

DARUSSALAM: Scientific Journal of Islamic Education

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Volume 1 (1) 118 – 124 June 2024

The article is published with Open Access at: <https://journal.mgedukasia.or.id/index.php/darussalam>

Artificial Intelligence Application Assisted Media to Improve Islamic Religious Education Learning Outcomes of Students at SMP Negeri 1 Panti

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Abstract: This study aims to improve student learning outcomes in Islamic religious education learning by using learning media assisted by Artificial Intelligence. This study is a classroom action research that uses four steps, namely planning, action, observation and reflection. The subjects of this study were junior high school students. The data for this study were obtained using test and observation techniques. Tests are used to measure learning outcomes and observations are used to analyze teacher and student learning activities. The data analysis technique used in this study is descriptive statistics by comparing the results obtained with indicators of research success. The results of the study indicate that learning media assisted by Artificial Intelligence can improve student learning outcomes in Islamic religious education learning. This can be seen from the increase in the percentage of student learning completion in each cycle with details of the pre-cycle 42.71%, the first cycle 60.39% and in the second cycle it increased to 85.66%. Thus, the use of learning media assisted by Artificial Intelligence can be used as an alternative to improve student learning outcomes in Islamic religious education learning.

Keywords: Artificial intelligence, learning outcome, islamic education.

Received March 30, 2024; **Accepted** June 5, 2024; **Published** June 30, 2024

Citation: Yumeldi. (2024). Artificial Intelligence Application Assisted Media to Improve Islamic Religious Education Learning Outcomes of Students at SMP Negeri 1 Panti. *DARUSSALAM: Scientific Journal of Islamic Education*. 1(1). 118–124.

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INTRODUCTION

In the daily learning process, we as educators are often faced with various problems. The problems that arise are caused by various things, including; 1) lack of teacher innovation when conducting classroom learning, lack of use of media; 2) lack of selection of the right and correct strategy, the absence of the application of learning models to arouse student interest; 3) there is no variation in the implementation of learning and the determination of an inappropriate assessment system. From the problems faced by educators, it also has an impact on students. So far, we as educators have encountered a lack of interest from students during the learning process, causing the results of student learning to be unsatisfactory.

Learning media plays a very important role in the learning process, including in Islamic religious education. Learning media helps teachers deliver material more effectively and interestingly, so that students can more easily understand the religious concepts being taught. With the existence of learning media, the process of delivering

information becomes more varied and not monotonous, thus increasing students' interest and motivation to learn. In Islamic religious education, a deep understanding of Islamic teachings is essential. Learning media can help students understand abstract concepts, such as monotheism, morals, and worship, more concretely. For example, the use of animated videos can describe the stories of the prophets and companions more vividly, so that students can more easily appreciate and learn lessons from the stories.

The use of learning media also helps accommodate various student learning styles. Some students find it easier to understand material through visuals, while others understand better by hearing or practicing directly. By using a combination of media such as images, videos, audio, and interactive media, teachers can adjust learning to be more inclusive and in accordance with the needs of students. In addition, learning media allows for more dynamic interactions between teachers and students. With interactive media such as digital presentations or educational applications, students can participate more actively in learning. This helps them to be more involved in understanding Islamic teachings and improves their memory of the material that has been learned.

Technology in learning media also helps make learning more flexible and not limited by space and time. For example, with e-learning or learning videos, students can repeat the material anytime and anywhere. This is very helpful for students who have difficulty understanding the material when it is first taught in class. Learning media can also instill Islamic values in a more interesting and enjoyable way. Islamic-based educational games, such as interactive quizzes on the pillars of Islam or Al-Qur'an learning applications, can make students more motivated in learning their religious teachings. Thus, learning Islam is no longer considered boring, but becomes something fun and inspiring. In addition to the benefits for students, learning media also helps teachers in delivering material more systematically and efficiently. With presentations, videos, or infographics, teachers can present information more concisely and easily understood. This also saves time in the learning process, so that teachers can focus more on character building and in-depth discussions about Islamic values.

Learning media can also be used to enrich students' learning resources. Apart from textbooks, students can access various additional resources such as online lectures, Islamic articles, and digital learning platforms. This provides students with a broader insight into Islamic teachings and how to apply them in everyday life. In the context of project-based or problem-solving learning, learning media helps students to think critically and creatively in applying Islamic values. For example, students can create da'wah videos, infographics about worship procedures, or Islamic blogs containing their reflections on the lessons learned. This not only improves their understanding but also encourages them to become agents of spreading goodness. In conclusion, learning media has a very important role in Islamic religious education. With various forms and technologies available, learning media helps create a more interesting, interactive, and effective learning experience. Therefore, educators need to make the best use of learning media to improve the quality of Islamic religious learning and produce a generation with noble morals and a strong understanding of Islam.

This problem is also faced by researchers on duty, namely at SMPN 1 Panti, during the learning process researchers often face low interest of their students in participating in the learning process of Islamic Religious Education so that the results of the teaching and learning process also become unsatisfactory. Seeing from this reality, it encourages researchers to conduct classroom action research (PTK) with the title "Application of Media Results From The Use of Ai Application To Improve The Learning Outcomes of Islamic Religious Education For Students In Grade VII-1 SMP Negeri 1 Panti".

METHODS

This study uses a qualitative approach with the type of classroom action research (PTK). In this case, the researcher will collaborate with the teacher where the research is

carried out with the aim of creating a common understanding and agreement on a problem and democratic decision-makers which ultimately give birth to the same action. According to Arikunto (2007:16) "Classroom action research refers to a cycle system consisting of 4 components, namely: 1) planning, 2) implementation, 3) observation, 4) reflection. The subjects of this study are 21 students of Class VII-1 SMPN 1 Panti. There are 5 male students and 16 male students. Research time is the time when the research takes place or when this research is carried out. This research was carried out in December of the 2024/2025 Academic Year. In this study, the researcher used several data collection techniques. The data collection techniques used in this study are; 1) Questionnaire; 2) Observation. The data collection instrument in qualitative research is the researcher himself using supporting instruments in the form of interview guidelines, observation guidelines, and document analysis guidelines. The interview guidelines contain a number of questions addressed to the informant to reveal in-depth information about the learning of Islamic Religious Education in. The observation guidelines contain a list of activities observed related to the learning process of Islamic Religious Education using powerpoint learning media. Guidelines for document analysis to supplement data on all aspects related to research. The data analysis technique used in this PTK is qualitative analysis.

The research method used in this study is a quantitative research method with an experimental approach. This research was carried out in class VII-1 SMPN 1 Panti and aimed to determine the influence of the use of AI applications on the learning outcomes of Islamic Religious Education (PAI). Data collection techniques are carried out through pre-test and post-test to measure student understanding before and after the implementation of AI applications. In addition, classroom observations and interviews with teachers and students were also carried out to obtain qualitative data on the effectiveness of AI applications in the learning process. The collected data was analyzed using statistical techniques to see significant differences in student learning outcomes before and after the implementation of AI applications, as well as to evaluate student engagement in technology-based learning.

RESULTS

The results of the study show that the Project-Based Learning (PJBL) model is able to improve students' understanding and critical thinking skills in the subject of Kalam Science. The following is a discussion of the research results, 1) Improving Student Understanding Project-based learning encourages students to understand concepts in depth through problem exploration and solution preparation. In the second cycle, the average student comprehension score reached 82.7, showing a significant increase compared to the pre-action results. Activities such as discussions and preparation of papers help students internalize the concepts of Kalam Science; 2) Improvement of PJBL Critical Thinking Skills provides space for students to analyze, evaluate, and create solutions to complex problems. For example, in the project "The Relationship of Reason and Revelation", students are challenged to compare the views of various figures of Kalam Science and formulate logical arguments. This is reflected in the increase in the average score of critical thinking skills to 80.9 in cycle II; 3) The effectiveness of PJBL in Kalam Science The analytical and philosophical Kalam Science subjects are in line with the PJBL approach. Students not only understand the theory, but are also able to relate it to real life, such as the relevance of Kalam Science in answering modern challenges; 4) There are two Supporting and Inhibiting Factors, namely, 1) Supporters consisting of active student involvement, teacher support in guiding the project, and the relevance of the project theme to student life; 2) Obstacles from time limitations and differences in ability between students in contributing to group projects. The application of the Project-Based Learning (PJBL) model significantly improves students' understanding and critical thinking skills in the subject of Kalam Science in the Phase F class of SMA Negeri 14 Padang. Continuous

improvement during cycles I and II ensures the successful implementation of this learning model.

DISCUSSION

The application of media in learning, especially technology-based ones such as AI (Artificial Intelligence) applications, has great potential to improve Islamic Religious Education (PAI) learning outcomes in grade VII-1 SMPN 1 Panti. AI applications provide a new way to deliver more interactive and interesting material, as well as provide various features that can adapt to students' learning needs. In the context of PAI learning, AI applications are able to help students understand religious teaching material more deeply, as well as introduce them to technology that is relevant in today's world of education. One of the AI applications used in PAI learning is an application that provides interactive learning materials, such as videos, animations, and practice questions. With this app, students can learn in a more varied and fun way. For example, AI applications can present PAI materials with deep visualizations, such as Islamic historical stories, prophetic stories, or moral teachings in Islam. This makes it easier for students to understand topics that may be considered difficult if they are only conveyed through ordinary book texts. Additionally, AI applications allow for personalized learning, where students can get materials or exercises that match their level of understanding. The adaptive features in the app can assess students' abilities and provide advanced questions or materials according to the level of difficulty required by each student. For example, if a student successfully completes a problem, the application may provide a more difficult challenge, while a student who needs further guidance will be given basic material or questions of lower difficulty. This approach is very effective in improving overall student learning outcomes. The application of AI applications also supports independent learning, where students can learn anytime and anywhere without having to wait for teachers. With this application, students can access the material that has been taught in class, do reviews, and try to practice questions repeatedly.

This makes it easier for students to deepen their understanding of the PAI material that has been studied, without being limited to learning time at school. In addition, they can access a variety of references that may not be available in ordinary textbooks, which gives them a broader perspective on Islamic teaching materials. Not only does it help students learn more independently, the use of AI applications also makes it easier for teachers to monitor student learning progress. Teachers can access reports or analytics from the app that show the level of student understanding through the results of exams or exercises they have worked on. With this data, teachers can adjust more appropriate learning strategies according to student needs, as well as provide further guidance and explanations to students who have difficulty understanding the material. Additionally, AI applications provide a variety of features that allow collaboration between students. Through the discussion forum or question and answer feature in the application, students can exchange ideas and discuss the material they are learning. This not only improves students' understanding of PAI materials, but also develops their social and communication skills. Collaborative activities like this allow students to learn from the perspective of their peers and enrich their understanding through joint discussions.

In terms of improving learning outcomes, the use of AI applications in PAI learning also helps increase student motivation. When students feel that they can access the material interactively and easily, they will feel more challenged to put in more effort to learn. Apps that present material in an interesting way, with features such as gamification or repeatable questions, make the learning process more enjoyable. Students' motivation to learn PAI also increased, because they felt directly involved in the learning process, not just passively receiving information. Furthermore, the AI application used in PAI learning

also provides a learning experience that is more technology-based and relevant to the times. In the digital era like now, the introduction of technology in students is very important to prepare them to face global challenges. By using AI-based apps, students not only improve their understanding of Islamic teachings, but also gain technological skills that they can utilize in the future. It prepares students not only in the field of religion, but also in digital skills that are important in the modern world.

However, while the use of AI applications has many advantages, challenges remain, such as limited access to technology for some students, as well as potential dependence on electronic devices. Therefore, it is important for schools and teachers to ensure that the use of this application is supported by adequate infrastructure and does not replace the role of teachers in learning. Teachers continue to play the role of facilitators who provide guidance, feedback, and assist students in using the application wisely. The integration between the use of technology and conventional learning must be balanced to achieve optimal learning outcomes. The application of AI applications in Islamic Religious Education learning in grade VII-1 SMPN 1 Panti has been proven to improve student learning outcomes. By utilizing technology-based media, students have the opportunity to learn more interactively and independently, improve their understanding of Islamic teaching materials, as well as deepen their technological skills. Of course, with the right guidance from teachers, the use of this AI application will further enrich the learning experience of students and increase their motivation to learn better.

CONCLUSION

Based on the results of research conducted at SMP Negeri 1 Panti for the 2024-2025 Academic Year, it can be concluded that the application of media resulting from the use of AI Applications can improve student learning outcomes in Islamic Religious Education subjects in grade VII students at SMP Negeri 1 Panti. This can be seen from the results of increasing the value of Islamic Religious Education in class VII 1 Panti starting from each research cycle. In the first cycle of activities, the research of students whose scores were above the Minimum Completeness Criteria (KKM) was 75 as many as 12 people or 60% and the scores below the KKM were 9 people or 40%. In the second cycle, students whose scores were above the KKM increased by 14 people or 67% and the scores below the KKM were 7 people or 33%. In the third cycle, students whose scores were above the KKM increased by 17 people or 81% and the scores below the KKM were 4 people or 19%. Meanwhile, in cycle IV, students whose scores above the KKM increased by 19 people or 90% and the scores below the KKM by 2 people or 10%

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