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THE IMPLEMENTATION OF SCRATCH LEARNING MEDIA TO IMPROVE STUDENTS' LEARNING OUTCOMES AND LEARNING ACTIVITIES IN THE FIQH SUBJECT FOR GRADE V AT MI AL-MA'ARIF SIDOLAJU NGAWI

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Abstract. This study aims to improve student learning outcomes and engagement through the use of technology-based introductory learning media in the Fiqh subject at MI Al-Ma'arif Sidolaju Ngawi. The problem underlying this study is the low level of student participation and learning outcomes that have not yet met the Minimum Passing Criteria (KKM), caused by the dominance of traditional teaching methods and the limited use of learning media appropriate to the students' characteristics. This study employs a Classroom Action Research (CAR) approach using the Kemmis and McTaggart model, conducted over two cycles. The research subjects consisted of 22 Year 5 pupils in the 2024/2025 academic year. Data collection techniques included observation of pupil activities, learning outcome tests, interviews, and documentation. Each cycle comprised the planning, implementation, observation, and reflection stages. The results of the study showed an increase in student learning activity from 51.6% in cycle I to 57.92% in cycle II. Furthermore, the average learning outcome score increased from 63 in cycle I to 80 in cycle II. These findings indicate that the use of technology-based introductory learning media is effective in enhancing student engagement and learning outcomes in the subject of Fiqh. This study is limited by a small sample size, the scope of a single class, and a relatively short research duration, so the results cannot yet be generalized widely. Therefore, future research is recommended to involve larger samples, more diverse contexts, and longer implementation periods to obtain more comprehensive findings.

Keywords: Scratch, Learning Media, Fiqh, Learning Outcomes

Abstrak. Penelitian ini bertujuan untuk meningkatkan hasil belajar dan keterlibatan siswa melalui penggunaan media pembelajaran pengantar berbasis teknologi pada mata pelajaran Fiqih di MI Al-Ma'arif Sidolaju Ngawi. Penelitian ini menggunakan pendekatan Penelitian Tindakan Kelas (PTK) dengan model Kemmis dan McTaggart yang dilaksanakan dalam dua siklus. Subjek penelitian terdiri atas 22 siswa kelas V tahun ajaran 2024/2025. Teknik pengumpulan data meliputi observasi aktivitas siswa, tes hasil belajar, wawancara, dan dokumentasi. Setiap siklus mencakup tahap perencanaan, pelaksanaan tindakan, observasi, dan refleksi. Hasil penelitian menunjukkan adanya peningkatan aktivitas belajar siswa dari 51,6% pada siklus I menjadi 57,92% pada siklus II. Selain itu, nilai rata-rata hasil belajar meningkat dari 63 pada siklus I menjadi 80 pada siklus II. Temuan ini menunjukkan bahwa penggunaan media pembelajaran pengantar berbasis teknologi efektif dalam meningkatkan keterlibatan dan hasil belajar siswa pada mata pelajaran Fiqih. Penelitian ini terbatas pada jumlah sampel yang kecil, ruang lingkup satu kelas, serta durasi penelitian yang relatif singkat sehingga hasilnya belum dapat digeneralisasikan secara luas. Oleh karena itu, penelitian selanjutnya disarankan untuk melibatkan sampel yang lebih besar, konteks yang lebih beragam, serta periode implementasi yang lebih panjang guna memperoleh temuan yang lebih komprehensif.

Kata Kunci: Scratch, Media Pembelajaran, Fiqih, Hasil Pembelajaran

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INTRODUCTION

Education in the 21st century faces significant challenges, particularly in aligning learning approaches with the characteristics of students who grow up in a digital environment. Rapid technological development has shaped how children access information, communicate, and construct knowledge, which in turn requires learning processes that are more interactive, visual, and contextual. In this situation, conventional instructional practices that rely heavily on verbal explanation and textbooks are increasingly unable to meet students' cognitive and motivational needs (Isnaini et al., 2021). Consequently, teachers are expected to design learning experiences that are not only pedagogically sound but also relevant to students' digital realities.

The strategic role of learning media in addressing these challenges has been widely emphasized in educational theory and practice (Mushaffa et al., 2025). Bruner's theory highlights that learning becomes more effective when instructional media align with students' stages of cognitive development, enabling abstract concepts to be understood more concretely. Similarly, in the context of Islamic education, Al-Ghazali emphasized the importance of teaching aids in strengthening comprehension and accelerating the internalization of knowledge. These perspectives position learning media not merely as supplementary tools, but as essential components in creating meaningful and effective learning experiences, particularly for subjects that demand conceptual understanding and practical application (Islam et al, 2025).

Despite this theoretical consensus, practical implementation in schools often lags behind. Many classrooms still depend on traditional methods such as lectures, board writing, and printed textbooks. This gap between theory and practice has direct implications for student motivation, engagement, and learning outcomes. At MI Al-Ma'arif Sidolaju, this condition is evident in Fiqh learning, where students' achievement remains below the Minimum Mastery Criteria. Fiqh is frequently perceived as difficult and monotonous because it is taught with minimal visualization and limited opportunities for interaction, even though it plays a crucial role in shaping students' religious understanding and character formation.

The urgency of this problem lies in the mismatch between the abstract and contextual nature of Fiqh material and the instructional strategies currently used to teach it. Without appropriate learning media, students struggle to connect legal concepts and religious principles with real-life situations. If this condition persists, it may not only hinder cognitive achievement but also weaken students' appreciation and internalization of Islamic values. Therefore, there is a pressing need for innovative learning media that can bridge this gap by presenting Fiqh content in a more concrete, engaging, and student-centered manner.

Responding to this need, Scratch-based learning media offer a promising alternative. Scratch is a visual programming application that allows the creation of animations, simulations, and interactive learning activities. Its design aligns closely with the learning preferences of digital-native students, enabling them to explore concepts actively rather than passively receive information. While previous studies have examined the general effectiveness of interactive media in improving learning outcomes, limited research has focused specifically on the use of Scratch in Fiqh learning at the elementary school level.

Previous research has shown that the use of Scratch-based media is effective in improving student learning outcomes, but it is generally still limited to general subjects. For example, a study by Isnaini et al. (2021) found that utilizing the Scratch application as a learning medium for elementary school students was able to increase motivation and learning engagement, although it has not been specifically applied to religious subjects such as Fiqh. In addition, Juliyana et al. (2024) developed game-based learning media using Scratch in science and social studies learning and showed a significant improvement in student learning outcomes. However, these studies still focus on media development and have not integrated it into classroom action-based learning designs that emphasize the continuous enhancement of student activity and participation.

Based on this gap, this study has novelty in integrating Scratch media into Fiqh learning in elementary schools through the Classroom Action Research (CAR) approach, which not only focuses on learning outcomes but also on systematically increasing students' activity and engagement within the context of Islamic education. The novelty of this study lies in its integration of Scratch as an instructional medium within the context of Fiqh education through a classroom action research design. This study does not only evaluate learning outcomes, but also emphasizes student engagement and participation as key indicators of instructional effectiveness. By situating Scratch-based media within authentic classroom practice at MI Al-Ma’arif Sidolaju, this research contributes both theoretically and practically: theoretically, by extending the application of digital learning media theories to Islamic education, and practically, by providing an evidence-based model for improving Fiqh instruction in primary schools.

METHOD

This study uses the Classroom Action Research (CAR) method with the Kurt Lewin model. Classroom action research is research conducted by carrying out actions implemented by teachers in their own classrooms through self-reflection, with the aim of improving their performance as teachers, so that student learning outcomes increase.

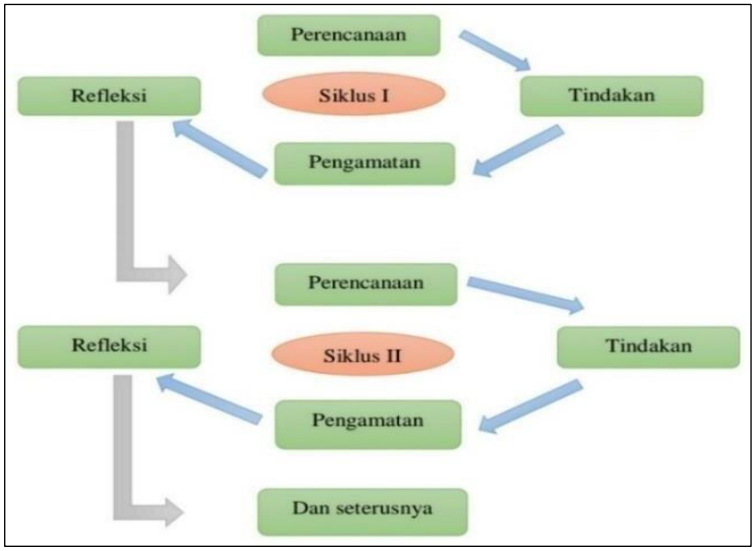

Figure 1. Kurt Lewin Procedure

The model in this study consists of two cycles, in which each cycle includes four stages: planning, implementation, observation, and reflection. This research was conducted at Mi al-Ma'arif Sidolaju and Ngawi with 22 students as the subjects in Grade V in the 2024/2025 academic year.

This study employed a classroom action research (CAR) approach using the Kemmis and McTaggart model, which consists of planning, action, observation, and reflection stages. The research was conducted in two cycles to allow continuous improvement of the learning process based on reflection from each cycle. This design enabled systematic evaluation and refinement of learning strategies to enhance student learning outcomes and classroom engagement. The learning media used was Scratch, a visual and interactive programming platform that supports the development of animations, simulations, and simple games related to learning content. Data were collected through observations, tests, interviews, and documentation. Observations focused on student participation and learning activities, while written tests were used to measure students' cognitive achievement at the end of each cycle. Interviews with teachers and students were conducted to obtain deeper insights into the effectiveness of the media, and documentation supported the research process through records and visual evidence.

Data analysis combined quantitative and qualitative techniques. Quantitative analysis was used to calculate learning outcome scores and activity percentages across cycles, while qualitative analysis examined changes in student behavior and responses during the learning process. The results of each cycle were compared with predetermined success indicators to assess the effectiveness of Scratch-based media in improving student engagement and learning outcomes in Fiqh at the Madrasah Ibtidaiyah level.

Quantitative Analysis

Observation Data Analysis, Observation data were analyzed by calculating the percentage of student engagement using the formula:

$$P = \frac{F}{N} x100$$

Notes:
P = Percentage of student engagement
F = Number of actively involved students
N = Total number of students

Test Data Analysis, Test results were calculated to see the average student scores and the improvement between the first and second cycles. The formula for the average score:

$$X = \frac{\sum X_i}{N}$$

Notes:
X = Average score
$\sum xi$ = Total score of all students
N = Number of students

Qualitative Analysis

Interview and documentation data were analyzed using descriptive methods to describe the views and experiences of teachers and students related to the use of SCRATCH Media. This information was used to strengthen quantitative findings and provide deeper insights (Sembring et al., 2022). With a combination of quantitative and qualitative analysis, this study can provide a comprehensive picture of the effectiveness of SCRATCH Media in increasing student engagement and learning outcomes.

RESULTS AND DISCUSSION

This study uses SCRATCH learning media to improve the learning outcomes of Grade 5 students at MI Al-Marif Sidolaju in the Fikih subject. This study was conducted in two cycles, where each cycle consisted of one meeting. The implementation of Scratch creates an interactive, enjoyable learning atmosphere that is in accordance with the characteristics of today's students. This media is able to overcome students' boredom toward Fikih learning, which was previously abstract in nature. The visualizations and animations in Scratch help students understand worship concepts in a more concrete way. These findings support constructivist learning theory, which emphasizes active student involvement in the learning process (Nashih et al., 2024). The classroom action research method used includes four main stages, namely planning, implementation, observation, and reflection.

Cycle I

After identifying the problem, the researcher began the learning planning process, which is one of the steps in the learning process. This planning included searching for appropriate methods to improve the learning process and preparing a learning plan, which covered: determining learning topics and tools, arranging appropriate learning methods and steps, setting indicators, and organizing appropriate data collection instruments (Islam & Syaifudin, 2024).

Figure 1. Learning activities for cycle I

Figure 1 illustrates the implementation of learning activities in Cycle I after the planning stage was completed. As shown in the figure, the teacher begins the lesson by introducing the topic of Zakat and Qurban and explaining the learning objectives to students. The Scratch-based learning media is then used to present the material in a visual and interactive form, allowing students to observe animations and simulations related to the concepts being taught.

The figure also depicts student involvement during the learning process, where students actively pay attention to the media and participate in classroom activities guided by the teacher. This stage reflects the teacher's readiness in managing the class and utilizing Scratch as a modeling-based medium to support concept understanding. However, based on observations in Cycle I, student participation was not yet optimal, as some students were still passive and relied heavily on teacher guidance.

The implementation of the action was carried out on December 10 for 30 minutes, starting from 10:30 to 11:00, with a total of 22 students. In this implementation, there were initial activities, core activities, and closing activities. Based on the data obtained in the first cycle in the Fikih subject, the researcher concluded that the level of student activeness reached 51.46% and satisfactory learning outcomes were at 18%, however, the overall level of student learning mastery had not yet been achieved, which was 82%. Therefore, the researcher continued the study to the second cycle by using Scratch-based learning methods in Fikih instruction to improve student activeness and their learning outcomes. Furthermore, the researcher prepared a plan for the second cycle as preparation for the implementation of learning in that cycle.

Cycle II

After the implementation of Cycle I, the observation results indicated that students had begun to show active participation in Fikih learning, although their engagement and learning outcomes had not yet reached the expected indicators. Based on these findings, the researcher proceeded to Cycle II by preparing follow-up actions, including revising learning devices, refining evaluation questions, and improving observation instruments in collaboration with the school (Islam et al., 2024). This reflective step is consistent with the principles of Classroom Action Research, which emphasize continuous improvement through iterative cycles.

Figure 2. Learning activities and student engagement in cycle II

Figure 2. Illustrates the learning process in Cycle II, where students demonstrate higher levels of engagement during Fikih lessons using Scratch-based media. The figure shows students actively paying attention to the media, interacting with the teacher, and participating in learning activities. This visual evidence supports the quantitative findings, confirming that improvements in learning design and media utilization in Cycle II contributed to increased student activeness and better learning outcomes.

The implementation of Cycle II was conducted on December 10 for 30 minutes, from 10:30 to 11:00, involving 22 students. Learning activities were structured into three stages: initial, core, and closing activities. The initial activities aimed to create a conducive learning atmosphere and to stimulate students' motivation and readiness to learn. This stage is crucial in Islamic education, as it integrates academic learning with character and spiritual development, helping students internalize values alongside cognitive understanding (Islam et al., 2025; Juliyana et al., 2024). During the core activities, Scratch-based learning media were used more intensively to support students' understanding of Zakat and Qurban concepts. Students were encouraged to observe animations, respond to teacher prompts, and participate in discussions related to the material. These activities were designed to foster holistic development, encompassing intellectual engagement, emotional involvement, and spiritual reflection, in line with the goals of contemporary Islamic education (Amelia et al., 2025). The closing activities focused on reinforcing key concepts and reflecting on learning experiences.

The results of Cycle II showed a clear improvement compared to Cycle I. Student activeness increased from 51.46% in Cycle I to 57.92% in Cycle II, indicating a positive change in participation and classroom engagement. Furthermore, the average learning outcome score increased substantially from 63 to 80. This improvement suggests that Scratch-based learning media effectively support active learning and enhance students' understanding of Fikih material. These findings are consistent with previous studies showing that interactive and visual media can increase student motivation, participation, and learning outcomes, particularly at the elementary level (Isnaini et al., 2021; Juliyana et al., 2024).

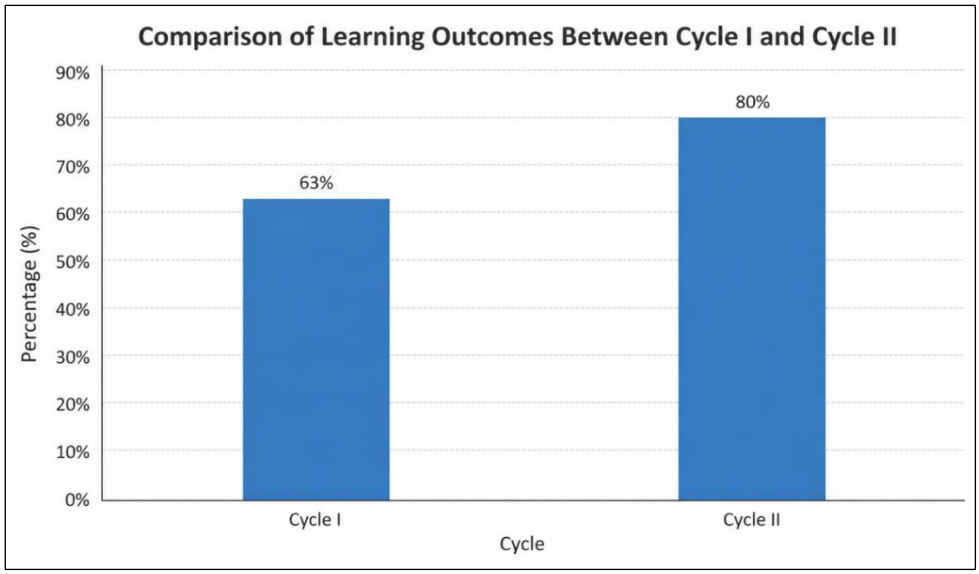

Figure 3. Comparison of learning outcomes between cycle I and cycle II

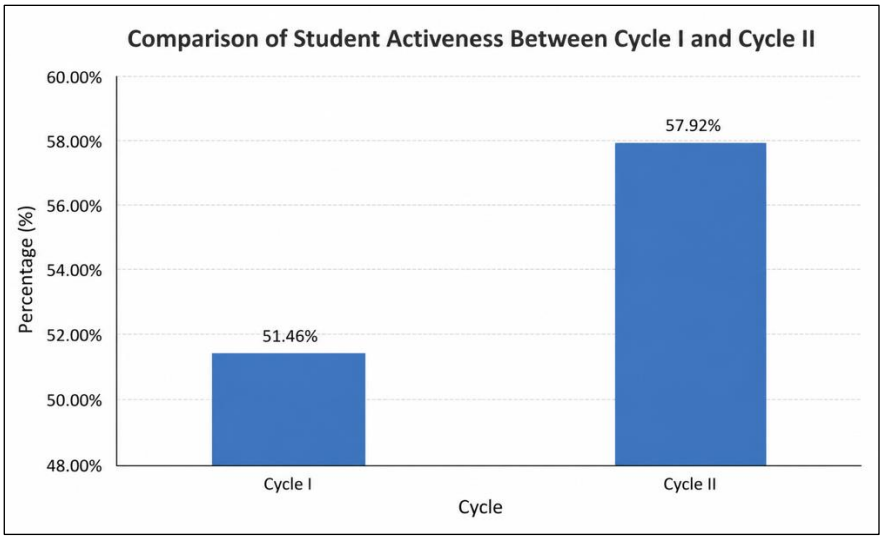

Figure 4. Comparison of student activeness between cycle I and cycle II

The implications of this study indicate that the use of Scratch-based learning media plays a strategic role in improving the quality of Fiqih learning in elementary schools, both in terms of the process and learning outcomes. The increase in student activity and learning outcomes suggests that the integration of technology can bridge the gap between the abstract characteristics of Fiqih material and students' learning needs, which are more visual and interactive. These findings emphasize the importance of digital-based learning innovation as an alternative to less effective conventional methods, while also encouraging teachers to develop competencies in utilizing educational technology. Thus, the implementation of media such as Scratch not only impacts the enhancement of student engagement but also contributes

to strengthening 21st-century skills and the relevance of learning with the demands of the digital era.

CONCLUSION

The results obtained from this Classroom Action Research (CAR) indicate an improvement in both the learning process and student learning outcomes in the Fikih subject, especially after the implementation of technology-based learning media, namely Scratch. Scratch is a visual programming application that allows students to learn in a more interactive, enjoyable, and easily understood way, thereby stimulating their interest and enthusiasm for learning. The main objective of this study is to improve the quality of learning, not only in terms of understanding the material, but also in terms of active student participation, emotional engagement, and the development of 21st-century skills such as critical thinking, creativity, and problem-solving abilities.

The use of Scratch learning media has proven to be effective in improving learning outcomes and learning activities of Grade V students at MI Al-Ma'arif Sidolaju in the Fikih subject. Scratch is able to bridge conventional learning with a technological approach that is relevant to the times. This study is also expected to make a real and positive contribution to the world of education, which includes: for teachers, this research can serve as inspiration or a model in developing technology-based learning strategies that are appropriate to student characteristics and teaching materials. For students, the use of media such as Scratch provides a more meaningful learning experience and encourages them to be more active and independent in learning. For schools, the results of this study can be used as evaluation material as well as innovation in improving the quality of learning, especially in the implementation of educational digitalization. For the world of education in general, this research is expected to help address the challenges of the times, where technology has become an inseparable part of the learning process. Finally, it is greatly hoped that the results of this study can be used as an important and useful reference in developing adaptive and innovative learning approaches, especially those based on technology, so that quality educational goals that are relevant to the needs of the times can be achieved optimally.

The limitations of this study lie in several methodological and contextual aspects. First, this study was only conducted in one class with a relatively small number of subjects, so the generalization of the research results is still limited to similar contexts. Second, the classroom action research design used only consisted of two cycles with a relatively short duration, so it has not been able to illustrate the long-term impact of using Scratch media on learning

outcomes and student engagement. Third, the study focused only on one Fiqh material, namely zakat and qurban, so the effectiveness of this media on other materials cannot yet be confirmed. In addition, this study has not examined in depth external factors such as differences in students' initial abilities, the support of facilities and infrastructure, as well as teachers' technological competence, which can affect the success of implementing Scratch-based learning media. Therefore, it is recommended that future research involve a larger sample, a longer duration, and more diverse variables in order to obtain more comprehensive results that can be generalized.

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