors provide insights into institutional policies, support, and challenges in implementing digital technologies.
- Interviews were conducted using a semi-structured interview guide to ensure the data collected was in-depth and relevant.

##### c. Documentation

- Documentation includes data collection in the form of:
  - ✓ Photos and videos of the learning process.
  - ✓ Digital learning materials, such as educational applications or videos used.

- ✓ Teachers' notes and reports regarding the implementation of digital technology.
  - Documentation serves as concrete evidence and supports the validity of data from observations and interviews.
2. Data Processing Stages
- a. Data Reduction
- The collected data is screened to eliminate irrelevant or redundant information.
  - The focus of data reduction is on information related to:
    - ✓ The effectiveness of digital technology in increasing students' interest in learning.
    - ✓ Supporting and inhibiting factors for the implementation of digital technology.
    - ✓ Student responses to the use of digital technology.
  - The reduction process is carried out by arranging data in the form of main categories or themes.
- b. Data Presentation
- The reduced data is presented in a format that is easier to understand, such as:
    - ✓ **Table:** Showing a comparison of student learning outcomes before and after using digital technology.
    - ✓ **Chart:** Shows the level of student engagement based on the learning media used.
    - ✓ **Narration:** In-depth explanation of relevant interview and observation results.
  - This data presentation helps provide a visual and narrative picture that supports further analysis.
3. Conclusion Drawing Stages
- a. Thematic analysis
- Data was analyzed by identifying the main themes that emerged from the results of observations, interviews, and documentation.
  - Themes analyzed include:
    - ✓ The level of effectiveness of digital technology in increasing students' interest in learning.
    - ✓ Supporting factors such as institutional support and availability of technological devices.
    - ✓ Obstacles faced by teachers and students during implementation.
- b. Identify key findings
- Based on the themes generated, researchers formulated key findings which include:
    - ✓ The role of digital technology in creating more engaging and relevant learning.
    - ✓ The importance of teacher training and institutional support in technology implementation.
    - ✓ Positive impact on students' interest in learning and increased involvement in learning.
  - These findings are formulated in the form of a clear and comprehensive narrative, and are supplemented with visual evidence such as tables and images.

**RESULTS AND DISCUSSION**

This study provides evidence that the implementation of digital technology in Islamic Religious Education (PAI) learning at the elementary school level has a positive impact on students' learning interests. The results of the study that have been described reveal a number of key findings that include increasing students' learning interests, supporting and inhibiting factors, and students' responses to technology-based methods.

**1. Increasing Students' Interest in Learning**

Data shows that students who learn using digital technologies, such as interactive learning apps and educational videos, have higher levels of engagement than conventional methods.

**Table 2. Comparison of Students' Learning Interests**

Learning methods	High Interest in Learning (%)	Low Interest in Learning (%)
Conventional	45	55
Digital Technology	65	15

From the table above, it can be seen that only 45% of students showed high learning interest when using conventional learning methods, while 55% showed low learning interest. On the contrary, the application of digital technology increases high learning interest to 85%, with only 15% of students still having low interest.

This fact shows that digital technology creates a more engaging and relevant learning experience for students. Interactive learning applications, for example, offer features such as quizzes, games, and simulations that allow students to learn independently in a fun way. Educational videos also provide visualizations that make it easier for students to understand abstract Islamic Religious Education materials, such as the story of the prophet or the concept of Islamic values.

Higher student engagement can be attributed to the interactive elements and instant feedback provided by digital technology. In conventional methods, learning tends to be passive with lectures dominating, which often makes students lose attention. In contrast, digital technology makes students feel more actively involved in the learning process.

## 2. Supporting and Inhibiting Factors

The application of digital technology in learning cannot be separated from the factors that support success and the obstacles faced.

### Supporting Factors

#### a. Availability of Technology Devices:

- ✓ In schools that have adequate technological facilities, such as tablets, computers, or projectors, the implementation of digital technology can run smoothly.
- ✓ This device allows students and teachers to access various learning media that are relevant to the PAI curriculum.

#### b. Students' Enthusiasm for Interactive Media:

- ✓ Most students feel happy and motivated to use digital technology because they are familiar with digital devices in their daily lives.
- ✓ Interactive media, such as educational games, provide a learning experience that feels more like entertainment than a learning obligation, thereby increasing their motivation.

### Inhibiting Factors

#### a. Lack of Teacher Training:

- ✓ Many teachers feel less confident in using digital technology due to the lack of training related to learning devices and applications.
- ✓ Teachers often struggle to integrate technology into lesson plans effectively.

#### b. Limited Facilities in Certain Schools:

- ✓ Not all schools have adequate access to technology devices and the internet.
- ✓ This is a major obstacle for schools in remote areas, where technological facilities are not evenly distributed.

These factors indicate the importance of institutional support in the form of teacher training, provision of technology facilities, and development of education policies that encourage the use of digital technologies across schools.

## 3. Student Responses to Digital Technology

Most of the students involved in this study gave positive responses to the use of digital technology in Islamic Religious Education learning. They felt more motivated to learn because this method:

- ✓ Engaging and interactive: Students stated that educational apps and videos were more enjoyable than reading textbooks or listening to lectures.
- ✓ Relevant to everyday life: Digital technology is designed to fit the lifestyle of modern students who are accustomed to using digital devices. This makes learning feel more familiar and relevant.
- ✓ Facilitating understanding: Technology-based media helps students understand complex material, such as abstract concepts in Islamic Religious Education, in a simpler and more visual way.

This positive response reflects that digital technology not only functions as a learning tool, but also as a means to create meaningful learning experiences. Students feel more confident in exploring learning materials because technology provides flexibility and convenience in learning.

## DISCUSSION

This study provides in-depth insights into the impact of implementing digital technology in Islamic Religious Education (PAI) learning in elementary schools, especially in increasing students' interest in learning. The

following discussion explains the interpretation of the research results and their implications for various parties involved in education, and includes graphic visualizations to support understanding of the findings.

### **1. Interpretation of Results**

The results of this study indicate that the use of digital technology, such as interactive learning applications and educational videos, has a significant positive impact on students' learning interests. This is in line with the theory of learning motivation which states that interactive and interesting learning media can increase student engagement and learning outcomes.

✓ **Relevance to Learning Motivation Theory:**

This theory emphasizes that student engagement in the learning process increases when the media used is able to attract attention, provide challenges, and create a sense of satisfaction after completing the task. Digital technology meets all of these elements by providing an interactive, visual, and immediate feedback learning experience.

✓ **Student Needs in the Modern Era:**

The high interest of students in learning digital methods reflects the relevance of technology to their lives in the modern era. Elementary school students today grow up in an environment filled with digital devices, so technology-based learning feels more familiar and interesting than conventional methods.

✓ **Comparison Chart of Learning Interest:** The chart below shows a comparison of students' learning interest between conventional and digital technology-based methods:

Graph 1. Comparison of Students' Learning Interests Digital technology-based learning methods show a high learning interest of 85%, compared to conventional methods which only reach 45%. This illustrates that technology integration is able to create a more meaningful learning experience for students.

### **2. Implications of Research Results**

a. **For Teachers**

The integration of digital technology in Islamic Religious Education learning provides encouragement for teachers to adopt more innovative and relevant teaching methods.

✓ **Technology Competency Development:**

Teachers need to be trained to use learning apps, educational videos, and other digital tools effectively in the learning process. This includes technical skills as well as pedagogical understanding to design learning that utilizes technology.

✓ **Enhance Creativity:**

With technology, teachers have the opportunity to create more engaging learning media, such as interactive quizzes or simulations based on Islamic Religious Education concepts, which encourage students to participate more actively.

b. **For Students**

Technology-based learning not only increases students' interest in learning Islamic Religious Education but also provides additional benefits:

✓ **Technology Skills Development:**

Students gain skills in using digital devices, which are essential for the future. They learn to interact with technology productively, not just for entertainment.

✓ **Relevant Learning Experience:**

Students feel that learning is more relevant to their lives, especially because digital media creates a more contextual and engaging learning environment.

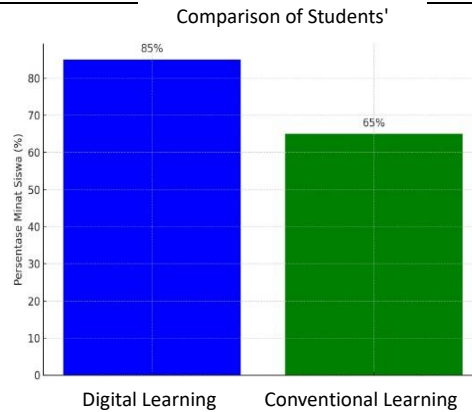
c. **For Educational Institutions**

Educational institutions have a strategic role in supporting the successful implementation of digital technology:

✓ **Policy Development:**

Institutions need to design policies that support the integration of technology in learning, including the provision of digital devices, adequate internet access, and teacher training.

✓ **Supporting Facilities:** It is important to ensure that every school has adequate facilities so that all students can experience the benefits of digital technology in learning.



This is a graphic visualization that shows a comparison of student learning interests between digital technology-based learning and conventional methods.

## CONCLUSION

Based on the results of the research and discussion that have been explained, it can be concluded that the implementation of digital technology in Islamic Religious Education (PAI) learning in elementary schools has a significant positive impact on students' learning interests. This study shows that the use of interactive media, such as learning applications, educational videos, and online quizzes, can create a more interesting, relevant, and enjoyable learning experience for students. This media not only significantly increases student engagement compared to conventional methods, but also helps them understand the material better through the visualization and interactivity offered by digital technology. Supporting factors for the implementation of digital technology in Islamic Religious Education learning are also important highlights. The availability of technological devices such as computers, tablets, or projectors is one of the main elements that supports the successful use of technology in the learning process. In addition, students' enthusiasm for technology, which has become part of their daily lives, also accelerates the adaptation and acceptance of digital-based learning media. Students who are familiar with technology feel more comfortable and motivated to learn using these tools, which ultimately increases their interest in learning.

However, the research results also identified inhibiting factors that need to be considered to ensure the successful implementation of technology in learning. One of the main obstacles is the lack of training for teachers in using digital technology effectively. Many teachers find it difficult to integrate technology into learning due to limited technical and pedagogical knowledge. In addition, limited facilities in some schools, such as inadequate internet access or lack of technological devices, are also significant obstacles. The implications of the results of this study are very relevant for various parties involved in education, including teachers, students, and educational institutions. For teachers, the integration of digital technology in Islamic Religious Education learning not only provides opportunities to improve teaching effectiveness, but also encourages them to be more creative in designing learning strategies that suit the needs of modern students. Training and mentoring for teachers are very important to ensure they have the necessary competencies to utilize technology optimally.

For students, the use of digital technology in learning not only increases their interest in learning Islamic Religious Education materials, but also helps them develop technological skills from an early age. These skills will be valuable assets for students in facing future challenges, where technology plays an increasingly dominant role in various aspects of life. In addition, a fun and relevant learning experience to everyday life also helps students better understand and apply religious values in real life. For educational institutions, the results of this study provide encouragement to develop policies that support technology-based learning. Educational institutions are expected to provide adequate facilities, such as stable internet access, technological devices, and training programs for teachers. In addition, policies that encourage innovation in learning need to be designed to create a learning environment that is more interesting and relevant to the needs of students in the digital era. By considering the findings and implications of this study, it is hoped that the integration of digital technology in Islamic Religious Education learning can continue to be improved and optimized. This success will not only increase students' interest in learning Islamic Religious Education, but also help create a generation that is better prepared to face global challenges, while still having strong character and morals in accordance with Islamic religious values.



Further research is also needed to further explore the long-term impacts of using digital technology in learning, as well as the best strategies to overcome existing obstacles.

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