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Development of Google Sites Based on Deep Learning Material Emulating the Role of Maulana Malik Ibrahim

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ABSTRACT
This research aims to: (1) determine the feasibility level of web-based learning media using the Google Sites platform with a deep learning approach on the material "Emulating the Role of Maulana Malik Ibrahim in Spreading Islam," and (2) identify changes in students' learning interest after using the web-based learning media developed through Google Sites by applying the deep learning approach with a focus on the topic "Emulating the Role of Maulana Malik Ibrahim (Sunan Gresik) in Spreading Islam." This study employs the Research and Development (R&D) method with the ADDIE development model, consisting of five systematic stages: analysis, design, development, implementation, and evaluation. Interactive, engaging, and easily accessible learning materials were developed through the Google Sites platform. After the validation process, trials were conducted by media and material experts through individual, small-group, and field testing. The research results showed that the media obtained an average score of 79.4% from media experts (valid with minor revisions), 100% from material experts (highly valid), 86% from small-group trials (highly feasible), and 92% from field trials (highly feasible). These findings indicate that the web-based learning model with a deep learning approach is practical, effective, and suitable for use in Islamic Religious Education. Through its interactive features and appealing visual design, this media can enhance students' motivation, understanding, and participation while providing opportunities for independent learning. Moreover, the developed product assists educators in delivering material innovatively and facilitates students to learn anytime and anywhere, thereby improving learning outcomes and creating meaningful and enjoyable educational experiences.

***Keywords**: Learning media, deep learning approach, Islamic Religious Education, Google Sites, Maulana Malik Ibrahim.*

INTRODUCTION

The rapid advancement of information and communication technology has significantly impacted the education sector, including Islamic religious education (PAI) in vocational high schools (SMK). Despite the availability of technology, traditional teaching methods, particularly in teaching history-related subjects, remain predominant, often resulting in decreased student engagement, enthusiasm, and understanding. Teachers predominantly rely on monotonous lectures, which neither stimulate student interaction nor enhance motivation, especially in comprehending historical figures and their contributions. (Rahayu et al., 2022). Consequently, students' appreciation of national heroes and patriotism is at a declining trend, which raises concerns about the sustainability of national values and identity (Banjar Government, 2024).

Addressing this educational challenge requires innovative media that can foster active learning, critical thinking, and real-world contextualization of knowledge. Web-based learning media, particularly Google Sites integrated with deep learning approaches, offer promising potential to transform PAI learning by facilitating interactive, accessible, and personalized learning experiences (Yahya, 2025)(Duwi Lismawati, 2024). Deep learning emphasizes meaningful, mindful, and joyful learning by encouraging students' critical analysis, problem-solving, and engagement beyond rote memorization (Muti, 2024; Muzawi, 2024).

Previous studies have demonstrated the effectiveness and feasibility of deploying Google Sites as an educational platform, especially in subjects like semiotics and mathematics, contributing to improved student comprehension and motivation (Rikani et al., 2021; Yahya et al., 2025). Nonetheless, there remains a research gap in developing and validating PAI learning media specifically tailored to the

historical and cultural context of Islamic figures such as Maulana Malik Ibrahim (Sunan Gresik) to enhance students' cultural literacy and spiritual values.

This study innovates by developing a web-based PAI learning media using Google Sites with a deep learning approach, focusing on the role of Maulana Malik Ibrahim in spreading Islam in Indonesia. The research aims to address the shortcomings of conventional teaching, integrating interactive multimedia, video content, and evaluation games to improve student engagement and learning outcomes. The study stance supports the previous findings by building upon and expanding their application in the PAI subject context, aiming to correct the inertia in media utilization in Islamic education.

The objectives of this study are: (1) to develop a Google Sites-based learning media using a deep learning approach tailored for PAI; (2) to evaluate the implementation effectiveness of this media in enhancing student motivation and understanding regarding Maulana Malik Ibrahim's historical role. The expected benefit is to provide educators with an innovative tool that leverages technology to enrich Islamic education in vocational high schools.

METHOD

This research employed a Research and Development (R&D) approach using the ADDIE model, which consists of five phases: Analysis, Design, Development, Implementation, and Evaluation. The objective was to produce and test a web-based learning media using Google Sites with a deep learning approach for Islamic religious education (PAI) material about Maulana Malik Ibrahim's role in spreading Islam.(Zulfah & Yunizhar, n.d.)

The subjects were students of grade X at SMK Pesantren Temulus Ngawi, involving teachers as material and media experts for validation. The development process began with performance and needs analysis to identify learning challenges and requirements. Subsequently, the design phase involved preparing clear learning objectives, content selection, and structuring the Google Sites interface, including menus for learning goals, material, videos, evaluation quizzes, and profile.

In development, the learning media was created and validated by experts for feedback and improvement. Implementation consisted of limited trials: initial individual testing, small group testing with eight students, and a field trial in a class of 30 students. Data collection used qualitative methods (interviews, observations, documentation) and quantitative instruments (pre-tests, post-tests, validation and response questionnaires with Likert scales). The pre-test and post-test assessed knowledge improvement, while questionnaires measured media validity, practicality, and student response.(Slamet, 2022)

Data analysis was conducted descriptively using empirical scoring formulas to determine validity and effectiveness. The evaluation phase focused on revising the media based on feedback and analyzing the impact on student motivation and understanding.(Sa'dunAkbar,2017)

RESULT AND DISCUSSION

This research produced a product in the form of a Google Sites-based learning media using a deep learning approach, developed through the ADDIE model (Analysis, Design, Development, Implementation, Evaluation). The development process aimed to enhance the effectiveness and attractiveness of Islamic Religious Education (PAI) learning at SMK Pesantren Temulus, particularly in the topic *Emulating the Role of Maulana Malik Ibrahim in Spreading Islam*.

In the analysis stage, it was found that the PAI learning process at the school still relied on lecture methods and textbooks, resulting in students being passive and less motivated. Therefore, an interactive and contextual digital learning media was needed.

The design stage produced a web layout with several main menus, namely: Learning Objectives, Materials, Videos, Evaluation, and Web Profile. The materials were structured in accordance with the Learning Outcomes (CP) and Competency Achievement Indicators (IPK).

The development stage involved creating the media using the Google Sites platform, which included text, images, instructional videos, and interactive evaluations based on Quizizz.

Result

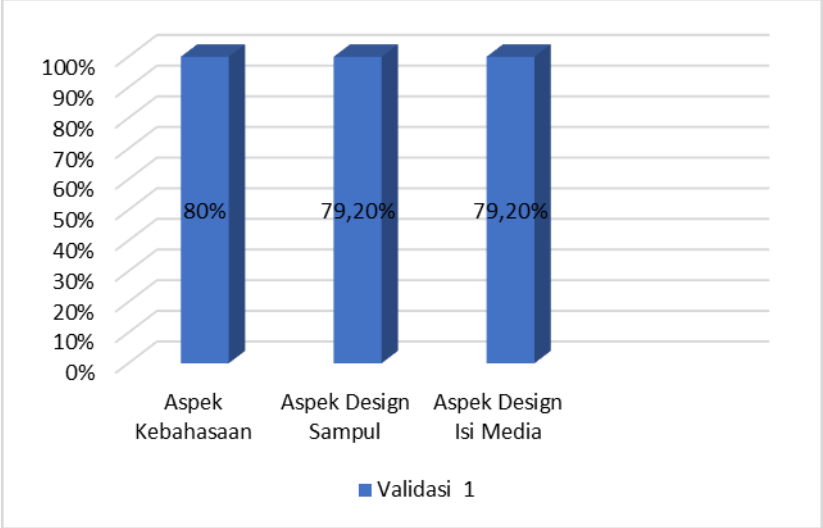
The assessment of the feasibility of the Google Sites-based learning media with a Deep Learning approach was conducted through several stages, namely validation by media experts, validation by material experts, as well as individual testing, small group testing, and field trials. Each stage aimed to ensure that the developed media was truly feasible for use in the Islamic Religious Education (PAI) learning process at SMK Pesantren Temulus Ngawi.

The results of the media expert validation indicated that the developed learning media had met the feasibility standards, although minor revisions were still required. The validation was conducted by a lecturer specializing in educational technology who assessed three main aspects: language, cover design, and content design. The evaluation results showed an average percentage score of 79.4%, categorized as valid with minor revisions needed.

More specifically, the language aspect obtained a score of 80%, indicating that the language used in the media was clear and communicative, though some terminology still required refinement for better consistency and adherence to Indonesian language standards. The cover design aspect received a score of 79.2%, suggesting that the visual appearance was appealing but required slight adjustments in color composition and layout balance to better suit student characteristics. Meanwhile, the content design aspect also scored 79.2%, showing that the media was sufficiently engaging and easy to understand, yet needed minor adjustments in the alignment of images and text to create a more proportional layout and enhance students' focus during learning.

Overall, these findings demonstrate that the Google Sites-based learning media met the feasibility criteria and can be utilized after implementing minor revisions to improve its visual presentation and content readability.

The results of the media validation are presented in the following graph:



Meanwhile, the material expert validation results obtained a perfect score of 100%, categorized as valid without revision. The assessment was conducted by an Islamic Religious Education (PAI) teacher who served as the material validator. The evaluated aspects included the relevance of the material to the learning objectives, learning outcomes (CP), competency achievement indicators (IPK), and language use.

The validation results indicated that all the materials presented in the learning media were fully aligned with the applicable curriculum, featuring a systematic presentation flow, adequate depth of discussion, and strong relevance between the material and learning objectives. The validator also noted that the language used was highly communicative, easy for students to understand, and free from grammatical or semantic errors.

Based on these results, the learning media was declared highly feasible for use without requiring any additional revisions in terms of material content.

The results of the material validation are presented in the following graph:

After being declared valid by the experts, the learning media proceeded to the individual trial stage, which involved three students with different academic abilities. The purpose of this stage was to assess how easily the display and features of the media could be used and understood by students individually. Based on the evaluation results, the average score obtained was 68%, which falls into the fairly feasible category. Although this result indicates that the media can be used, several suggestions were provided by the participants, such as the need to simplify navigation and add usage instructions to make the media easier to operate independently. These findings served as the basis for the researcher to make initial revisions before testing the media with a larger group.

The next stage was the small group trial, which involved eight students. The purpose of this trial was to observe student responses to the appearance, content, and effectiveness of the learning media in a broader group. Based on the analysis results, the average percentage obtained was 86%, categorized as highly feasible. Students stated that the Google Sites-based media was easily accessible, visually appealing, and helped them better understand the presented material. In addition, the instructional video and interactive quiz features were considered effective in enhancing learning enthusiasm by providing a fun and engaging learning experience. No significant technical issues were found during the use of the media, indicating that the media functioned well and successfully attracted students' learning interest.

The final stage was the field trial (large group), involving twenty students from grade X of SMK Pesantren Temulus. This stage aimed to determine the effectiveness level of the media when applied in an actual learning setting. Based on the evaluation results, the learning media obtained an average score of 92%, categorized as highly feasible without revision. Students assessed that the media's appearance was very attractive, its features were easy to operate, and the material was clearly presented and relevant to learning needs. They also expressed that the media helped them understand the material more deeply due to the combination of text, images, and videos that clarified learning concepts. Furthermore, the use of Quizizz as an evaluation tool made the learning process more interactive and fostered motivation to engage in healthy competition.

The table below presents the data on validation results and student responses.

Variabel	Presentase	Kategori
Validasi Media	79,4%	Valid perlu direvisi
Validasi Materi	100%	Sangat valid
Uji coba Perorangan	68%	Cukup layak
Uji coba Kelompk Besar	86%	Sangat layak
Uji coba Lapangan	92%	Sangat Layak digunakan tanpa revisi

Overall, the feasibility test results showed that the Google Sites-based learning media with a Deep Learning approach met all feasibility criteria in terms of appearance, content, and effectiveness of use. The media was declared valid, practical, and effective for use in Islamic Religious Education (PAI)

learning, as it successfully enhanced students' interest, participation, and understanding of the material "Emulating the Role of Maulana Malik Ibrahim in Spreading Islam."

Discussion

The results of the study show that Google Sites-based learning media with a Deep Learning approach has a positive impact on increasing students' motivation and understanding of the material Emulating the Role of Maulana Malik Ibrahim (Sunan Gresik) in Spreading Islam. Through the development process with the ADDIE model, this media successfully passed the stage of expert validation and field trials with very satisfactory results, namely reaching a feasibility level of 92%. These results prove that the developed media has met the principles of validity, practicality, and effectiveness as required in research and development.

The success of this learning media is inseparable from the application of the Deep Learning approach which emphasizes meaningful learning, joyful learning, and mindful learning. This approach makes students not only memorize information, but also understand the meaning and moral values contained in the story of Maulana Malik Ibrahim's struggle. This is in line with the opinion of Diputera et al. (2024) who stated that Deep Learning-based learning is able to increase critical thinking awareness and make students more reflective in understanding the material in depth. Thus, Google Sites-based media is an effective means to realize meaningful learning.

When compared to previous research, the results of this study are consistent with the findings of Duwi Lismawati (2024) who showed that Google Sites-based PAI learning media is effective in increasing the learning motivation of high school students with a significance result of 0.000 (sig < 0.05). Likewise, the research of Rikani, Istiqomah, and Irham Taufiq (2021) found that Google Sites-based media on SPLTV material obtained a validation score above 80% and a student response of 3.6 with a good category. The similarity of these results shows that the Google Sites platform has great potential as an interactive, easily accessible, and appropriate learning media for students in the digital era. The difference lies in the context of use: this study focuses on the development of religious character through learning the history of Islamic figures, not just improving cognitive outcomes.

Theoretically, the results of this study strengthen Mayer's (2009) theory of Cognitive Theory of Multimedia Learning, which explains that learning will be more effective if information is presented visually and verbally at the same time. In this context, Google Sites functions as a multimodal medium that combines text, images, videos, and interactive quizzes. This combination is able to optimize the absorption of students through multisensory information processing. In other words, students not only read the material but also see and hear illustrations that strengthen the understanding of Islamic concepts studied.

Overall, the results of this study show that Google Sites-based learning media not only increases students' interest and learning outcomes, but also contributes to Islamic Religious Education learning innovations based on digital technology. This media can be used as a reference for teachers to create learning that is more interactive, flexible, and relevant to the needs of today's students.

CONCLUSION

Based on the research findings and discussion, it can be concluded that the Google Sites-based learning media with a Deep Learning approach on the topic *"Emulating the Role of Maulana Malik Ibrahim (Sunan Gresik) in Spreading Islam"* is feasible, effective, and innovative for use in Islamic Religious Education (PAI) learning at SMK Pesantren Temulus Ngawi. The validation results showed that the media met all feasibility criteria, both in terms of content and design, with a media expert validation score of 79.4% (feasible with minor revisions) and a material expert validation score of 100% (highly feasible without revision). The results of the individual, small group, and field trials also showed a significant increase in scores from 68% to 92%, indicating that the media is easy to use, engaging, and effective in enhancing students' motivation and understanding.

Substantively, the developed learning media successfully addressed the needs of 21st-century education, which demands the integration of technology into the teaching and learning process. The application of the Deep Learning approach encouraged students to become more active, reflective, and capable of understanding the material in depth rather than through mere memorization. This finding reinforces the concept of meaningful learning and supports the implementation of the Merdeka Curriculum, which emphasizes experience-based learning.

The main strength of this media lies in its ability to provide a flexible, interactive, and enjoyable

learning experience through the combination of text, videos, images, and Quizizz-based evaluations. However, this study has a limitation in that the trial scope was restricted to one school and a single learning topic. Therefore, it is recommended that future research be conducted on a broader scale, involving different educational levels and subjects to obtain a more comprehensive understanding of the effectiveness of web-based learning media using the Deep Learning approach.

With these findings, the Google Sites-based learning media can serve as an innovative alternative solution for Islamic Religious Education teachers in developing digital learning processes that are engaging, adaptive to technological advancements, and capable of fostering religious character and exemplary values among students.

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