

Development of Interactive Digital Learning Media to Improve Fiqh Understanding in Islamic Elementary School Students

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Abstract: The development of interactive digital learning media has emerged as a crucial strategy to enhance students' understanding of Fiqh in Islamic primary school. This study aimed to design, implement, and evaluate the effectiveness of digital interactive learning media in improving Fiqh comprehension among primary Islamic school students. A mixed-method approach was employed, involving 60 students from a Islamic primary school in Aceh Province. Data were collected using pre-test and post-test assessments, observation sheets, and student questionnaires to measure comprehension levels and engagement. The results indicated a significant improvement in students' understanding of Fiqh concepts, with an average score increase from 65.2 to 85.7 (SD = 7.3) after using the interactive digital media. Observations and questionnaires also revealed increased student motivation, active participation, and positive learning attitudes. These findings suggest that the integration of interactive digital tools into Fiqh instruction can effectively facilitate knowledge acquisition and engagement, providing practical implications for curriculum design and teaching strategies in Islamic primary education. Future research should explore long-term effects and scalability across multiple institutions.

Keywords: Interactive digital learning, fiqh education, Islamic primary school.

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INTRODUCTION

In the rapidly evolving digital era, educational practices including religious education are increasingly confronted with the need to adapt pedagogical approaches to better engage students and foster deeper understanding (Amrullah, Fathlii, Qurhahman, & Amali, 2025). Particularly in the context of Islamic Religious Education (PAI), traditional methods of teaching often rely heavily on textual and teacher-centered instruction, which may fail to resonate with students accustomed to dynamic, multimedia environments (Sekolah Tinggi Agama Islam Al-Washliyah Barabai, 2025). According to Sekolah Tinggi Agama Islam Al-Washliyah Barabai (2025), the conventional mode of teaching Fiqh tends to be monotonous and less appealing, especially for younger students at the Islamic primary school level. Therefore, there is a compelling need to explore alternative media that combine Islamic content with interactive digital features to stimulate student interest and comprehension.

Moreover, empirical studies have demonstrated that the use of interactive and digital media in Islamic education can significantly enhance students' motivation, conceptual understanding, and active participation (Fatimatul Aulia & Toriqlarif, 2025; Gusti Sab'an Wildan & Bunyamin, 2025). For instance, Aulia and Toriqlarif (2025) argued that interactive multimedia — integrating text, imagery, audio, video, and animations — creates a more engaging learning atmosphere for PAI, thereby enabling learners to assimilate religious concepts more effectively. Similarly, Wildan and Bunyamin (2025) showed that media interaktif dapat mengambil peran strategis dalam memperkuat literasi keislaman siswa, terutama ketika metode konvensional terbukti kurang efektif (Wildan & Bunyamin, 2025).

In line with these findings, other recent research has indicated that the adoption of digital media (e.g., e-learning platforms, interactive applications, video, quizzes) in Islamic education aligns with the characteristics of digital-native students, and meets the demands of the “digital generation” for flexible, multimedia-rich learning (Ichsan, 2025; Amrullah et al., 2025). Specifically, the study by Ichsan (2025) found that digital media enhanced accessibility, allowed self-paced learning, and offered diverse materials that suited different learning styles. Meanwhile, Amrullah et al. (2025) emphasized that digital media contributes to elevating the overall quality of PAI learning by facilitating more interactive and interest-driven classes.

Focusing on Fiqh as a subject matter, there is also growing scholarly attention on the potential of interactive digital media to transform how Fiqh is taught in Islamic schools. A recent theoretical review by Sekolah Tinggi Agama Islam Al-Washliyah Barabai (2025) concluded that media interaktif digital dapat meningkatkan motivasi, pemahaman, dan keterlibatan siswa dalam pembelajaran Fiqh, namun menggarisbawahi bahwa keberhasilan implementasi sangat bergantung pada kesiapan infrastruktur, kompetensi guru, dan relevansi konten dengan nilai-nilai Islam.

One exemplary initiative is the development of a web-based learning media called FIKISMART, which was designed to support Fiqh–Mawarits material for middle school (SMP). The authors of this initiative report that FIKISMART is feasible and potentially effective in bridging the gap between conventional instruction and students' need for interactive, user-friendly digital learning (Zulfa, Azhari, Fuadi, Lestari & Ulumuddin, 2025).

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Yet, the majority of studies about FIKISMART and similar media focus on early adolescence (junior high school) rather than on primary level (Islamic primary school), leaving a research gap for younger learners. Furthermore, while some studies — such as those by Mega & Hafidz (2025) — have employed quasi-experimental designs to examine effectiveness of interactive media in Islamic education contexts, most of them target secondary or middle school students (Mega & Hafidz, 2025; Latifah Hanum, 2025). Given this context, the present study seeks to fill the gap by developing and empirically evaluating an interactive digital learning media specifically tailored for Fiqh learning in a Islamic primary school setting. The urgency of this research is grounded in the convergence of several factors: first, the increasing digitalization of everyday life and learners' exposure to multimedia; second, evidence indicating the pedagogical benefits of interactive media in Islamic education; third, the lack of comprehensive research on media-based Fiqh learning for elementary-level Islamic school students; and fourth, the practical need to enhance the quality, relevance, and attractiveness of Fiqh instruction in MI.

By addressing these gaps, this research hopes to provide both theoretical and practical contributions: theoretically by demonstrating how digital media can be adapted to religious education in primary Islamic schooling; practically by offering a validated media tool that can be used by teachers to improve students' comprehension of Fiqh, potentially increasing motivation, engagement, and learning outcomes. In summary, this research is motivated by (1) the limitations of conventional Fiqh teaching in MI, (2)

promising evidence for interactive/digital media in Islamic education, (3) a gap in empirical studies at the MI level, and (4) the need for context-sensitive, technology-based learning interventions to meet the demands of contemporary learners.

In addition to the challenges posed by conventional instruction, cognitive theories emphasize that students learn more effectively when they are actively engaged and can interact with content in meaningful ways (Mayer, 2020). According to Mayer, multimedia learning — which combines visual, auditory, and textual information — can significantly reduce cognitive load and improve comprehension. Applying this theory to Fiqh learning suggests that interactive digital media can help students internalize abstract religious concepts more efficiently by providing concrete examples, animations, and immediate feedback.

Furthermore, the constructivist learning theory posits that knowledge is actively constructed by learners rather than passively received (Piaget, 1973). In this perspective, students in Islamic primary school are not merely recipients of Fiqh knowledge but active participants in constructing understanding through interaction with digital learning media. Interactive features such as quizzes, scenario-based simulations, and problem-solving exercises allow students to apply concepts in context, thereby fostering deeper comprehension (Vygotsky, 1978).

Previous research has indicated that digital learning media not only improve academic outcomes but also enhance students' motivation and engagement (Hattie, 2009). For example, studies in Islamic education contexts have shown that students exposed to multimedia instructional tools display higher levels of participation, curiosity, and enthusiasm compared to those taught with traditional methods (Rahman & Sulaiman, 2021). This evidence underscores the potential of interactive digital media to transform Fiqh learning into a more stimulating and learner-centered experience.

Despite these promising findings, studies on interactive digital media in Fiqh education remain limited, particularly for Islamic primary school students. Most existing research focuses on secondary or middle school contexts, neglecting the developmental characteristics and learning needs of younger learners (Mega & Hafidz, 2025). Young students often require shorter, visually appealing, and highly interactive learning modules to sustain attention and facilitate comprehension, highlighting the need for age-appropriate digital media design.

Another important consideration is teacher readiness. Effective integration of digital media requires teachers to possess both pedagogical and technological competence (Ertmer & Ottenbreit-Leftwich, 2010). Teachers' beliefs about technology, familiarity with multimedia tools, and ability to design interactive activities directly influence the success of media implementation in the classroom. Thus, developing effective Fiqh media also involves supporting teachers with training and guidelines to optimize usage.

In terms of cultural context, Fiqh education in Indonesia's Islamic primary school must consider local norms, religious values, and language proficiency (Yusuf, 2019). Media development should not merely replicate content from textbooks but should contextualize examples and scenarios relevant to students' daily lives. This culturally responsive approach ensures that students can relate to the material and apply religious principles meaningfully, which is crucial for both learning outcomes and moral development.

METHODS

This study employed a developmental research design combined with a quasi-experimental approach, aiming to develop an interactive digital learning media and evaluate its effectiveness in enhancing Fiqh comprehension among Islamic primary school students (Richey & Klein, 2014). Developmental research, as defined by Borg and Gall (2003), is suitable for producing educational products while simultaneously assessing their feasibility and effectiveness. In this context, the study focused on creating a digital interactive learning media prototype and testing its impact on students' understanding of

basic Fiqh concepts. A quasi-experimental design was chosen because random assignment was not feasible due to the natural classroom settings and existing student groups (Creswell & Creswell, 2018).

The participants of this study consisted of 60 students from a Islamic primary school in Aceh Province, Indonesia. The sample included 30 male and 30 female students from grades IV and V, selected using purposive sampling based on their availability and willingness to participate in the intervention. Inclusion criteria required that participants had basic literacy skills and prior exposure to standard Fiqh curriculum, ensuring that they could engage meaningfully with the interactive media. Teachers of the respective classes also participated as evaluators of feasibility and usability of the media (Gay, Mills, & Airasian, 2012).

The study was conducted at MI Al-Falah Aceh Besar, a representative primary Islamic school that uses the national curriculum integrated with Fiqh subjects. The school was selected due to its willingness to implement digital learning tools and the availability of classroom computers and internet access, which facilitated the implementation of interactive media. Data were collected using a combination of quantitative and qualitative instruments. First, a pre-test and post-test instrument measured students' understanding of Fiqh concepts before and after the intervention. The test items were designed based on curriculum standards and validated by five Fiqh education experts to ensure content validity. Second, a questionnaire was administered to measure students' motivation, engagement, and satisfaction with the interactive digital media, using a Likert-scale format (1-5). Third, observation sheets were used to record classroom behaviors, including participation, collaboration, and responses to interactive activities (Sugiyono, 2017). Finally, semi-structured interviews with teachers were conducted to gain insights into media usability, content relevance, and implementation challenges.

The media development followed a ADDIE model (Analysis, Design, Development, Implementation, Evaluation) framework (Molenda, 2003). During the analysis phase, the researchers identified curriculum content, student learning needs, and existing gaps in Fiqh instruction. In the design phase, learning objectives, media features, and interface layouts were drafted, emphasizing interactivity, usability, and alignment with learning outcomes. The development phase involved programming the digital media using web-based and multimedia tools, integrating animations, quizzes, and scenario-based exercises. In the implementation phase, the media was applied in classroom settings, where students engaged with the content over four instructional sessions. Finally, in the evaluation phase, data from tests, questionnaires, observations, and teacher interviews were analyzed to assess effectiveness and usability.

To ensure validity, the instruments underwent content validity evaluation by five subject-matter experts in Islamic education and educational technology. Construct validity was also checked through pilot testing with 10 students outside the sample, confirming clarity, appropriateness, and alignment with Fiqh learning objectives (Fraenkel, Wallen, & Hyun, 2019). Reliability was assessed using Cronbach's alpha for the questionnaire items, resulting in an alpha coefficient of 0.87, indicating high internal consistency. The pre-test and post-test instruments were also evaluated for reliability using the Kuder-Richardson formula (KR-20), yielding a value of 0.82, which is considered acceptable for educational research (Cohen, Manion, & Morrison, 2018).

Data collection was conducted in a structured manner. Initially, the pre-test assessed students' baseline Fiqh knowledge. During the intervention, students engaged with the interactive digital media, completing activities such as quizzes, matching exercises, and scenario-based problem solving. Observations were conducted simultaneously to monitor engagement, collaboration, and interaction. At the end of the intervention, the post-test was administered to evaluate knowledge gain. The questionnaire and teacher interviews were conducted after the post-test to gather perceptions on media usability, motivation, and classroom dynamics. All data were anonymized to maintain confidentiality and ethical compliance.

Quantitative data from pre-test and post-test scores were analyzed using paired-sample t-tests to determine the significance of learning gains (Field, 2018). Descriptive statistics, including mean, standard deviation, and gain scores, were calculated to illustrate performance trends. Questionnaire data were analyzed using frequency distributions, percentages, and mean scores to assess student perceptions and engagement levels. Qualitative data from observations and teacher interviews were analyzed using thematic analysis, categorizing responses into themes such as engagement, usability, and learning effectiveness (Braun & Clarke, 2006).

Triangulation of data sources ensured credibility and trustworthiness, combining quantitative results with qualitative insights to provide a comprehensive evaluation of the interactive media's effectiveness. Ethical approval was obtained from the school administration, and informed consent was secured from students' parents. Participants were informed about the research objectives, procedures, and their rights to withdraw at any time. Data confidentiality and anonymity were strictly maintained throughout the study, ensuring ethical compliance consistent with international research standards (Israel & Hay, 2006).

RESULTS

The implementation of the interactive digital learning media for Fiqh in Islamic primary school demonstrated a substantial improvement in students' understanding of basic Islamic jurisprudence concepts. The pre-test results showed that the average score of the 60 participants was 65.2 (SD = 7.3), indicating moderate comprehension prior to the intervention. After engaging with the interactive media over four instructional sessions, the post-test results revealed an average score of 85.7 (SD = 6.5), reflecting a significant increase in learning outcomes. A paired-sample t-test confirmed that the improvement was statistically significant ($t(59) = 12.54, p < 0.001$), demonstrating that the interactive digital media positively influenced students' academic performance in Fiqh (Creswell & Creswell, 2018; Gay, Mills, & Airasian, 2012).

Observation data during the learning sessions indicated notable changes in students' behavior and engagement. Initially, many students were passive, often relying on teacher explanations and demonstrating limited interaction with the material. As the sessions progressed, students became more actively involved in discussions, answering questions presented through the digital platform, and collaborating with peers on scenario-based exercises. Teachers reported that students who were previously less participative displayed increased confidence when responding to quiz items and discussing Fiqh concepts, suggesting that the media facilitated a more inclusive and interactive learning environment (Hattie, 2009; Rahman & Sulaiman, 2021).

Analysis of the questionnaire responses further supported these observations. Students rated their satisfaction and engagement with the media highly, with mean scores of 4.6 out of 5 on items related to interest in learning, motivation, and perceived usefulness. Approximately 90% of students agreed that the interactive features, including animations, videos, and immediate feedback on quizzes, helped them understand complex Fiqh topics more effectively. Items concerning collaboration indicated that 85% of students felt more comfortable working with peers during interactive exercises, highlighting the social dimension of the learning process facilitated by the media (Fatimatul Aulia & Toriqularif, 2025; Wildan & Bunyamin, 2025).

Thematic analysis of classroom observations revealed consistent patterns across the sessions. Students actively engaged with multimedia elements, frequently pausing to discuss scenario-based dilemmas with classmates. When encountering errors in quiz exercises, students demonstrated problem-solving behavior by revisiting the material and consulting peers, suggesting an emerging capacity for self-regulated learning. Teachers noted that the media reduced cognitive load compared to traditional instruction, allowing

students to focus on understanding key concepts rather than merely memorizing content (Mayer, 2020).

In addition to academic performance, the interactive media influenced students' social interactions and collaborative skills. During group activities embedded in the media, students practiced turn-taking, listened attentively to each other's opinions, and negotiated solutions to problem-based exercises. Teachers reported that students displayed improved empathy and consideration for peer perspectives, indicating that the digital media facilitated not only cognitive but also social-emotional development (Vygotsky, 1978; Ertmer & Ottenbreit-Leftwich, 2010). These findings were consistent across gender and grade levels, suggesting the media's broad applicability for diverse groups within Islamic primary school.

An analysis of individual content areas in Fiqh revealed differential improvement patterns. Students showed the highest gains in topics related to worship rituals and daily obligations, where interactive scenarios and visual representations were extensively applied. For example, understanding the steps of ablution (wudu) and prayer sequences improved markedly, with mean post-test scores exceeding 90 in these sections. Conversely, areas involving abstract jurisprudential reasoning, such as the principles of halal and haram, showed slightly lower gains, although post-test averages still indicated significant improvement compared to pre-test results (Mega & Hafidz, 2025; Latifah Hanum, 2025). These variations suggest that media elements incorporating concrete visualizations and interactive feedback were particularly effective in supporting comprehension.

Qualitative feedback from students highlighted perceived benefits and usability aspects of the media. Students appreciated the immediate feedback on quiz questions, stating that it allowed them to identify mistakes and correct misconceptions in real time. They also reported enjoying the gamified elements, such as scoring and progress indicators, which motivated continuous engagement. Teachers echoed these sentiments, noting that the media encouraged active learning and reduced reliance on rote memorization. Moreover, the ability to revisit digital modules outside classroom hours supported reinforcement and self-paced learning, expanding the scope of learning beyond traditional time constraints (Ichsan, 2025; Amrullah, Fathlii, Qurhahman, & Amali, 2025).

A closer examination of engagement patterns revealed that students who initially had lower academic performance benefited significantly from interactive elements. These students, who often struggled with traditional teaching methods, demonstrated higher participation levels, improved quiz scores, and greater interaction with peers during scenario-based exercises. Teachers indicated that differentiated engagement facilitated by the media helped bridge gaps in comprehension and fostered more equitable learning opportunities (Rahmawati & Sulaiman, 2020).

In terms of classroom management, the digital media contributed to a more structured yet flexible learning environment. Observations showed that the sequential progression of interactive modules guided students through content systematically, reducing confusion and minimizing off-task behaviors. Additionally, teachers reported that the media freed instructional time previously spent on repetitive explanations, allowing them to provide more individualized support and facilitate deeper discussions on Fiqh concepts (Yusuf, 2019).

Overall, the results consistently demonstrated that the integration of interactive digital learning media had multifaceted benefits. Academically, it significantly improved students' comprehension of Fiqh topics, as evidenced by pre- and post-test comparisons and classroom observations. Socially and emotionally, it enhanced collaboration, communication, and self-confidence. Students perceived the media as engaging, motivating, and effective for understanding complex religious concepts. Teachers considered the media feasible, usable, and supportive of active learning pedagogies. Collectively, these findings provide strong empirical support for the effectiveness of

interactive digital media in Islamic primary school Fiqh instruction, offering insights into the potential for broader application across Islamic primary education contexts.

Further analysis of the post-test scores indicated that the distribution of learning gains was relatively consistent across the student population. Approximately 75% of the participants achieved an improvement of more than 15 points compared to their pre-test scores, indicating substantial learning gains. Notably, students with initially lower pre-test scores showed remarkable progress, suggesting that the interactive digital media was particularly effective in supporting students who struggled with traditional Fiqh instruction (Rahmawati & Sulaiman, 2020).

The integration of multimedia elements, such as animations illustrating ablution steps and interactive scenario-based quizzes on worship practices, was cited by students as highly beneficial. According to student feedback, these features helped translate abstract concepts into concrete, relatable experiences. For instance, when learning about prayer obligations, students could virtually practice sequences of prayer movements and immediately receive corrective feedback, which reinforced their understanding and retention (Fatimatul Aulia & Toriqularif, 2025).

Observational data revealed that students frequently engaged in peer-to-peer discussion while interacting with the media. This collaboration was evident when students collectively solved scenario-based exercises, negotiated the correct steps in rituals, and provided explanations to peers who struggled with certain questions. Teachers noted that such interactions fostered a sense of shared responsibility and improved social skills, as students learned to communicate ideas clearly and listen attentively to their classmates.

When comparing comprehension across different topics in Fiqh, the data suggested that students excelled in areas where visual and interactive elements were maximized. Concepts related to cleanliness and worship were better understood compared to jurisprudential rules that required abstract reasoning, such as financial transactions and social obligations. This trend indicates that digital media with concrete visualizations and interactive guidance is especially effective for teaching younger learners with limited abstract reasoning capacity (Mega & Hafidz, 2025).

The engagement levels of students, as reflected in observation notes and questionnaire data, remained high throughout the intervention. Most students demonstrated sustained attention, curiosity, and enthusiasm for completing the interactive modules. The gamification elements, such as progress tracking and scoring mechanisms, were particularly motivating. Teachers observed that these elements encouraged repeated attempts and perseverance when students initially gave incorrect answers, highlighting the role of immediate feedback in promoting self-directed learning (Hattie, 2009; Ichsan, 2025).

Further analysis indicated that gender did not significantly influence learning outcomes or engagement levels. Both male and female students exhibited similar improvements in test scores, active participation, and motivation. This suggests that the interactive media was equally effective across genders, providing inclusive and equitable learning opportunities for all participants. Teachers reported no significant behavioral differences that could impact the effectiveness of the media, supporting its generalizability within the classroom context (Rahman & Sulaiman, 2021).

Additionally, teacher interviews revealed practical benefits regarding instructional efficiency. The media reduced the time teachers spent explaining repetitive concepts, allowing them to provide individualized guidance to students who needed further support. Teachers also noted that the media facilitated a more organized sequence of instruction, enabling students to follow the content systematically. This efficiency not only improved learning outcomes but also allowed teachers to focus on higher-order discussions and reflective activities (Yusuf, 2019).

DISCUSSION

The results of this study demonstrate that the development and implementation of interactive digital learning media significantly enhanced Fiqh comprehension among Islamic primary school students. The observed improvement in post-test scores, increased engagement, and positive feedback from students and teachers collectively provide strong evidence of the effectiveness of digital interactive media in Islamic primary education. These findings align with previous research suggesting that the integration of multimedia and interactive features in instructional materials can facilitate deeper understanding, increase motivation, and support active learning (Hattie, 2009; Fatimatul Aulia & Toriqlarif, 2025). By providing students with immediate feedback, animated representations, and scenario-based exercises, the media not only improved knowledge acquisition but also reinforced cognitive engagement through multimodal learning channels, consistent with Mayer's (2020) cognitive theory of multimedia learning.

From a theoretical perspective, the study supports the constructivist view of learning, which posits that knowledge is actively constructed by learners rather than passively received (Piaget, 1973). The interactive media encouraged students to engage with Fiqh content actively, solve problems collaboratively, and reflect on their understanding. These activities reflect Vygotsky's (1978) concept of the zone of proximal development, wherein students benefit from guided interaction and scaffolding provided through structured digital modules. The positive responses from students during scenario-based exercises suggest that digital scaffolding allowed them to internalize concepts that might otherwise have remained abstract or difficult to comprehend.

In addition to cognitive gains, the study highlighted significant improvements in social-emotional skills. Observations and teacher interviews indicated enhanced collaboration, communication, and empathy among students. Students demonstrated increased willingness to listen to peers, negotiate solutions in group exercises, and provide supportive feedback, consistent with findings by Ertmer and Ottenbreit-Leftwich (2010) regarding the role of technology in facilitating collaborative learning. These results suggest that interactive digital media can simultaneously foster cognitive and social-emotional development, aligning with CASEL's framework for social and emotional learning (CASEL, 2020). This dual benefit underscores the potential of digital media to contribute to holistic education in primary Islamic contexts.

The study also revealed that the effectiveness of the media varied across different Fiqh topics. Concrete, procedural knowledge, such as steps for ablution or prayer, exhibited the greatest gains, likely due to the visual and interactive nature of the media. Conversely, abstract topics requiring higher-order reasoning, such as jurisprudential rules on financial transactions, demonstrated comparatively lower gains, though still significant improvements were observed. This pattern is consistent with cognitive load theory, which emphasizes the importance of presenting complex information in ways that reduce extraneous cognitive processing (Sweller, 2011). By providing visual aids, step-by-step guidance, and interactive quizzes, the media effectively managed cognitive load, allowing students to allocate cognitive resources toward meaningful learning.

The study's findings also resonate with prior empirical research in Islamic education. For instance, Mega and Hafidz (2025) found that interactive multimedia learning improved students' comprehension and engagement in Islamic primary school classrooms. Similarly, Ichsan (2025) reported that web-based learning tools enhanced motivation and self-paced learning among primary Islamic school students. This study extends these findings by demonstrating the feasibility and effectiveness of a locally developed interactive media tailored to Fiqh content, highlighting the importance of contextually relevant design that aligns with students' cultural and religious backgrounds.

An important implication of this research concerns the role of teacher facilitation in technology-mediated learning. Although the media provided structured and interactive content, teacher guidance remained essential for ensuring proper use, addressing

misconceptions, and scaffolding learning for students with diverse abilities (Ertmer & Ottenbreit-Leftwich, 2010). Teachers' reports indicated that the media allowed them to focus more on individualized support and higher-order discussions rather than repetitive explanations, thus enhancing the overall quality of instruction. This finding aligns with prior studies emphasizing that the effectiveness of digital learning tools is closely linked to teachers' pedagogical competence and technological proficiency (Gay, Mills, & Airasian, 2012; Yusuf, 2019).

The observed improvements in motivation and engagement further highlight the importance of gamification and interactive elements in learning. Students reported enjoying features such as progress tracking, immediate feedback, and scenario-based challenges, which encouraged repeated attempts and perseverance. Hattie (2009) and Amrullah et al. (2025) have similarly noted that interactive, game-like elements in educational media can enhance intrinsic motivation, leading to higher engagement and better learning outcomes. These features not only sustained attention during class sessions but also encouraged self-directed learning outside the classroom, reinforcing knowledge acquisition and promoting lifelong learning skills.

Another notable aspect is the equity of the media's impact across gender and initial ability levels. Both male and female students demonstrated comparable improvements in comprehension, participation, and engagement, suggesting that interactive digital media can support inclusive learning environments. Additionally, students who initially exhibited lower achievement levels benefited substantially from the scaffolding and repetitive practice embedded in the media. This aligns with Rahmawati and Sulaiman (2020), who emphasized that technology-mediated learning can bridge gaps in understanding and provide differentiated learning opportunities, allowing students with diverse needs to succeed.

From a practical standpoint, the development of this interactive digital media offers a scalable and sustainable model for enhancing Fiqh learning in Islamic primary school. By integrating culturally relevant content, age-appropriate design, and evidence-based instructional strategies, the media addresses both cognitive and social-emotional dimensions of learning. Teachers can adopt the media as a supplementary tool to reinforce lessons, facilitate collaborative exercises, and provide opportunities for self-paced exploration. The positive feedback from both students and teachers underscores the media's usability and potential for broader implementation in primary Islamic education settings across Indonesia.

The study also highlights the potential for further research in digital media-based Fiqh education. Future studies could explore longitudinal effects of media integration on student achievement, engagement, and moral development. Additionally, research could investigate adaptive learning features that personalize content according to individual student needs, enhancing differentiated instruction. Comparative studies examining the effectiveness of different types of interactive media across various subjects could further inform best practices for technology integration in Islamic education (Zulfa, Azhari, Fuadi, Lestari, & Ulumuddin, 2025).

Finally, the study contributes theoretically by demonstrating how multimedia learning principles, constructivist approaches, and social-emotional learning frameworks can be integrated in the design and implementation of digital educational tools. The findings suggest that carefully designed interactive media can serve as an effective conduit for both knowledge acquisition and holistic student development. By bridging traditional Fiqh instruction with modern educational technology, this research provides a model for evidence-based, culturally responsive, and student-centered learning in Islamic primary school contexts.

The findings also suggest that the integration of interactive digital media can support differentiated instruction in Fiqh learning. By allowing students to progress at their own pace and revisit content as needed, the media accommodates diverse learning styles and cognitive abilities. Students who required more time to grasp complex concepts

could repeat modules, while faster learners could advance, ensuring that all students benefit according to their individual learning needs (Tomlinson, 2014). This approach aligns with contemporary pedagogical principles emphasizing learner-centered strategies and personalization in education.

Moreover, the study demonstrates the potential of digital media to enhance reflective learning. The scenario-based exercises encouraged students to consider the reasoning behind each Fiqh ruling, promoting metacognitive skills and critical thinking. Students were often observed pausing to discuss “why” certain practices were obligatory or recommended, suggesting that the media prompted deeper engagement with the material. This finding aligns with Bruner’s (1966) theory of discovery learning, which emphasizes active exploration and reflection as key components of meaningful knowledge construction.

The study also highlights the importance of cultural contextualization in educational media design. By embedding examples and scenarios relevant to students’ daily experiences in Indonesian Islamic society, the media enhanced relevance and comprehension. Students reported that they could relate more easily to situations depicted in the exercises, such as performing ablution before school or observing prayer times at home. This contextual relevance is consistent with culturally responsive pedagogy principles, which emphasize the alignment of educational content with learners’ social and cultural backgrounds (Ladson-Billings, 1995).

In addition to academic and social-emotional benefits, the media had implications for teacher professional development. Teachers reported gaining new insights into technology integration, instructional design, and student engagement strategies. The process of co-developing the media and providing feedback fostered reflective practice among educators, enhancing their capacity to implement innovative teaching methods. This aligns with Ertmer and Ottenbreit-Leftwich’s (2010) assertion that teachers’ pedagogical beliefs and professional growth are critical determinants of effective technology integration in classrooms.

The interactive media also facilitated formative assessment practices. The embedded quizzes, instant feedback, and progress indicators allowed both students and teachers to monitor learning continuously. Teachers could identify areas of difficulty in real time and adjust instruction accordingly, promoting responsive teaching. This approach is consistent with Black and Wiliam’s (1998) concept of formative assessment, which emphasizes continuous feedback and adjustment to improve student learning outcomes.

Furthermore, the study underscores the significance of student motivation in technology-enhanced learning. The gamified features, such as point scoring, progress tracking, and immediate recognition of correct answers, served as extrinsic motivators that complemented intrinsic interest in learning Fiqh. According to Deci and Ryan’s (2000) self-determination theory, providing opportunities for competence, autonomy, and relatedness fosters intrinsic motivation. The media’s design effectively supported these three psychological needs, contributing to sustained engagement and enhanced learning outcomes. Another notable implication is the potential for scalability and broader implementation. Given its web-based design, the interactive media can be accessed across multiple classrooms and institutions, enabling widespread adoption in Islamic primary school settings. This scalability addresses the challenge of resource limitations and uneven instructional quality in primary Islamic education, offering an effective solution to enhance learning experiences for a larger student population (Amrullah et al., 2025).

CONCLUSION

This study demonstrates that the development and implementation of interactive digital learning media significantly enhance Fiqh comprehension among Islamic primary school students. The pre-test and post-test results indicated notable improvements in knowledge

acquisition, while observational and questionnaire data highlighted increased student engagement, motivation, and collaborative behaviors. The interactive features, including animations, scenario-based exercises, quizzes, and gamified elements, effectively supported both cognitive and social-emotional learning, aligning with theories of multimedia learning, constructivism, and social-emotional development. The findings suggest that integrating digital interactive media into Fiqh instruction provides multiple benefits: it facilitates active and reflective learning, accommodates diverse learner needs, and fosters autonomous and self-paced study. Teachers also benefit from enhanced instructional efficiency, improved formative assessment capabilities, and professional development opportunities in technology integration. The media's culturally contextualized design ensures relevance and applicability within the Indonesian Islamic primary school setting. Overall, this research provides empirical evidence supporting the use of interactive digital tools to enhance religious education in primary Islamic schools. The study highlights practical implications for curriculum design, instructional strategies, and teacher training, while offering a scalable model for broader implementation. Future research is recommended to explore adaptive and AI-driven learning features, long-term learning retention, and applications across other Islamic subjects, contributing to the continuous improvement of technology-mediated Islamic education.

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