



Fostering Akidah Akhlak Values through the Kampung Warna Interactive Storybook in Islamic Elementary Education

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ABSTRACT

This study developed and evaluated an interactive digital storybook titled Kampung Warna as a learning tool for moral and character education in Islamic elementary schools. It responds to the need for engaging, age-appropriate resources to support Akidah Akhlak learning in early grades. The research assessed the e-book's validity, practicality, and effectiveness for grade 2 students. Using a development research approach, the process included expert validation, teacher and student trials, and pre- and post-test evaluations. Data were collected from 80 students across four Madrasah Ibtidaiyah in West Sumatra through validation forms, questionnaires, and learning outcome tests. The data were analyzed using descriptive statistics, expert validation procedures, practicality assessment analysis, and normalized gain scores to evaluate the effectiveness of the learning media. Results showed that Kampung Warna achieved a validity score above 90%, with practicality scores of 95.71% from teachers and 94.75% from students. The normalized gain reached 78.42%, indicating high effectiveness. The Kampung Warna interactive storybook is highly valid, practical, and effective for Akidah Akhlak learning. It enhances student engagement, supports teachers in conveying moral values, and significantly improves learning outcomes with high effectiveness confirmed through statistical analysis.

Keywords: Interactive Storybook; Akidah Akhlak; Islamic Education; Moral Values; Elementary Students

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1. INTRODUCTION

Akidah Akhlak is a core subject in Islamic education that aims to instill foundational beliefs and noble character in students from an early age (Putri et al., 2023). However, in some Madrasah Ibtidaiyah today, the learning of Akidah Akhlak still faces significant challenges. Teaching methods often rely heavily on rote memorization and teacher-centered instruction (Amirova, 2025), with limited use of visual or contextual learning tools. As a result, students may find the subject abstract, less engaging, and disconnected from their daily lives. This affects not only their understanding but also their ability to internalize and apply Islamic moral values in behavior.

The lack of attractive and child-friendly teaching materials (Gyawali, 2020) is one of the main issues contributing to the low interest and participation of students in Akidah Akhlak learning. Moreover, the learning resources currently available are often text-heavy, use complex language, and do not sufficiently consider the developmental stage and cognitive abilities of elementary school students. In an age where digital media plays a central role in children's lives, the educational environment must adapt to leverage interactive technologies (Lukas & Yunus, 2021) that can make learning more meaningful and enjoyable.

Storytelling has long been recognized as an effective pedagogical strategy (Nair & Yunus, 2021), particularly for moral education. When integrated with digital platforms, interactive storybooks can serve as powerful tools to convey values and concepts in a way that is relatable and engaging for children. Kampung Warna is an interactive e-book developed to meet this need. It is designed to help grade 2 Madrasah Ibtidaiyah students learn Akidah Akhlak through a colorful, narrative-based experience enriched with illustrations, character role models, and life-relevant messages.

This research aims to develop and evaluate the Kampung Warna e-book by analyzing its validity, practicality, and effectiveness as a learning medium for Akidah Akhlak. By addressing the current limitations in teaching materials and pedagogy, this study hopes to contribute to the improvement of Islamic moral education in elementary schools through innovative, student-centered learning media (Purnamasari et al., 2020).

Based on the results of this study, several recommendations can be proposed to improve the implementation and development of Akidah Akhlak learning through interactive media in Madrasah Ibtidaiyah (Kawakip et al., 2023). First, educators are encouraged to adopt digital storytelling as a complementary learning strategy to traditional methods. The use of storybooks such as Kampung Warna can make abstract moral concepts more concrete, relatable, and engaging for young learners. Teachers should be trained to integrate interactive media effectively into their instructional design to enhance student participation and value internalization. Second, developers of Islamic educational media are advised to prioritize age-appropriate language, attractive illustrations, and culturally relevant storylines in creating learning content.



The positive feedback from both educators and students in this study highlights the importance of aligning media design with the cognitive and emotional development of early elementary school students (Tsortanidou et al., 2022). The integration of moral values through a culturally grounded digital storybook something that remains limited in Akidah Akhlak instructional media also represents a key novelty of this research. Adding contextual Qur'anic verses or hadiths, as suggested by validators, may further strengthen the religious message conveyed. Third, future studies may expand the implementation of the interactive storybook across different grade levels and regions to test its adaptability and generalizability. Longitudinal research is also needed to assess the long-term impact of digital moral learning on students' behavior beyond academic performance.

2. METHOD

This study employed a research and development method adapted from the Borg and Gall model (Azima, Iraqi, Algifari, Habibi, et al., 2024; Azima, Iraqi, Algifari, Zahra, et al., 2024; Yumna et al., 2024), focusing on the design, validation, and evaluation of an interactive e-book titled Kampung Warna as a learning medium for Akidah Akhlak in Madrasah Ibtidaiyah. The development process consisted of five stages: (1) needs analysis; (2) product design; (3) expert validation; (4) field testing for practicality; and (5) effectiveness testing. The material was developed specifically for second-grade students, integrating themes of Islamic character education such as humility, helpfulness, and gratitude.

The validation stage involved two experts, one in instructional media and one in Islamic education. Each reviewed the e-book for language clarity, visual presentation, content alignment with Akidah Akhlak curriculum, and age appropriateness. Revisions were made according to feedback, particularly related to illustration accuracy and color harmony. The revised e-book was then tested in four Madrasah Ibtidaiyah in West Sumatra: MIN 3 Padang, MIN 2 Solok, MIN Solok City, and MIN Bukittinggi. A total of 80 second-grade students and four Islamic education teachers participated in the practicality and effectiveness testing.

Practicality data were collected using structured questionnaires administered to both teachers and students (Farikhah et al., 2024). These instruments measured aspects such as ease of use, interest level, clarity of illustrations, and usefulness in supporting Akidah Akhlak instruction. To evaluate effectiveness, a pre-test and post-test design was implemented, focusing on students' understanding of key moral principles. The gain score method was applied to calculate the learning improvement, with a Normalized Gain (N-gain) formula used to determine the level of instructional effectiveness (Yonanda et al., 2023) (Azima, Iraqi, Algifari, Zahra, et al., 2024).

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All instruments were administered in person during class time between February and March 2025. Ethical approval was obtained from the participating schools, and all student data were anonymized. The study aimed to ensure replicability by using standardized tools and clearly defined procedures across all test sites.

3. RESULTS & DISCUSSION

3.1. Major Findings

The Kampung Warna interactive storybook was created as a digital learning tool to support the teaching of Akidah Akhlak to second-grade students at Madrasah Ibtidaiyah. Designed as an illustrated interactive e-book, it aligns with the reading abilities and interests of young learners, aiming to foster engagement in both reading and moral learning. The narrative centers on a character named Bani, a boy living in the vibrant and nature-rich Kampung Warna, a village known for its agricultural traditions and environmental harmony. Despite being the son of the wealthiest man in the village, Bani is depicted as a humble, respectful, and helpful child who enjoys farming and herding animals. His character reflects the core moral values emphasized in Akidah Akhlak education. The integration of these values into the storyline is intended to support character development in a relatable and enjoyable format. The e-book's visual design and interactive elements were carefully crafted to enhance student engagement, with detailed illustrations presented in Figure 1.

The results of the validity assessment confirmed that the Kampung Warna storybook holds strong potential as a high-quality instructional resource (Utaminingsih et al., 2024). The language and content components earned a validation score of 95, while the graphics aspect received a score of 90 both falling within the "very valid" category. Experts recommended minor improvements, especially related to certain illustrations and color schemes, to enhance visual appeal and sustain student interest. Overall, these findings indicate that the Kampung Warna e-book meets key standards for use in early-grade moral education, having gained solid validation in both pedagogical substance and visual presentation.





(a)



(b)

Figure 1. Kampung Warna interactive e-book of children's story display

3.2. Interpretation of the Results

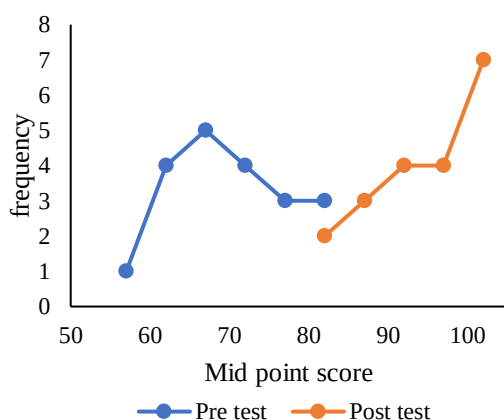
The practicality assessment revealed strong approval from both teachers and students, as detailed in Table 1. Educators from four Madrasah Ibtidaiyah provided an average score of 95.71, while students rated it at 94.75. These results reflect the e-book's high usability and effectiveness in classroom settings. Students responded positively to the appealing illustrations, clear moral themes, and easy-to-understand narrative. Meanwhile, teachers appreciated how the storybook aided in presenting Akidah Akhlak material more effectively, helping to convey abstract moral concepts in a way that is accessible and relatable for young learners.

Table 1. Results of practicality test of storybooks

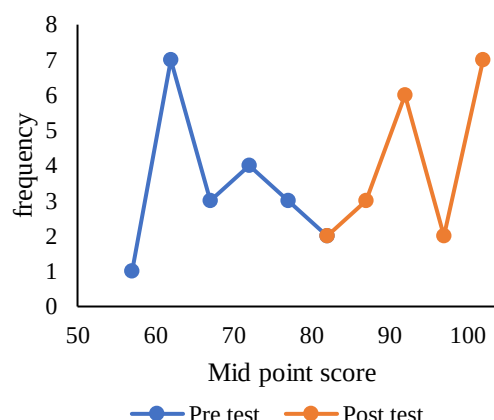
Aspect	Rates by teacher	Rates by students
Language	97,5	93
Illustration	90,5	
Letter and graphic	93,75	
Accuracy of the content presented	96,25	
Make it easier for educators to instill Akidah Akhlak	97,5	
Easy to understand language		87,5
Intersested display		92
The content of the story is interesting and easy to understand		94
Increase enthusiasm for learning		88,6
Makes it easier to understand Akidah Akhlak		87,5
Easy to understand language		87,5
Average	95,71	94,75

The frequency distribution graph at Figure 2 shows a significant improvement in the Akidah Akhlak learning outcomes of Grade 2 students from four madrasahs after the learning intervention. At MIN 3 Padang, the average score increased from 68.35 in the pre-test to 93.05 in the post-test. A similar trend occurred at MIN 2 Solok, where the score rose from 66.75 to 92.25. At MIN Bukittinggi, the average score improved from 61.75 to 92.00, while at MIN Solok City, it increased from 62.00 to 92.25. This consistent upward trend across all schools indicates that the learning intervention effectively enhanced students' understanding of Akidah Akhlak.

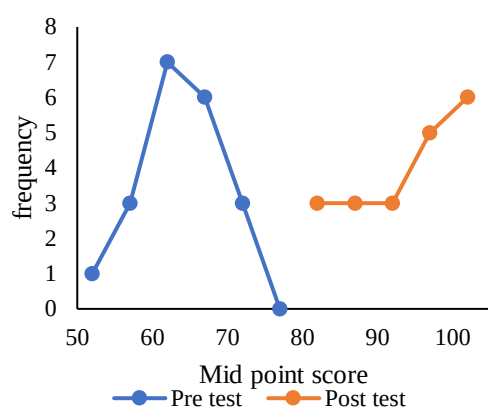
To evaluate the effectiveness of the Kampung Warna interactive storybook in Akidah Akhlak lessons, researchers analyzed the differences between students' pre-test and post-test scores using a paired sample t-test. This method is used to determine whether there is a statistically meaningful change in the performance of the same group before and after an educational intervention. In hypothesis testing, the null hypothesis (H_0) suggests no significant difference between the two sets of scores, whereas the alternative hypothesis (H_1) indicates a significant difference.



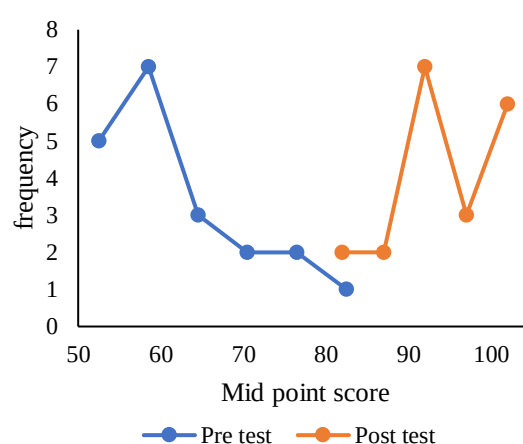
(a)



(b)



(c)



(d)

Figure 2. Frequency distribution of Grade 2 students' Akidah Akhlak learning evaluation scores in the pre-test and post-test: (1) Students of MIN 3 Padang, (2) Students of MIN 2 Solok, (3) Students of MIN Bukittinggi, (4) Students of MIN Kota Solok.

The null hypothesis is retained if the calculated t-value is less than the critical value of 1.729; otherwise, the alternative hypothesis is accepted. The results showed that the t-values obtained from all four schools MIN 3 Padang (10.59), MIN 2 Solok (10.86), MIN Bukittinggi (14.44), and MIN Solok City (12.00) were all considerably higher than the critical value, leading to the acceptance of H_1 . These findings confirm that students' learning outcomes improved significantly after using the e-book. In conclusion, the study highlights the positive impact of the Kampung Warna digital storybook on students' comprehension of Akidah Akhlak and reinforces the potential of integrating technology-enhanced learning tools in Islamic education (Yumna, Hambali Jaili, Preexcy B. Tupas, Nana Fauzana Azima, Minsih & Dahliana, 2024) (Dahliana et al., 2024).

Regarding its effectiveness, the results indicated significant improvements in student learning outcomes, as presented in Table 2. The average score of 80 students increased from 64.71 on the pre-test to 92.38 on the post-test. The normalized gain was calculated at 78.42, placing it in the category of high effectiveness. This outcome reflects the e-book's success in enhancing students' understanding and internalization of moral values. These results are consistent with previous studies, such as that of Ramadhan (Ramadhan, 2024), which emphasize that digital learning tools when thoughtfully developed with cultural relevance and sound pedagogical principles can effectively contribute to moral education.

Table 2. Results of testing the effectiveness of e-storybooks as a medium for learning Akidah Akhlak

Average pre-test	Average post-test	% learning evaluation increment	Normal Gain value	Effectivity level
64,71	92,38	42,76	78,42	High Effective

The research findings align with Constructivist Learning Theory (Nair, 2022), which emphasizes that children learn best when they actively engage with meaningful and contextual materials. The digital storytelling format helps transform abstract moral concepts into concrete experiences, reinforcing Nair & Yunus' view that narrative-based learning enhances comprehension and value internalization. The high practicality score from teachers and students further supports Technology Acceptance Model (Met al., 2025), suggesting that ease of use and perceived usefulness significantly influence the adoption of digital educational media in classrooms.

The effectiveness of the e-book, demonstrated through improved student learning outcomes, is consistent with Multimedia Learning Theory (Mayer) (Rahayu et al., 2024), which states that combining text, images, and interactive elements optimizes cognitive processing and increases retention. The positive response from students supports Gyawali's (Gyawali, 2020) argument that visually rich materials increase motivation and participation, especially for younger learners. These findings collectively highlight that integrating interactive digital storybooks into Akidah Akhlak instruction not only enhances engagement but also strengthens value-based learning outcomes. This reinforces the need for Madrasah Ibtidaiyah to adopt more innovative, student-centered media that reflect children's cognitive development and digital habits.

3.3. Relevance and Implications

The interactive children's e-book, developed as a narrative-based digital learning tool, serves as an engaging medium that presents specific situations within the story to help children easily understand and internalize moral teachings (Yumna et al., 2024). By embedding moral lessons within relatable narratives, the e-book allows children to connect emotionally with the content, thereby improving their comprehension and retention of core values. The interactive elements such as illustrations, dialogue, and digital features also contribute to a more immersive learning experience, making the educational process enjoyable and meaningful for young learners.

Furthermore, the results emphasize the critical role of such digital tools in supporting Islamic education. Storytelling, as exemplified through the character Bani who models humility, helpfulness, and respect, offers a culturally resonant method for value transmission (Larasati et al., 2024). These stories do not merely convey moral messages abstractly but instead present them within the lived realities of children, enabling students to better relate to and emulate the values depicted. This supports the notion that values-based education is more effective when it is rooted in contextually relevant narratives, aligned with students' social and cultural environments, thus fostering deeper moral reflection and behavioral development.



3.4. Limitations

Despite its success in demonstrating the potential of interactive e-books as a medium for moral education, this study is not without limitations. The research was limited to four elementary schools located in West Sumatra, which may affect the generalizability of the findings to broader educational contexts. Differences in regional culture, school infrastructure, and digital literacy could influence how students in other areas respond to similar interventions. As such, caution should be exercised when applying the results to schools with different demographic and educational characteristics.

Moreover, the study primarily measured short-term learning outcomes, such as immediate comprehension and recall of moral values, without examining long-term behavioral changes. Understanding whether students internalize and practice the taught values over time remains an important area for further investigation. Another limitation lies in the depth of religious content: although the storyline aligns well with Akidah Akhlak learning objectives, the integration of Qur'anic verses and hadiths was limited. A deeper and more structured incorporation of these religious sources could significantly enhance the spiritual dimension of the learning experience, strengthening students' connection to core Islamic teachings and providing a more holistic approach to character education.

3.5. Suggestions for Future Research

Future studies should consider involving a larger and more diverse sample, encompassing schools from various regions, socio-cultural backgrounds, and educational settings. This broader scope will provide more comprehensive insights into the effectiveness and adaptability of interactive story-based e-books across different student populations. In addition, conducting longitudinal research is crucial to assess the long-term impact of such digital learning tools on students' moral development. Tracking behavioral changes over time will help determine whether the values taught through interactive storytelling are truly internalized and reflected in students' actions beyond the classroom.

To complement this, future research is also recommended to incorporate assessments of affective and psychomotor domains in addition to cognitive outcomes (Yumna, Hambali Jaili, Preexcy B. Tupas, Nana Fauzana Azima, Minsih & Dahliana, 2024). Evaluating students' emotional responses, attitudes, and actual behavioral changes can provide a more holistic understanding of the e-book's educational impact. Psychomotor assessments such as students' participation in classroom discussions, role-playing activities, or community service inspired by story content could serve as tangible indicators of moral application. These comprehensive evaluations will help ensure that character education delivered through digital media not only enhances understanding but also fosters meaningful changes in attitudes and actions.

Furthermore, future research could explore the integration of advanced interactive features such as quizzes, animations, voiceovers, and embedded religious texts to further enhance user engagement and comprehension. These features have the potential to create more dynamic and personalized learning



Yumna, Nana Fauzana Aima, Nurul Majeedah Hamdan, Preexcy B. Tupas experiences that cater to various learning styles. Collaborating with educators and religious scholars in the development process is also essential to ensure the content remains pedagogically sound, culturally relevant (Azima et al., 2025), and in line with national curricula as well as Islamic teachings. Such co-creation efforts can result in more authentic and contextually meaningful educational materials that effectively support moral and spiritual growth among students.

4. CONCLUSION

The development of the Kampung Warna interactive storybook provides strong evidence that digital storytelling can be an effective pedagogical tool for teaching Akidah Akhlak in early Islamic education. Through a structured process of validation, practicality testing, and effectiveness analysis, this study demonstrated that narrative-driven and visually engaging media significantly enhances students' understanding and interest in moral values. More than just a medium for content delivery, the storybook fostered emotional engagement and moral reflection, effectively bridging abstract religious teachings with students' everyday experiences. In contrast to traditional, passive instructional methods, this approach encourages active, student-centered learning that is rooted in both cultural familiarity and religious relevance.

The findings highlight not only the educational value of integrating digital media into Islamic studies but also the broader potential for adapting such tools across diverse educational settings. As a recommendation for future practice and research, the development of similar digital learning media should involve a larger and more diverse sample to ensure broader applicability. Longitudinal studies are also needed to assess the long-term internalization of moral values, especially through affective and psychomotor domains that go beyond cognitive understanding. Evaluating emotional responses, behavioral changes, and value-based actions such as classroom participation and community involvement will offer a more holistic measure of effectiveness. Furthermore, co-developing content with educators and religious scholars, while incorporating more Qur'anic verses and hadiths, will enhance both pedagogical strength and spiritual depth. As educators continue to seek innovative and meaningful ways to shape morally grounded students, tools like Kampung Warna represent a promising and practical step forward in digital character education.

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