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The Development of Fiqh Teaching Materials with English-Language Visuals Based on Google Sites

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ABSTRACT

This study aims to develop interactive Fiqh teaching materials based on Google Sites, enriched with English-language visual content, to enhance students' motivation and understanding at MTsN 1 Padangsidimpuan. The research employed a Research and Development (R&D) approach using the 4D model—Define, Design, Develop, and Disseminate. The study involved 30 eighth-grade students over a six-week period during the 2024/2025 academic year. Expert validation was conducted by media, content, and language specialists, and the developed teaching materials achieved an average feasibility score of 93.78%, categorized as “excellent” based on the eligibility criteria established by Akker (1999), which considers scores above 85% as highly feasible. A paired sample t-test was used to measure the effectiveness of the product, yielding a p-value of 0.0000 ($p < 0.05$), indicating a statistically significant improvement in students' learning outcomes after the implementation. Students reported that the materials were engaging, easy to access, and helpful in grasping abstract Fiqh concepts, while also enhancing their exposure to English vocabulary in an Islamic context. These findings support the integration of digital platforms and bilingual visual aids as effective strategies to modernize Islamic education and promote 21st-century skills in madrasah settings.



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Introduction

Islamic education is a holistic and continuous process aimed at nurturing individuals with balanced development in intellectual, spiritual, moral, and social aspects. It integrates the key elements of tarbiyah (character formation), ta'lim (knowledge transmission), and tazkiyah (spiritual purification), forming a comprehensive framework for shaping individuals who are both morally upright and intellectually capable (Kementerian Agama RI, 2016). Within Indonesia's national education system, Fikih (Islamic jurisprudence) is a core subject in Madrasah Tsanawiyah (MTs), serving not only to communicate legal rulings based on the Qur'an and Hadith but also to instill ethical behavior aligned with Islamic teachings (Ismail, 2020).

Despite its importance, Fikih learning in MTs remains predominantly traditional—teacher-centered, text-heavy, and reliant on printed materials. These methods often fail to engage students and present difficulties in understanding abstract legal concepts, leading to low motivation, limited participation, and suboptimal learning outcomes (Hakim, 2020; Lestari, 2020). Although the COVID-19 pandemic accelerated the shift to online learning, most instructional approaches merely digitized static materials without meaningful pedagogical transformation, often neglecting learner interactivity and engagement (Rohman, 2020; Putra, 2021). As Selwyn

(2022) notes, the pandemic exposed the urgent need not just for digital access, but for pedagogically sound digital innovation that empowers both learners and educators.

From a cognitive theory perspective, the integration of multimedia elements is essential to foster deeper learning. According to Mayer's Cognitive Theory of Multimedia Learning, students learn more effectively from words and pictures than from words alone, particularly when information is organized in a way that reduces cognitive overload and promotes active processing (Mayer, 2021). This supports the need to move beyond text-based instruction by incorporating well-designed visual elements into Fikih materials to improve student understanding.

Furthermore, Ruben Puentedura's SAMR model offers a framework for evaluating technology integration in education, ranging from Substitution to Redefinition. To truly transform Fikih learning, the use of platforms such as Google Sites should aim for the Modification or Redefinition levels—where technology enables significant task redesign or allows previously inconceivable learning experiences (Puentedura, 2006). However, in practice, most digital adaptations of Islamic studies remain at the substitution level, replicating printed materials in digital formats with minimal added pedagogical value.

Various learning management systems (LMS) such as Moodle, Edmodo, and Google Classroom have been introduced to facilitate Islamic education. However, these platforms are often perceived as complex and require a learning curve, especially for teachers and students in under-resourced areas (Amalia, 2021; Nugraha, 2021). In contrast, Google Sites offers a user-friendly, open-access platform that enables teachers to design visually rich, interactive learning environments without advanced technical skills (Yunus, 2019). Its potential lies in combining multimedia content, hyperlinks, and embedded tools that can enhance student engagement. Nonetheless, empirical evidence comparing Google Sites to other LMS platforms in the context of Fikih instruction remains scarce, and its pedagogical impact has yet to be rigorously assessed.

Moreover, the integration of English-language visuals into Fikih materials offers interdisciplinary benefits. Visual aids help students conceptualize abstract topics more easily, while the exposure to English strengthens students' global Islamic literacy and foreign language skills (Sari, 2021; Wibowo, 2020). This is especially relevant in the 21st century, where English proficiency and cross-cultural understanding are increasingly vital. However, such integration is rarely found in current Islamic education practices at the junior secondary level.

At MTsN 1 Padangsidimpuan, existing Fikih instruction still relies on lecture methods and dense textual content, making it difficult for students to comprehend and remain engaged. The lack of visual and digital learning tools has further widened the learning gap, particularly during remote learning periods. Given these challenges, developing Google Site-based Fikih materials enriched with English-language images offers a potentially effective solution to increase student comprehension, motivation, and participation.

This study aims to develop and validate Fikih teaching materials utilizing the Google Sites platform, integrated with English-language visuals, to be implemented at MTsN 1 Padangsidimpuan. The objective is to improve students' understanding of Islamic legal concepts, enhance their English vocabulary related to Islamic terms, and foster more interactive and student-centered digital learning environments. This effort aligns with the goals of the 2013 Curriculum and the directives of Permendikbud No. 37 of 2018, which emphasize the importance of cultivating 21st-century competencies, including critical thinking, communication, collaboration, and creativity.

Method

This study employed a Research and Development (R&D) approach aimed at designing and producing instructional materials to improve the teaching and learning of Fiqh at MTsN 1 Padangsidimpuan. The approach was grounded in the model developed by Gall, Gall, and Borg (2003), which defines R&D as a process of developing and validating educational products through systematic procedures. The development process was guided by the 4D model proposed by Thiagarajan et al. (1974), consisting of four main phases: Define, Design, Develop, and Disseminate.

In the Define phase, a comprehensive needs analysis was conducted to identify gaps in existing instructional practices. Data collection involved classroom observations, curriculum analysis, and semi-structured interviews with both teachers and students. An interview protocol was developed to guide these interviews, including open-ended questions such as: "What challenges do you face when teaching/learning Fiqh?", "How do you perceive the use of technology in Islamic education?", and "What kind of learning materials would be more engaging or effective for you?". These questions were designed to elicit in-depth responses regarding instructional problems and learner needs. The findings from this phase highlighted the absence of interactive, contextual, and bilingual learning tools for Fiqh, as well as low student motivation during traditional instruction.

The Design phase translated the identified needs into a prototype instructional product. The product was designed using the Google Sites platform to integrate text, visuals, interactivity, and English-language elements. The content was aligned with the national Fiqh curriculum and included modules on key topics supported by images and multimedia. Visual materials were selected and adapted to support bilingual learning and concept retention, especially for abstract or jurisprudential content.

In the Develop phase, the prototype underwent validation and revisions. Validators were selected based on specific criteria: (1) having at least five years of teaching experience in Fiqh or Islamic Studies, (2) holding a graduate degree in Islamic education or educational technology, and (3) having experience in curriculum development or instructional media. Three experts—two from Islamic education and one from instructional technology—evaluated the product using a validation instrument covering content accuracy, language clarity, visual relevance, user accessibility, and alignment with learning objectives. Feedback from validators informed revisions, followed by small-group trials involving a limited number of students ($n = 10$) to test usability and clarity.

The Disseminate phase involved a larger-scale implementation of the revised product in two full Fiqh classes ($n = 60$ students). Teachers were provided with a brief training session on how to use the Google Site platform, and the materials were integrated into classroom instruction over a three-week period. During this time, data on learning outcomes and user feedback were collected. The impact of the instructional materials was measured by comparing students' pre-test and post-test scores, as well as by analyzing their perceptions via questionnaires and reflection logs.

Instrument validity and reliability were carefully addressed. The questionnaire was validated through expert judgment and tested for internal consistency using Cronbach's alpha, yielding a coefficient of 0.84, indicating high reliability. The test instruments (pre- and post-tests) were developed based on learning indicators derived from the curriculum. Content validity was assessed by two subject-matter experts. Item analysis was also conducted to evaluate difficulty level and discrimination index before use in the actual implementation.

To ensure the trustworthiness of qualitative data, strategies such as triangulation, member checking, and peer debriefing were employed. Triangulation was achieved by cross-verifying data from interviews, observations, and questionnaires. Member checking was conducted by inviting participants to review transcribed responses and interpretations. A detailed audit trail was also maintained to document the development and evaluation process.

Data analysis used mixed methods. Qualitative data from interviews, observations, and open-ended responses were analyzed thematically, identifying patterns relevant to the instructional needs and student engagement. Quantitative data from pre-tests, post-tests, and Likert-scale questionnaires were analyzed using descriptive statistics, including means, percentages, and standard deviations. The gain scores between pre- and post-tests were used to assess the effectiveness of the product, while student perception data were categorized as "excellent," "good," "adequate," or "poor" based on interpretation ranges (e.g., 81–100% = excellent).

Results and Discussions

This chapter presents the findings and provides a comprehensive analysis of the development, implementation, and impact of a web-based instructional media using Google Sites for the subject of Fiqh at MTsN 1 Padangsidimpuan. The discussion integrates both empirical results and theoretical reflections grounded in digital learning frameworks, particularly Mayer's Multimedia Learning Theory and the SAMR model (Substitution, Augmentation, Modification, Redefinition). Each subsection explores not only what was found, but also interprets the results critically, taking into account methodological limitations and pedagogical implications.

Learning Outcomes and Quantitative Data Analysis

The implementation of the Google Sites-based instructional media led to a marked increase in student achievement, as evidenced by the rise in the average test scores from 69.5 on the pre-test to 88.5 on the post-test. The standard deviation also decreased from 12.2 to 8.0, suggesting not only an overall improvement but also a reduction in learning disparities among students. A paired sample t-test was conducted to statistically verify the significance of the gain, yielding a t-statistic of -6.7653 and a p-value of 0.0000 ($p < 0.05$). This result confirmed a significant improvement in student performance following the use of the developed media.

However, these promising results must be interpreted with caution. The study did not include a control group, which limits the ability to attribute the observed improvement exclusively to the instructional media. Other contributing factors—such as increased teacher guidance, repeated exposure to test materials, or natural learning progression—could have influenced the outcome. The absence of experimental control prevents the

isolation of the media's effect, thus weakening causal claims. Future studies should consider using a quasi-experimental or experimental design with randomized control to strengthen the validity of the findings.

Student Perceptions and Motivation

Feedback gathered through interviews and open-ended surveys revealed that students responded positively to the web-based media. Many expressed that the inclusion of images, videos, and interactive quizzes enhanced their learning experience. One student noted, "I like using the site because it has pictures and videos, and I don't need to carry heavy books anymore." Another shared, "I can learn by myself, and I watch the video again if I don't understand the first time."

While these comments indicate increased motivation and engagement, they also highlight a limitation in how student feedback was interpreted. Statements focused on convenience and novelty (e.g., not carrying books) may reflect superficial satisfaction rather than deep learning. Therefore, it is essential to analyze such perceptions within a broader educational framework, such as self-regulated learning (Zimmerman, 2002), which emphasizes learner autonomy, goal-setting, and reflective thinking. If the media contributes to students' ability to learn independently and revisit material as needed, it aligns with core principles of learner-centered pedagogy.

In addition, the integration of multimedia content can be linked to Mayer's Cognitive Theory of Multimedia Learning, which posits that meaningful learning occurs when students engage both verbal and visual channels. The Google Site used in this study incorporated diagrams, step-by-step video explanations, and concise English captions, which likely supported dual-channel processing and minimized cognitive overload. The segmentation of content into manageable chapters and the inclusion of contextual visuals helped students to retain and apply knowledge more effectively.

Instructional Media Design and Theoretical Reflection

The instructional media was designed using the 4D model (Define, Design, Develop, Disseminate). During the Define stage, analysis of classroom practices revealed that traditional instruction in Fiqh was heavily text-based and teacher-centered, with limited use of visual or interactive materials. This created a learning environment that was passive and disengaging for many students. To address this, the media was developed to support active, multimodal learning aligned with the Merdeka Curriculum's emphasis on competence, character development, and contextual understanding.

The Design and Develop phases involved careful structuring of content into four chapters, each integrating multimedia elements such as videos, illustrations, interactive quizzes, and English-language terminology. These features were intended not only to enhance understanding but also to introduce students to basic bilingual religious vocabulary, thus aligning with national goals of English integration in subject learning. The use of Google Sites allowed for easy access, cross-device compatibility, and asynchronous learning, which are crucial in supporting diverse learners, especially those in remote or under-resourced environments.

Using the SAMR model, the media's impact can be categorized at multiple levels. At the Substitution level, Google Sites replaced printed materials; at Augmentation, it enhanced learning with embedded videos and quizzes; at the Modification level, it altered classroom workflows, enabling flipped learning; and at Redefinition, it allowed for new forms of learning experiences, such as self-paced study, mobile access, and real-time teacher feedback through Google Forms.

Expert Validation and Potential Bias

The instructional media underwent validation from three experts: a media specialist, a content expert (Fiqh teacher), and a language expert. The media received scores of 93% (media), 94% (content), and 94% (language), indicating high levels of feasibility and quality. Validators commented positively on the clarity of visual layout, curriculum alignment, bilingual terminology, and age-appropriate language use.

Nonetheless, these high scores raise questions about potential biases. The validation process did not explicitly state whether validators had prior affiliations with the researcher or the institution, which could inadvertently influence the objectivity of the assessments. It is also unclear whether the validators used standardized rubrics or subjective judgment. Future studies should enhance transparency in the validation process by clearly stating evaluator independence and using detailed instruments with inter-rater reliability measures.

Challenges and Limitations in Implementation

While the media was generally successful, several challenges emerged during implementation. The most critical barrier was internet connectivity, especially for students living in rural areas. Some students had difficulty accessing video content due to weak signals. Teachers responded by compressing videos and distributing them

via WhatsApp for offline access. This adaptation showed the importance of context-aware design in educational technology development.

Another challenge involved the digital literacy of senior teachers, some of whom were unfamiliar with creating or managing Google Sites. Informal training and peer mentoring were organized to support their capacity-building. This highlights the need for continuous professional development to ensure successful integration of technology into classroom practice. Additionally, some students using older smartphones experienced compatibility issues, which were addressed by simplifying the interface and reducing high-resolution content.

Broader Impact and Scalability

Following validation and positive field trials, the media was disseminated to other classes through WhatsApp and supported with orientation sessions for students and teachers. The product showed high scalability and adaptability, with minimal adjustment needed for different classroom settings. The experience suggests that low-cost, accessible digital tools like Google Sites can serve as powerful platforms for religious education when designed thoughtfully.

Parental and school support also played a vital role in successful implementation. Schools provided Wi-Fi access and devices, while parents ensured that smartphones were used appropriately for learning. Communication was maintained through WhatsApp groups involving teachers, students, and parents, creating a collaborative learning environment.

Conclusions

Based on the research findings and the discussions presented, it can be concluded that the development of web-based instructional media using Google Sites—enhanced with English-language visuals and multimedia elements—shows promising potential in improving students' understanding and engagement in Fiqh learning at MTsN 1 Padangsidempuan. Developed through the 4D model (Define, Design, Develop, and Disseminate), the media addressed initial instructional challenges, such as low motivation, abstract content comprehension, and the lack of interactive resources. Students demonstrated significant improvement in learning outcomes, as evidenced by pre-test and post-test score comparisons.

The use of Google Sites allowed for flexible, student-centered learning, accommodating different learning styles and enabling self-paced study. The integration of English-language captions alongside Fiqh materials also supported the development of bilingual literacy. Feedback from teachers and students indicated high levels of satisfaction with the platform's clarity, visual appeal, and ease of use.

However, it is important to approach these findings with caution. The success of the media, as presented in this study, is context-dependent and faces several significant limitations. Chief among them is the reliance on stable internet access and the digital readiness of both students and teachers. The effectiveness of the platform is reduced in environments with poor connectivity or limited access to devices. Moreover, some teachers required additional guidance and support in using the digital platform, indicating a clear need for ongoing professional development.

In addition, the project's sustainability remains uncertain. After the research period, questions arise as to who will maintain, update, and expand the content on the Google Site. Without institutional commitment or digital infrastructure planning, there is a risk that the platform may become obsolete or underused. To ensure sustainability, schools need to allocate specific responsibilities to digital content teams and invest in training programs for teachers, particularly in instructional design and basic website maintenance.

Policy recommendations must also go beyond general encouragement of digital learning. Concrete steps should include structured teacher training in educational technology, integration of media development into school planning, and partnerships with internet service providers to ensure equitable access, particularly in rural or under-resourced areas. Schools and regional education authorities should also consider establishing centralized repositories of digital Islamic learning materials that can be customized and maintained collectively.

For future research, it is recommended to conduct comparative studies across multiple madrasahs, especially those with weaker infrastructure, to test the adaptability and effectiveness of this media under different conditions. Longitudinal studies could also explore the long-term impact of web-based media on students' religious literacy and digital competence. Furthermore, future research could examine how digital Fiqh instruction might integrate with other subjects in a cross-disciplinary framework, promoting more holistic educational outcomes.

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