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The Use of Solite Kids Interactive Learning Media to Improve Fiqh Learning Outcomes in Madrasah

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Abstract
Technological advancements in education require teachers to present engaging and enjoyable learning experiences that align with the characteristics of today's digital generation. The use of technology-based learning media, such as Android applications, offers a solution for creating a more interactive and effective learning environment. This study aims to examine the effectiveness of the Android-based interactive learning media *Solite Kids* in improving student learning outcomes in the Fiqh subject for seventh-grade students at MTsN 3 Kota Surabaya. The research method used is a quasi-experimental design with a pretest-posttest control group format. Data were collected through pretest and posttest assessments administered to two classes: class VII G as the experimental group using *Solite Kids*, and class VII H as the control group using conventional teaching methods. Data analysis included normality testing, homogeneity testing, and an independent sample t-test using SPSS software. The results showed that the average posttest score of the experimental group increased to 80.17, while the control group achieved an average of 70.83. The independent sample t-test yielded a significance value (2-tailed) of 0.009 < 0.05, indicating that H_0 is rejected and H_a is accepted. Therefore, it can be concluded that the Android-based interactive learning media *Solite Kids* is effective in improving Fiqh learning outcomes among seventh-grade students at MTsN 3 Kota Surabaya.

Keywords: Learning Media, Android Solite Kids, Fikih Learning Outcomes

Abstrak
Kemajuan teknologi dalam dunia pendidikan menuntut guru untuk mampu menyajikan pembelajaran yang menarik, menyenangkan, dan sesuai dengan karakteristik generasi digital saat ini. Penggunaan media pembelajaran berbasis teknologi seperti aplikasi Android menjadi solusi untuk menciptakan suasana belajar yang lebih interaktif dan efektif. Penelitian ini bertujuan untuk mengetahui efektivitas media pembelajaran interaktif berbasis Android Solite Kids dalam meningkatkan hasil belajar siswa pada mata pelajaran Fikih kelas VII MTsN 3 Kota Surabaya. Metode penelitian yang digunakan adalah Quasi Experimental Design dengan bentuk pretest-posttest control group. Pengumpulan data dilakukan melalui tes awal (pretest) dan tes akhir (posttest) pada dua kelas, yaitu kelas VII G sebagai kelas eksperimen yang menggunakan media Solite Kids, dan kelas VII H sebagai kelas kontrol yang menggunakan metode pembelajaran konvensional. Analisis data meliputi uji normalitas, homogenitas, dan uji independent sample t-test dengan bantuan perangkat lunak SPSS. Hasil menunjukkan bahwa rata-rata nilai posttest siswa pada kelas eksperimen meningkat menjadi 80,17, sedangkan pada kelas kontrol sebesar 70,83. Uji independent sample t-test menghasilkan nilai signifikansi (2-tailed) sebesar 0,009 < 0,05, sehingga H_0 ditolak dan H_a diterima. Dengan demikian, dapat disimpulkan bahwa media pembelajaran interaktif berbasis Android Solite Kids efektif dalam meningkatkan hasil belajar Fikih siswa kelas VII di MTsN 3 Kota Surabaya.

***Kata kunci**: Media pembelajaran, Android Solite Kids, Hasil belajar Fikih*

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INTRODUCTION

Advancements in education continue to shape how learning is designed, delivered, and experienced, especially in the digital era. Teachers today face the challenge of teaching a generation of students raised with technology—students who demand engaging, flexible, and interactive learning experiences (Hasan, 2023). Conventional methods such as lectures and rote memorization are increasingly ineffective in maintaining students' attention, especially when educational content is delivered in rigid formats (Astini & STKIP, 2019). The necessity to innovate is pressing, not only in general subjects but particularly in religious education, including Fiqh.

Fiqh, as a core component of Islamic religious education, governs daily conduct, spiritual practice, and interpersonal relations among Muslims. It goes beyond doctrinal teaching—it shapes character, moral reasoning, and religious identity (Suyuti et al., 2023). However, many students perceive Fiqh as difficult and unrelatable, often due to abstract concepts and conventional delivery methods (Yanti Fauziah et al., 2023). When Fiqh is taught solely through lectures, students tend to lose interest, resulting in low retention and poor academic outcomes (Listiaji & Subhan, 2021).

The subject of Fiqh, as part of Islamic religious education, plays an important role in shaping students' character and morals. Fiqh teaches the laws of Islam that cover various aspects of life, from worship to muamalat (social relations). A good understanding of Fiqh will help students practice their religious teachings correctly and become individuals of noble character (Pertiwi & Achadi, 2023). However, in reality, many students face difficulties in understanding the concepts of Fiqh. The conventional teaching methods, which are often less interactive, are frequently one of the main causes (Salma et al., 2021). Teaching that is solely centered on lectures and

one-way explanations often makes students feel bored and less motivated. As a result, student performance in the subject of Fiqh tends to be low.

The integration of technology in Fiqh education serves as a solution to overcome these challenges. Interactive learning applications like Solite Kids allow for the delivery of Fiqh content in a more engaging and enjoyable way (A'yunina & Masruroh, 2022). The interactive features in this application can help students understand Fiqh concepts more deeply and practically (Amaliyah & Hasan, 2025). By using technology, teachers can explain Fiqh material through animations, videos, and educational games that can enhance student engagement and motivation to learn.

Several previous studies have shown that the use of technology-based learning media can improve the effectiveness of learning. For example, Chairunnisa's research (Chairunnisa et al., 2022) studied the application of Android-based learning media in early childhood reading skills and found that its use had a positive impact on student learning outcomes. Al'am and Rohmah's research (Al'Am & Rohmah, 2024) also discussed the use of mobile applications in Arabic language learning and concluded that there was an improvement in students' understanding of concepts. Meanwhile, the study by Fikri and Hasanudin (Fikri & Hasanudin, 2022) studied interactive media for reading skills among students and showed an increase in students' learning interest. However, these three studies did not specifically discuss the use of the Solite Kids app in Fiqh learning at the junior high school level, leaving a gap in research that still needs to be addressed.

MTsN 3 Surabaya, located in Rungkut, is a government-run Islamic school under the Ministry of Religious Affairs. As a madrasah in a major urban area, it is relatively well-equipped with digital infrastructure and teacher resources. Classroom activities predominantly consist of lectures, discussions, and Q&A sessions. Student engagement, especially in Fiqh, is generally low, with many students showing limited enthusiasm and difficulty applying Fiqh concepts to real-life situations. The school, however, has demonstrated openness to innovation. With a high percentage of students owning Android devices and the school's support for blended learning

models, the integration of a structured Android-based learning media for Fiqh is both feasible and timely.

This study aims to examine the use of the *Solite Kids* app as an interactive learning media for the Fiqh subject at MTsN 3 Surabaya. By utilizing visual, auditory, and kinesthetic features, this app transforms static religious instruction into a dynamic learning experience. The novelty lies in the adaptation of a popular early education tool (*Solite Kids*) for use in secondary-level Fiqh learning—a field where technology integration remains limited.

The study reveals that the app significantly improves students' understanding of Fiqh material. Post-test evaluations indicate increased scores compared to pre-tests, and student interviews reflect greater motivation and active participation. A teacher at MTsN 3 Surabaya noted "Students who were previously passive are now more enthusiastic during Fiqh lessons using this app. They also appear more confident when completing exercises within the app." (Wawancara; Dhanu, 2024).

Furthermore, the application supports students with different learning styles. Those with visual preferences benefit from animations, while auditory learners respond positively to voiceovers and narrations. Psychomotor engagement is also stimulated through interactive elements, enhancing not only cognitive but also affective and behavioral outcomes.

The research contributes both theoretically and practically. Theoretically, it supports the notion that Islamic education, especially in normative subjects like Fiqh, can be revitalized through technological innovation. Practically, it provides a model for Fiqh learning that can be replicated in other Islamic schools and adjusted for similar religious disciplines. It challenges the perception that religious education must remain traditional to be authentic, instead proposing that innovation and orthodoxy can coexist without diminishing religious values.

By bridging the gap between tradition and technology, this study offers an inclusive and adaptive pedagogical approach that aligns with current educational demands. It emphasizes the importance of presenting Islamic teachings in ways that

resonate with students' lived experiences—through platforms and formats they are already familiar with. Ultimately, this study affirms that innovation in Fiqh education is not only necessary but also possible. With careful adaptation and thoughtful design, digital media like *Solite Kids* can help nurture a generation that is both technologically literate and spiritually grounded.

METHOD

This study employs a quantitative approach with a quasi-experimental research design (Thoifa, 2015). The design used is a pretest-posttest nonequivalent control group design, which involves two groups: the experimental group and the control group (Muhbib Abdul Wahab, n.d.; Zulfa, 2018). The experimental group receives treatment in the form of Android-based interactive learning media, specifically the *Solite Kids* application, while the control group is taught using conventional teaching methods. This design is chosen to measure the effect of using Android-based learning media on students' learning outcomes. The study was conducted at MTsN 3 Surabaya, focusing on the subject of Fiqh in one class that was divided into two groups: the experimental group and the control group.

The primary materials and tools used in this research include the *Solite Kids* application as the Android-based interactive learning media, Android devices capable of running the application, evaluation instruments in the form of pretests and posttests, and observation sheets to record the learning process in the classroom. Data collection techniques in this study consisted of both testing and observation. Testing involved administering a pretest before the treatment and a posttest afterward to measure students' learning outcomes (Anshori & Ismawati, 2019). Meanwhile, observation was carried out during the learning sessions in both groups to strengthen the quantitative data by recording student participation, interaction, and classroom dynamics.

RESULT AND DISCUSSION

Result

The use of the Solite Kids application is coordinated by the Fiqh subject teacher regarding the material to be taught. The application covers Fiqh topics on Sunnah prayers, including various types of Sunnah prayers (both mu'akkad and ghairu mu'akkad), the procedures for prayer, prayers, and quizzes combined with animations, audio, and text. In its implementation, the researcher involved two classes as subjects: class VII H as the control group and class VII G as the experimental group, with each class consisting of 30 students.

Fiqh Learning Outcomes Description

In this study, the researcher conducted one pretest and posttest in both the experimental and control classes. Based on the pretest and posttest data, a descriptive analysis of students' learning outcomes was performed and presented in a table that shows the central tendency and distribution of data. This table can be seen below.

Table 2. Learning Outcomes of the Experimental Class Before (Pretest) and After Treatment (Posttest)

Data Centralization and Dispersion	***Pretest***	***Postest***
Rata-rata (mean)	46,17	80,17
Median	50	82,5
Sum	1385	2405
Std. Deviation	15,29	13,55
Range	60	55
Lowest Value (min)	15	45
Highest Value (max)	75	100

Based on the table above, it can be seen that the average pretest score of the experimental class students is 46.17, with the lowest score being 15, the highest score being 80, and the total score being 1385 from 30 students. Meanwhile, the average posttest score of the experimental class is 80.17, with the lowest score being 45, the highest score being 100, and the total score being 2405 from 30 students.

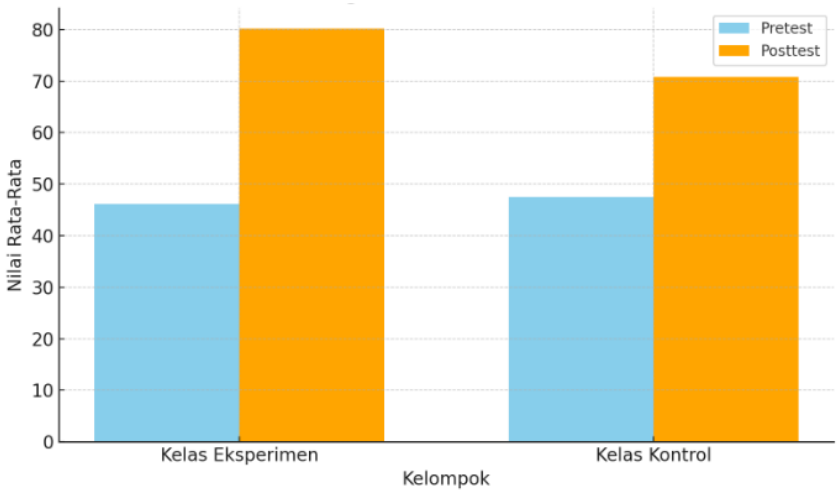
Table 3. Learning Outcomes of the Control Class Before (Pretest) and After Treatment (Posttest)

Pemusatan dan Penyebaran Data	***Pretest***	***Postest***
Rata-rata (mean)	47,50	70,83
Median	47,5	75

Sum	1425	2125
Std. Deviation	12,78	13,00
Range	50	55
Lowest Score (min)	25	40
Highest Score (max)	75	90

Based on the table above, it can be seen that the average pretest score of the control class students is 47.50, with the lowest score being 25, the highest score being 75, and the total score being 1425 from 30 students. Meanwhile, the average posttest score of the control class is 70.83, with the lowest score being 40, the highest score being 90, and the total score being 2125 from 30 students.

Graph of Pretest and Posttest Score Comparison



Data Normality Test

After obtaining the descriptive statistical analysis results of the pretest and posttest in both the experimental and control classes, the next step is to conduct a normality test. The normality test used in this study is the Kolmogorov-Smirnov test. To determine normality, if the sig value is > 0.05, the data is considered normal; if sig < 0.05, the data is considered not normal. The results of the calculation using SPSS 22.0 software are as follows:

Table 4. Results of the Data Normality Test

No.	Kelompok	Sig.	Keterangan
1	Control Class Pre-test	0,759	Normal
2	Control Class Post-test	0,434	Normal
3	Experimental Class Pre-test	0,670	Normal
4	Experimental Class	0,412	Normal

Post-test

The results of the data normality test for the pretest and posttest using SPSS 22.0 showed that the significance (Sig.) values for all Kolmogorov-Smirnov tests were >0.05. This indicates that the research data follows a normal distribution.

Homogeneity of Variance Test

After determining the normality of the data, the next step is to conduct a homogeneity test. This homogeneity test was conducted using SPSS 22.0, with the testing criterion being that if the homogeneity test result shows P > α = 5% or a probability greater than 0.05, the data is considered homogeneous. The results of the homogeneity test calculation are shown in the following table:

Table 5. Results of the Homogeneity of Variance Test

Kelas	F_{Hitung}	**Sig.**	**Keterangan**
Pre-test	0,13	0,376	Homogen
Post-test	7,41	0,895	Homogen

The results of the significance value calculations for the pretest and posttest data are greater than 0.05 (sig > 0.05), which indicates that the data in this study are homogeneous.

Independent Sample t Test

Based on the results of the normality and homogeneity tests, it was found that the data are normally distributed and have homogeneous variances. Therefore, the difference between the posttest scores of the control and experimental groups can be tested using the Independent Sample t Test. This test aims to determine whether there is a significant difference between the posttest scores of the experimental group, which used Android-based application media, and the control group, which did not use Android-based application media in the learning process. The results of the Independent Sample t Test calculation are shown in the following table:

Table 6. First Output "Group Statistics"

Class		N	Mean	Std. Deviation	Std. Error Mean
Learning Outcomes	Control	30	70,83	13,00	2,37
	Experiment	30	80,17	13,55	2,47

Based on the Group Statistics output table above, it is known that the total number of learning outcome data for the control and experimental classes is 30 students each. The mean learning outcome for the control class is 70.33, while the mean learning outcome for the experimental class is 80.17. Therefore, based on descriptive statistics, it can be concluded that there is a difference in the average learning outcomes between the control and experimental classes. To further determine whether this difference is statistically significant, refer to the following table:

Table 7. Second Output "Independent Sample Test"

Independent Samples Test

		Leavene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confident Interval of the Difference	
									Lower	Upper
Hasil Belajar	Equal variances assumed	,02	,895	-2,72	58,00	,009	-9,33	3,43	-16,20	-2,47
	Equal variances not assumed			-2,72	57,90	,009	-9,33	3,43	-16,20	-2,47

Based on the output above, it is known that the value of Sig. Levene's Test for Equality of Variances is 0.895 > 0.05, which means that the variance between the control and experimental classes is homogeneous or equal. Based on the output table in the Equal variances assumed section, the Sig. (2-tailed) value is 0.009 < 0.05. Therefore, according to the decision rule in the independent sample t-test, it can be concluded that H0 is rejected and Ha is accepted. Thus, it can be concluded that there is a significant difference between the average learning outcomes of students in the control and experimental classes.

Improvement in Students' Understanding of Fiqh Material

In this study, one of the indicators of the success of the implementation of the Solite Kids application is the improvement in students' understanding of Fiqh material, particularly related to the topic of Sunnah prayers. To measure this improvement, the researcher compared the pretest and posttest results from both the control and experimental classes. The table below shows a comparison between the experimental and control classes in terms of understanding the Fiqh material, based on the average posttest scores for specific aspects that were tested.

Table 8. Comparison of Learning Outcomes for Fiqh Material on Sunnah Prayers

Learning Aspect	Control Class(Posttest)	Experimental Class(Posttest)
Introduction to Types of Sunnah Prayers	72.5	85
Procedures of Sunnah Prayers	68.2	80
Prayers in Sunnah Prayers	70.0	83.5
Understanding of Sunnah Prayer Quiz	65.3	78

The table demonstrates a significant difference in posttest scores between the control and experimental classes across all assessed aspects, with the experimental class—using the Solite Kids application—consistently achieving higher scores. For instance, in the "Introduction to Types of Sunnah Prayers" aspect, the experimental class scored an average of 85 compared to the control class's 72.5. The results of this study showed a significant improvement in students' Fiqh learning outcomes in the experimental group that used the *Solite Kids* Android-based interactive learning media compared to the control group that received conventional instruction.

In conclusion, the integration of *Solite Kids* not only improved learning outcomes but also transformed the learning experience into a more engaging and inclusive process. These findings highlight the effectiveness of Android-based interactive media in improving both academic performance and classroom engagement, particularly in religious subjects such as Fiqh.

Discussion

The Influence of Interactive Learning Media on Fiqh Learning Outcomes

The results of this study indicate that the use of the Solite Kids application as an interactive learning medium has a significant impact on improving the learning outcomes of seventh-grade students in the Fiqh subject at MTsN 3 Surabaya. This is evidenced by the increase in the average score from pretest to posttest in the experimental class, which was higher than in the control class. The significance value (Sig. 2-tailed) of $0.009 < 0.05$ indicates a significant difference between the two groups,

leading to the conclusion that the Solite Kids media is effective in enhancing students' learning outcomes.

Theoretically, this finding aligns with Gagné and Briggs's learning theory (Reiser & Gagné, 1982) which posits that interactive learning media stimulate students' cognitive and affective components—such as attention, interest, and motivation—which contribute to achieving learning goals (Jacka, 1985). When students are actively involved in the learning process, their absorption and retention of information are higher compared to when they are merely passive listeners in conventional learning (Cahyasari et al., 2024). This research also supports the findings of Tanjung (Tanjung, 2022) on the effectiveness of Android-based learning media in Tarikh lessons, as well as those of Eka Diana and Jannatun Firdaus (Eka Diana & Jannatun Firdaus, 2021) on the development of Android-based Fiqh media, both of which showed improved student learning outcomes after using digital media (Hasanah et al., 2024).

The main contribution of this finding is to provide empirical evidence that Android-based learning media can be adopted as an innovative solution to address the low interest and performance of students in Fiqh lessons. This research also offers direction for developing technology-based learning strategies that are more relevant to the characteristics of today's digital generation, particularly within madrasah environments.

Visual and Audio Features in Enhancing Material Comprehension

The Solite Kids application offers a learning approach that differs from conventional methods by integrating various multimodal features such as animation, audio, and interactive quizzes. The animated depictions of Sunnah prayer movements serve as highly effective visualization tools, especially for students who struggle to understand descriptive texts. These visualizations provide visual stimuli that help students form concrete mental representations of worship movements, thereby reinforcing their comprehension.

The audio support in the application also plays a crucial role in enhancing the learning process, particularly in the pronunciation of prayers, which is an essential

part of Fiqh lessons (Eka Diana & Jannatun Firdaus, 2021). The combination of text, audio, and visuals aligns well with the modality learning theory (Hasan, Naseha, et al., 2024) which states that learning becomes more effective when delivered through multiple sensory channels (Cholifah et al., 2024). This study is consistent with the findings of Zulwiddi (Zulwiddi, 2023) and Chairunnisa dkk (Chairunnisa et al., 2022), which showed that the use of multimodal learning media can enhance information retention and concept comprehension, particularly in procedural learning such as religious practices. Solite Kids has proven to provide a comprehensive learning scenario that directly engages various aspects of students' learning experiences (Jazilatusyifa, 2024).

The findings of this study emphasize the importance of multimodal media like Solite Kids not only in enriching the learning experience but also in addressing concrete challenges in Fiqh education—namely bridging the gap between conceptual knowledge and religious practice. This is particularly crucial in the context of madrasah education, which emphasizes the integration of cognitive and psychomotor aspects in religious learning.

Comparison with Conventional Methods

The comparison between the class using the Solite Kids application and the class employing the lecture method reveals a significant gap in learning achievement. The lower posttest scores in the control class indicate that the lecture method tends to be less effective in stimulating students' comprehension and retention. Theoretically, this can be explained through Sweller's Cognitive Load Theory (Sweller & Chandler, 1991), which asserts that delivering large amounts of verbal information can overload students' working memory (Sari et al., 2024). Without visual support or interactive activities (Chandler & Sweller, 1991), students find it more difficult to absorb and recall information conveyed solely through oral explanation (Sari, 2022).

In contrast, the Solite Kids application offers a cognitively lighter learning experience by breaking information into smaller units supported by visuals and audio (Nurharini et al., 2024). This not only facilitates encoding into long-term memory but also enables more personalized and repetitive learning. In this context, constructivist

learning theories developed by Piaget and Vygotsky provide a strong theoretical foundation (Agustyaningrum et al., 2022). Both emphasize the importance of active student engagement in constructing knowledge through direct experience, exploration, and interaction with media.

Previous studies by Baharudin (Baharudin et al., 2021) and Setyaningrum (Setyaningrum et al., 2024) support these findings, demonstrating that Android-based learning applications significantly impact students' academic achievement. Baharudin specifically highlighted how interactive media enhances students' focus and attention span, while Setyaningrum emphasized the role of technology-based media in boosting learning motivation.

These connections suggest that the results of this study are not isolated cases but rather part of a broader trend regarding the effectiveness of technology-based learning. Solite Kids not only helps improve learning outcomes but also serves as a bridge that makes Fiqh lessons more contextual and accessible for the digital generation (Annisa, 2023). This research opens opportunities to develop more inclusive, engaging, and adaptive technology-based Fiqh learning models that cater to the needs of today's students.

Challenges and Constraints in the Use of Technology-Based Learning Media

Although the effectiveness of the Solite Kids application in improving learning outcomes has been proven, its successful implementation still depends on the readiness of infrastructure and supporting resources. The challenge of access to adequate Android devices reveals that the digital divide remains a significant issue in education. According to Bronfenbrenner's ecological theory of education, physical and social environments—including access to technology—affect children's development and learning (Fahrudi, 2022). If not all students have equal access to digital devices, it leads to learning disparities that contradict the principles of inclusion and educational equity (Astawa, 2021).

This issue is also reflected in findings by Ramzi (Ramzi, 2022), who highlighted that the lack of digital facilities and devices in rural schools directly affects the

effectiveness of technology-based learning. Therefore, the contribution of this study not only reinforces the benefits of digital applications in education but also sends a strong signal to policymakers to include equitable access as an integral part of digital education transformation. Providing facilities such as computer labs or implementing device lending policies are practical solutions that can be adopted (Senita, 2024).

Beyond infrastructure, teacher readiness is also a determining factor in the success of technology-based learning (Tama Erlanda Putri et al., 2023). Many teachers still feel unfamiliar or lack confidence in optimally using digital media in the classroom. The Technological Pedagogical Content Knowledge (TPACK) framework developed by Mishra and Koehler emphasizes the importance of integrating content knowledge, pedagogy, and technology (Hasan, Aziz, et al., 2024). Without in-depth training, teachers may only use applications superficially, without fully utilizing features that could enhance student engagement and understanding (Yuliastini & Sucipto, 2022).

This study provides an important contribution by demonstrating that teacher training is not merely a complement but a crucial component in the implementation of digital learning media. These findings reinforce the conclusions of A'yunina and Masruroh (A'yunina & Masruroh, 2022) who stressed that the effectiveness of digital media is highly influenced by teachers' competence in managing it. Therefore, the successful implementation of applications such as Solite Kids must be viewed within a systemic framework that includes infrastructure readiness, teacher competency, and holistic support from educational policies.

CONCLUSION

The findings of this study indicate that the use of the Solite Kids application as an Android-based interactive learning medium significantly improves students' learning outcomes in the subject of Fikih at MTsN 3 Kota Surabaya. The application enhances students' understanding of abstract concepts through its visual, audio, and instant feedback features, which contribute to a more engaging and participatory learning experience. It supports

independent learning and facilitates better knowledge retention compared to conventional teaching methods. For further development, schools are encouraged to improve acces to digital learning facilities and provide training for teachers in the effective pedagogical use of educational technology. Future studies may explore similar approaches in different subjects or educational levels and investigate long-term impacts on students' cognitive development.

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