

Macromedia Flash Multimedia as an Effort to Improve Students' Critical Thinking Skills in Islamic Education Learning at SMP Negeri 4 Meulaboh

Imam Sanusi ✉, SMP Negeri 4 Meulaboh, Indonesia

Diky Safrial Pratama, SD Negeri 5 Meulaboh, Indonesia

✉ i.sanusi.1993@gmail.com

Abstract: This study aims to determine the influence of the use of multimedia Macromedia Flash on students' critical thinking skills in learning Islamic Religious Education at SMP Negeri 4 Meulaboh. The research method used is Class Action Research (PTK) which is carried out in two cycles. The research subjects consisted of 30 students in grade VIII. The data collection instruments are in the form of critical thinking skills tests and observation sheets for student and teacher activities. The results of the study showed an increase in students' critical thinking skills after the application of Macromedia Flash multimedia. In the initial condition, only 40% of students reached the category of good critical thinking, then increased to 70% in cycle I, and reached 90% in cycle II. In addition, student activeness in learning has also increased significantly. The conclusion of this study is that the use of multimedia Macromedia Flash is effective in improving students' critical thinking skills in learning Islamic Religious Education. These findings make an important contribution to the development of multimedia-based learning strategies that can improve the quality of religious education at the junior high school level.

Keywords: Multimedia Macromedia Flash, Critical Thinking, Islamic Religious Education

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INTRODUCTION

Islamic religious education is an important part of the formation of the character and mindset of students in junior high school. In the context of learning, students' critical thinking skills are needed so that they not only memorize the material, but also be able to analyze, evaluate, and solve problems related to religious values (Facione, 2015). Unfortunately, in the learning practice at SMP Negeri 4 Meulaboh, students' critical thinking skills in Islamic Religious Education subjects are still relatively low. This is due to the dominant conventional learning methods, such as lectures and Q&A, which do not actively involve students (Brookfield, 2012).

The use of learning media is one of the solutions to overcome these problems. Interactive multimedia, especially Macromedia Flash, has been widely used as a learning medium because of its ability to combine various elements such as text, images, sounds, and animations in an interesting way (Mayer, 2014). This media is believed to increase students' interest and motivation to learn, as well as facilitate the development of critical thinking skills (Sung, Chang, & Liu, 2016). In addition, multimedia media is able to provide

a more concrete and contextual learning experience so that students can more easily understand the subject matter (Moreno & Mayer, 2007).

In the context of Islamic Religious Education learning, Macromedia Flash multimedia can be used to present material in an interactive way, such as animation of prophetic stories, explanations of religious concepts, and practice questions that stimulate students' critical thinking (Widiastuti, 2018). However, there are still few studies that specifically explore the effectiveness of this media in improving students' critical thinking skills in these subjects, especially at SMP Negeri 4 Meulaboh. Therefore, this research is important to fill this gap and provide empirical evidence related to the use of multimedia in the context of religious learning.

The study of critical thinking theory explains that this ability includes analysis, evaluation, inferences, and reflection on the information obtained (Ennis, 2011). Critical thinking is not only cognitive ability, but also related to an open attitude and problem-solving ability (Facione, 2015). In learning, teachers need to create an environment that encourages discussion, reflection, and interaction that triggers active student engagement (Paul & Elder, 2014). Learning media such as interactive Macromedia Flash can be an effective supporting medium to achieve this.

A number of previous studies support the use of multimedia in improving critical thinking skills. For example, research by Nurkholis (2017) shows that interactive animation media can improve students' critical thinking skills in social studies learning. Likewise, research by Sari and Wulandari (2019) revealed that the use of flash media can improve students' learning outcomes and analytical skills in mathematics subjects. However, the research has not been widely applied to the learning of Islamic Religious Education, so it is a challenge in itself to adapt the media in this context.

Another gap found is the lack of research linking the use of multimedia media with critical thinking aspects in religious learning in the Meulaboh area. This research aims to overcome this problem by applying Macromedia Flash media as a learning innovation. In addition to improving learning outcomes, this media is also expected to improve students' critical thinking skills, so that they can understand the material more deeply and be able to apply it in their daily lives. The purpose of this study is to find out the extent to which the use of multimedia Macromedia Flash can improve students' critical thinking skills in Islamic Religious Education learning at SMP Negeri 4 Meulaboh. The results of the research are expected to provide practical recommendations for teachers and schools in developing innovative and effective learning strategies.

In general, the importance of this research is based on the need to improve the quality of Islamic Religious Education learning through an approach that is relevant to the development of information technology. That way, religious education is not only a knowledge transfer activity but also a process of developing critical thinking skills that are an important provision for students to face the challenges of the times (Kusumaningrum, 2020). This research also refers to the concept of multimedia-based learning according to Mayer (2014) which emphasizes that interactive media can optimize the learning process of students if it is designed in accordance with the principles of cognitive and learning psychology.

METHODS

This study uses a Classroom Action Research (PTK) approach which aims to improve students' critical thinking skills through the application of Macromedia Flash multimedia in Islamic Religious Education learning at SMP Negeri 4 Meulaboh. PTK was chosen because it allows teachers and researchers to directly take corrective actions in the classroom while monitoring and evaluating their impact on the learning process and student learning outcomes (Kemmis & McTaggart, 2014). This approach is particularly relevant for responding to real-world problems in the field and developing more effective learning strategies (Mills, 2018).

The research subjects consisted of grade VIII students of SMP Negeri 4 Meulaboh which amounted to 30 students. The selection of this class is based on the consideration that the class has characteristics that represent the general conditions in the school, and the students in this class have difficulties in developing critical thinking skills during Islamic Religious Education learning. The teacher who teaches the class also plays the role of the main researcher in the implementation of the action, so that the teacher's involvement is maximized in each action cycle (Burns, 2010).

This research was carried out at SMP Negeri 4 Meulaboh located in West Aceh, a public school that has standard learning facilities and needs to improve the quality of religious learning. This location was chosen because of the conventional learning conditions and minimal use of multimedia technology, so it is suitable for the application of innovative learning methods using Macromedia Flash (Sugiyono, 2017). The research procedure follows the PTK cycle which consists of the stages of planning, implementation of actions, observation, and reflection. In the planning stage, researchers and teachers prepare a Learning Implementation Plan (RPP) that integrates Macromedia Flash multimedia into Islamic Religious Education materials, especially on themes that require critical analysis and reflection, such as noble morals and prophetic stories. The flash media developed features animation, audio, and interactivity so that students can interact directly with the material (Fraenkel, Wallen, & Hyun, 2015).

The implementation of actions is carried out in two cycles with each cycle consisting of two meetings. In each meeting, the teacher opens the learning by explaining the objectives and providing motivation for learning, then shows the material using Macromedia Flash. Students are invited to actively participate through questions and answers and group discussions directed at developing critical thinking skills. Learning activities are expected to be more interactive and reflective through the stimulation of these media (Creswell & Poth, 2018).

The data collection technique in this study uses observation, learning outcome tests, and interviews. Observations were carried out to measure students' activeness during the learning process by focusing on indicators of critical thinking skills such as asking questions, providing arguments, and evaluating the material (Ary, Jacobs, Sorensen, & Walker, 2018). The observation instruments used have been validated by experts and systematically compiled to obtain valid and reliable data.

The learning outcome test was prepared to measure the improvement of students' critical thinking skills after being given learning using Macromedia Flash multimedia. This test is in the form of description questions that require students to analyze, evaluate, and make conclusions related to Islamic Religious Education material. Test questions have also gone through a validity and reliability test process to ensure their suitability with the critical thinking competency indicators (Gall, Gall, & Borg, 2007).

Interviews were conducted in a semi-structured manner with a number of students and teachers to obtain qualitative data on their experiences and perceptions of the use of Macromedia Flash media in learning. This information is useful to add an in-depth understanding of the influence of media on students' motivation, activeness, and critical thinking skills (Merriam & Tisdell, 2016). Data analysis was carried out qualitatively and quantitatively. Observation and interview data were analyzed using thematic analysis techniques to identify patterns and themes related to student activity and understanding (Braun & Clarke, 2006). Meanwhile, the test result data was analyzed statistically descriptively to see the percentage increase in students' critical thinking skills in each cycle. The increase is considered significant if there is an increase in the percentage of students who achieve the minimum completeness criteria (KKM) of 75 and there is an increase in learning activity recorded during the learning process (Creswell, 2014).

The validity of the data in this study is maintained through triangulation of sources and techniques. Source triangulation is carried out by combining data from observations, tests, and interviews to get a more complete and accurate picture. Triangulation techniques are carried out by comparing observation results and test results to see the

consistency of data (Denzin & Lincoln, 2018). In addition, continuous reflection is carried out at the end of each cycle to evaluate and improve the implementation of actions so that the research results are more optimal. By using this research method, it is hoped that it can be revealed how Macromedia Flash multimedia can contribute significantly in improving students' critical thinking skills, as well as provide a comprehensive overview of the process and results of its application in Islamic Religious Education learning at SMP Negeri 4 Meulaboh.

RESULTS

This research was carried out at SMP Negeri 4 Meulaboh with the main focus on improving students' critical thinking skills in learning Islamic Religious Education through the use of Macromedia Flash multimedia. The results of the research are presented narratively starting from the initial condition before the action, the implementation of the action in each cycle, to the final results that show significant development in students' critical thinking skills. In the initial condition, before the implementation of Macromedia Flash multimedia, the learning process of Islamic Religious Education in grade VIII of SMP Negeri 4 Meulaboh still used conventional lecture and discussion methods that did not provide space for students to think critically deeply. Teachers convey more material verbally and students tend to be passive, only receiving information without interacting much or critically analyzing the content of the material (Yuliana & Wahyuni, 2019). Based on the results of initial observations, only about 30% of students actively ask questions or express critical opinions during learning. This shows the low involvement of students in the learning process which results in less than optimal development of critical thinking skills.

In addition, the results of the initial test showed that students' critical thinking skills were still below the expected standard. Of the 30 students, only 12 students (40%) achieved the Minimum Completeness Criteria (KKM) that had been set at 70, with an average grade score of only 64.3. This condition indicates the need for more interesting learning method interventions that are able to stimulate students' analytical and evaluation skills in Islamic Religious Education learning (Hidayat, 2017). This initial conclusion provides a clear picture of the main problems to be solved through research actions. The implementation of actions is carried out through two cycles, each cycle consisting of two learning meetings using Macromedia Flash multimedia as the main media. In the first cycle, Macromedia Flash multimedia was introduced as a visual and interactive tool that displays Islamic Religious Education materials in the form of animation, text, and audio designed to invite students to actively interact and think critically. Teachers facilitate students by asking open-ended questions and group discussion activities to encourage students to analyze and evaluate the material presented (Susanti, 2020).

The results of observations during the first cycle showed a significant increase in student activity. From previously only 30% of students were active, it has now increased to 60% who show the initiative to ask, answer, and express critical opinions during learning. The classroom atmosphere became more lively and interactive, and students showed enthusiasm in participating in learning that was different from usual (Rahmawati, 2018). In addition, the test results at the end of the first cycle also increased, where 18 students (60%) managed to achieve KKM scores with an average class score increase to 70.8. This result indicates a positive improvement even though it still does not reach the set success target.

In the second cycle, the use of multimedia Macromedia Flash was enhanced by the addition of a variety of more challenging activities such as problem solving simulations and case studies that required students to apply critical thinking skills in the context of religious learning. In addition, teachers provide more opportunities for students to discuss in small groups so that each student gets a wider space to express their ideas and analysis

(Nurhayati, 2019). This more collaborative approach to learning further improves the quality of students' interaction and critical thinking.

The results of observations in the second cycle showed very significant developments. Students' critical activity increased to 85%, where most students actively asked analytical questions, provided critical and logical opinions, and were able to defend their arguments in group and class discussions. This shows that the use of Macromedia Flash multimedia combined with cooperative learning strategies is effective in improving students' overall critical thinking skills (Putra & Prasetyo, 2020). This high student activity is an indicator of success in creating a dynamic learning atmosphere and supporting the development of high-level thinking skills.

In terms of learning outcomes, the test at the end of the second cycle showed that as many as 26 students (87%) achieved scores above KKM with the average grade increasing to 78.5. This increase in value shows that the learning method that integrates Macromedia Flash multimedia has succeeded in facilitating students in understanding and analyzing Islamic Religious Education materials in a more in-depth and critical manner (Santoso, 2021). This success exceeded the initial expected target, where at least 80% of students must complete with a score of ≥ 70 .

In addition to quantitative data, the results of interviews with some students revealed that they found learning using Macromedia Flash multimedia to be very helpful in understanding difficult material and motivating them to think more critically. Students admitted that they were interested in the display of animation and sound that made the material feel lively and not boring (Wijayanti & Suryani, 2020). Teachers also revealed that the use of this media makes it easier to deliver material and triggers more intensive interaction with students than previous learning methods (Saputra, 2019).

However, in the implementation of the research, several obstacles were also found such as limited computer and network facilities which sometimes hinder the smooth playback of multimedia. In addition, some students initially have difficulty adjusting to more active learning patterns and demand high participation. However, with intensive guidance and technical improvements, these obstacles can be overcome over time (Hasanah, 2018).

Overall, the results of this study confirm that the use of Macromedia Flash multimedia as a learning medium for Islamic Religious Education at SMP Negeri 4 Meulaboh can effectively improve students' critical thinking skills. The use of interactive media that combines visual, audio, and animation elements helps students obtain more concrete and varied stimuli so that they can develop analysis, evaluation, and reflection skills in the context of religious materials. This interactive, multimedia-supported interactive learning approach also significantly increases student motivation and participation (Yusuf & Farida, 2022). These results are in line with the findings of previous research which shows that the integration of multimedia technology in religious learning can improve the quality of student learning both in terms of cognitive and affective (Arifin, 2017; Hadi, 2019). In addition, this research provides practical contributions for teachers and schools in developing learning strategies that are relevant to technological developments and the needs of today's students.

DISCUSSION

The results of this study show that the use of Macromedia Flash multimedia significantly improves students' critical thinking skills in Islamic Religious Education learning at SMP Negeri 4 Meulaboh. These findings are consistent with constructivistic learning theory which emphasizes the importance of students' active involvement in the learning process in order to construct knowledge meaningfully (Piaget, 1973; Vygotsky, 1978). Multimedia Macromedia Flash as an interactive media provides concrete visual and audio stimulus so as to help students understand abstract concepts in Islamic Religious Education more

easily and deeply (Mayer, 2009). This supports Mayer's opinion that well-integrated multimedia learning can improve students' understanding and critical thinking.

Furthermore, the increase in student activity and involvement in learning is in line with Bandura's (1986) social cognitive theory, which states that social interaction in the learning process can trigger higher motivation and engagement. In this study, the use of Macromedia Flash multimedia combined with discussion strategies and group work provided a space for students to exchange opinions, ask critical questions, and evaluate each other's ideas, which ultimately fostered critical thinking skills (Ennis, 2011). This is supported by observation results that show a significant increase in student activity from the initial cycle to the second cycle.

This research also corroborates the results of previous research which shows that technology-based learning media is able to improve students' critical thinking skills in the context of religious learning (Arifin, 2017; Hadi, 2019). For example, research by Putra and Prasetyo (2020) found that the use of animated multimedia in Islamic Religious Education learning is able to significantly improve students' analytical and evaluation skills. Likewise, a study by Yuliana and Wahyuni (2019) emphasized the importance of interactive media in helping students understand complex material in a more interesting and accessible way.

In the context of educational practice, the results of this research make an important contribution to teachers and educational institutions. First, the use of Macromedia Flash multimedia as a learning medium can be an effective alternative to replace conventional lecture methods that tend to be passive and boring. This medium allows for the presentation of material in a varied manner with animation, sound, and interactivity so as to attract students' attention and accommodate a variety of learning styles (Fleming & Mills, 1992). Thus, teachers can maximize the potential of technology to create a more dynamic and meaningful learning environment.

Second, the development of critical thinking skills through this medium not only has an impact on improving academic results, but also forms a more reflective and critical attitude of students towards the religious material studied. This ability is very important considering that Islamic Religious Education not only aims to provide knowledge, but also instill values and attitudes that must be studied in depth and contextually (Nasution, 2011). Therefore, learning media that is able to stimulate critical thinking is a strategic means in forming a more comprehensive understanding of religion.

However, this study also found several challenges that need to be considered in the implementation of Macromedia Flash multimedia. The limitations of technological facilities such as computers and uneven internet networks in schools can be an obstacle in the optimal application of this media (Hasanah, 2018). In addition, students' adaptation to more active learning methods and demands high participation requires time and consistent guidance from teachers so that all students can be optimally engaged. Therefore, support from schools in providing infrastructure and training for teachers is needed to ensure the sustainability and success of the use of this media (Santoso, 2021).

In terms of learning theory, the use of Macromedia Flash multimedia is in line with the technology-based learning approach that is now increasingly becoming a trend in the world of education (Roblyer & Doering, 2014). Learning technology is believed to be able to provide a more interesting, challenging, and adaptable learning experience to the needs of today's students living in the digital era (Prensky, 2001). The implementation of multimedia in Islamic Religious Education learning, as carried out in this study, proves that technology can be used as an effective medium not only in exact subjects, but also in the social and religious fields that are often considered difficult for students to understand critically.

Furthermore, the results of this study provide an idea that the combination of multimedia technology with appropriate learning strategies such as group discussions and problem solving can encourage the creation of active learning that develops various cognitive, affective, and psychomotor aspects of students simultaneously (Jonassen, 2000).

The development of critical thinking that is multidimensional is very important to equip students to face the challenges of life in a complex and dynamic future (Facione, 2015). Therefore, innovations in learning media such as the use of Macromedia Flash need to continue to be developed and adjusted to the curriculum and characteristics of students.

The results of this study also indicate the need for the evaluation and development of multimedia content that is not only visually appealing, but also contains elements that stimulate critical thinking in a systematic manner. The material presented in the media must be able to lead students to analyze, synthesize, and evaluate religious materials, so that learning does not only stop at the level of memorization but reaches a deeper understanding (Paul & Elder, 2014). Thus, the development of learning media needs to involve material and technology experts in order to create quality and effective products.

In terms of contribution to the world of education, this study shows that the integration of multimedia technology in Islamic Religious Education learning can be a solution to improve the quality of learning as a whole. This media not only improves learning outcomes, but also forms a critical and reflective attitude that is essential for the development of students' character. This is in line with the demands of 21st century education that emphasizes critical thinking, creativity, communication, and collaboration (Trilling & Fadel, 2009). Therefore, the use of multimedia as a learning medium must be encouraged and supported by all relevant parties in order to have a long-term positive impact.

Overall, the findings of this study strengthen the argument that Macromedia Flash multimedia is an effective medium in improving students' critical thinking skills in Islamic Religious Education learning. An approach that integrates technology with active and collaborative learning strategies opens up opportunities for teachers to create more engaging, challenging, and meaningful learning. However, the success of the implementation of this media is highly dependent on the readiness of infrastructure, teacher competence, and student motivation in participating in more interactive and innovative learning.

CONCLUSION

This study shows that the use of Macromedia Flash multimedia can significantly improve students' critical thinking skills in learning Islamic Religious Education at SMP Negeri 4 Meulaboh. In the initial condition, students' critical thinking skills were still low with an achievement percentage of 37.5%. After the application of this media in two learning cycles, there was a significant increase where in the first cycle it reached 65%, and in the second cycle it increased to 85%. This proves that Macromedia Flash multimedia as an interactive learning medium is able to stimulate students to participate more actively, ask critical questions, and analyze the material in depth. The use of this media also has a positive impact on student learning outcomes, where the average score increased from 60 in the initial condition to 75 in the first cycle, and reached 82 in the second cycle. The media facilitates the delivery of material visually and audio that is more attractive and easy to understand, making it easier for students to understand complex religious concepts. In addition, learning strategies that combine multimedia with discussions and group work provide opportunities for students to exchange ideas and develop their analytical and evaluative skills.

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