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Enhancing Learning Motivation through Interactive Video Technology in Islamic Religious Education

Zahwatus Syahidah[1*], Ngatmin Abbas[2], Arif Effendi[3]

[1*] **Institut Islam Mamba'ul 'Ulum Surakarta, Indonesia**
[2] **Institut Islam Mamba'ul 'Ulum Surakarta, Indonesia**
[3] **Institut Islam Mamba'ul 'Ulum Surakarta, Indonesia**

Korespondensi:* zahwasyaheeda@gmail.com

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Abstract

This study is motivated by the limited empirical research on the use of interactive video-based learning technology in Islamic Religious Education (IRE), despite its potential contribution to enhancing students' learning motivation in the digital era. The study aims to analyze the effect of interactive video-based learning technology on students' learning motivation in Islamic Religious Education. The research adopts a quantitative correlational design, involving 30 eleventh-grade students of SMA Al Islam 1 Surakarta selected through a total sampling technique. Data were collected using structured questionnaires measuring the utilization of interactive video-based learning technology and students' learning motivation. Prior to data collection, the instruments were tested for validity and reliability. The data were analyzed using descriptive statistics and simple linear regression with the assistance of IBM SPSS Statistics version 31. The findings reveal that both the utilization of interactive video-based learning technology and students' learning motivation were categorized at a moderate level. Furthermore, the regression analysis indicates that interactive video-based learning technology has a positive and statistically significant effect on students' learning motivation ($p = 0.012 < 0.05$), with a coefficient of determination (R^2) of 0.206, indicating that interactive video technology contributes 20.6% to the variance in learning motivation. These findings support the Cognitive Theory of Multimedia Learning, which emphasizes the effectiveness of multimedia-based instruction in facilitating meaningful learning experiences. The study concludes that interactive video-based learning technology plays an important role in enhancing students' learning motivation in Islamic Religious Education. The implications of this study include theoretical contributions to the literature on educational technology and Islamic education, as well as practical recommendations for teachers and schools to integrate interactive video learning into instructional practices. Additionally, future research is encouraged to investigate other factors influencing learning motivation and to involve larger and more diverse samples across educational settings.

Abstrak

Penelitian ini dilatarbelakangi oleh terbatasnya penelitian empiris mengenai penggunaan teknologi pembelajaran berbasis video interaktif dalam Pendidikan Agama Islam (PAI), meskipun teknologi tersebut berpotensi berkontribusi dalam meningkatkan motivasi belajar siswa di

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educational technology; multimedia learning		era digital. Penelitian ini bertujuan untuk menganalisis pengaruh teknologi pembelajaran berbasis video interaktif terhadap motivasi belajar siswa dalam Pendidikan Agama Islam. Penelitian ini menggunakan desain korelasi kuantitatif, yang melibatkan 30 siswa kelas XI SMA Al Islam 1 Surakarta yang dipilih melalui teknik sampling total. Data dikumpulkan menggunakan kuesioner terstruktur yang mengukur pemanfaatan teknologi pembelajaran berbasis video interaktif dan motivasi belajar siswa. Sebelum pengumpulan data, instrumen penelitian telah diuji validitas dan reliabilitasnya. Data dianalisis menggunakan statistik deskriptif dan regresi linier sederhana dengan bantuan IBM SPSS Statistics versi 31. Temuan menunjukkan bahwa baik pemanfaatan teknologi pembelajaran berbasis video interaktif maupun motivasi belajar siswa dikategorikan pada tingkat sedang. Selain itu, analisis regresi menunjukkan bahwa teknologi pembelajaran berbasis video interaktif memiliki pengaruh positif dan signifikan secara statistik terhadap motivasi belajar siswa ($p = 0{,}012 < 0{,}05$), dengan koefisien determinasi (R^2) sebesar 0,206, yang menunjukkan bahwa teknologi video interaktif berkontribusi sebesar 20,6% terhadap varians motivasi belajar. Temuan ini mendukung Teori Kognitif Pembelajaran Multimedia, yang menekankan keefektifan pengajaran berbasis multimedia dalam memfasilitasi pengalaman belajar yang bermakna. Penelitian ini menyimpulkan bahwa teknologi pembelajaran berbasis video interaktif memainkan peran penting dalam meningkatkan motivasi belajar siswa dalam Pendidikan Agama Islam. Implikasi dari penelitian ini mencakup kontribusi teoretis terhadap literatur tentang teknologi pendidikan dan pendidikan Islam, serta rekomendasi praktis bagi guru dan sekolah untuk mengintegrasikan pembelajaran video interaktif ke dalam praktik pengajaran. Selain itu, penelitian selanjutnya didorong untuk menyelidiki faktor-faktor lain yang memengaruhi motivasi belajar serta melibatkan sampel yang lebih besar dan lebih beragam di berbagai lingkungan pendidikan.

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INTRODUCTIONS

The rapid development of digital technology has significantly transformed educational practices across the world. The integration of technology into teaching and learning processes is no longer considered an optional innovation but has become a fundamental component of contemporary education. Digital technologies provide opportunities to create more flexible, interactive, and student-centered learning environments, enabling learners to access educational resources beyond conventional classroom settings. Educational institutions are increasingly encouraged to adopt technology-enhanced learning approaches that can support students' cognitive engagement, learning experiences, and academic achievement. In this context, educational technology has become one of the most influential drivers of educational transformation in the twenty-first century (Godsk & Møller, 2025; Mayer, 2024).

Along with the rapid advancement of educational technology, researchers and practitioners have increasingly emphasized the importance of student engagement and learning motivation as key determinants of educational success. Motivation plays a crucial role in directing, sustaining, and regulating learning behavior. Students with high learning

motivation tend to demonstrate greater persistence, stronger commitment to learning tasks, and higher academic achievement than those with lower motivation. Conversely, insufficient motivation may lead to disengagement, passive participation, and poor learning outcomes. Recent studies indicate that learning environments supported by appropriate technological interventions can positively influence students' motivation, engagement, and learning experiences (Shen et al., 2024; Wang et al., 2024; Yang et al., 2025).

The increasing utilization of educational technology has also influenced the field of Islamic Religious Education (IRE). As part of the broader educational system, Islamic Religious Education is expected to adapt to technological developments while maintaining its primary objective of fostering students' religious understanding, values, and character development. However, many Islamic Religious Education classrooms continue to rely heavily on traditional teacher-centered instructional approaches. Although these approaches remain important for transmitting religious knowledge, they may not fully accommodate the learning characteristics of contemporary students who are highly familiar with digital media and technology. Consequently, educators are challenged to design learning experiences that remain faithful to educational objectives while simultaneously responding to the demands of digital-age learners (Nurdin et al., 2024; Rohmiati, 2025).

One technological innovation that has received considerable attention in recent years is interactive video-based learning technology. Interactive video differs from conventional video because it allows learners to actively interact with instructional content through embedded questions, hyperlinks, feedback mechanisms, visual simulations, and multimedia elements. Such features transform learners from passive recipients of information into active participants in the learning process. Previous studies have demonstrated that interactive video learning can enhance students' attention, participation, and learning interest across various educational contexts (Awaliyah, 2024; Truss et al., 2024). Furthermore, interactive video provides opportunities for self-paced learning, enabling students to revisit learning materials according to their individual learning needs and preferences.

The effectiveness of interactive video technology can be explained through several established educational theories. One of the most influential frameworks is the Cognitive Theory of Multimedia Learning (CTML) developed by Mayer. According to CTML, meaningful learning occurs when learners actively process information through both visual and auditory channels. Multimedia presentations that combine text, images, narration, animation, and video can facilitate deeper understanding when designed according to cognitive principles. Mayer (2020, 2024) argues that learners process information more effectively when instructional materials reduce unnecessary cognitive load and promote active cognitive processing. Consequently, interactive video learning environments have the potential to improve learning experiences by presenting information in a manner consistent with how the human cognitive system processes information.

Recent developments in multimedia learning research further support this perspective. AlShaikh et al. (AlShaikh et al., 2024) demonstrated that multimedia learning principles remain highly relevant in technology-enhanced educational environments, including AI-supported instructional systems. Similarly, Waxman and Goldie (Waxman & Goldie, 2023) emphasized that effective multimedia design should consider cognitive load principles to prevent information overload and maximize learning outcomes. Furthermore, Bali et al. (Bali et al., 2026) highlighted that visual complexity and instructional design significantly influence learners' cognitive processing and learning effectiveness. These findings suggest that the educational value of video technology does not merely depend on the presence of multimedia elements but rather on how those elements are designed and integrated within instructional experiences.

In addition to cognitive perspectives, motivational theories provide important explanations regarding the effectiveness of interactive video technology. Keller's ARCS Motivation Model proposes that effective instructional design should address four motivational dimensions: Attention, Relevance, Confidence, and Satisfaction (Keller, 2009). Interactive videos possess characteristics that can support these dimensions simultaneously. Dynamic visual content may attract learners' attention, contextualized instructional materials can increase perceived relevance, structured learning activities may strengthen confidence, and immediate feedback mechanisms can enhance learning satisfaction. Therefore, interactive video technology has considerable potential to foster learning motivation through carefully designed instructional experiences.

The relationship between educational technology and motivation can also be understood through Self-Determination Theory (SDT). SDT argues that learners' motivation increases when three basic psychological needs—autonomy, competence, and relatedness—are fulfilled (Ryan & Deci, 2000). Interactive video learning environments may contribute to these needs by providing learners with greater control over learning activities, supporting competence development through scaffolded instruction, and facilitating meaningful interactions with learning content. Recent empirical studies have confirmed that educational environments supporting these psychological needs positively influence student engagement, well-being, and learning motivation (Howard et al., 2026; Shen et al., 2024; Wang et al., 2024; Yang et al., 2025).

A growing body of empirical research has documented the positive impact of educational technology on learning motivation. In the context of Islamic Religious Education, studies have reported that digital learning media, interactive multimedia, educational games, and video-based learning can improve students' motivation and engagement. Abdillah et al. (Abdillah et al., 2025) found that interactive educational games contributed positively to students' enthusiasm for learning Islamic Religious Education. Similarly, Herawati et al. (Herawati et al., 2025) reported that animated video-assisted learning significantly enhanced students' motivation in Islamic Religious Education. Other studies have also highlighted the effectiveness of interactive videos in increasing students' interest and motivation to learn religious subjects (Krastiana, 2025; Muhammad et al., 2025; Trajaya et al., 2025).

Despite these promising findings, several limitations remain evident within the existing literature. First, many previous studies have focused primarily on the development of educational media, classroom action research, or qualitative descriptions of technology implementation. Consequently, relatively few studies have quantitatively examined the magnitude of the relationship between interactive video technology and learning motivation in Islamic Religious Education contexts. Second, a substantial proportion of existing research has concentrated on general educational subjects such as mathematics, science, language learning, and social studies, while Islamic Religious Education remains underrepresented in educational technology research. Third, although numerous studies have documented positive outcomes associated with digital learning technologies, many have not integrated cognitive and motivational theories simultaneously to explain how and why technology influences learning motivation.

Moreover, recent international research suggests that technology integration should not be viewed uncritically. While educational technology offers significant opportunities for improving learning experiences, it may also create challenges related to cognitive overload and digital distraction. Pérez-Juárez et al. (Pérez-Juárez et al., 2023) reported that excessive exposure to digital technologies can reduce concentration and create learning distractions when instructional activities are not properly structured. Similarly, cognitive load research emphasizes that multimedia-rich environments may become ineffective if instructional designs overwhelm learners' processing capacities (Bali et al., 2026; Waxman & Goldie,

2023). These findings indicate that the effectiveness of interactive video technology depends not only on technological sophistication but also on pedagogically sound instructional design.

Accordingly, this study seeks to address these gaps by investigating the effect of interactive video-based learning technology on students' learning motivation in Islamic Religious Education at the senior high school level. Unlike many previous studies that primarily focused on media development or descriptive evaluations, this study quantitatively examines the contribution of interactive video technology to students' learning motivation using regression analysis. Furthermore, the study integrates Cognitive Theory of Multimedia Learning, the ARCS Motivation Model, and Self-Determination Theory as complementary theoretical perspectives for explaining the relationship between interactive video technology and learning motivation.

The novelty of this study lies in three aspects. First, it specifically examines interactive video technology within the context of Islamic Religious Education, an area that remains relatively underexplored in educational technology research. Second, it provides empirical evidence regarding the magnitude of the relationship between interactive video technology and learning motivation using quantitative analysis. Third, it integrates cognitive and motivational theories to provide a more comprehensive explanation of how technology-enhanced learning environments influence students' motivation. Therefore, this study aims to determine whether interactive video-based learning technology significantly affects students' learning motivation in Islamic Religious Education and to examine the extent of its contribution to motivational outcomes among senior high school students.

METHOD

This study employed a quantitative approach using a correlational research design to examine the effect of interactive video-based learning technology on students' learning motivation in Islamic Religious Education. A quantitative approach was considered appropriate because the study aimed to measure the magnitude of the relationship between variables and to test the proposed hypothesis through statistical analysis.

The research was conducted at SMA Al Islam 1 Surakarta during the 2025/2026 academic year. The population consisted of all students in Class XI who participated in Islamic Religious Education learning activities utilizing interactive video-based learning technology. Due to the relatively small population size, this study applied a total sampling technique, in which all members of the population were included as research participants. Consequently, the sample comprised 30 students.

Data were collected using two structured questionnaires designed to measure the study variables. The first instrument assessed the utilization of interactive video-based learning technology (independent variable), while the second measured students' learning motivation in Islamic Religious Education (dependent variable). The instruments were developed based on relevant theoretical indicators identified from the literature. Responses were measured using a four-point Likert scale ranging from strongly disagree (1) to strongly agree (4). The use of a four-point scale was intended to minimize neutral responses and encourage participants to express a clear position regarding each statement.

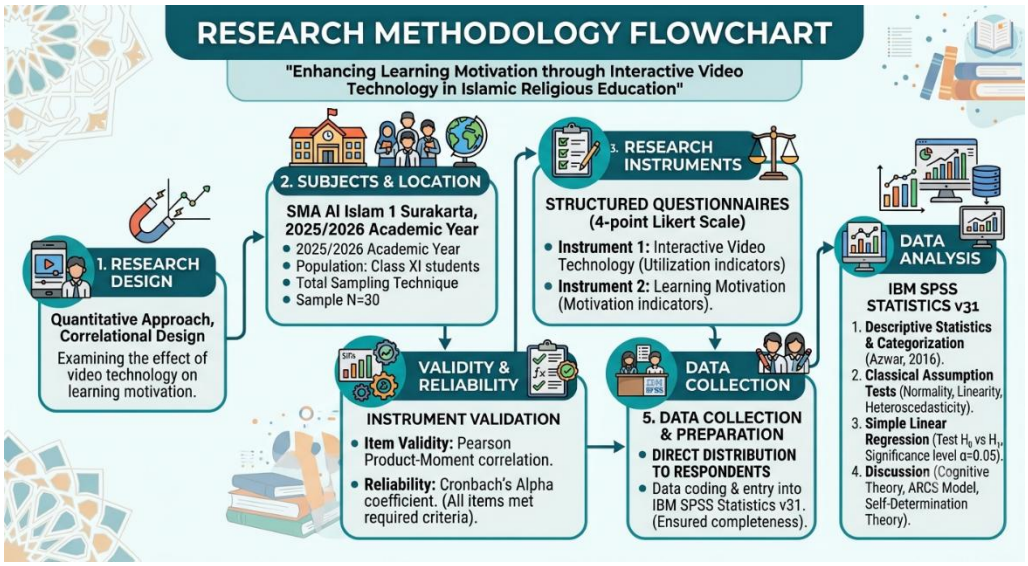
Prior to data collection, the instruments were subjected to validity and reliability testing. Item validity was examined using the Pearson Product-Moment correlation coefficient, while instrument reliability was evaluated using Cronbach's Alpha. The validity test was conducted to determine the extent to which each item accurately measured the intended construct, whereas the reliability test assessed the internal consistency of the instruments. The results indicated that all questionnaire items met the required validity criteria and demonstrated satisfactory reliability, thereby confirming their suitability for data collection.

Descriptive statistical analysis was initially performed to identify the distribution of respondents' scores on both variables. To provide a clearer interpretation of respondents' characteristics, the data were categorized into high, moderate, and low levels using the categorization procedure proposed by Azwar (2016). This categorization enabled the researchers to describe the general profile of students' utilization of interactive video technology and their learning motivation.

Before conducting hypothesis testing, several classical assumption tests were performed to ensure the appropriateness of regression analysis. Normality testing was conducted using the Kolmogorov–Smirnov test after data transformation procedures were applied to achieve normal distribution. Linearity testing was employed to examine whether the relationship between the independent and dependent variables followed a linear pattern. In addition, heteroscedasticity testing was carried out through scatterplot analysis to determine whether the residual variance remained constant across predicted values. The results of these tests confirmed that the data met the assumptions required for regression analysis.

The hypothesis was tested using simple linear regression analysis because the study involved one independent variable and one dependent variable. Regression analysis was employed to determine whether interactive video-based learning technology significantly influenced students' learning motivation and to measure the magnitude of its contribution. Statistical analysis was performed using IBM SPSS Statistics version 31. The decision-making criterion was based on a significance level of 0.05. The null hypothesis (H_0) was rejected and the alternative hypothesis (H_1) was accepted when the significance value was less than 0.05.

To strengthen the interpretation of the findings, the results of the regression analysis were discussed in relation to the Cognitive Theory of Multimedia Learning, the ARCS Motivation Model, and Self-Determination Theory. These theoretical perspectives provided a comprehensive framework for explaining how interactive video technology contributes to students' learning motivation within the context of Islamic Religious Education.



Gambar 1. Method

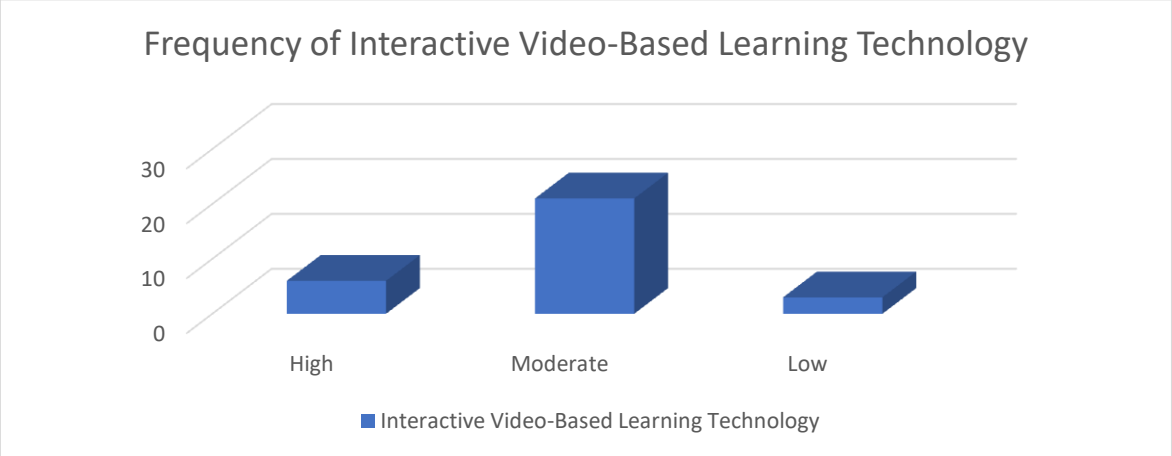
RESEARCH RESULT

Level of Interactive Video-Based Learning Technology

To provide an overview of students' utilization of interactive video-based learning technology, respondents' scores were categorized into three levels: high, moderate, and low. The categorization results are presented in Table 1.

Table 1. Distribution of Interactive Video-Based Learning Technology Levels

Category	Frequency	Percentage (%)
High	6	20.0
Moderate	21	70.0
Low	3	10.0
Total	30	100



Picture 1. Frequency of Interactive Video-Based Learning Technology

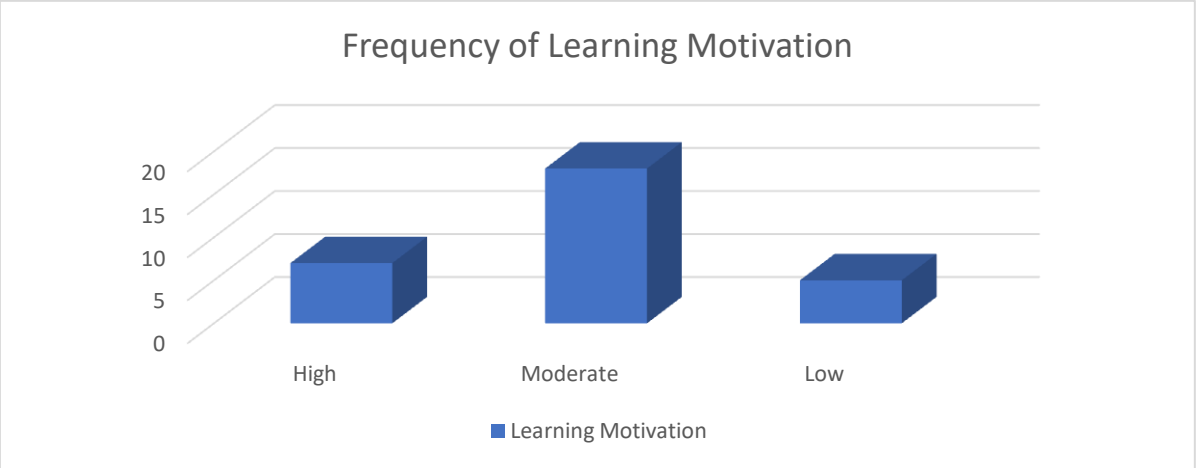
As shown in Table 1 and Picture 1, the majority of students (70.0%) were classified in the moderate category, while 20.0% were categorized as high and 10.0% as low. These findings indicate that the utilization of interactive video-based learning technology among students was generally at a moderate level. The results suggest that interactive video technology has been implemented in the learning process; however, its utilization has not yet reached an optimal level across all students.

Level of Learning Motivation

Students' learning motivation in Islamic Religious Education was also categorized into high, moderate, and low levels. The results are presented in Table 2.

Table 2. Distribution of Learning Motivation Levels

Category	Frequency	Percentage (%)
High	7	23.33
Moderate	18	60.00
Low	5	16.67
Total	30	100



Picture 1. Frequency of Learning Media

Table 2 and Picture 2 shows that most students (60.0%) demonstrated a moderate level of learning motivation. Meanwhile, 23.33% of students were categorized as having high motivation and 16.67% were classified as having low motivation. These findings indicate that students generally exhibited a satisfactory level of motivation toward learning Islamic Religious Education, although opportunities remain for further enhancement.

Assumption Testing

Prior to hypothesis testing, several statistical assumptions were examined. After the data transformation procedure, the normality test indicated that the data met the normality assumption. Furthermore, the linearity test confirmed a linear relationship between interactive video-based learning technology and learning motivation. The heteroscedasticity test also revealed no indication of heteroscedasticity. Therefore, the data satisfied the assumptions required for regression analysis.

Regression Analysis

Simple linear regression analysis was conducted to determine whether interactive video-based learning technology significantly influenced students' learning motivation in Islamic Religious Education. The results are summarized in Tables 3–5.

Table 3. Model Summary

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.454[a]	.206	.178	4.316

a. Predictors: (Constant), X1

b. Dependent Variable: Motivasi Belajar Mata Pelajaran Pendidikan Agama Islam

The model summary indicates a correlation coefficient (R) of 0.454, suggesting a moderate positive relationship between interactive video-based learning technology and learning motivation. The coefficient of determination (R^2) of 0.206 indicates that interactive video technology explained 20.6% of the variance in students' learning motivation.

Table 4. ANOVA Results

ANOVA[a]					
Model	Sum of Squares	df	Mean Square	F	Sig.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	135.257	1	135.257	7.262	.012[b]
	Residual	521.543	28	18.627		
	Total	656.800	29			

a. Dependent Variable: Motivasi Belajar Mata Pelajaran Pendidikan Agama Islam

b. Predictors: (Constant), X1

The ANOVA results demonstrate that the regression model was statistically significant (F = 7.266, p = 0.012), indicating that interactive video-based learning technology significantly predicted students' learning motivation.

Table 5. Regression Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	23.962	5.709		4.197	<,001
	X1	.387	.144	.454	2.695	.012

a. Dependent Variable: Motivasi Belajar Mata Pelajaran Pendidikan Agama Islam

The regression coefficient analysis revealed a positive and significant effect of interactive video-based learning technology on students' learning motivation (t = 2.695, p = 0.012). Therefore, the proposed hypothesis was accepted. The findings suggest that higher levels of interactive video technology utilization are associated with higher levels of learning motivation among students.

Overall, the regression results confirm that interactive video-based learning technology serves as a significant predictor of learning motivation in Islamic Religious Education. Although the contribution of the independent variable was moderate, the findings indicate that technology-enhanced learning environments can play an important role in supporting students' motivation and engagement in learning activities.

DISCUSSION

Interactive Video Technology in Islamic Religious Education

The findings revealed that the utilization of interactive video-based learning technology among students was generally categorized at a moderate level, with 70% of respondents falling within the moderate category. This result indicates that interactive video technology has begun to be integrated into Islamic Religious Education (IRE) learning activities, although

its implementation has not yet reached an optimal level. The moderate category suggests that digital technology has become increasingly present in instructional practices, yet its utilization remains uneven and influenced by contextual factors such as teachers' technological competence, infrastructure availability, and institutional support.

This finding reflects the broader transformation currently occurring within Islamic education. The integration of digital technology into religious learning is no longer limited to supplementary activities but is gradually becoming part of the instructional process itself. Rohmiati (Rohmiati, 2025) argues that the digitalization of Islamic Religious Education has created new opportunities for improving learning effectiveness and student engagement. Similarly, Nurdin et al. (2024) emphasize that contemporary Islamic education must adapt to technological developments while preserving its educational and moral objectives. Therefore, the moderate level of technology utilization identified in this study may be interpreted as evidence that Islamic Religious Education is undergoing a gradual transition toward a digital learning environment.

The findings are also consistent with the perspective of Godsk and Møller (Godsk & Møller, 2025), who argue that educational technology adoption is often characterized by progressive rather than immediate transformation. Teachers generally require time to develop technological literacy, redesign instructional strategies, and integrate digital tools into pedagogical practices. In the context of Islamic Religious Education, this transition may be even more complex because educators must ensure that technological innovations remain aligned with religious values and educational goals.

Furthermore, Sandjaya (Sandjaya, 2025) and Aulia et al. (Aulia et al., 2025; Mukaromah et al., 2025; Mukaromah & Cholil, 2025) highlight that digital media have become increasingly important for supporting student participation and engagement in religious learning. However, they also note that the effectiveness of technology integration depends largely on how instructional media are selected, designed, and implemented. Consequently, the moderate level of interactive video utilization found in this study should not be interpreted as a limitation but rather as an indication that Islamic Religious Education is currently moving toward a more technology-enhanced learning environment. This transformation represents an important foundation for future innovations in digital Islamic education.

Students' Learning Motivation in Islamic Religious Education

The results further indicated that students' learning motivation was generally categorized at a moderate level, with 60% of respondents falling within the moderate category. This finding suggests that students possessed a satisfactory degree of willingness and enthusiasm to participate in Islamic Religious Education learning activities. However, the moderate category also indicates that motivation remains open to improvement through appropriate instructional interventions and supportive learning environments.

Learning motivation is widely recognized as a multidimensional construct influenced by both internal and external factors. According to Sardiman (Sardiman, 2018), motivation functions as a driving force that stimulates, directs, and sustains learning activities. Similarly, Uno (Uno, 2023) explains that students' motivation is shaped not only by personal interests and aspirations but also by instructional strategies, learning environments, and teacher support. Therefore, the moderate level of motivation observed in this study is likely the result of interactions among multiple psychological, pedagogical, and environmental factors.

From the perspective of Self-Determination Theory (SDT), students' motivation develops when their needs for autonomy, competence, and relatedness are adequately fulfilled (Ryan & Deci, 2020). Students who feel capable of mastering learning tasks, experience meaningful interactions, and possess a sense of control over their learning tend to demonstrate higher levels of intrinsic motivation. Recent studies by Shen et al. (Shen et al., 2024) and Yang et al.

(Yang et al., 2025) further confirm that supportive learning environments significantly contribute to students' motivation and engagement.

The moderate motivational level identified in this study therefore reflects a learning environment that has succeeded in fostering students' interest to some extent but has not yet fully maximized the motivational potential of all learners. This finding reinforces the argument that motivation should not be viewed as a fixed personal attribute but rather as a dynamic construct influenced by instructional experiences, educational technologies, and social interactions. Consequently, efforts to enhance students' learning motivation require comprehensive strategies that address both psychological and pedagogical dimensions.

Why Interactive Video Technology Enhances Learning Motivation

The most important finding of this study is that interactive video-based learning technology had a positive and statistically significant effect on students' learning motivation. The regression analysis demonstrated that interactive video technology explained 20.6% of the variance in learning motivation, indicating that technology-enhanced learning environments play a meaningful role in shaping students' motivational outcomes. This relationship can be understood through cognitive, motivational, and psychological perspectives.

Cognitive Explanation

From a cognitive perspective, the findings support the Cognitive Theory of Multimedia Learning (CTML) proposed by Mayer (2020, 2024). CTML suggests that learners process information through separate visual and auditory channels, each possessing limited cognitive capacity. Learning becomes more effective when instructional materials are designed to facilitate active processing while minimizing unnecessary cognitive load.

Interactive video technology combines visual images, text, narration, animations, and other multimedia elements that support dual-channel information processing. Such integration enables learners to construct more coherent mental representations of instructional content. Consequently, students are able to understand learning materials more effectively and experience less difficulty during learning activities.

The findings are consistent with AlShaikh et al. (AlShaikh et al., 2024), who reported that multimedia learning principles remain highly relevant in contemporary digital learning environments. Likewise, Waxman and Goldie (Waxman & Goldie, 2023) argue that well-designed multimedia instruction can improve cognitive engagement and learning effectiveness by reducing extraneous cognitive load. Therefore, the positive effect identified in this study may be attributed to the ability of interactive video technology to facilitate more efficient cognitive processing compared to conventional instructional approaches.

Motivational Explanation

The findings may also be interpreted through Keller's ARCS Motivation Model, which emphasizes four dimensions of learning motivation: Attention, Relevance, Confidence, and Satisfaction. Interactive video technology possesses characteristics that directly support each of these dimensions.

First, interactive videos capture students' attention through dynamic visual presentations, animations, and multimedia content. Second, contextualized learning materials enhance relevance by connecting instructional content with students' experiences and interests. Third, structured learning sequences and immediate feedback mechanisms strengthen learners' confidence by helping them monitor their understanding. Finally, successful completion of interactive learning tasks contributes to learning satisfaction.

These characteristics explain why students exposed to interactive video technology tend to demonstrate stronger motivation than those relying solely on conventional instructional methods. The findings suggest that technology enhances motivation not simply because it is

novel but because it creates learning experiences that satisfy key motivational needs identified by the ARCS model.

Psychological Explanation

Beyond cognitive and motivational factors, the findings can also be explained through Self-Determination Theory. According to Ryan and Deci (Ryan & Deci, 2000) intrinsic motivation develops when individuals experience autonomy, competence, and relatedness.

Interactive video technology can support autonomy by allowing students to control the pace and sequence of their learning activities. Students can revisit learning materials, repeat explanations, and learn according to their individual needs. Interactive videos also support competence by providing clear explanations, visual demonstrations, and immediate feedback that strengthen learners' confidence in their abilities. In addition, meaningful interaction with instructional content may foster a sense of engagement and connection that contributes to relatedness.

Recent studies by Howard et al. (Howard et al., 2026) and Wang et al. (Wang et al., 2024) indicate that technology-enhanced learning environments can significantly strengthen these psychological needs, leading to higher levels of intrinsic motivation and engagement. Therefore, the significant effect observed in this study may be understood as the result of cognitive facilitation, motivational stimulation, and psychological need satisfaction operating simultaneously within interactive video-based learning environments.

Overall, the findings support the argument that interactive video technology enhances learning motivation through multiple interconnected mechanisms rather than through technological novelty alone.

Comparison with Previous Studies

The findings of this study are generally consistent with previous research examining the relationship between educational technology and learning motivation. Trajaya et al. (2025) reported that interactive learning media positively contributed to students' motivation in Islamic Religious Education. Similarly, Muhammad et al. (Widodo et al., 2025) found that interactive video-based learning significantly enhanced students' learning motivation in religious education contexts.

Comparable findings were also reported by Herawati et al. (Herawati et al., 2025), who demonstrated that animated video-assisted learning increased students' enthusiasm and engagement in Islamic Religious Education. Likewise, Krastiana (Krastiana, 2025) and Pasaribu et al. (Pasaribu et al., 2025) concluded that technology-supported instructional media positively influenced students' interest in learning activities.

Similar findings were also reported by Prihantoro et al. (Prihantoro et al., 2025), who found that animated video media significantly enhanced university students' learning motivation, suggesting that multimedia-based instructional interventions consistently contribute to motivational outcomes across different educational levels.

Although these studies generally support the positive role of digital learning technologies, several important differences distinguish the present study. First, many previous investigations focused primarily on media development, classroom action research, or descriptive evaluations of instructional interventions. In contrast, this study quantitatively measured the contribution of interactive video technology through regression analysis, thereby providing empirical evidence regarding the magnitude of its effect.

Second, unlike studies that relied predominantly on practical descriptions of instructional outcomes, this research integrates Cognitive Theory of Multimedia Learning, the ARCS Motivation Model, and Self-Determination Theory to explain the mechanisms underlying the observed relationship. This theoretical integration represents an important contribution

because it provides a more comprehensive explanation of how technology influences learning motivation.

Third, the findings extend previous research by demonstrating that interactive video technology contributes not only to engagement and participation but also to measurable motivational outcomes within the specific context of Islamic Religious Education. Therefore, the present study strengthens the growing body of evidence suggesting that interactive video technology constitutes a meaningful pedagogical tool for enhancing learning motivation.

Implications for Islamic Education in the Digital Era

The findings have important implications for the future of Islamic Religious Education in the digital era. The positive and significant influence of interactive video technology suggests that educational technology should no longer be viewed merely as a supplementary instructional tool. Rather, technology should be considered an integral component of contemporary pedagogical strategies designed to improve learning quality and student engagement.

The findings reinforce the argument of Godsk and Møller (Godsk & Møller, 2025) that meaningful educational transformation requires not only technological adoption but also pedagogical innovation. Similarly, Rohmiati (Rohmiati, 2025) emphasizes that digital transformation within Islamic education must be accompanied by changes in instructional approaches, teacher competencies, and learning design.

For teachers, the results highlight the importance of developing digital literacy and instructional design skills. Teachers should be encouraged to create and utilize interactive learning materials that align with students' learning needs and motivational characteristics. Nurdin et al. (Nurdin et al., 2024) further argue that educators play a crucial role in ensuring that technology integration enhances rather than distracts from educational objectives.

Therefore, the practical implication of this study is that successful digital transformation in Islamic Religious Education requires a combination of technological competence, pedagogical innovation, and learner-centered instructional design. Technology becomes meaningful only when it is integrated into a coherent educational strategy that promotes active learning and meaningful engagement.

Critical Reflection

Although the findings demonstrate a positive relationship between interactive video technology and learning motivation, it is important to avoid the assumption that technology automatically improves educational outcomes. The coefficient of determination indicates that interactive video technology explained only 20.6% of the variance in learning motivation, suggesting that many other factors continue to influence students' motivational development.

Recent international research highlights several challenges associated with educational technology implementation. Pérez-Juárez et al.(Pérez-Juárez et al., 2023) reported that excessive exposure to digital technologies may contribute to distraction and reduced concentration. Similarly, Bali et al. (Bali et al., 2026) emphasized that poorly designed multimedia environments may increase cognitive load and hinder learning effectiveness. Waxman and Goldie (Waxman & Goldie, 2023) likewise argue that multimedia learning environments become effective only when instructional design principles are carefully applied.

These findings suggest that the educational value of interactive video technology depends not merely on technological sophistication but also on pedagogical quality. Videos that are excessively complex, visually overloaded, or poorly structured may undermine rather than enhance learning motivation. Likewise, students' technological readiness, digital literacy, and self-regulation skills may influence the effectiveness of technology-based learning experiences.

Consequently, the positive findings of this study should be interpreted within a broader educational perspective. Interactive video technology possesses considerable potential for enhancing learning motivation, but its effectiveness depends on thoughtful instructional design, appropriate implementation, and supportive learning environments. In other words, technology itself is not the ultimate determinant of educational success; rather, success emerges from the interaction between technology, pedagogy, and learner characteristics.

Taken together, the findings of this study suggest a coherent pathway through which interactive video technology influences learning motivation. Interactive videos enhance student engagement, facilitate multimedia information processing, support the fulfillment of psychological needs, and ultimately contribute to stronger learning motivation. This pathway underscores the importance of integrating educational technology within pedagogically sound instructional practices, particularly in the evolving landscape of Islamic Religious Education.

CONCLUSION AND SUGGESTION

This study investigated the effect of interactive video-based learning technology on students' learning motivation in Islamic Religious Education among senior high school students. The findings revealed that both the level of interactive video technology utilization and students' learning motivation were categorized at a moderate level. More importantly, the regression analysis demonstrated that interactive video-based learning technology had a positive and statistically significant effect on students' learning motivation. The coefficient of determination indicated that interactive video technology contributed 20.6% to students' learning motivation, suggesting that technology-based instructional media constitute an important factor in fostering students' motivation to learn Islamic Religious Education.

The findings support the argument that interactive video technology can enhance learning motivation by facilitating more engaging and meaningful learning experiences. From the perspective of the Cognitive Theory of Multimedia Learning, interactive videos enable learners to process information through visual and auditory channels simultaneously, thereby supporting more effective cognitive processing. From a motivational perspective, the findings are consistent with the ARCS Motivation Model, which emphasizes the importance of attention, relevance, confidence, and satisfaction in sustaining learners' motivation. Furthermore, the findings align with Self-Determination Theory, suggesting that interactive video learning environments may strengthen students' motivation by supporting their needs for autonomy, competence, and meaningful learning engagement.

Theoretically, this study contributes to the growing body of literature on educational technology and Islamic Religious Education by integrating cognitive and motivational perspectives to explain the relationship between interactive video technology and learning motivation. While previous studies have largely focused on media development, classroom action research, or descriptive evaluations of technology use, this study provides empirical evidence regarding the magnitude of the contribution of interactive video technology to students' learning motivation through quantitative analysis. In addition, the study extends the application of Multimedia Learning Theory, the ARCS Motivation Model, and Self-Determination Theory within the context of Islamic Religious Education, an area that remains relatively underexplored in educational technology research.

Practically, the findings highlight the importance of integrating interactive video technology into Islamic Religious Education as part of broader efforts to enhance students' motivation and engagement in the digital era. However, the moderate contribution identified in this study also indicates that technology alone is insufficient to maximize learning motivation. The effectiveness of interactive video learning depends on instructional design quality, pedagogical implementation, students' readiness, and the broader learning environment. Therefore, educational institutions and teachers should view technology not merely as a

teaching tool but as a component of a comprehensive pedagogical strategy designed to create meaningful learning experiences.

Despite its contributions, this study is limited by its relatively small sample size and focus on a single educational setting. Future studies are encouraged to involve larger and more diverse samples, investigate additional variables influencing learning motivation, and employ mixed-methods or longitudinal approaches to obtain a more comprehensive understanding of how educational technology shapes learning motivation in Islamic Religious Education. Further research may also explore the role of digital engagement, cognitive load, and self-regulated learning as mediating factors in the relationship between interactive video technology and students' learning motivation.

Pernyataan Etika & Peran Penulis (CRediT Statement)

Penulis Satu (Zahwatusy Syahidah): Konseptualisasi, Metodologi, Penulisan – draf asli.
Penulis Dua (Ngatmin Abbas): Kurasi data, Validasi.
Penulis Dua (Arif Efendi): Kurasi data, Validasi.

Kebijakan Data

Data yang mendukung temuan penelitian ini tersedia dari penulis korespondensi berdasarkan permintaan yang wajar.

Persetujuan Etik

Penelitian ini telah disetujui oleh Komite Etik IIM Surakarta dan mematuhi standar etika penelitian pada manusia.

REFERENSI

Abdillah, M. I., Hunaida, W. L., & Muqit, A. (2025). Digitalization of Islamic Education Learning through Interactive Educational Games. *Edudeena: Journal of Islamic Religious Education*, *9*(1), 67–76.

AlShaikh, R., Al-Malki, N., & Almasre, M. (2024). The implementation of the cognitive theory of multimedia learning in the design and evaluation of an AI educational video assistant utilizing large language models. *Heliyon*, *10*(3). https://doi.org/10.1016/j.heliyon.2024.e25361

Aulia, M. G., Ratnasari, D., & Aribah, L. (2025). Development of Islamic Religious Education Learning Videos in Elementary Schools Using Powtoon Software. *Al-Mudarris (Jurnal Ilmiah Pendidikan Islam)*, *8*(3), 581–598.

Awaliyah, I. N. (2024). Mathematics Learning Innovation: Interactive Learning Videos to Increase Student Learning Activity and Motivation. *JPMI (Jurnal Pendidikan Matematika Indonesia)*, *10*(1), 1–18.

Azwar, S. (2016). Reliabilitas dan validitas aitem. *Buletin Psikologi*, *3*(1), 19–26.

Bali, C., Tasdelen, B., Bandi, S., & Zsidó, A. (2026). Understanding the cognitive cost of multimedia learning: effects of visual load and language proficiency. *Cognitive Research: Principles and Implications*, *11*(1), 2. https://doi.org/10.1186/s41235-025-00699-2

Godsk, M., & Møller, K. L. (2025). Engaging students in higher education with educational technology. *Education and Information Technologies*, *30*(3), 2941–2976. https://doi.org/10.1007/s10639-024-12901-x

Herawati, E. T. H., Rukajat, A., Mansyur, M. H., & Kejora, M. T. B. (2025). Learning Islamic Religious Education Based On Local Wisdom Assisted By Animated Videos In Increasing The Learning Motivation Of Elementary School Students. *Journal of Innovation and Research in Primary Education*, *4*(3), 1871–1881.

Howard, J. L., Bradshaw, E. L., & Ryan, R. M. (2026). Future directions for self-determination theory: Introduction to the special issue. *Motivation and Emotion*, *50*(1), 1–12. https://doi.org/10.1007/s11031-025-10160-y

Keller, J. M. (2009). *Motivational Design for Learning and Performance: The ARCS Model Approach*. Springer US.

Krastiana. (2025). Increasing Students' Interest and Motivation to Learn in Islamic Religious Education Learning through the Use of Interactive Videos at MA Al-Hidayah Makassar. *ETNOPEDAGOGI: Jurnal Pendidikan Dan Kebudayaan*, *2*(1), 330–338.

Mayer, R. E. (2020). *Multimedia Learning* (3rd ed.). Cambridge University Press. https://doi.org/DOI: 10.1017/9781316941355

Mayer, R. E. (2024). The Past, Present, and Future of the Cognitive Theory of Multimedia Learning. *Educational Psychology Review*, *36*(1), 8. https://doi.org/10.1007/s10648-023-09842-1

Muhammad, D. H., Turrohmah, B. M., Pramudita, A., Wardhani, M. K., Aisyah, S., Alatise, T., & Alsokari, T. (2025). The Effect of Implementing Interactive Video-Based E-Learning on Motivation to Learn the Arba'in Nabawi Hadith. *JERIT: Journal of Educational Research and Innovation Technology*, *2*(2), 83–93.

Mukaromah, N., & Cholil, N. K. (2025). Level Up Pembelajaran Melalui Pendampingan Guru Dalam Pengembangan Game Edukatif Berbasis Gimkit Dan Quizwhizzer. *Asskruie: Jurnal Pengabdian Kepada Masyarakat*, *2*(2), 39–46.

Mukaromah, N., Zidan, M. F., & Sabil, A. N. (2025). Transformasi Pembelajaran Haji di MTs Melalui Multimedia Interaktif Berbasis Canva dan Quizziz. *Janitra: Journal of Educational Sciences*, *1*(1), 53–67.

Nurdin, N., Anhusadar, L., Lubis, M., Hadisi, L., & Rijal, M. (2024). Beyond the chalkboard: Digital innovations in islamic learning through interactive powerpoint. *Jurnal Ilmiah Peuradeun*, *12*(3), 1099–1128.

Pasaribu, M. M., Sormin, D., & Lubis, J. N. (2025). Efforts To Increase Students' Learning Motivation Through Audio-Visual Media. *Tafkir: Interdisciplinary Journal of Islamic Education*, *6*(3), 601–618.

Pérez-Juárez, M. Á., González-Ortega, D., & Aguiar-Pérez, J. M. (2023). Digital distractions from the point of view of higher education students. *Sustainability*, *15*(7), 6044.

Prihantoro, M. T., Pratama, Z. A., & Suparmi, S. (2025). The Effect of Animated Video Media Therapy on Enhancing University Students' Learning Motivation. *International Journal of Counseling and Psychotherapy*, *2*(3), 116–123.

Rohmiati, E. (2025). The use of digital media in learning Islamic religious education: Opportunities and challenges. *Urwatul Wutsqo: Jurnal Studi Kependidikan Dan Keislaman*, *14*(1), 33–45.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*(1), 68.

Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, *61*, 101860. https://doi.org/10.1016/j.cedpsych.2020.101860

Sandjaya, A. (2025). Utilization of YouTube Media in Islamic Religious Education Learning. *Civic Engagement and Social Education Journal*, *2*(2), 250–255.

Sardiman, A. M. (2018). *Interaksi dan Motivasi Belajar Mengajar*. Rajawali Pers.

Shen, H., Ye, X., Zhang, J., & Huang, D. (2024). Investigating the role of perceived emotional support in predicting learners' well-being and engagement mediated by motivation from a self-determination theory framework. *Learning and Motivation*, *86*, 101968. https://doi.org/https://doi.org/10.1016/j.lmot.2024.101968

Trajaya, T., Wijaya, T., Nugroho, A. M. A., Pratama, W. D. J., & Febriani, E. (2025). The Role of Interactive Learning Media in Improving Students' Learning Motivation of Islamic Education. *International Journal Corner of Educational Research*, *3*(3), 163–167.

Truss, A., McBride, K., Porter, H., Anderson, V., Stilwell, G., Philippou, C., & Taggart, A. (2024). Learner engagement with instructor-generated video. *British Journal of Educational Technology*, *55*(5), 2192–2211. https://doi.org/https://doi.org/10.1111/bjet.13450

Uno, H. B. (2023). *Teori motivasi dan pengukurannya: Analisis di bidang pendidikan*. Bumi Aksara.

Wang, Y., Wang, H., Wang, S., Wind, S. A., & Gill, C. (2024). A systematic review and meta-analysis of self-determination-theory-based interventions in the education context. *Learning and Motivation*, *87*, 102015. https://doi.org/https://doi.org/10.1016/j.lmot.2024.102015

Waxman, J. B., & Goldie, S. J. (2023). *Cognitive Theory of Multimedia Learning; Applying cognitive load theory to the design of educational multimedia*.

Widodo, A. A., Husni, M., Al, U., & Malang, Q. (2025). Strategi Digitalisasi Pendidikan Pesantren Dalam Internalisasi Nilai Aswaja Bagi Generasi Z di Era Teknologi. *Ihsan: Jurnal Pendidikan Islam*, *3*(1), 375–386.

Yang, Y., Chen, J., & Zhuang, X. (2025). Self-determination theory and the influence of social support, self-regulated learning, and flow experience on student learning engagement in self-directed e-learning. *Frontiers in Psychology*, *Volume 16-2025*.