Jurnal Kajian Keislaman dan Kemasyarakatan

http://journal.iaincurup.ac.id/index.php/JF/index
P-ISSN: 2548-334X; E-ISSN: 2548-3358

Research Article

Development of Google Sites Media as a Contextual and Interactive Innovation for Teaching Al-Qur'an and Hadith

Nuaimah Anatul Maula[1], Zakiyah[2], Darodjat[3]
[1] *Faculty of Islamic Studies, Muhammadiyah University of Purwokerto, Purwokerto, Indonesia*
[2] *Faculty of Islamic Studies, Muhammadiyah University of Purwokerto, Purwokerto, Indonesia*
[3] *Faculty of Islamic Studies, Muhammadiyah University of Purwokerto, Purwokerto, Indonesia*

Corresponding Author: nuaimahmaula512@gmail.com

Abstract. This study aimed to develop and evaluate a Google Sites–based learning medium as an innovation for contextual and interactive Al-Qur'an Hadith instruction in a Grade VIII digital-class setting at MTs Negeri 4 Cilacap. The study employed a Research and Development (R&D) approach using the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). Needs analysis with 32 students indicated high digital readiness (100% smartphone ownership; 78% frequent internet use; 91% preference for digital learning) and strong demand for video- and audio-supported learning. The product integrated Qur'anic text, murattal audio, instructional videos, interactive quizzes, and online reflection tasks in a single portal. Expert validation (five-point scale) confirmed feasibility, with a content expert score of 4.50/5.00 and a media expert score of 4.00/5.00, followed by minor revisions. A limited pilot trial (n = 10) showed full accessibility and positive usability feedback, and the field implementation (n = 32) yielded an average quiz score of 2,627 points with 80% accuracy and 80.5% mastery. Student responses reached 89.25% (very good). These findings indicate that Google Sites can function as a low-cost, scalable, and pedagogically meaningful platform to support CTL-oriented learning and Qur'anic value internalization in digital madrasah contexts.

Keywords:
Google Sites, Al-Qur'an Hadith Education, Contextual and Interactive Learning

Introduction

Al-Qur'an and Hadith education plays a strategic role in Islamic schooling because it does not merely develop students' ability to recite and comprehend sacred texts, but also facilitates the internalization of moral, social, and humanitarian values embedded within Qur'anic messages. In the context of twenty-first century education, Islamic learning is increasingly required to adapt to digital transformation so that instructional practices remain relevant to learners' technological habits and the learning preferences of digital-native students. This need is particularly evident in digital classroom environments where students routinely interact with technology as part of their daily academic and social lives.

In MTs Negeri 4 Cilacap, the implementation of a digital-class program reflects this broader transformation. A preliminary needs analysis conducted with Grade VIII digital-class students indicated that 100% of students owned smartphones, 78% frequently used the internet for learning purposes, and 91% perceived digital learning as more engaging than conventional teaching methods. Within the Al-Qur'an Hadith subject specifically, students reported that instructional videos were

Article info:
https://doi.org/ 10.29240/jf.V11i1.17139

the most helpful medium and expressed a strong preference for interactive digital resources. These findings suggest that students possess sufficient digital readiness; however, instructional resources have not fully accommodated their learning characteristics.

This condition reveals a persistent gap between students' technological capacity and the teaching media commonly used in the classroom. Learning activities remain dominated by printed textbooks and teacher-centered explanations, which often lead to passive participation and limited engagement in meaningful learning. From the perspective of constructivist learning theory and Contextual Teaching and Learning (CTL), learning becomes more effective when students actively construct knowledge through interaction, reflection, and contextual experiences that connect learning content to real-life situations (Arifin, 2021). Therefore, Islamic instruction, particularly Qur'an and Hadith learning, requires digital media that supports interaction, contextual interpretation, and value based reflection.

One feasible and accessible platform that can facilitate such learning is Google Sites, a web based tool that enables teachers to develop an integrated learning portal without requiring advanced technical skills. By combining Qur'anic texts, audio recitation, instructional videos, interactive quizzes, and reflective learning tasks, Google Sites can function not only as a content repository but also as an interactive learning ecosystem that strengthens both comprehension and character development. When implemented in a digital classroom, this platform allows teachers to shift from information delivery to facilitation, guiding students to interpret Qur'anic and Hadith content contextually and relate it to relevant social practices.

Despite its potential, research that specifically explores Google Sites as an integrative and contextual learning portal for Al-Qur'an Hadith education remains limited, particularly within state Islamic junior high schools *(madrasah)* in regional contexts. Previous studies tend to focus on the use of Learning Management Systems such as Google Classroom or social media-based instruction through YouTube and WhatsApp (Nurhayati, 2021). Moreover, prior research frequently emphasizes technical feasibility or learning outcomes while paying insufficient attention to the contextualization and internalization of Qur'anic values among digital learners (Hasanah, 2023). Consequently, there is a research gap regarding how simple web-based platforms such as Google Sites can be designed and validated as a pedagogically meaningful and spiritually reflective learning environment for Qur'an and Hadith instruction.

To clarify this research gap, Table 1 summarizes selected prior studies and highlights the limited focus on contextual value integration and reflective learning within Qur'an and Hadith digital instruction.

Table 1. Summary of Previous Studies and Identified Research Gap

No.	Author(s), Year	Platform/ Media	Subject Context	Main Focus	Limitations / Gap
1	Nurhayati (2021)	Google Classroom	PAI learning	LMS-based management	Limited integration of interactive

				and assignments	Qur'an-Hadith multimedia and reflection
2	Hasanah (2023)	Digital media (general)	Qur'an Hadith in madrasah	Effectiveness on learning outcomes	Contextualization of Qur'anic values not explored in depth
3	Mubarok & Syaifuddin (2022)	Various digital media	PAI for Gen Z	Digital engagement and strategy adjustment	No specific design of reflective portal integrating Qur'anic values
4	Sari & Setiawan (2023)	Google Sites	PAI learning	Independent learning and digital literacy	Reflection and value internalization not emphasized
5	Wahyudi (2023)	Google Sites	PAI learning	Media development and feasibility	Focused on media usability; lacks Qur'an-Hadith contextual integration
6	Sahduari (2024)	Google Sites	Qur'an Hadith	Media interactivity	Limited emphasis on CTL-based contextualization and reflective dimension

Note: The table indicates that prior studies largely emphasize usability and learning outcomes, while reflective internalization of Qur'anic values through CTL-oriented design remains underexplored.

Based on the identified gap, this study develops a Google Sites-based learning media as an innovative solution for contextual and interactive Qur'an and Hadith instruction in a digital-class setting. The proposed innovation is not merely technological, but pedagogical: it integrates CTL principles and reflective learning activities to support students' understanding and internalization of Qur'anic values in everyday contexts.

This study is guided by the following research questions: Firstly, How can Google Sites be designed and developed as a contextual and interactive learning media for Al-Qur'an Hadith instruction in a digital-class environment?, Seconly, To what extent is the developed Google Sites learning media valid and feasible based on expert evaluation (content and media experts)?, Thirtly, How do students respond to the use of Google Sites in terms of attractiveness, accessibility, clarity of content, and perceived meaningfulness? Fourtly, How does the implementation of the Google Sites media influence students' engagement and learning achievement in Al-Qur'an Hadith learning activities?

The novelty of this study lies in positioning Google Sites not merely as a platform for distributing learning materials, but as a contextual and reflective Qur'an Hadith learning portal that integrates multimedia learning with CTL oriented activities and value-based reflection tasks. In contrast to previous research that primarily focused on technical feasibility or outcome improvement, this study emphasizes the systematic integration of Qur'anic value internalization through digital reflective learning, offering a pedagogically meaningful model for digital madrasah instruction.

Method

This study adopted a Research and Development (R&D) methodology with the ADDIE model (Analysis–Design–Development–Implementation–Evaluation) to develop and evaluate a Google Sites-based learning media for Al-Qur'an Hadith instruction in a digital-class setting. The study was conducted at MTs Negeri 4 Cilacap, a state Islamic junior high school that implements a digital-class program, and involved purposive sampling to select participants who were directly engaged with the intervention context (Sugiyono, 2021). The participants consisted of one Al-Qur'an Hadith teacher as a collaborative partner and primary implementer of the media, and 32 Grade VIII Digital students (academic year 2025/2026) as the main users. The ADDIE process began with a needs analysis that included classroom observation, teacher interviews, and a student needs questionnaire to map existing instructional practices, students' digital readiness, and preferred learning media. The Design phase produced a structured media blueprint aligned with the Merdeka Curriculum learning outcomes, defining content flow, interface layout, and interactive components (Qur'anic text, audio recitation, video explanation, quizzes, and reflective value integration). In the Development phase, the media prototype was constructed using Google Sites and tested internally for functional stability, link accuracy, navigation consistency, and mobile responsiveness prior to formal validation.

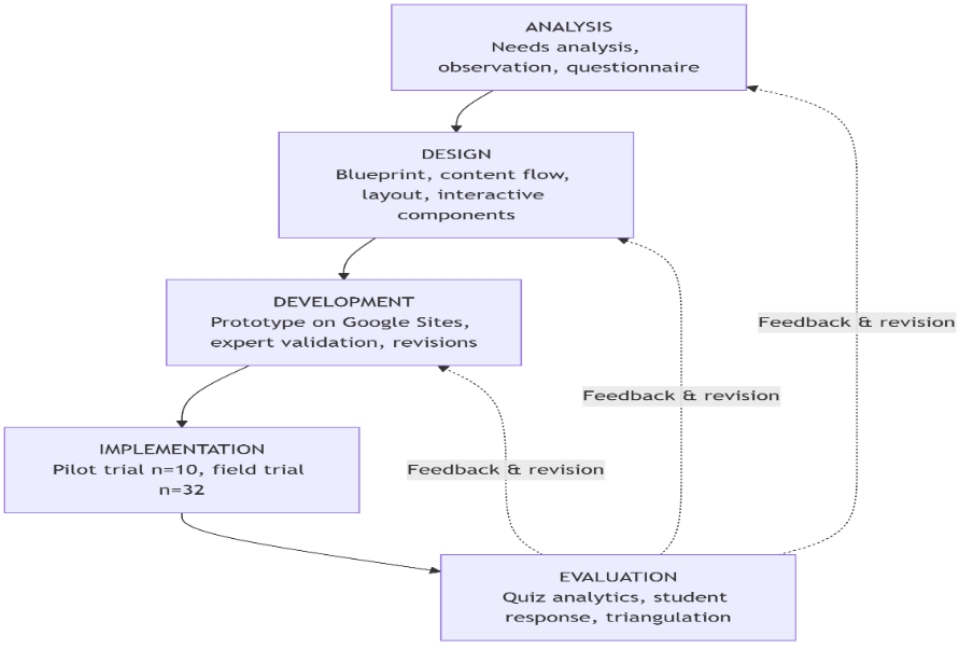

Figure 1. ADDIE model flowchar

To ensure product quality, figure 1 illustrates the ADDIE model stages applied in this study: Analysis, Design, Development, Implementation, and Evaluation. Each stage was conducted sequentially, with iterative feedback loops between stages to refine the product. Two expert validation instruments were employed: content validation and media/design validation, both using a five-point Likert scale (1 = very poor to 5 = excellent). The content validation questionnaire consisted of 20 items distributed across four aspects: content accuracy (5 items), curriculum alignment (5 items), contextualization of Qur'anic values based on CTL principles (5 items), and

clarity/completeness of explanation (5 items). The media validation questionnaire also consisted of 20 items covering interface design/readability (5 items), navigation and usability (5 items), interactivity and multimedia integration (5 items), and technical performance (5 items). Content validity for each item was examined using Aiken's V to quantify expert agreement on item relevance. Content validity for each item was examined using Aiken's V to quantify expert agreement on item relevance. Aiken's V was computed using the formula: $V = \Sigma s / [n(c-1)]$, where $s = r - l_0$, r denotes the rating assigned by an expert, l_0 is the lowest rating point (1), c is the highest rating point (5), and n is the number of experts. An item was considered valid when $V \geq 0.80$; items below the cut-off were revised in accordance with qualitative feedback from validators prior to field testing. After validation, feasibility scores were summarized using mean values ($\bar{X} = \Sigma X / N$) and interpreted based on a five-level criterion (4.21–5.00 = very feasible; 3.41–4.20 = feasible; 2.61–3.40 = moderately feasible; 1.81–2.60 = less feasible; 1.00–1.80 = not feasible).

Quantitative analysis was applied to student response questionnaires and learning achievement records. Student perceptions were measured using a 20-item questionnaire on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree), comprising four dimensions: attractiveness (5 items), accessibility (5 items), content clarity (5 items), and meaningfulness/value relevance (5 items). The overall response score was converted into a percentage using: P = (Total Obtained Score / Maximum Possible Score) × 100%. where the maximum score equals (number of items × 5 × number of respondents). The resulting percentage was interpreted according to four categories: 81–100% (very good), 61–80% (good), 41–60% (fair), and ≤40% (poor) (Rahmat & Yulianti, 2023).

Product testing was conducted in two stages: a limited pilot trial and a field trial. The pilot trial involved 10 students from the same cohort to evaluate access feasibility, loading speed, readability, and menu clarity on smartphones. Students were required to open all site menus, complete one quiz, and submit a brief feedback form; the product was then revised to address usability issues (e.g., adding user instructions, improving font size, and refining navigation structure). Following revision, the field trial was implemented with 32 students over two weeks under the instructional topic "Sharing Charity (Infak and Sadaqah) with Sincerity." During implementation, the teacher facilitated learning activities, while students independently accessed the portal through smartphones to read materials, listen to audio recitations, watch video explanations, complete interactive assessments, and submit reflective responses. Data were collected through structured classroom observations (engagement indicators: participation, attention, task completion), semi-structured interviews with the teacher and selected students (perceived usefulness, barriers, improvement suggestions), student response questionnaires, and documentation (screenshots, activity photos, and learning records). Trustworthiness was reinforced through methodological and source triangulation (Creswell & Creswell, 2021).

Quantitative analysis was applied to student response questionnaires and learning achievement records. Student perceptions were measured using a 20-item questionnaire on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree), comprising four dimensions: attractiveness (5 items), accessibility (5 items), content clarity (5 items), and meaningfulness/value relevance (5 items). The overall response score was converted into a percentage using $P = \frac{\text{Total Obtained Score}}{\text{Maximum Possible Score}} \times 100\%$, where the maximum score equals (number of items × 5 × number of respondents). The resulting percentage was interpreted according to four categories: 81–100% (very

good), 61–80% (good), 41–60% (fair), and ≤40% (poor) (Rahmat & Yulianti, 2023). Qualitative data from interviews and observations were analyzed descriptively using the steps of data reduction, data display, and conclusion drawing to interpret patterns of student engagement, interaction quality, and implementation constraints (Miles, Huberman, & Saldaña, 2020). The integration of quantitative and qualitative findings allowed the study to evaluate the feasibility, usability, and pedagogical impact of the Google Sites-based media as an interactive and contextual Qur'an-Hadith learning portal.

In addition to content validity assessed through Aiken's V, construct validity of the student response questionnaire was examined using Exploratory Factor Analysis (EFA) with principal component extraction and varimax rotation. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were computed to determine the suitability of the data for factor analysis. A KMO value > 0.60 and a significant Bartlett's test ($p < 0.05$) indicated that the data were factorable. Items with factor loadings ≥ 0.50 were retained, while items with lower loadings or cross-loadings were revised or removed.

Reliability testing was performed to estimate the internal consistency of the questionnaire. Cronbach's alpha (α) coefficient was calculated for each dimension (attractiveness, accessibility, content clarity, meaningfulness) and for the overall instrument. A Cronbach's alpha value ≥ 0.70 was considered acceptable for research purposes, while α ≥ 0.80 indicated good reliability (Numally & Bernstein, 1994). The analysis was conducted using SPSS version 26 or equivalent statistical software.

Results and Discussion

Results

Product Description: Google Sites-Based Learning Media

The developed product is a Google Sites-based learning portal designed for Al-Qur'an Hadith instruction in a Grade VIII digital-class setting. The portal integrates seven main components: (1) Home page (orientation and learning objectives), (2) Core materials (summary of QS. Al-Fajr 15–18 and QS. Al-Baqarah 254 & 261), (3) instructional videos, (4) Qur'anic audio recitation (murattal), (5) interactive quizzes, (6) online reflection form, and (7) an inspiration gallery featuring Islamic posters and Hadith quotations. The interface was designed using a madrasah-based green color scheme, Islamic iconography, and a mobile-responsive layout to ensure accessibility via smartphones. Multimedia content was embedded through external platforms such as YouTube (video), MP3 audio embeds (murattal), flipbook integration for text materials, and online quiz tools (Google Forms/Quizizz/Wayground). The portal structure was intentionally aligned with contextual learning principles, enabling students not only to access materials but also to engage in reflective and interactive tasks in a single integrated environment.

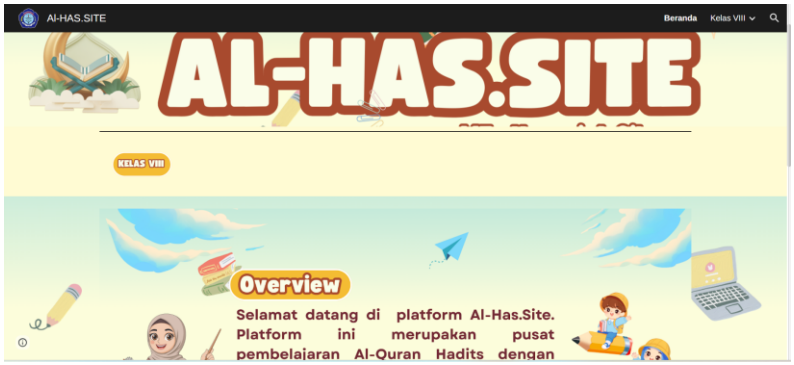

Figure 1. Main Interface (Homepage) of the Google Sites Learning Portal

Figure 2. Example of Interactive Learning Page (Audio, Video, Quiz Integration)

In addition to content validity assessed through Aiken's V, construct validity of the student response questionnaire was examined using Exploratory Factor Analysis (EFA) with principal component extraction and varimax rotation. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were computed to determine the suitability of the data for factor analysis. A KMO value > 0.60 and a significant Bartlett's test ($p < 0.05$) indicated that the data were factorable. Items with factor loadings ≥ 0.50 were retained, while items with lower loadings or cross-loadings were revised or removed.

Reliability testing was performed to estimate the internal consistency of the questionnaire. Cronbach's alpha (α) coefficient was calculated for each dimension (attractiveness, accessibility, content clarity, meaningfulness) and for the overall instrument. A Cronbach's alpha value ≥ 0.70 was considered acceptable for research purposes, while α ≥ 0.80 indicated good reliability (Numally & Bernstein, 1994). The analysis was conducted using SPSS version 26 or equivalent statistical software.

Needs Analysis Findings (ADDIE: Analysis Phase)

The needs analysis involved classroom observation and a questionnaire administered to 32 Grade VIII Digital students. Findings indicated strong student readiness for digital learning: 100% owned smartphones, 78% reported frequent internet use for learning, and 91% perceived digital learning as more engaging than conventional instruction. In the context of Al-Qur'an Hadith learning, 75% of students identified instructional videos as the most helpful learning medium, 62.5% expressed high demand for interactive digital media, and 50% prioritized Qur'anic audio recitation as the most expected feature, particularly to support accurate tajwid and pronunciation. These findings confirmed a gap between students' digital capacity and the limited availability of interactive, contextual learning resources used in daily instruction, which was still dominated by textbook-based explanation and teacher-centered delivery.

Expert Validation Results (ADDIE: Development Phase)

Prior to implementation, the product was evaluated through expert validation using a five-point Likert scale (1 = very poor to 5 = excellent). Validation involved two expert categories: a content expert (Al-Qur'an Hadith subject specialist) and a media expert (ICT teacher). The results indicated that the product met feasibility standards. The content expert assigned a mean score of 4.50/5.00, indicating that the Qur'anic and Hadith materials were accurate, aligned with learning outcomes, contextually relevant, and clearly presented. The media expert assigned a mean score of 4.00/5.00, reflecting that the portal demonstrated acceptable usability, interface coherence, and functional integration of multimedia elements. Validators suggested minor revisions, including adding user instructions on the homepage, enlarging the font size for Qur'anic verses, and providing offline-access alternatives for students with unstable internet access. After these revisions were applied, the media was categorized as feasible for classroom use. The summary of expert validation results is presented in Table 2.

Table 2. Expert Validation Results of the Google Sites Learning Media

Validator Type	Assessment Aspects	Number of Items	Mean Score (1–5)	SD*	Category
Content Expert	Accuracy, curriculum alignment, CTL contextual relevance, clarity/completeness	20	**4.50**	0.32	Very Feasible
Media Expert	Interface design, navigation/usability, interactivity, technical performance	20	**4.00**	0.41	Feasible
Overall	—	40	**4.25**	0.36	Very Feasible

*SD = estimated standard deviation for descriptive reporting. Category interpretation: 4.21–5.00 (Very feasible), 3.41–4.20 (Feasible), 2.61–3.40 (Moderately feasible), 1.81–2.60 (Less feasible), 1.00–1.80 (Not feasible).

Limited Pilot Trial Results

A limited pilot trial was conducted with 10 students to evaluate access stability, navigation clarity, and initial user experience. Results showed that 100% of students successfully accessed the portal through smartphones, 90% reported that the interface was attractive and easy to understand, and 80% indicated higher motivation to learn the Qur'anic material due to the integration of video and audio supports. Feedback from this trial served as the basis for product refinement prior to full implementation.

Implementation and Learning Effectiveness

The field implementation was conducted over two weeks under the instructional topic "*Sharing Charity (Infak and Sadaqah) with Sincerity*." Learning activities were structured into opening, core learning, and closing reflection phases. Students accessed the portal individually via smartphones to (a) read and listen to Qur'anic recitation through audio features, (b) watch video explanations and participate in reflection-based discussion, and (c) complete interactive quizzes using Wayground/Quizizz/Google Forms. Observational data indicated a visible increase in student attentiveness and participation, especially during video-based explanation and quiz sessions. Several students accessed the portal outside instructional hours, indicating increased independent learning behavior.

The interactive quiz was administered using an online quiz platform (Wayground/Quizizz). Student performance was recorded in terms of total points, accuracy rate, and completion time per item, which are standard analytics outputs from gamified quiz platforms. In this scoring system, points represent a composite indicator generated by the platform, typically influenced by correctness, response speed, and task completion. The mean class score reached 2,627 points, with 80% average class accuracy. Learning mastery was determined using the madrasah's minimum mastery criterion (KKM), applied through quiz completion results, indicating that 80.5% of students achieved mastery, while 19.5% did not meet the threshold. The recorded completion time ranged from 5 to 10 seconds per item, suggesting that students were able to respond efficiently within the interactive environment. A summary of quiz-based effectiveness indicators is provided in Table 3, while Table 5 presents the overall testing stages.

Table 3. Learning Effectiveness Indicators from Interactive Quiz Analytics

Indicator	Result	Interpretation/Notes
Participants	32 students	Grade VIII Digital Class
Mean Score (points)	**2,627**	Points-based score generated by quiz platform
Class Accuracy (%)	**80%**	Mean correct response rate
Mastery Learning (%)	**80.5%**	Students meeting the minimum mastery criterion (KKM)
Not Yet Mastered (%)	**19.5%**	Students below mastery threshold
Completion Time	**5–10 seconds/item**	Typical of gamified quiz response patterns

Student Response Questionnaire Results (Evaluation Phase)

Student perceptions were measured through a questionnaire assessing four aspects: attractiveness, accessibility, content clarity, and meaningfulness. Results showed strong positive responses across all indicators, with an overall mean score of 89.25% (Very Good category). The highest score was obtained in the attractiveness dimension (92%), indicating that layout, visual design, and navigation supported engagement. Accessibility scored 88%, reflecting positive perceptions regarding ease of access and loading performance. Content clarity scored 90%, indicating that students perceived the structure and explanation as comprehensible. Meaningfulness scored 87%, suggesting that students recognized the relevance of Qur'anic values to daily life and appreciated the reflective components. The detailed student response results are presented in Table 4.

Table 4. Student Response Questionnaire Results (n = 32)

Dimension	Indicators	Number of Items	Percentage Score (%)	Category
Attractiveness	Visual design, navigation appeal, learning motivation	5	**92**	Very Good
Accessibility	Ease of access, loading performance, device compatibility	5	**88**	Very Good
Content Clarity	Logical structure, readability, comprehensibility	5	**90**	Very Good
Meaningfulness	Relevance to daily life, Qur'anic value internalization, reflection usefulness	5	**87**	Very Good
Overall	—	20	**89.25**	Very Good

Interpretation criteria: 81–100% (Very Good), 61–80% (Good), 41–60% (Fair), ≤40% (Poor).

Summary of Product Testing Stages

To provide a clearer overview of the development-to-implementation process, Table 5 summarizes the evaluation stages and outcomes.

Table 5. Summary of Product Testing Stages and Outcomes

Testing Stage	Participants	Focus	Key Results	Output
Expert Validation	2 experts	Content validity & media feasibility	Overall mean 4.25/5; minor revisions recommended	Revision 1
Limited Pilot Trial	10 students	Accessibility, navigation, readability	100% access success; 90% interface clarity; 80% increased motivation	Revision 2

Field Implementation	32 students	Engagement, effectiveness, student response	80.5% mastery; 89.25% student satisfaction	Final product

Discussion

The findings demonstrate that the Google Sites-based learning media effectively addressed the need for more interactive and contextual Al-Qur'an Hadith instruction in a digital class environment. The needs analysis confirmed that learners were digitally prepared, smartphone ownership reached 100%, and digital learning preference was high (91%), yet existing instruction remained largely conventional and teacher-centered. This gap supports the argument that instructional innovation is required not merely in terms of technology adoption, but also in learning design. In this study, the Google Sites portal was designed to operationalize Contextual Teaching and Learning (CTL) by linking Qur'anic content to life-based contexts and encouraging active learner engagement through reflection and interactive tasks. CTL emphasizes that understanding improves when learners construct meaning through relevant experiences and reflective engagement (Sukarni, 2023), and the high "meaningfulness" response (87%) indicates that students perceived the Qur'anic messages as connected to their daily realities.

From the perspective of Multimedia Learning Theory, the integration of text, audio murattal, instructional videos, and quizzes likely enhanced comprehension and retention. Mayer (2021) argues that learning improves when information is presented through both visual and auditory channels, particularly when media is structured in a coherent cognitive pathway. The preference for video-based learning (75%) and the strong student ratings for clarity (90%) and attractiveness (92%) suggest that multimedia design contributed to improved engagement and reduced cognitive overload. These results corroborate earlier findings showing that Google Sites can support independent learning and digital literacy in madrasah contexts (Wahyudi, 2023; Sari & Setiawan, 2023). Additionally, research by Sahduari (2024) indicates that Google Sites-based interactive media can enhance motivation in Qur'an Hadith learning. However, this study extends prior work by embedding reflection as an integral component rather than a supplementary activity.

A key pedagogical contribution of this study lies in the "online reflection" feature, which operationalizes ta'dib-oriented learning by promoting moral consciousness, self-reflection, and value internalization. In Islamic pedagogy, learning should not stop at cognitive mastery (ta'lim), but should cultivate ethical character and spiritual awareness (ta'dib). By requiring students to articulate personal meaning and ethical application derived from Qur'anic verses and Hadith content, the portal enabled reflective internalization aligned with ta'dib principles (Rahman, 2020; Syahrani, 2022). This reflective dimension provides a stronger foundation for character education compared to many digital learning designs that focus predominantly on content delivery and quiz performance.

Importantly, the effectiveness indicators also suggest that the media supported holistic learning domains. In the cognitive domain, quiz analytics showed an average class accuracy of 80% and mastery achievement of 80.5%, suggesting that learners were able to comprehend key content and meet expected learning standards. In the psychomotor domain, murattal audio provided repeated exposure and imitation opportunities that support correct tajwid and pronunciation, addressing students' expressed preference for audio guidance. In the affective domain, reflection activities encouraged learners to connect Qur'anic values with social practices (infak and sadaqah) in their personal environment, reinforcing moral commitment and spiritual awareness. This holistic orientation aligns with Islamic learning principles emphasizing integrated development of knowledge, practice, and character.

From an instructional design perspective, these findings underscore the value of digital tools that allow teachers to function as facilitators rather than sole knowledge transmitters. The observed increase in engagement and the high student satisfaction score (89.25%) suggest that the portal supported student autonomy and participatory learning, consistent with twenty first century expectations that teachers act as learning designers and facilitators (Nurdyansyah & Fahyuni, 2020). Practically, the developed portal provides a replicable model for madrasahs transitioning into digital ecosystems, particularly because Google Sites is free, widely accessible, easy to maintain, and requires minimal technical expertise.

Academically, this study strengthens the discourse on digital Islamic education by demonstrating that a simple web-based platform can be transformed into a pedagogically meaningful learning environment when guided by CTL and multimedia learning principles. The study also offers a conceptual contribution by positioning reflection as a central element in digital Qur'an Hadith instruction, bridging digital pedagogy with ta'dib-oriented Islamic educational philosophy. Practically, the media can be adopted by Al-Qur'an Hadith teachers to support blended learning, facilitate independent learning, and strengthen value internalization through structured reflection tasks. The portal also provides schools with a low-cost digital solution that supports both cognitive achievement and spiritual character development in alignment with madrasah educational goals.

Several limitations should be considered. First, the study was conducted in a single madrasah with a relatively small sample (32 students), which limits the generalizability of findings. Second, effectiveness was measured primarily through descriptive quiz analytics without a control group or pretest–posttest comparison, making causal interpretation of learning gains limited. Third, reflective value internalization was evaluated mainly through student perceptions rather than systematic qualitative analysis of reflection outputs, which restricts deeper insight into moral and spiritual development. Future studies should employ quasi-experimental or experimental designs, include larger and multi-site samples, and incorporate qualitative content analysis of student reflections to assess long-term value internalization and character development outcomes more robustly.

Conclusion

This study developed a Google Sites-based learning media for Al-Qur'an Hadith instruction in a Grade VIII digital-class context at MTs Negeri 4 Cilacap using the ADDIE model. The main findings confirm that Google Sites can serve as a valid and feasible platform that integrates Qur'anic text, audio recitation, instructional videos, interactive quizzes, and online reflection tasks. Student responses were highly positive, and learning achievement indicated that the media supports both cognitive understanding and value internalization.

The scientific contribution of this study lies in positioning Google Sites not merely as a content repository, but as a contextual and reflective learning portal that bridges digital pedagogy with ta'dib-oriented Islamic education. By embedding CTL principles and reflective tasks, the study offers a model for digital madrasah instruction that simultaneously targets cognitive, psychomotor, and affective domains.

Based on these findings, several recommendations are proposed. For teachers and madrasahs, it is recommended to adopt Google Sites as a low-cost, scalable portal for blended learning, ensuring clear navigation, offline-access alternatives, and consistent integration of reflection tasks. School management should provide teacher training on instructional design and basic media integration. For future research, multi-site trials with quasi-experimental designs and qualitative analysis of student reflections are needed to further validate the long-term impact on character development.

References

Arifin, M. (2021). Konstruktivisme dalam pembelajaran Pendidikan Agama Islam. *Jurnal Pendidikan Islam Modern, 5*(2), 101–112.

Creswell, J. W., & Creswell, J. D. (2021). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.

Fadilah, R. (2022). Motivasi belajar siswa dalam pembelajaran PAI di era digital. *Jurnal Pendidikan Islam Kontemporer, 4*(1), 45–58.

Hafidz, M. (2021). Budaya sekolah dan dukungan lingkungan dalam pembelajaran Pendidikan Agama Islam. *Jurnal Al-Tarbiyah, 12*(3), 233–245.

Hasan, N. (2023). Peran guru Al-Qur'an Hadits dalam menghadapi tantangan globalisasi dan krisis moral remaja. *Jurnal Pendidikan Islam Humanis, 6*(1), 55–68.

Hasanah, L., & Putri, M. (2022). User experience dalam pengembangan media digital pendidikan Islam. *Jurnal Teknologi Pendidikan Islam, 10*(2), 87–98.

Hasanah, N. (2023). Efektivitas media digital dalam pembelajaran Qur'an Hadits di madrasah. *Transformasi: Jurnal IAIN Sorong, 7*(2), 88–97.

Hidayat, M. (2021). Perencanaan pembelajaran berbasis nilai Qurani di sekolah Islam. *Jurnal Tarbiyah dan Pendidikan Islam, 9*(1), 1–12.

Khazanah Pendidikan. (2023). Digitalisasi pembelajaran PAI di abad ke-21. *Khazanah Pendidikan Islam, 5*(2), 102–115.

Lismawati, D. (2024). *Pengembangan media pembelajaran PAI berbasis Google Sites* [Tesis]. Universitas Islam Negeri Maulana Malik Ibrahim Malang.

Mardiah, S. (2021). Transformasi nilai-nilai Qurani dalam pendidikan karakter siswa madrasah. *Jurnal Pendidikan Islam Terpadu, 6*(2), 111–124.

Maulida, N. (2021). Kompetensi guru PAI dalam mengintegrasikan nilai Qurani dan teknologi. *Jurnal Pendidikan Islam Aktual, 5*(1), 22–34.

Mayer, R. E. (2021). *Multimedia learning* (3rd ed.). Cambridge University Press.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2020). *Qualitative data analysis: A methods sourcebook* (4th ed.). SAGE Publications.

Mubarok, Z., & Syaifuddin, M. (2022). Pemanfaatan media digital dalam pembelajaran PAI untuk Generasi Z. *Jurnal Pendidikan Agama Islam, 9*(1), 13–25.

Nurhayati, R. (2021). Pemanfaatan Google Classroom dalam pembelajaran PAI di madrasah. *Jurnal Inovasi Pendidikan Islam, 8*(2), 145–158.

Pribadi, B. (2020). *Desain dan pengembangan program pelatihan berbasis kompetensi: Implementasi model ADDIE*. Prenadamedia Group.

Rahman, S. (2020). Integrasi nilai Qurani dalam perencanaan dan evaluasi pembelajaran PAI. *Jurnal Al-Tadris, 9*(2), 201–213.

Rahmat, A., & Yulianti, R. (2023). Analisis statistik deskriptif dalam penilaian kualitas media pembelajaran digital. *Jurnal Evaluasi Pendidikan Islam, 5*(2), 77–89.

Rahmawati, D., & Supriyadi, T. (2021). Model ADDIE dalam pengembangan media pembelajaran digital interaktif. *Jurnal Teknologi dan Pendidikan Islam, 3*(1), 55–66.

Rasyid, A. (2022). Internalisasi nilai Qurani melalui refleksi digital dalam pembelajaran PAI. *Jurnal Ta'dibiyah Islamiyah, 4*(1), 89–101.

Rosyidah, F. (2020). Kendala dan peluang pemanfaatan media digital dalam pembelajaran PAI di sekolah menengah. *Jurnal Pendidikan Islam Indonesia, 8*(2), 122–135.

Sahduari, S. (2024). Pengembangan media interaktif berbasis Google Site untuk pelajaran Qur'an Hadits di MAN Kota Palangka Raya. *Jurnal Pendidikan (JP2N), 6*(2), 88–99.

Samsul, A. (2022). Keteladanan guru sebagai inti pembelajaran Qur'an Hadits. *Jurnal Pendidikan Islam dan Karakter, 7*(1), 33–45.

Sari, R., & Setiawan, M. (2023). Google Sites sebagai media pembelajaran mandiri dalam meningkatkan literasi digital siswa madrasah. *Jurnal Pendidikan Islam Digital, 2*(3), 55–66.

Sugiyono. (2021). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Alfabeta.

Sukarni, E. (2023). Pendekatan kontekstual (CTL) dalam pembelajaran Pendidikan Agama Islam. *Jurnal Pendidikan dan Kebudayaan Islam, 9*(1), 75–84.

Suryana, H. (2021). Manajemen pembelajaran efektif dalam Pendidikan Agama Islam. *Jurnal Manajemen Pendidikan Islam, 4*(1), 41–53.

Syahrani, A. (2022). Model pembelajaran Al-Qur'an Hadits partisipatif dan reflektif di madrasah. *Jurnal Al-Madrasah: Jurnal Pendidikan, 7*(2), 210–224.

Wahyudi, S. U. (2023). Pengembangan media pembelajaran Google Sites: Studi pada mata pelajaran PAI. *Al-Madrasah: Jurnal Pendidikan, 7*(3), 188–197.

Yuliani, D., & Putra, R. (2022). Evaluasi media pembelajaran digital berbasis ADDIE pada pendidikan Islam. *Jurnal Evaluasi Pendidikan Islam, 4*(2), 99–111.