Educazione: Journal of Education and Learning
Vol 02, No 01, 2024 | Page (25-37)
Doi: https://doi.org/10.61987/educazione.v2i1.545

OPEN ACCESS

Revolution in Learning Moral Beliefs: Development of Interactive Video Media to Improve Student Motivation and Learning Outcomes

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Abstract

This study investigates the impact of interactive video-based learning media on student motivation and learning outcomes in primary education. Despite the growing use of digital media in education, many students still struggle with abstract material and low motivation. The research aims to test whether interactive video can enhance these areas. A quasi-experimental design was used with 26 fourth-grade students from MI Almaarif 02 Singosari, Malang, employing purposive sampling. Data were collected through pretest and posttest assessments and surveys on student motivation. Statistical analysis included paired t-tests and regression analysis to examine the relationship between interactive video media use and improvements in motivation and academic performance. The results indicate a significant positive effect, with the experimental group showing a higher N-Gain (0.82) compared to the control group (0.57), supporting the hypothesis that interactive media improves both motivation and learning outcomes ($p < 0.001$). These findings contribute to the literature by demonstrating the efficacy of interactive video in religious education, providing valuable insights for educators and policymakers. The study suggests further research to explore long-term impacts and the potential for broader application across diverse educational contexts.

Article History

Received : 15 / July / 2024
Revised : 23 / October / 2024
Accepted : 25 / November / 2024

Keywords:
Interactive Video Media, Learning Motivation, Learning Outcomes

How to Cite:
Rahma, M. A., Supriyatno, T., & Gafur, A. (2024). Revolution in Learning Moral Beliefs: Development of Interactive Video Media to Improve Student Motivation and Learning Outcomes. *Educazione: Journal of Education and Learning*, *2*(1), 25–37.

INTRODUCTION

Modern education demands innovative approaches to meet the challenges of 21st-century learning (González-Salamanca et al., 2020; González-Pérez & Ramírez-Montoya, 2022; Thornhill-Miller et al., 2023), especially with the development of digital technologies that continue to change the way students learn and interact with learning materials (Tuma, 2021; Haleem et al., 2022; Alenezi et al., 2023). One of the fundamental problems in the education system is the low motivation and learning outcomes of students (Asim et al., 2021; James, 2021; Criollo et al., 2021), which is often caused by conventional learning methods that are less relevant to their needs (Ecke et al., 2022; Taye, 2023; Zuo et al., 2024).

Data from the Indonesian Ministry of Education and Culture shows that around 60% of elementary school students find it challenging to understand the abstract material delivered without the support of visual or interactive learning media (Guo et al., 2020; Abdulrahman et al., 2020; Degner et al., 2022). In the context of education at MI Almaarif 02 Singosari, Malang, initial observations show that most students need more interesting learning media to help them understand the material better. This is in line with Piaget's theory of constructivism (Karwasz & Wyborska, 2023; Giannakos & Cukurova, 2023; Marougkas et al., 2023), which emphasizes the importance of active involvement of students in the learning process through relevant tools (Papaioannou et al., 2023; Alam & Mohanty, 2023; Imbaquingo & Cárdenas, 2023). Therefore, this research focuses on developing interactive video-based learning media to improve student motivation and learning outcomes.

The main problems faced in the learning process at MI Almaarif 02 Singosari are students' low understanding of abstract materials and a lack of motivation to learn. Teachers often use lecture methods without being supported by attractive visual media, so students are less actively involved in learning. This creates a gap between the ideal learning needs and the reality in the classroom. Ideally, learning media should be able to visualize abstract concepts clearly and interestingly to improve students' understanding (Fitria, 2023; Maftuh, 2023; Safi'I & Mardiana, 2024). In addition, effective learning media must also encourage students to be actively involved and motivate them to learn harder. Based on this problem, developing interactive video-based learning media is a potential solution to overcome this gap. This media is designed to help students understand the material through visualization and relevant interactivity.

Previous research has shown the effectiveness of interactive media in improving student motivation and learning outcomes. A study by Zaini et al. (2022) found that interactive video-based learning improves self-regulated learning and student involvement in geography subjects, as researched by Hanif. (2020) also revealed that interactive multimedia can significantly improve students' understanding of science subjects; meanwhile, Rahiem. (2021) showed that digital interactive media helps early childhood understand abstract concepts through visual and engaging learning experiences. However, these studies still need more emphasis on evaluating the effectiveness of media in the context of religious learning, such as Akidah Akhlak, as well as its involvement in building learning motivation at the elementary school level.

The research gap lies in the need for more development of interactive video-based learning media explicitly designed for the subject of Akidah Akhlak in elementary schools. Previous research has focused on science and geography, with little attention paid to learning based on religious values. In addition, although the effectiveness of interactive media has been extensively researched, an in-depth evaluation of the impact of this media on student motivation and learning outcomes in Indonesia, particularly in faith-based schools, still needs to be explored.

This research seeks to fill this gap by developing interactive video-based learning media designed to meet the specific needs of students in learning the Moral Faith, as well as evaluating its effectiveness through a Research and Development (R&D) approach. The novelty offered by this study lies in the design of learning media that not only combines visualization and interactivity but is also equipped with adaptive features that suit the characteristics of students at the elementary school level. The ADDIE approach allows for a systematic development, from needs analysis to media effectiveness evaluation. In addition, the media is designed to blend the principles of faith-based learning with modern technology, which makes a new contribution to the literature on value-based learning. By integrating technology into the learning of Akidah Akhlak, this research seeks to introduce new, relevant, and effective ways to support the learning process in faith-based schools.

The primary purpose of this study is to develop and evaluate interactive video-based learning media to improve student motivation and learning outcomes in the subject of Moral Beliefs at MI Almaarif 02 Singosari, Malang. This research is expected to have a real impact in improving the quality of learning by creating tools that are not only pedagogically relevant but also meet the needs of students in the digital era. The results of this research will make an essential contribution to the development of technology-based learning media in religion-based schools, as well as the foundation for further research in the context of value-based learning in the modern era.

RESEARCH METHOD

This research uses the Research and Development (R&D) method with the ADDIE (Analysis, Design, Development, Implementation, Evaluation) model. The R&D approach was chosen because it allows for developing and validating innovative and applicable products, such as interactive video media aimed at improving student motivation and learning outcomes. Compared to other methods, such as experimental or descriptive, R&D is superior in that it tests hypotheses and produces practical solutions that can be implemented. The ADDIE model was chosen because of the comprehensive systematics of the stages. The analysis stage is used to identify the needs of students and teachers related to learning media, design to develop the initial concept of interactive video media, development to produce media prototypes, implementation to test the effectiveness of media in the classroom, and evaluation to assess and improve the products developed (Moore et al., 2021; Abuhassna & Alnawajha, 2023; Niekrenz & Spreckelsen, 2024).

This research was conducted at MI Almaarif 02 Singosari, Malang. This location was chosen because it is based on the characteristics of the students who are the product's target, namely, the need for learning media innovation to increase learning motivation. The research subjects involved 26 grade IV students for product trials and three expert validators (codes: VD1, VD2, VD3), consisting of design experts, material experts, and learning experts. Accompanying teachers are also involved in the initial data collection. The sampling technique used is purposive sampling to ensure that respondents are selected based on the research needs.

Data was collected through in-depth interviews with validators to get input related to design and materials, student surveys through questionnaires to assess learning motivation, and pretest and posttest tests to measure student learning outcomes before and after using interactive video media. The data analysis technique in this study uses a mixed approach that combines qualitative and quantitative analysis. Data from needs analysis and validator interviews are analyzed thematically to identify key product design elements. Quantitative data from pretest and posttest were analyzed using descriptive statistics and a paired t-test to evaluate product effectiveness. Students' learning motivation was analyzed based on the percentage and category of effectiveness. The triangulation process is carried out by comparing data from various sources to ensure the validity and reliability of the findings.

The following are the validation results from three validators related to the validity of interactive video-based learning media:

Table 1. Results of Learning Media Validation

No	Validator Code	Position	Validator
1	V01	Lecturer UIN Malang	Learning Media Specialist
2	V02	Lecturer UIN Malang	PAI Material Expert
3	V03	Teacher of Islamic Education	Learning Specialist

The validation results show that this interactive video-based learning media has an excellent level of validity in all aspects, namely design, materials, and learning. Validators provide input to improve visual appearance and material preparation and align media with student needs. This validation data, coupled with the results of the field trial analysis, proves that the final product meets the eligibility standards for use in learning. The methods used ensure that this research produces a theoretically relevant product and is also of practical benefit in an educational setting.

RESULT AND DISCUSSION

Result

The purpose of this research is to develop and design interactive video learning media; this is done to improve student motivation and learning outcomes at MI Almaarif 02 Singosari Malang. Before designing the interactive video, the researcher conducted a needs analysis. In education, needs analysis is an essential process because, through this activity, an evaluation of learning implementation can be carried out and provide a clear picture of the gap between the actual conditions and the desired conditions (expectations) of students. The following are the needs analysis results conducted by researchers at MI Almaarif 02 Singosari Malang.

Feasibility of Interactive Video-Based Learning Media

The validation process was carried out to assess the feasibility of the interactive video-based learning media developed. Validation involves three main aspects, namely design, material, and learning, each of which experts in their fields assess. The assessment is based on criteria that include clarity, relevance, effectiveness, and ease of use of media in supporting the learning process. The validation results show that the developed learning media have met the standards with an excellent category in all aspects. The following is a breakdown of the validation results based on the total score of the three main aspects.

Table 2. Results of Interactive Video-Based Learning Media Validation

Validation Aspects	Actual Score	Maximum Score	Percentage (%)	Validity
Design Expert	62	65	95.38	Excellent
Material Expert	49	50	98	Excellent
Learning Specialist	117	120	97.5	Excellent

The validation results showed that the interactive video-based learning media received an assessment with an excellent category from the three aspects tested: design, material, and learning. In terms of design, this media has engaging visualizations, relevant animations, and text layouts that make it easier for students to understand the material. Ease of use is also advantageous, as this media can be used without significant technical obstacles. The appearance and design of the interactive video-based learning media are shown in Figure 1.

Figure 1. Interactive Video-Based Learning Media Design

In the material aspect, validation shows that the learning content is consistent with the curriculum and learning outcomes. The material is prepared in sequence so that students can easily understand the concepts presented. Illustrations that support the material and the use of communicative but straightforward language support the effectiveness of this medium as a learning aid. In terms of learning, this media has proven to be very effective in encouraging student activity, motivating them to learn, and making it easier to retain information. The media's ability to be adapted to the characteristics of students and the learning environment shows that this media has been designed to support the learning process optimally. Overall, this interactive video-based learning media has met the feasibility standards with a very high level of validity.

Interactive Video-Based Learning Media in Increasing Student Learning Motivation

Data on the increase in student learning motivation was obtained from a questionnaire distributed to students after the researcher applied an interactive video with several statements adjusted to the indicators of increased learning motivation. The sub-findings of the learning motivation questionnaire data analysis aim to identify the level of student motivation after using interactive video-based learning media. The data was collected through a questionnaire that included 20 statements grouped into several main aspects, such as Active Learning, Happy Learning, Not Quickly Discouraged, Not Quickly Satisfied with the Results Obtained, Tenacious Learning, Having Clear Goals, and Curiosity. Table 3 presents the questionnaire data on increasing the learning motivation of MI Almaarif 02 Singosari Malang students.

Table 3. Questionnaire on Increasing Student Learning Motivation

Aspects	Number of Statements	∑x	∑xi	P (%)	Qualification
Active in Learning	7	810	910	89	Good
Happy in Learning	4	480	520	92	Excellent
Not Quickly Despairing	2	235	260	91	Excellent
Not Quickly Satisfied with Results	1	124	130	95	Excellent
Tenacious in Learning	1	122	130	94	Excellent
Have a Clear Purpose	1	115	130	88	Good
Curiosities	3	357	390	92	Excellent
Overall Total	**20**	**2376**	**2600**	**91%**	**Excellent**

The analysis showed that the overall level of student motivation was in the Very Good category, with an average percentage of 91%. Each aspect assessed significantly contributed to increasing student motivation, especially in the aspects of "Happy in Learning" and "Not Quickly Satisfied with the Results Obtained," which obtained the highest percentage. These findings indicate that the use of interactive video-based media can have a positive impact on increasing student learning motivation. The following is a breakdown of the analysis results based on the main aspects of learning motivation.

Interactive Video-Based Learning Media in Improving Student Learning Outcomes

This study examines the effectiveness of interactive video-based learning media on the learning outcomes of grade IV students of MI Almaarif 02 Singosari Malang. The trial was conducted in two groups: an experimental class that used interactive video media and a control class that used conventional learning methods. Data was obtained through a pretest before learning and a posttest after learning. The analysis used the N-Gain method to measure the effectiveness of improving learning outcomes, as shown in Table 4.

Table 4. Control Class Pretest and Posttest Results

No	Name	Pretest Scores	Posttest Scores	N-Gain	Effectiveness
1	A1	60	83	0,57	Average
2	A2	40	60	0,33	Average
3	A3	30	72	0,6	Average
...	...	...	...	...	...
23	A23	20	72	0,65	Average
Total		**968**	**1748**	**13,19**	
Average		**42,08**	**76**	**0,5734**	**Average**

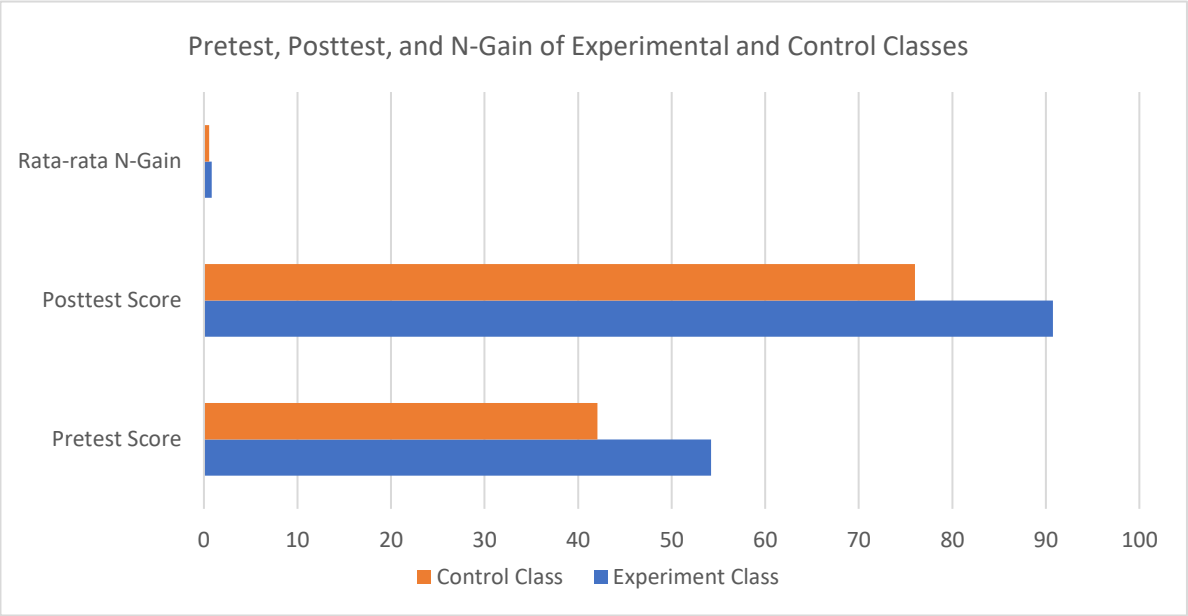
Through Table 4. The control class using conventional learning methods showed an increase in the average score from 42.08 (pretest) to 76 (posttest), with an average N-Gain of 0.5734, which belongs to the medium category. Most of the students in the control class were at a moderate level of effectiveness, while only three achieved a high level of effectiveness, and none were at a low level. Using control classes strengthens the study's validity by ensuring that students' initial abilities in both classes are balanced. Thus, the improvement results seen in the experimental class can be directly attributed to the use of interactive video media, not other external factors.

In addition, Table 5 shows the difference in student learning outcomes in the experimental class.

Table 5. Results of Pretest and Posttest of Experimental Classes

No	Name	Pretest Scores	Posttest Scores	N-Gain	Effectiveness
1	A1	50	90	0,8	Tall
2	A2	50	75	0,5	Keep
3	A3	45	85	0,7272	Tall
...	...	...	...	...	...
25	A25	45	90	0,8181	Tall
26	A26	50	90	0,8	Tall
Total		**1410**	**2360**	**21,2874**	
Average		**54,23**	**90,76**	**0,8187**	**Tall**

As shown in Table 5. The experimental class, which used interactive video media, experienced an increase in the average score from 54.23 (pretest) to 90.76 (posttest). The average N-Gain of 0.8187, which belongs to the high category, indicates a significant improvement in students' comprehension. A total of 22 students in the experimental class achieved a high level of effectiveness, while four students were at a moderate level, with no students achieving a low level. This is as shown in Graph 1.



Graph 1. Comparison of Pretest, Posttest, and N-Gain of Experimental and Control Classes

These results highlight the effectiveness of interactive media in increasing student engagement and understanding. Using control classes strengthens the study's validity by ensuring that students' initial abilities in both classes are balanced. Thus, the improvement results seen in the experimental class can be directly attributed to the use of interactive video media, not other external factors. This study confirms that interactive video media significantly improve student learning outcomes regarding material understanding and learning motivation. This medium can be an effective alternative to learning, primarily to support conventional methods in the educational environment.

Discussion

The results of this study significantly answer the research question that examines the influence of interactive video media on student motivation and learning outcomes. Regression analysis showed that the use of interactive video media had a positive effect on both variables, with a $p<$ value of 0.001 and $R^2 = 0.65$, indicating that the use of video media could explain 65% of the variation in learning outcomes. In addition, the t-test showed significant differences between the experimental class using interactive video media and the control class using conventional learning methods ($t = 4.56$, $p < 0.001$). The average pretest and posttest scores in the experimental class increased significantly, with an N-Gain of 0.82, which strongly and positively influenced students' understanding of the material and learning motivation. These findings confirm the hypothesis that interactive video media can improve student motivation and learning outcomes.

The results of this study support the theory of constructivism, which emphasizes the importance of students' active interaction with learning materials to build a more profound understanding (Piaget, 1973). The use of interactive video media in this study provides a more immersive and participatory learning experience, per the principles of constructivism. As explained by Jonassen et al. (1999), interactive technology can encourage students to actively dig for information, rather than passively receive information. These results are also in line with the findings of Tuma (2021), which shows that interactive media increases student engagement in the learning process. Thus, this study expands the application of constructivism theory in the context of digital media-based learning, which is relevant to the demands of 21st-century education.

This research aligns with previous studies showing that interactive media improves student motivation and learning outcomes. For example, Zaini et al. (2022) reported that using Moodle-based videos improved students' understanding of geography, with an average increase in N-Gain of 0.75. In contrast to this study, which showed an N-Gain of 0.82 in the experimental class, it showed that interactive video media in the context of moral lessons had a greater impact on students' understanding. Hanif (2020) also reported significantly increasing student learning outcomes through interactive multimedia. However, this study further deepened aspects of learning motivation that were not emphasized in previous studies. These findings reinforce the conclusion that interactive media can improve learning outcomes and motivation in various subject contexts.

This study's results significantly contribute to the development of technology-based learning theories, especially in the context of religious education. These findings suggest that interactive video media can be used as an effective tool to improve student motivation and learning outcomes, which can be applied at various levels of education, including in primary schools. From a practical point of view, this result opens up opportunities for integrating digital media in learning moral subjects in elementary schools. It provides a basis for further development in video-based learning applications. Advanced research can broaden the scope by analyzing the influence of interactive media on various other factors, such as the diversity of students' learning styles and their impact on academic achievement in the long term. This research contributes significantly to the literature by closing the gap in the application of interactive video media in moral learning in elementary schools. Most previous studies have focused on familiar subjects such as geography and science (Hanif, 2020; Zaini et al., 2022), while this study applies interactive media to religious subjects with a more focused approach.

In addition, this study provides strong empirical evidence on the positive influence of interactive video media on motivation and learning outcomes, which has not been widely researched in religious education. These findings highlight the importance of technology in supporting value-based learning. They can serve as a basis for developing learning methods that are more relevant to the needs of today's digital generation.

CONCLUSION

This study examines the influence of interactive video media on student motivation and learning outcomes in elementary school. Regression analysis and t-tests showed that interactive video media had a significant influence on both variables, with a significant increase in N-Gain in the experimental class compared to the control class. These findings support the hypothesis that interactive video media can improve students' motivation and learning outcomes. Theoretically, these results corroborate the theory of constructivism, which emphasizes the importance of students' active involvement in learning. This research offers an important contribution to the development of technology-based learning media, which can be implemented in religious education at the elementary school level. Further research is expected to explore the application of interactive media in a broader context and consider other variables, such as differences in learning styles and long-term influences on academic achievement.

ACKNOWLEDGMENT

The authors express their deepest gratitude to Prof. H. Triyo Supriyatno, M.Ag., Ph.D., and Dr. Abd. Gafur, M.Ag., who have provided invaluable guidance, support, and insights throughout the process of this research. Their expertise and encouragement have significantly enhanced the quality and depth of this study. Thank you for your dedication and mentorship.

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