Artificial Intelligence as a Learning Media for Islamic Religious Education in an Effort to Improve Student Learning Outcomes at SMA Negeri 2 Sipora

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Abstract: This study aims to improve student learning outcomes in Islamic religious education learning by using artificial intelligence as a learning medium. This study is a classroom action research that uses four steps, namely planning, action, observation and reflection. The subjects of this study were high school students. The data for this study were obtained by 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 artificial intelligence as a learning medium 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 48.71%, the first cycle 66.39% and in the second cycle it increased to 89.66%. Thus, the use of artificial intelligence as a learning medium can be used as an alternative to improve student learning outcomes in Islamic religious education learning.

Keywords: Artificial inlligence, learning media, islamic education, learning outcome.

INTRODUCTION

Education is a reflection of intelligence and the development and progress of a nation. Humans can develop their potential so that they are able to face every change caused by the advancement of science and technology. Education must be the top priority in building a nation and state. Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble morals, and skills needed by themselves, society, nation and state. The teaching and learning process in the world of education is a system that fosters a teacher's willingness to manage teaching as a whole.

In the teaching and learning process, teachers occupy a very central position, because their role is very decisive. Teachers must be able to translate and describe the content contained in the curriculum, then transform the content to students through the teaching and learning process. Apart from this, the improvement and development of the

quality of education is always expected not only to be the responsibility of teachers, but also school supervisors, even school committees and the community. The easy generation must be equipped with knowledge that will later become a provision for themselves, especially when they are involved in society, nation and state. Along with the development of the times and the development of technology today, it requires an improvement in the quality of human resources, which can only be done through education. Currently, the Indonesian nation is trying to improve the quality of human resources by developing the quality of education, by improving learning in schools.

Islamic Religious Education and Ethics plays an important role in shaping the character of students who have faith, piety, and noble character. In facing the challenges of the digital era, PAI learning in schools requires relevant innovations to remain interesting and effective. Students today are in a technology-filled environment, so conventional learning approaches are often less able to meet their learning needs. This is a special concern, especially at the high school level, where students need learning that not only hones religious knowledge, but also is able to motivate them to apply religious values in daily life. One solution to answer these challenges is to utilize artificial intelligence/AI-based technology. The use of AI-based Teaching Power Media offers an interactive, personalized, and adaptive learning experience, according to student needs. This medium is able to provide engaging material with animations, interactive videos, and technology-based assessments, which can increase student engagement in learning. Based on previous research, AI-based teaching media is able to create a more effective learning experience by providing direct feedback and allowing students to learn at their own pace (Hidayatullah, 2021).

At SMA Negeri 2 Sipora, student learning outcomes in PAI and Ethics subjects still show significant variations, with some students not reaching the Minimum Completeness Criteria (KKM). Some of the factors that affect this are the lack of use of interesting learning media, the dominant teaching method in the form of lectures, and the low motivation of students in participating in learning. This condition requires learning innovations that are able to stimulate students' interest in learning and improve their understanding of PAI materials in depth. The use of AI-based Teaching Media is expected to answer this problem. This media allows students to learn independently or in groups with a more contextual and fun learning experience. In addition, AI-based Teaching Media can accommodate various student learning styles, ranging from visual, auditory, to kinesthetic, so that learning becomes

more inclusive. Thus, it is hoped that the use of this media can improve student learning outcomes, both in cognitive, affective, and psychomotor aspects. Therefore, this study aims to analyze the use of AI-based Teaching Power Media in improving the learning outcomes of Islamic Religious Education and Ethics in grade XII students of SMA Negeri 2 Sipora. This research will also evaluate the extent to which the teaching media is able to overcome the learning obstacles that have been experienced by students and teachers. With the findings produced, this research is expected to contribute to the development of more innovative learning strategies that are relevant to current technological developments.

METHODS

Classroom Action Research is research conducted in a classroom to determine the consequences of actions applied to a research subject in the class. Meanwhile, according to Mills, in simple terms, classroom action research is a study that reports all situations, conditions, teaching and learning activities, then explains the problem and finds a solution with a specific action. Based on the above opinions, it can be concluded that classroom action research is PTK in the context of educators being willing to introspect, reflect, reflect or evaluate themselves so that their ability as an educator is expected to be quite professional and affect the quality and quality of education. In this case, by conducting

PTK, teachers can improve learning practices so that they become more effective. This study is a class action study that does not look at the presence of populations and samples because the impact of treatment only applies to subjects who are subject to action, so the subjects of the research in this study are students in grades IX-1 at SMA Negeri 2 SIPORA for the 2024/2025 academic year with a total of 15 students.

This research was carried out in the second semester of the 2024/2025 academic year. Meanwhile, the object of this research is an understanding of the concept of Islamic religious security in the first semester, inheritance material. The instruments used are, 1) Syllabus, which is a set of plans and arrangements for classroom management learning activities, as well as assessment of learning outcomes; 2) Learning implementation plan (RPP), which is a learning tool that is used as a guideline for teachers in teaching and is prepared for each round and meeting. Each lesson plan contains basic competencies, indicators of achievement of learning outcomes, learning objectives, and teaching and learning activities using predetermined learning methods and models; 3) Observation Sheet, this observation sheet is used to observe the activities of teachers and students in the learning process; 4) Formative Test, this test is prepared based on the learning objectives to be achieved, used to measure the ability to understand the concept of Islamic religious education in accordance with the material taught.

This formative test is given at the end of each round. The form of the question used is the teacher's choice (objective). Data collection in this study uses several methods, namely as follows,1) Observation is a method of collecting information materials (data) which is carried out by conducting systematic observations and recording of phenomena that are being used as objects of observation. In this study, observations were made by the researcher by observing the activities of students and teachers during the learning process of Islamic religious education using audio visual media; 2) Test. This technique is used to obtain data and information about student learning outcomes before and after the instruments used; 3) test questions that have been prepared by the researcher; 4) Documentation is a way of collecting data, such as archives and includes books on opinions, theories, postulates or laws, and values related to research problems. A document is a record of events that have passed. Documents can be in the form of writings, drawings, or monumental works of a person. The documentation referred to here is to find out the geographical location, history of its establishment, vision and mission, organizational structure, state of teachers and employees, students, facilities and infrastructure, as well as photos of learning activities in grade XII students of SMA Negeri 2 Sipora.

RESULTS

The learning outcomes of students in Islamic Religious Education Learning at SMA Negeri 2 Sipora Kep. Mentawai are seen by several evaluations from the end of each Cycle I and Cycle II learning. To see the extent of the improvement of student learning outcomes with the use of powerpoint media, on the material of love for the homeland and religious moderation, it can be found in the acquisition of scores for each cycle.

This study aims to analyze the impact of the use of Artificial Intelligence (AI)-based Teaching Media in improving the learning outcomes of Islamic Religious Education (PAI) and Ethics of grade XII students of SMA Negeri 2 Sipora. Based on the results obtained, the application of AI-based media shows a positive influence on student activities, motivation, and learning achievements.

This media presents a more interesting, interactive, and learning experience that is in line with the needs of 21st century learning. In the implementation of the research, AI-based Teaching Media is designed to support subject matter with interactive features, such as learning videos, interactive simulations, and technology-based quizzes. The observation results showed that students were more enthusiastic in participating in learning compared to conventional methods. AI-based media allows students to learn

independently and purposefully, so that students who were previously less active become more involved in discussions and learning activities. One of the important findings is the increase in student learning motivation. The use of AI-based technology attracts students because it provides more visual and responsive content. Students feel more motivated to learn because the media provides a more personalized experience, such as direct feedback and material adjustments based on individual abilities. This is in line with research conducted by Rahmat (2020), which shows that technology-based learning can increase student motivation and engagement. Analysis of learning outcomes showed a significant increase in students' average scores.

The data of the initial and final tests indicated that the majority of students experienced an increase in understanding of the material after using AI-based Power Teaching Media. In the cognitive aspect, students are able to master important concepts in PAI materials, such as the values contained in the Qur'an and Hadith, as well as the application of religious teachings in daily life. In addition to cognitive aspects, AI-based learning also improves students' affective and psychomotor aspects. In the affective aspect, students show a more positive attitude towards PAI learning, such as greater respect, care, and responsibility. Meanwhile, in the psychomotor aspect, students are more able to apply religious values in real life, such as carrying out worship more solemnly and showing behavior in accordance with Islamic teachings.

The increase in learning activities was also seen through the results of class observations. Students ask questions, answer questions, and discuss with peers more often. AI-based media provides a stimulus that encourages students to think critically and creatively. Students are invited to solve problems, analyze cases, and make decisions relevant to religious teachings. This process reflects active learning which is one of the principles of modern education.

However, this study also identifies several challenges in the application of AI-based Teaching Media Power. One of the main challenges is the inadequate technology infrastructure in schools, such as limited hardware, internet networks, and other supporting resources. In addition, there are also obstacles in the initial adaptation of students and teachers to this new technology. Some students need longer to get used to the use of AI-based media, while some teachers need specialized training to optimize the use of the media. To overcome these challenges, intensive training for teachers is urgently needed. Teachers must have a deep understanding of AI-based technologies and the ability to design learning that maximizes the potential of this medium. In addition, schools need to invest in the procurement of adequate technology and infrastructure to support the sustainability of AI-based learning programs.

Another advantage of AI-based Teaching Power Media is its flexibility in supporting differentiated learning. This media can be adjusted to the learning needs of each student, so that students who have different learning abilities can still follow the learning well. With this approach, students with low ability can get more mentoring, while students with high ability can explore more in-depth material. In addition, AI-based Teaching Power Media provides analytical data that is useful for teachers in monitoring student progress. Teachers can view reports on students' learning progress, strengths, and weaknesses based on the data generated by the media. This information helps teachers in designing more effective and evidence-based learning strategies. This research also found that AI-based Teaching Media supports collaborative learning. In some activities, students are invited to work together in groups to complete the assigned tasks. This collaboration not only improves learning outcomes, but also develops social skills, such as communication, cooperation, and leadership.

In terms of time effectiveness, the use of AI-based Teaching Media allows the learning process to take place more efficiently. Complex material can be delivered in a simpler and more interesting way through this media, so that students understand the content of the lesson faster. It also helps teachers to allocate more time to in-depth discussions and enrichment activities. The application of AI-based Teaching Power Media

not only has a positive impact on students, but also on teachers. Teachers feel more helped in conveying material that is difficult to explain verbally. With the support of this media, teachers can create more varied and creative learning, so that learning becomes more interesting for students. In the context of character development, AI-based media can be used to instill religious values more effectively. For example, through interactive videos that feature real-life scenarios, students are invited to understand the importance of applying religious values in daily life. This media also provides space for students to reflect on their understanding of the material being taught.

DISCUSSION

The use of Artificial Intelligence (AI)-based Teaching Media in Islamic Religious Education (PAI) and Ethics learning in grade XII of SMA Negeri 2 Sipora shows a significant impact in improving student learning outcomes. This media presents a learning experience that is more interactive, interesting, and relevant to the needs of the digital era. Based on the results of the study, students who were previously less enthusiastic about participating in lessons showed a significant increase in learning motivation after the application of AI-based media. They become more involved in the learning process, both individually and in groups, through interactive features such as animated videos and practical simulations.

The results of the analysis showed an increase in student learning outcomes in cognitive, affective, and psychomotor aspects. Cognitively, students are able to understand the material better, such as the concept of knowing the books of Allah, the meaning of the verses of the Qur'an, and the moral values contained in PAI. Affectively, students show a more positive attitude towards religious learning, such as a desire to learn more deeply and behave in accordance with Islamic values. In terms of psychomotor, students are more active in practical activities such as reading the Qur'an with tartil and carrying out worship simulations correctly. This success is also supported by AI features that are able to provide direct feedback to students. This media provides learning data analytics that make it easier for students to understand their mistakes and shortcomings independently. In addition, this media also provides flexibility for students to learn at their own pace, so that they are able to accommodate differences in learning abilities in the classroom. This adjustment is one of the important factors in supporting better learning outcomes. However, this study also found several obstacles in the application of AI-based Teaching Media Power.

The main obstacle is the inadequate technological infrastructure in schools, such as limited hardware and stable internet networks. In addition, some students and teachers need time to adapt to this new technology. However, with the support of intensive training for teachers and infrastructure improvements, these obstacles can be overcome gradually. Overall, the application of AI-based Teaching Power Media has proven to be effective in improving the quality of PAI learning at SMA Negeri 2 Sipora. In addition to providing better learning outcomes, this media also encourages students to learn independently, think critically, and apply religious values in daily life. With further development, AI-based media has great potential to become a key learning tool in the future, particularly in subjects that emphasize character development and spiritual values.

CONCLUSION

The results of this study support previous findings that show that AI-based technology has great potential in improving the quality of learning. However, the success of the implementation of this media is highly dependent on the commitment of all parties, including teachers, students, and schools, in supporting the technology-based learning process. By considering the advantages and challenges that exist, AI-based Teaching Media can be an innovative solution in improving the quality of PAI learning in schools. This research underscores the importance of technology integration in education, especially in

preparing students to face the challenges of the increasingly complex modern world. Overall, AI-based Teaching Power Media has proven to be effective in improving the learning outcomes of Islamic Religious Education and Ethics. This media not only has a positive impact on learning outcomes, but also on student motivation, social skills, and character development. With continuous improvement, this media has the potential to become one of the main tools in learning transformation in the digital era.

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