

THE DEVELOPMENT OF THE WEBSITE-BASED HISTORY LEARNING MEDIA "HISTORY GALLERY" FOR TWELFTH-GRADE STUDENTS AT MAN 1 PALU

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ABSTRACT

History learning at MAN 1 Palu was still predominantly conducted through conventional teaching methods and lacked interactive digital learning media. This study aimed to develop a website-based history learning medium, History Gallery, for twelfth-grade students at MAN 1 Palu and to determine its feasibility and practicality. The study employed the Research and Development (R&D) method using the ADDIE model, which consists of five stages: analysis, design, development, implementation, and evaluation. The subjects of this study were one history teacher and 30 twelfth-grade students at MAN 1 Palu. Data were collected through observations, interviews, questionnaires, and documentation. The results indicated that the History Gallery medium achieved a material expert validation score of 97.3% and a media expert validation score of 86.6%, both categorized as highly feasible. Furthermore, the teacher response questionnaire yielded a score of 95%, while the students' response questionnaire obtained a score of 83.5%, indicating that the medium was highly practical. The findings suggest that the website-based History Gallery can support history learning by providing visual and interactive learning experiences through images, instructional videos, and 360-degree images. Therefore, the developed medium is considered both highly feasible and highly practical for use in history learning.

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INTRODUCTION

The rapid development of digital technology has transformed various sectors of life, including education. Digital transformation in education is no longer limited to the use of technological devices but involves the systematic integration of technology, pedagogy, and learning content to improve educational quality. UNESCO (2023)

emphasized that educational digitalization should strengthen pedagogical practices and enhance learning outcomes. In Indonesia, the implementation of the Merdeka Curriculum further encourages the use of technology to support adaptive and student-centered learning environments.

Website-based learning media have emerged as an effective means of facilitating interactive learning. Such media provide flexible access and enable the integration of various forms of content, including text, images, videos, and assessments. Previous studies have reported positive impacts of website-based learning on students' understanding and engagement. Mustapa & Santoso (2025) found that Google Sites effectively improved conceptual understanding and learning participation among senior high school students. Similarly, Prayoga & Suryadi (2025) reported that interactive history learning media developed through Google Sites were feasible and capable of increasing students' engagement in history lessons.

History learning possesses distinctive characteristics compared with other subjects. It requires students not only to memorize historical facts but also to understand temporal and spatial contexts, analyze cause-and-effect relationships, and interpret historical sources critically. Therefore, visual and interactive media are essential to support historical imagination and facilitate meaningful learning experiences. Previous studies have demonstrated that visual-based digital media can significantly improve students' engagement, motivation, and understanding in history learning contexts (Mustapa & Santoso, 2025; Prayoga & Suryadi, 2025). Immersive technologies, such as 360-degree visualization, allow students to observe historical objects and environments more realistically, thereby promoting deeper historical understanding. Rasim et al. (2022) further reported that 360-degree visual technology provides a more immersive learning experience by enabling learners to explore objects from multiple perspectives, thus enhancing spatial understanding and learning engagement.

Despite the growing body of research on website-based learning media, studies integrating visual galleries and 360-degree exploration within a single history learning platform remain limited, particularly in the context of Islamic senior high schools (madrasah). Most existing studies focus on simple websites or isolated visual media without combining these features into an integrated learning system. Moreover, previous studies have rarely developed history learning media that simultaneously integrate structured historical materials, digital visual galleries, instructional videos, 360-degree visualization, and online evaluation features within a single website-based platform. Therefore, there remains a significant research gap concerning the development of comprehensive and immersive digital learning media for history instruction in madrasah settings.

Preliminary observations conducted at MAN 1 Palu and interviews with the history teacher revealed that history instruction remains predominantly lecture-based and relies heavily on textbooks and basic presentation slides. Limited utilization of technology in instructional practices has contributed to low student engagement and reduced learning interest. Furthermore, the school has not yet implemented a website-based history learning medium specifically designed to support interactive learning.

Based on these considerations, this study aimed to develop a website-based history learning medium entitled History Gallery for twelfth-grade students at MAN 1 Palu. The developed media integrate structured learning materials, visual galleries, instructional videos, 360-degree images, and evaluation features within a single platform. The novelty of this study lies in the integration of digital historical galleries and 360-degree visual exploration within a website-based learning environment specifically designed for history learning in a madrasah context. This study is expected to contribute to the advancement of digital transformation in madrasah education by providing a feasible and practical learning medium for history instruction.

METHOD

Research Type and Design

This study employed a Research and Development (R&D) method using a mixed-methods approach. The R&D method was used to develop a website-based history learning medium entitled History Gallery, while the mixed-methods approach enabled the integration of quantitative and qualitative data to obtain a comprehensive evaluation of the developed product. The development process adopted the ADDIE model, consisting of five stages: analysis,

design, development, implementation, and evaluation (Creswell, 2014; Sugiyono, 2019). The analysis stage involved identifying instructional problems, students' needs, and existing learning conditions. The design stage focused on preparing learning materials, website structure, and storyboard design. The development stage involved producing and validating the media, followed by implementation through limited product trials. Finally, the evaluation stage was conducted to revise and improve the product based on expert and user feedback.

Research Setting and Time

The study was conducted at MAN 1 Palu, Central Sulawesi, Indonesia, during the 2025/2026 academic year. The research activities began with the needs analysis stage and continued through product development, implementation, and evaluation. The research site was selected based on preliminary observations indicating the limited use of website-based learning media in history instruction and the need for more interactive learning resources.

Participants and Sampling Technique

The participants consisted of 30 twelfth grade students of MAN 1 Palu, one history teacher, one material expert, and one media expert. The student participants were selected using purposive sampling, considering accessibility, availability during the implementation period, willingness to participate, and their ability to represent the characteristics of twelfth-grade students at MAN 1 Palu. Purposive sampling was chosen because this study focused on limited product testing in an R&D context, where participants were selected based on specific criteria relevant to the objectives of product evaluation rather than statistical generalization (Sugiyono, 2019). The sample size was considered appropriate for limited product testing in R&D studies aimed at evaluating product feasibility and practicality rather than generalizing findings to a broader population. The sample size was considered appropriate for limited product testing in R&D studies aimed at evaluating product feasibility and practicality rather than generalizing findings to a broader population.

Research Instruments

The instruments used in this study included observation sheets, semi structured interview guidelines, validation questionnaires, practicality questionnaires, and documentation sheets. Observation sheets and interview guidelines were used to identify learning conditions and instructional needs during the analysis stage. Validation questionnaires were administered to the material expert and media expert to assess the feasibility of the developed product. Practicality questionnaires were distributed to the history teacher and students to evaluate the usability of the History Gallery learning media. Prior to implementation, all instruments underwent content validation through expert judgment to ensure their relevance, clarity, and suitability for evaluating the developed product.

Data Collection Techniques

Data were collected through observations, semi-structured interviews, questionnaires, and documentation. Observations were conducted to examine the existing history learning process and students' engagement. Interviews with the history teacher were carried out to identify instructional problems and media needs. Questionnaires were employed to obtain quantitative data regarding the feasibility and practicality of the developed media, while documentation was used to support and verify the research findings.

Data Analysis Techniques

Qualitative data obtained from observations, interviews, and participants' comments were analyzed descriptively through data reduction, data presentation, and conclusion drawing. Quantitative data derived from expert validation and practicality questionnaires were analyzed using descriptive statistics in the form of percentages. The percentage scores were calculated using the following formula:

$$P = \frac{f}{N} \times 100\%$$

where P represents the percentage score, f is the total score obtained, and N is the maximum possible score.

The obtained percentage scores were subsequently interpreted to determine the feasibility and practicality levels of the developed media. The results were interpreted using predetermined criteria: 81–100% (Very

Feasible/Very Practical), 61–80% (Feasible/Practical), 41–60% (Fairly Feasible/Fairly Practical), 21–40% (Less Feasible/Less Practical), and 0–20% (Not Feasible/Not Practical). These criteria were used to determine the feasibility and practicality of the developed learning media.

Product Validation and Revision

Product validation was conducted through expert judgment involving one material expert and one media expert. The material expert assessed the appropriateness and accuracy of the historical content, while the media expert evaluated the visual design, navigation, layout, and usability of the website. Suggestions and recommendations from the validators were used as the basis for revising the product before implementation. After the expert validation stage, the product was revised and subsequently implemented in a limited trial involving one history teacher and 30 students.

Following implementation, additional revisions were made based on feedback from the teacher and students obtained through practicality questionnaires. The revision process ensured continuous improvement of the developed media. This iterative revision process was intended to enhance both the quality and usability of the developed learning media.

Criteria for Product Success

The History Gallery learning media were considered successful if they met the following criteria: (1) achieving the categories of Feasible or Very Feasible based on expert validation, and (2) achieving the categories of Practical or Very Practical based on teacher and student responses.

RESULT AND DISCUSSION

Result

Analysis Stage

The analysis stage was conducted to identify the needs and problems encountered in history learning at MAN 1 Palu. Preliminary observations and interviews with the history teacher revealed that the learning process was still dominated by conventional lecture methods and relied primarily on textbooks and simple presentation slides. Limited utilization of technology-based learning media contributed to low student engagement and reduced interest in history learning. These findings indicated the need for an interactive website-based learning medium to support history instruction.

Design Stage

Based on the findings of the needs analysis, the History Gallery learning media were designed using the ADDIE development model. The website integrated various learning components, including structured learning materials, image galleries, instructional videos, 360-degree images, and evaluation features. The interface design emphasized ease of navigation and visual attractiveness to facilitate students' learning experiences.

Development Stage

The developed product was validated by one material expert and one media expert before implementation. The results of expert validation are presented in Table 1.

Table 1. Expert Validation Results

Validator	Percentage	Category
Material Expert	97.3%	Very Feasible
Media Expert	86.6%	Very Feasible

Source: Processed Research Data (2026)

The material expert validation yielded a score of 97.3%, indicating that the content was highly appropriate in terms of curriculum relevance, historical accuracy, and clarity of presentation. Meanwhile, the media expert validation score of 86.6% suggested that the website met the criteria for visual design, navigation, and usability. Therefore, the History Gallery learning media were considered suitable for implementation.

Implementation Stage

The practicality of the developed media was assessed through teacher and student response questionnaires involving 30 twelfth grade students selected using purposive sampling and one history teacher at MAN 1 Palu. The selection of participants was based on accessibility, availability during the implementation period, and their representativeness for limited product testing.

Table 2. Practicality Test Results

Respondent	Percentage	Category
Teacher	95.0%	Very Practical
Students	83.5%	Very Practical

Source: Processed Research Data (2026)

The teacher response score of 95.0% indicated that the media were easy to use and beneficial for facilitating history instruction. Similarly, the students' response score of 83.5% demonstrated that the website was practical, engaging, and accessible for learning activities. The high practicality scores indicate that the integration of visual galleries, instructional videos, and 360-degree images successfully created a more interactive learning environment. These features enabled students to explore historical materials independently and facilitated a more meaningful learning experience compared with conventional learning methods.

Evaluation Stage

Feedback from validators and users was used to revise and improve the product. Several refinements were made to enhance the visual appearance, optimize navigation, and improve the clarity of learning materials. The evaluation process ensured that the final version of the History Gallery learning media met the expected standards of feasibility and practicality.

Discussion

The Need for History Learning Media

Based on the results of observations and interviews conducted at MAN 1 Palu, it was found that the history learning process was still dominated by lecture methods using textbooks and YouTube videos as learning media. Although these media were considered helpful in the learning process, they had not been able to create interactive and engaging learning experiences for students.

Interviews with the history teacher indicated that website-based learning media had never been used in the learning process because the teacher had not yet understood how to utilize such media optimally. However, the teacher believed that website-based media could support the learning process if they had attractive displays, were easy to use, and contained interactive features such as learning evaluations.

In addition, interviews with several students showed that their interest in history lessons was influenced by the way teachers explained the material and the learning media used. Some students stated that history learning would be more interesting if it used technology-based media equipped with visual displays, images, and videos that helped them understand historical materials more clearly.

The high practicality scores indicate that the integration of visual galleries, instructional videos, and 360-degree images successfully created a more interactive learning environment. These features enabled students to explore historical materials independently and facilitated a more meaningful learning experience compared with conventional learning methods. If it used technology-based media equipped with visual displays, images, and videos that helped them understand historical materials more clearly.

These findings are in line with Saleh et al. (2023), who stated that learning media serve as tools for delivering learning information and materials that can stimulate students' attention, interest, understanding, and engagement in the learning process. Therefore, the need for more attractive and interactive learning media became the basis for developing the website-based learning media, History Gallery.

Furthermore, these findings are consistent with Nababan et al. (2023), who explained that website-based learning media provide learning flexibility because they can be accessed anytime and anywhere through the internet. Websites also allow the integration of various multimedia elements such as text, images, videos, and learning evaluations within a single digital platform, making learning more engaging and interactive.

Thus, based on the observations and interviews, it can be concluded that the development of website-based history learning media is needed to help students understand historical materials in a more visual, engaging, and interactive manner.

Development of Website-Based Learning Media

The development of the learning media in this study employed the Research and Development (R&D) method using the ADDIE model, consisting of analysis, design, development, implementation, and evaluation stages. The use of the R&D method is consistent with Sugiyono (2019), who stated that research and development aim to produce a product and test its feasibility before implementation in learning activities.

During the design stage, the researcher prepared storyboards, designed the website interface, organized learning materials, and determined the features to be included in the learning media. The media were developed using Google Sites with a simple interface that was easy for students to use.

At the development stage, historical materials, visual images, instructional videos, 360-degree images, and learning evaluations were integrated into a single website platform. The materials included Indonesian historical heritage sites such as Borobudur Temple, Prambanan Temple, Fort Vredeburg, and Fort Marlborough.

The development of website-based media in this study supports the findings of Mustapa & Santoso (2025), who reported that Google Sites can improve students' conceptual understanding because learning materials can be presented systematically and accessed repeatedly according to students' needs.

In addition, History Gallery utilized 360-degree image technology to help students observe historical objects in greater detail. This is consistent with Rasim et al. (2022), who argued that 360-degree visual technology enables users to examine objects from multiple perspectives, providing a more realistic visual experience than ordinary images.

The integration of 360-degree images became one of the distinctive features of the History Gallery media. Unlike conventional images, 360-degree visualization allowed students to explore historical objects from multiple perspectives, thereby supporting historical imagination and spatial understanding. This feature is particularly important in history learning because many historical sites cannot be visited directly by students due to geographical and financial constraints.

Through the use of 360-degree images, students were able to observe the details of historical buildings more clearly, thereby helping them develop spatial understanding and historical imagination regarding the historical materials studied.

Feasibility of the Learning Media

The website-based learning media, History Gallery, were validated by material and media experts to determine the feasibility of the product before implementation.

Based on the material expert validation results, the developed media obtained a score of 97.3%, categorized as Very Feasible. These results indicate that the materials presented were appropriate to the learning objectives, contained clear content, and used language that was easy for students to understand.

The media expert validation resulted in a score of 86.6%, which was also categorized as Very Feasible. This finding indicates that the media had an attractive visual appearance, user-friendly navigation, and a design suitable for history learning needs.

These findings are in accordance with Cahyadi (2019), who stated that the ADDIE model provides a systematic framework that enables instructional products to be developed according to students' needs and learning objectives.

The findings not only support the study conducted by Prayoga & Suryadi (2025), which reported that website-based history learning media can improve students' engagement, but also extend previous research by integrating digital historical galleries and 360-degree visualization within a single learning platform. While previous studies

mainly focused on website development or visual media separately, the present study combined these features to create a more immersive and interactive learning environment for history instruction.

Therefore, the expert validation results indicate that the website-based History Gallery learning media are feasible for use in history learning for twelfth-grade students at MAN 1 Palu.

Practicality of the Learning Media

After being declared feasible by the material and media experts, the website-based learning media were implemented with 30 twelfth-grade students at MAN 1 Palu to determine their practicality in the learning process.

During the implementation stage, students used the learning media through their smartphones. Throughout the learning activities, students appeared more active and enthusiastic when using the website-based learning media compared to conventional lecture methods and textbooks.

The use of visual images, instructional videos, historical galleries, Among the available features, visual galleries and 360-degree images appeared to provide the greatest support for students. These features enabled students to observe historical buildings in greater detail, thereby facilitating better understanding of historical concepts and increasing learning interest. The high practicality score obtained in this study indicates that students positively perceived the use of interactive digital media in history learning. And 360-degree images made students more interested in learning historical materials. In addition, the evaluation feature within the website helped students assess their understanding of the materials studied.

Based on the students' response questionnaire, the developed media obtained a score of 83.5%, categorized as Very Practical. These findings indicate that the media were easy to use, attractive, helpful in understanding the materials, and capable of increasing students' learning motivation.

However, several students provided lower scores regarding ease of use and understanding of the materials. Four students gave a score of 2 for the ease-of-use aspect, while several others gave scores of 2 and 3 for the understanding aspect. These findings indicate that some students still required adjustment in using digital learning media.

In addition to students' responses, the teacher response questionnaire obtained a score of 95%, categorized as Very Practical. The teacher stated that the website-based History Gallery learning media made history learning more interesting, visual, and interactive, thereby helping students understand historical materials more easily.

Consistent with Dianta et al. (2023), the use of 360-degree visual technology contributed to more immersive learning experiences. However, unlike the study conducted by Dianta et al. (2023), which focused primarily on virtual reality media, the present study integrated 360-degree visualization into a website-based platform that can be easily accessed through smartphones without requiring additional devices. This characteristic increases the practicality and accessibility of the developed media in school settings.

Therefore, it can be concluded that the website-based History Gallery learning media are practical for use in history learning because they help students understand historical materials in a more visual, engaging, and interactive manner.

CONCLUSION

This study developed a website-based history learning medium entitled History Gallery using the Research and Development (R&D) method with the ADDIE model, consisting of the stages of analysis, design, development, implementation, and evaluation. The learning media were developed through Google Sites by integrating historical materials, visual galleries, instructional videos, 360-degree images, and learning evaluation features within a single website platform.

The findings indicate that the History Gallery learning media are feasible for use in history learning. Material expert validation yielded a score of 97.3%, while media expert validation obtained a score of 86.6%, both categorized as Very Feasible. These results demonstrate that the developed media are appropriate in terms of content, visual design, and usability.

The practicality assessment also showed positive results. The teacher response questionnaire obtained a score of 95%, whereas the students' response questionnaire reached 83.5%, both categorized as Very Practical. These findings suggest that the integration of visual galleries, instructional videos, and 360-degree images within a website-based platform can provide more interactive, engaging, and meaningful history learning experiences for students. Therefore, the main contribution of this study lies in the development of an innovative and immersive history learning medium that supports digital transformation in madrasah education.

Nevertheless, this study has several limitations. The product testing was conducted only in one school and involved a limited number of participants. In addition, this study focused solely on examining the feasibility and practicality of the developed media and did not investigate its effectiveness in improving students' learning outcomes.

Future studies are recommended to implement the developed media in a broader educational context involving different schools and larger samples. Further research is also needed to examine the effectiveness of the History Gallery learning media in improving students' historical understanding, learning motivation, and academic achievement.

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