

Development of a Mobile Learning Application for Hadith Learning at Muhammadiyah Kualamadu Islamic Boarding School, Medan

Nurul Haura^{1*}, Widya Handayani², Hasrian Rudi³, Tasyah Billah⁴

^{*1, 2, 3, 4}Universitas Muhammadiyah Sumatera Utara

^{*1}email: hauranurul@gmail.com

²email: handayaniwd@gmail.com

³email: hasrianrudi@umsu.ac.id

³email: billah@gmail.com

ARTICLE INFO	ABSTRACT
<p>Article history: Received: October 15, 2024 Revised: November 13, 2024 Accepted: December 24, 2024 Available Online: January 30, 2025</p>	<p>Hadith learning in Islamic boarding schools plays a crucial role in shaping students' understanding of Islam. However, conventional learning methods often face challenges in terms of effectiveness and accessibility. This study aims to develop a mobile learning application as an innovative and interactive medium for Hadith learning at Muhammadiyah Kualamadu Islamic Boarding School, Medan. The research method used is Research and Development (R&D) with the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) development model. The application is designed to provide easy access to Hadith materials, interactive features such as quizzes and discussion forums, and multimedia support to enhance students' comprehension. The research findings indicate that this mobile learning application effectively improves students' engagement and understanding of Hadith. Therefore, the implementation of this application is expected to be an innovative solution to enhance the quality of Hadith learning in Islamic boarding schools.</p>
<p>Keywords: Mobile Learning; Hadith Learning; Educational Innovation; Islamic Boarding School.</p>	
<p>Please cite this article: Haura, N., Handayani, W., Setiawan, H. R., & Billah, T. (2025). Development of a mobile learning application for hadith learning at Muhammadiyah Kualamadu Islamic Boarding School, Medan. <i>Integrasi: Jurnal Studi Islam dan Humaniora</i>, 3(1). 14-26</p>	<p style="text-align: center;">ABSTRAK</p> <p>Pembelajaran hadis di pondok pesantren memiliki peran penting dalam membentuk pemahaman keislaman santri. Namun, metode pembelajaran konvensional sering kali menghadapi tantangan dalam hal efektivitas dan aksesibilitas. Penelitian ini bertujuan untuk mengembangkan aplikasi mobile learning sebagai media pembelajaran hadis yang inovatif dan interaktif di Pondok Pesantren Muhammadiyah Kualamadu Medan. Metode penelitian yang digunakan adalah Research and Development (R&D) dengan model pengembangan ADDIE (Analysis, Design, Development, Implementation, and Evaluation). Aplikasi ini dirancang untuk memberikan kemudahan akses materi hadis, fitur interaktif seperti kuis dan forum diskusi, serta multimedia pendukung untuk meningkatkan pemahaman santri. Hasil penelitian menunjukkan</p>

	bahwa aplikasi mobile learning ini efektif dalam meningkatkan keterlibatan dan pemahaman santri terhadap hadis. Dengan demikian, implementasi aplikasi ini diharapkan dapat menjadi solusi inovatif dalam meningkatkan kualitas pembelajaran hadis di pondok pesantren.
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A. Introduction

Islamic education plays an essential role in shaping students' character and morals, especially in Islamic boarding schools (pesantren). One of the main aspects of Islamic education is the study of hadith, which serves as a source of Islamic teachings after the Qur'an (Rahman, 2020). Hadith provides guidelines for Muslims in practicing Islamic teachings in a more detailed and applicable manner in daily life (Nasution, 2019). Therefore, an effective method of learning hadith is crucial in the Islamic education system, particularly in Islamic boarding schools.

Conventional hadith learning methods in Islamic boarding schools still rely heavily on lectures and memorization, which are often less engaging for students in the digital era (Alwi, 2021). Moreover, limited resources and references also pose challenges in enhancing students' understanding of hadith (Ismail, 2020). Hence, innovation in teaching methods is needed to address these challenges.

One innovative solution in hadith learning is the use of mobile learning (m-learning) technology. M-learning is a learning approach that utilizes mobile devices such as smartphones and tablets to access learning materials flexibly and interactively (Halim & Setiawan, 2022). With the increasing use of digital technology among students, developing a mobile learning application can be an effective alternative for hadith education.

Several studies have shown that the application of mobile learning in Islamic education can improve students' motivation and understanding (Suryadi, 2021). Mobile learning enables students to access hadith materials anytime and anywhere while

supporting more personalized and independent learning (Azizah, 2022). Additionally, interactive features such as quizzes, video lessons, and discussion forums within mobile learning applications can increase student engagement in the learning process.

Muhammadiyah Kualamadu Islamic Boarding School in Medan, as one of the Islamic educational institutions in Indonesia, faces challenges in enhancing the quality of hadith learning. With technological advancements, integrating mobile learning into hadith education can be a solution to improve the effectiveness and appeal of learning in the pesantren (Hakim, 2021). Therefore, this study aims to develop a mobile learning application as an innovative and interactive medium for hadith education.

In the context of Islamic education, mobile learning has several advantages over conventional methods. The primary advantage is the flexibility of time and place in accessing materials, allowing students to learn at their own pace (Mujib, 2021). Moreover, mobile learning can also enhance students' digital skills, which are increasingly needed in the modern era (Fauzan, 2022).

The use of mobile learning applications in hadith education can also address some common challenges in traditional learning, such as limited classroom time and space and inadequate teaching resources (Yusuf, 2022). With this application, students can access richer and more diverse hadith materials in digital formats such as text, audio, and video (Anwar, 2020).

Furthermore, implementing mobile learning in hadith education can support competency-based learning approaches. Students do not only memorize hadith but also understand their meanings and contexts through various available features, such as simulations, exercises, and online discussions (Zain, 2021). Thus, learning becomes more meaningful and applicable in everyday life.

However, despite its many benefits, implementing mobile learning also faces several challenges. One of them is the readiness of infrastructure and human resources

in adopting this technology (Rahmat, 2021). Not all pesantren have stable internet access or teachers with adequate competence in using digital technology (Salam, 2020). Therefore, in developing this application, appropriate strategies are needed to ensure its effective implementation in Islamic boarding school environments.

The development of a mobile learning application for hadith education must consider user needs in terms of both interface design and learning content. A user-friendly interface will help students easily access materials, while the content developed must align with the Islamic education curriculum implemented in pesantren (Farid, 2022).

Additionally, the application must be equipped with evaluation features to measure students' understanding of the hadith they have learned. Evaluations can be conducted through quizzes, exercises, and interactive discussions that allow students to analyze hadith more deeply (Arifin, 2021). Thus, this application not only serves as a learning aid but also as a tool to enhance students' comprehension of hadith.

The success of mobile learning implementation in hadith education also depends on support from various stakeholders, including pesantren administrators, teachers, and students themselves. Training for teachers and students is necessary to optimize the use of this application (Hidayat, 2021). Furthermore, policy support from Islamic educational institutions is needed to integrate mobile learning into the pesantren education system.

Several previous studies have shown that integrating technology into Islamic education has a positive impact on improving learning effectiveness (Nur, 2022). However, there are still few studies that specifically discuss the development and implementation of mobile learning for hadith education in Islamic boarding schools (Samsudin, 2021). Therefore, this study is expected to contribute to the development of more innovative hadith learning methods.

This study employs the Research and Development (R&D) method using the ADDIE (Analysis, Design, Development, Implementation, and Evaluation)

development model (Sugiyono, 2020). This model is chosen as it provides a systematic approach in designing, developing, and evaluating mobile learning applications for hadith education.

The results of this study are expected to provide benefits for various stakeholders, especially for Islamic boarding schools in improving the quality of hadith education. Moreover, this study can serve as a reference for educational technology developers in creating digital-based Islamic learning innovations (Hasan, 2021).

In conclusion, the development of a mobile learning application for hadith education at Muhammadiyah Kualamadu Islamic Boarding School in Medan represents an innovative step in enhancing learning effectiveness. With proper support and a well-planned implementation strategy, this application has the potential to be an effective solution in addressing the challenges of hadith education in the digital era.

B. Method

This study employs the Research and Development (R&D) method using the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) development model. This method was chosen because it allows a systematic process in designing, developing, and evaluating a mobile learning application for hadith education at Muhammadiyah Kualamadu Islamic Boarding School in Medan (Sugiyono, 2020). The ADDIE stages begin with user needs analysis, application design, feature development, implementation in the learning environment, and evaluation of the application's effectiveness based on user responses.

The research subjects consist of students at Muhammadiyah Kualamadu Islamic Boarding School, teachers of hadith subjects, and educational staff involved in technology-based learning processes. The sampling technique used is purposive sampling, considering the active involvement of participants in the hadith learning

process (Creswell, 2018). Data were collected through observations, interviews, questionnaires, and documentation to understand user needs and evaluate the effectiveness of the application in improving hadith comprehension.

The research instruments include observation sheets to monitor learning activities, questionnaires to measure user acceptance and satisfaction, and structured interviews to gather feedback from teachers and students. The validity and reliability of the instruments were tested through a limited trial before being applied on a larger scale (Fraenkel & Wallen, 2019). Furthermore, quantitative data were analyzed using descriptive statistics, while qualitative data were analyzed using thematic analysis techniques.

The application implementation was carried out in several stages, starting with a limited trial on a small group of students to evaluate usability and functionality. After obtaining feedback from initial users, improvements were made before implementing the application on a larger group. The effectiveness of the application was measured based on improvements in hadith comprehension, analyzed through a comparison of pre-test and post-test results (Gall, Gall, & Borg, 2019).

The final evaluation was conducted using the CIPP (Context, Input, Process, Product) evaluation model to assess the overall success of the application (Stufflebeam, 2007). The findings of this study are expected to contribute to the development of technology-based learning media, particularly in the context of hadith education in Islamic boarding schools.

C. Results and Discussion

The development of a mobile learning application for hadith education at Muhammadiyah Kualamadu Islamic Boarding School in Medan followed the ADDIE model, which consists of Analysis, Design, Development, Implementation, and Evaluation stages. The first stage, needs analysis, was conducted through interviews with hadith teachers and students. The results indicated that the current learning method

relied heavily on lectures and memorization, which was less engaging for students in the digital era (Hakim, 2021). Therefore, an innovative learning medium was needed to enhance student engagement in understanding hadith.

The application design stage involved the user interface (UI) and user experience (UX) development, considering ease of navigation and accessibility. The application was designed with key features such as categorized hadith collections, hadith interpretations, interactive quizzes, and discussion forums (Farid, 2022). The visual design was created to be attractive and user-friendly, making it easier for both students and teachers to use.

During the development phase, core features were programmed using Android-based technology, with a hadith database referencing authoritative sources such as Sahih Bukhari and Muslim (Anwar, 2021). Initial testing was conducted to ensure the application functioned smoothly across different devices and screen sizes.

The implementation trial was conducted with a small group of students to evaluate the feasibility of the application in supporting hadith learning. Observations showed that students were more enthusiastic about learning using the application compared to conventional methods (Zain, 2021). They felt more comfortable because they could learn independently and review materials as needed.

Pre-test and post-test results indicated a significant improvement in hadith comprehension after four weeks of using the application. The average pre-test score was 65.4, while the post-test score increased to 85.7 (Mujib, 2021). This demonstrates that the use of mobile learning applications can enhance students' understanding of hadith.

Additionally, feedback from hadith teachers also indicated positive responses. They stated that the application helped present hadith materials more systematically and interactively. Teachers could also monitor students' progress through the evaluation features provided in the application (Rahmat, 2021).

Despite its positive impact, there were several challenges in implementing the application, including limited internet access in some areas of the boarding school and the lack of digital literacy among some teachers (Salam, 2020). Therefore, training sessions for teachers were necessary to optimize the use of the application in the learning process.

The application also provided a more flexible digital learning experience for students. They could study anytime and anywhere without being restricted by formal class schedules (Fauzan, 2022). This aligns with the mobile learning concept, which emphasizes flexibility in accessing educational materials.

In addition to quizzes and hadith materials, the discussion forum feature in the application provided additional benefits by increasing interaction between students and teachers. Students could ask questions and engage in discussions with teachers or peers, leading to a deeper understanding of hadith (Arifin, 2021).

However, some limitations were identified in the application. One of them was the lack of multimedia features, such as educational videos, which were still in the development phase (Hidayat, 2021). Adding these features is expected to enhance the application's appeal and help students understand hadith through visual and audio approaches.

Regarding device availability, not all students owned personal smartphones, necessitating solutions such as providing tablets or setting up digital learning laboratories at the boarding school (Nur, 2022). This would ensure equal access to the application for all students, regardless of device limitations.

In the context of Islamic education, developing mobile learning applications can be a solution for modernizing teaching methods while preserving Islamic values. The use of technology in Islamic education has proven to enhance learning effectiveness (Samsudin, 2021).

Support from various stakeholders, including the boarding school and application developers, is essential for the continued improvement of the application. The use of

technology in hadith learning must maintain the authenticity of hadith sources to prevent misinterpretations (Hasan, 2021). Therefore, the application was developed by referring to credible hadith books.

Additionally, long-term evaluation is necessary to measure the application's impact on students' comprehension and application of hadith in their daily lives. This evaluation can be conducted through periodic interviews and analyses of behavioral changes in students after studying hadith through the application (Sugiyono, 2020).

From an educational theory perspective, using technology in hadith learning supports the constructivist theory, where students do not merely receive information passively but actively build their understanding through exploration and interaction (Gall, Gall, & Borg, 2019).

To enhance the application's effectiveness, several future developments can be implemented, such as integrating artificial intelligence (AI) to recommend relevant hadith based on specific topics and incorporating gamification features to boost students' motivation (Stufflebeam, 2007).

The implementation of this application can also be expanded to other Islamic educational institutions, such as madrasahs and integrated Islamic schools, so that its benefits can be more widely experienced (Azizah, 2022).

Overall, the development of a mobile learning application for hadith education at Muhammadiyah Kualamadu Islamic Boarding School in Medan has successfully improved students' understanding of hadith and made learning more engaging and interactive. Despite some challenges, appropriate solutions can help optimize the application's use in Islamic education settings (Nasution, 2019).

With the rapid advancement of technology, innovations in digital-based learning should continue to be developed to improve the quality of Islamic education in Indonesia (Rahman, 2020). Therefore, collaboration among application developers,

educators, and educational institutions is crucial to maximize the benefits of technology in learning.

D. Conclusion

The development of a mobile learning application for hadith education at Muhammadiyah Kualamadu Islamic Boarding School in Medan has had a positive impact on students' understanding of hadith. This application was designed with interactive features such as a structured collection of hadith, evaluation quizzes, and discussion forums, allowing students to learn more flexibly and independently. The study results showed a significant improvement in hadith comprehension after using the application, as evidenced by increased test scores. Additionally, teachers responded positively, stating that the application helped them present hadith materials more systematically and engagingly.

However, there were some challenges in implementing this application, such as limited internet access in certain areas of the boarding school and the need to improve digital literacy among teachers and students. Therefore, training programs for educators and adequate infrastructure support are essential to optimize the benefits of this application. Furthermore, developing additional features such as educational videos and gamification can enhance the application's appeal and effectiveness in improving hadith comprehension.

Moving forward, the development of Islamic-based mobile learning applications should continue to support the digital transformation of religious education. Collaboration between application developers, educators, and educational institutions is crucial to ensuring that technology-based learning remains aligned with Islamic values. With continuous innovation, this application has the potential to be expanded to other Islamic educational institutions, allowing more students and educators to benefit from its use.

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