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Development of iSpring Suite and Website 2 APK Builder-Based Interactive Learning Materials for Fiqh Education in Grade XII at MAN 4 Bojonegoro.

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Abstract

This study addresses the limited use of interactive learning media in Fiqh instruction, particularly on the topics of ijtihad and mazhab in Grade XII at MAN 4 Bojonegoro, which has led to low student engagement and difficulty in understanding conceptual material. The aim of this research is to develop an interactive teaching material based on iSpring Suite integrated with Website 2 APK Builder, and to determine its feasibility and practicality in supporting the learning process. This study employs a Research and Development (R&D) method using the Borg & Gall model, involving stages of needs analysis, product design, development, validation, revision, and field testing. Data were collected through observation, interviews, questionnaires, and documentation, and analyzed using descriptive and percentage techniques. The results indicate that the developed interactive teaching material achieved a high level of validity based on expert evaluations (material, media, and subject teacher) and showed a very practical level based on student responses during field trials involving 25 learners. The product effectively enhances students' understanding, engagement, and independent learning. In conclusion, the interactive teaching material developed through iSpring Suite and APK Builder is valid, practical, and suitable for use as an innovative learning medium in Fiqh education.

Keywords: *interactive teaching materials, iSpring Suite, APK Builder, Fiqh learning, R&D.*

INTRODUCTION

The rapid development of digital technology has significantly influenced the education sector, requiring innovation in teaching methods and learning media to create effective and meaningful learning experiences. In modern educational contexts, technology is not only used as a supporting tool but also plays a crucial role in facilitating structured, interactive, and student-centered learning processes. Therefore, the integration of digital-based learning media becomes essential, particularly in subjects that require deep conceptual understanding such as Fiqh.

Fiqh learning in Grade XII, especially on the topic of Ijtihad and Mazhab, involves abstract concepts and complex terminologies derived from Arabic sources. These characteristics often make the material difficult for students to understand. Based on preliminary observations conducted at MAN 4 Bojonegoro, the teaching process still predominantly relies on conventional methods such as lectures and textbooks. As a result, student participation tends to be low, and many students experience difficulties in understanding key concepts, particularly in relating theoretical knowledge to real-life contexts. In addition, the limited availability of interactive teaching materials restricts students' opportunities to learn independently outside the classroom.

Several previous studies have highlighted the importance of interactive learning media in improving student engagement and learning outcomes. Research by Laily (2021) demonstrated that learning media developed using I-Spring Suite are valid and

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feasible for instructional use. Similarly, Safitri and Maharani (2025) found that integrating I-Spring Suite with APK-based applications enhances interactivity and accessibility in learning. Other studies also indicate that multimedia-based learning tools can increase student motivation, participation, and comprehension. However, most existing studies focus on general subjects or different educational levels, and only a few specifically address the development of interactive teaching materials for Islamic education, particularly in Fiqh subjects.

Furthermore, previous research tends to examine the use of a single platform, while the integration of I-Spring Suite as a multimedia development tool and Website 2 APK Builder as an application converter remains limited. This gap indicates the need for research that combines both technologies to produce interactive, flexible, and easily accessible teaching materials. In addition, studies that consider the specific characteristics of madrasah students and the contextual needs of Fiqh learning are still scarce.

Based on these considerations, this study aims to develop interactive teaching materials based on I-Spring Suite and Website 2 APK Builder for Fiqh learning in Grade XII at MAN 4 Bojonegoro. The objectives of this research are: (1) to describe the process of developing interactive teaching materials, and (2) to determine the feasibility and practicality of the developed product.

This research is expected to contribute theoretically and practically. Theoretically, it enriches the literature on technology-based learning media in Islamic education. Practically, it provides an innovative learning solution that supports teachers in delivering structured and engaging content, while also enabling students to learn independently through accessible digital platforms.

METHOD

This study employed a Research and Development (R&D) approach aimed at developing and validating interactive learning materials for Fiqh education in Grade XII at MAN 4 Bojonegoro, particularly on the topics of Ijtihad and Madhhab. The R&D method was selected as it enables the systematic design, development, and evaluation of educational products to ensure their validity and practicality.

The development process in this study followed the Borg and Gall model, which consists of ten systematic stages. The first stage was research and information gathering, conducted through classroom observations and interviews with Fiqh teachers and students to identify learning problems, instructional methods used, and the need for interactive learning media. The second stage was planning, which included analyzing learning objectives, determining the scope of the material, and designing the structure of the interactive learning materials.

The third stage was the development of the initial product, involving the creation of learning materials using Microsoft PowerPoint integrated with iSpring Suite to produce interactive multimedia content. Subsequently, the materials were converted into an Android-based application using Website 2 APK Builder to allow flexible access for students. The fourth stage was preliminary field testing, which involved validation by subject matter experts, media experts, and Fiqh teachers, as well as limited trials with a small group of students to obtain feedback on the developed product.

Following this, product revisions were carried out based on suggestions and evaluation results. The next stage was field testing involving 25 Grade XII students to determine the practicality and ease of use of the interactive learning materials. After further revisions,

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operational field testing was conducted to evaluate the effectiveness of the product in real classroom learning conditions.

The final stage involved product refinement and dissemination, including the finalization of the developed interactive learning materials and their implementation in the learning process.

Data in this study were collected using several techniques, namely observation, interviews, questionnaires, and documentation. Qualitative data were obtained from interviews and expert feedback, while quantitative data were collected through questionnaires to measure the validity and practicality of the product.

Data analysis was conducted using descriptive analysis techniques. The levels of validity and practicality were determined through percentage calculations based on expert validation scores and student responses. The product was considered feasible if it achieved a minimum score of 75%, indicating that the developed interactive learning materials are suitable for use in the learning process.

Table 1. Score *Likert*

Criteria	Score Obtained
Excellent	5
Good	4
Fair	3
Poor	2
Very Poor	1

Tabel 2. Score *Guttman*

Response Options	Score
Yes	1
No	0

Tabel 3. Criteria for Assessing the Validity of Learning Media

Precentage (%)	Qualification	Validity Criteria
90 - 100%	Highly Valid	No Revision Required
75 - 89%	Valid	No Revision Required
65 - 74%	Moderately Valid	Revision Required
55 - 64%	Less Valid	Revision Required
0 - 54%	Very Poorly Valid	Revision Required

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Tabel 4. Criteria for Assessing Practicality

Precentage (%)	Practicality Level
86 - 100 %	Highly Practical, usable without revision
71 - 85 %	Practical, usable without revision
56 - 70 %	Moderately Practical, usable with revision
41 - 55 %	Less Practical, not recommended for use
25 - 40 %	Not Practical, not recommended for use

RESULTS AND DISCUSSION

The results of the preliminary study revealed that the Fiqh learning process was still dominated by conventional teaching methods such as lectures and textbook-based instruction. This condition resulted in limited student participation and low engagement during classroom activities. Students experienced difficulties in understanding the topic of Ijtihad and Mazhab due to its abstract nature and the use of Arabic terminology. In addition, the availability of interactive and technology-based teaching materials was very limited, which hindered students' ability to learn independently outside the classroom.

Based on these findings, an interactive teaching material was developed using I-Spring Suite and Website 2 APK Builder. The product was designed as an Android-based application that integrates various multimedia elements, including text, images, videos, animations, and interactive quizzes. The application also provides navigation features, glossary, and evaluation components to support structured and independent learning.

The development process followed the Borg and Gall model, including needs analysis, product design, development, validation, and testing stages. The initial product was validated by material experts, media experts, and a Fiqh teacher. The validation results indicated that the product met the criteria of validity in terms of content accuracy, instructional design, and media presentation.

Field testing was conducted with 25 students of Grade XII. The results showed that the developed teaching materials were practical and easy to use. Students responded positively to the application, stating that it was interesting, interactive, and helpful in understanding the material. The use of multimedia features and interactive quizzes contributed to increased student engagement and motivation in learning.

The findings of this study indicate that the use of interactive teaching materials significantly supports the learning process in Fiqh subjects, particularly in understanding complex and conceptual topics such as Ijtihad and Mazhab. The integration of multimedia elements, including visual and audio components, enables students to process information more effectively and enhances their comprehension.

These results are consistent with constructivist learning theory, which emphasizes

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the active role of learners in constructing knowledge through interaction and experience. The interactive features embedded in the developed application, such as quizzes and navigation systems, encourage students to actively engage with the learning material and explore concepts independently.

Furthermore, the use of I-Spring Suite as a development tool allows the transformation of conventional presentation materials into interactive multimedia content. Meanwhile, Website 2 APK Builder facilitates the distribution of learning materials in the form of Android applications, providing flexibility and accessibility for students. This combination supports mobile learning, which is increasingly relevant in the digital era.

The findings also align with previous studies that highlight the effectiveness of interactive media in improving student motivation and learning outcomes. Compared to earlier research, this study offers a novel contribution by integrating two platforms and applying them specifically in the context of Fiqh learning at the madrasah level.

In terms of practical implications, the developed teaching materials provide an innovative solution for teachers to deliver structured and engaging learning content. For students, the application supports independent and flexible learning, allowing them to access materials anytime and anywhere.

Overall, the results demonstrate that the interactive teaching materials developed in this study are valid, practical, and beneficial for enhancing the quality of Fiqh learning in digital-based educational environments.

Tabel 5. Recapitulation of All Validation Data and Responses

No	Validator	Precentage (%)	Criteria
1	Subject Matter Expert	92 %	Very Valid
2	Media Expert	80 %	Valid
3	Fiqh Teacher (Grade XII)	98 %	Highly Practical
4	Students	97%	Highly Practical

CONCLUSION

This study aimed to develop interactive teaching materials based on I-Spring Suite and Website 2 APK Builder for Fiqh learning in Grade XII at MAN 4 Bojonegoro, particularly on the topic of Ijtihad and Mazhab. The development process was carried out using the Research and Development (R&D) method with the Borg and Gall model, which includes stages of needs analysis, design, development, validation, and testing.

The results of this study indicate that the developed interactive teaching materials meet the criteria of validity and practicality. The validation results from experts show that the product is appropriate in terms of content, instructional design, and media presentation. In addition, the results of field testing demonstrate that the application is easy to use, engaging, and helpful in improving students' understanding of the material.

The use of multimedia elements and interactive features in the application

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contributes to increased student participation, motivation, and independent learning. Furthermore, the integration of I-Spring Suite and Website 2 APK Builder provides flexibility in accessing learning materials through Android devices, supporting the implementation of mobile learning in the digital era.

In conclusion, the developed interactive teaching materials are suitable for use in Fiqh learning and can enhance the quality of the learning process. This study also provides both theoretical and practical contributions to the development of technology-based learning media in Islamic education.

For future research, it is recommended to conduct wider-scale implementation and to measure the effectiveness of the product in improving student learning outcomes quantitatively. Additionally, further development can be carried out by integrating more advanced features and expanding the material scope to other topics in Fiqh learning.

DECLARATION OF GENERATIVE AI (if any)

During the preparation of this manuscript, the author used generative artificial intelligence (AI) tools, specifically ChatGPT, to assist in translating the manuscript from Indonesian into English. The use of AI was limited to language translation and did not involve the generation of research content, data analysis, or interpretation of results.

The author has carefully reviewed and edited all translated content to ensure its accuracy, clarity, and compliance with academic writing standards. The author takes full responsibility for the content of this manuscript.

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