MIKAILALSYS
Journal of Multidisciplinary Sciences

e-ISSN : 2987-2286
p-ISSN : 2987-3924
Index: Harvard, Boston, Sydney, Copernicus, Sinta 4, Scilit, Semantic, Google, etc

https://doi.org/10.58578/mikailalsys.v4i3.12265

Development of Interactive Learning Media Using the Genially Platform for Grade XI History Education in Senior High School

Dzikra Kurnia, Nofri Hendri, Darmansyah, Khairul Alfahani
Universitas Negeri Padang, Indonesia
dzikrakurnia9@gmail.com

Submitted:	Revised:	Accepted:	Published:
Aug 24, 2026	Sep 21, 2026	Oct 3, 2026	Oct 8, 2026

Abstract

A needs analysis at SMAN 1 Situjuah Limo Nagari identified a need for visual and interactive media to enhance student engagement and support understanding of historical events, figures, and chronology in Grade 11 history instruction. This study aimed to develop interactive learning media using Genially and assess its validity, practicality, and effectiveness. A research and development approach was employed using the ADDIE model, comprising analysis, design, development, implementation, and evaluation. The product was validated by one subject-matter expert and two media experts. Practicality was assessed among Grade 11 students at the school, while effectiveness was evaluated using pretest and posttest scores from 33 students in Grade 11 class F2. Following revision, the two media experts assigned validation scores of 81.17% and 91.76%, categorized as valid and highly valid, respectively. Subject-matter validation yielded a mean score of 4.70, categorized as highly valid, while the practicality assessment yielded a mean score of 4.88, categorized as highly practical. Mean test scores increased from 48.18 on the pretest to 88.48 on the posttest, with a normalized gain score of 0.78, categorized as high. These findings indicate that the developed media met the study's validity, practicality, and effectiveness criteria within the evaluated setting. The Genially-based media offers an alternative resource for diversifying history instruction and supporting interactive learning.

Keywords: ADDIE Model; Genially; History Education; Interactive Learning Media; Learning Outcomes

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INTRODUCTION

Science and technology are developing rapidly, bringing significant changes to education. Education is a conscious and systematic process that creates a learning environment in which students can develop their potential. Hidayat and Abdillah (2019) define education as a deliberate process of guidance and assistance to develop students' physical and mental potential. Similarly, Hasibuan et al. (2026) emphasize that education involves individuals and institutions in guiding students to develop their abilities and character in accordance with educational and learning objectives.

Learning media support the achievement of learning objectives effectively and efficiently by facilitating message delivery and stimulating students' motivation (Shoffa, 2023; Suryani, 2016). Appropriate media tailored to students' characteristics can foster an active and interactive learning environment (Septiani & Rejekiningsih, 2020; Van Straaten et al., 2026). Although presentation slides are widely used because they are easy to prepare (Uzun & Kilis, 2019; Miguel-Revilla, 2022), their continuous use may cause boredom and reduce student engagement. Therefore, teachers need to innovate by developing more engaging media to encourage active participation and sustain students' interest in learning (Hadiyanti & Widya, 2018; Pratiwi & Churiyah (2022).

The development of information and communication technology has shifted learning media toward more interactive digital forms, significantly influencing education (Mdhlalose, 2023). Consequently, teachers are expected to innovate in the learning process (Serdyukov, 2017). Traditional resources such as textbooks, worksheets, and teacher notes are relatively limited in interactivity and content presentation, making them less aligned with current technological developments (Pavešić & Cankar, 2022). One increasingly used form of digital media is web-based learning, which connects educators and students through engaging educational experiences and supports learning through multimedia features and interactive activities (Vlasenko et al., 2023; Hendri et al., 2020).

Observations conducted on November 5–7, 2025, at SMAN 1 Situjuah indicated that History learning was predominantly theoretical, with limited and monotonous use of learning media such as student worksheets and presentation slides, resulting in low student interaction. An interview with the Grade XI F2 History teacher, Ruzi Wahyudi, S.Pd., further revealed that classroom media remained largely conventional and had not fully incorporated interactive, technology-based, or multimedia features such as text, images, videos, and

interactive activities. Furthermore, some Grade XI students' History achievement remained below the established Learning Objective Achievement Criteria (KKTP), as indicated by the Mid-Semester Summative Assessment results below.

Table 1. History Summative Assessment Scores of Grade 11 Students

No	Score Range	Percentage	Number of Students	Category
1	≥ 75	60%	20	Achieved
2	≤ 75	40%	13	Not achieved

The data in Table 1 indicate that students' learning outcomes have not yet reached an optimal level, reflecting limited innovation in learning media and a predominantly one-way learning process. This condition may reduce students' interest in History by limiting engaging, varied, and technologically relevant learning experiences. Dina (2011) emphasizes that learning media can make instruction more engaging, varied, and less monotonous. Therefore, based on the needs analysis, interactive learning media, particularly the Genially platform, was identified as a suitable alternative to support students' learning.

Interactive learning media refer to a form of multimedia in which information and learning materials can be controlled or operated by users, allowing them to determine the sequence of content or activities based on the available options and instructions (Lailiyah, 2018; Sekarwangi et al., 2021). Such media involve teachers, students, and technological resources as interconnected components of the learning process. Interactive learning media function to facilitate learning by presenting instructional messages and materials in a form that is easier for students to understand, thereby supporting the achievement of educational objectives (Santoso et al., 2022).

Previous studies have demonstrated the potential of Genially as an interactive learning medium. Afifah et al. (2022) reported a media validation score of 94% and a limited trial score of 89.7% for Genially-based interactive learning media, indicating its feasibility for learning. Other studies have likewise examined Genially-based interactive multimedia as an alternative medium for supporting improvements in students' learning outcomes.

Nevertheless, there is a need for learning media specifically designed for Grade XI History education at SMAN 1 Situjuah Limo Nagari, particularly on colonialism and Indonesian resistance, while addressing students' characteristics and learning needs. This study therefore develops interactive Genially-based learning media and evaluates its validity, practicality, and effectiveness, extending previous research by aligning the media with the content and instructional context of Grade XI History education. The development of this

media is needed as an alternative learning medium that integrates instructional content and assessment within a single platform. It presents History materials through text, images, animations, videos, navigation buttons, interactive objects, and quizzes with feedback, enabling students to explore the content and assess their understanding through the available features.

Based on the foregoing discussion, this study aims to develop Genially-based interactive learning media for Grade XI History education, particularly on colonialism and Indonesian resistance, and to determine its validity, practicality, and effectiveness. These objectives correspond to the research questions concerning the development process and the validity, practicality, and effectiveness of the resulting media.

METHODS

This study employed a Research and Development (R&D) method using the ADDIE model, consisting of five stages: *Analysis, Design, Development, Implementation,* and *Evaluation*. The study aimed to develop Genially-based interactive learning media for Grade XI History, particularly on colonialism and Indonesian resistance. The *Analysis* stage examined the curriculum, students' characteristics, learning needs, and existing media. The *Design* stage involved developing the instructional structure, *flowchart*, *storyboard*, interface, navigation, and evaluation instruments.

The subjects consisted of one Grade XI History teacher as a subject-matter expert and two media experts from the Department of Curriculum and Educational Technology, Faculty of Education, Universitas Negeri Padang. The practicality test involved Grade XI students at SMAN 1 Situjuah Limo Nagari, while the effectiveness test involved 33 students from class XI F2. Participants were selected purposively based on the designated research trial class.

The data included qualitative and quantitative data. Qualitative data were obtained from validators' and students' comments, criticisms, responses, and suggestions, while quantitative data consisted of validation, practicality, *pre-test*, and *post-test* scores. Data were collected through observation, interviews, questionnaires, and tests. Observation and interviews were conducted during the *Analysis* stage, questionnaires were used to assess validity and practicality, and tests measured effectiveness through students' *pre-test* and *post-test* scores.

The study was conducted at SMAN 1 Situjuah Limo Nagari. The initial observation was carried out from November 5 to 7, 2025, while the product development and testing processes were conducted through the five stages of the ADDIE model.

RESULTS

1. Product Development Results

The developed product is a Genially-based interactive learning medium designed to present History materials in a more engaging and interactive manner. It includes an opening page, main menu, learning objectives, materials, evaluations/quizzes, user instructions, and developer profile. Interactive navigation buttons allow students to move between sections, while interactive objects provide access to additional information.

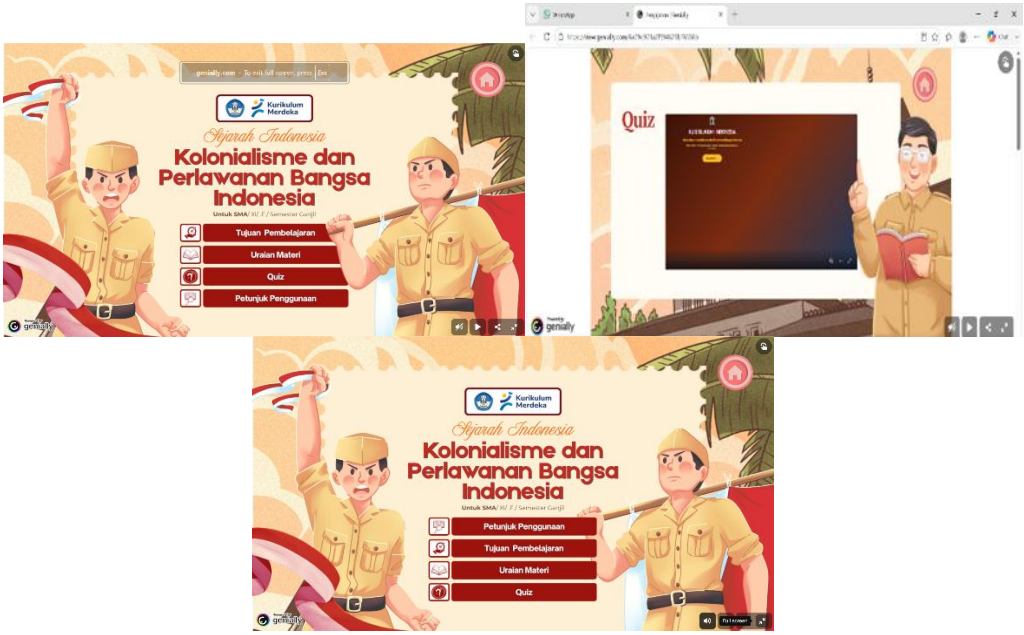


Figure 1. Genially-Based Interactive Learning Media
Note: *The media includes an opening page, main menu, learning materials, interactive navigation features, and evaluation/quizzes.*

2. Media and Content Validation Results

Validation was conducted to assess the feasibility of the developed product before implementation. Media validation involved two validators and covered visual appearance, text and typography, images and animations, audiovisual elements, and navigation functions. Content validation was conducted by one History teacher, assessing conceptual accuracy, text and typography, and evaluation components.

Table 2. Results of Media and Content Validation

Assessment Aspect	Score	Category
Media – Stage I, Validator 1	71.76%	Valid
Media – Stage I, Validator 2	90.58%	Highly Valid
Media – Stage II, Validator 1	81.17%	Valid
Media – Stage II, Validator 2	91.76%	Highly Valid
Content	4.70	Highly Valid

In the first media validation stage (Table 2), the first and second validators assigned scores of 71.76% (valid) and 90.58% (highly valid), respectively. Based on their feedback, revisions were made to the user instructions, learning objectives, quiz interface, and sound elements. After revision, the scores increased to 81.17% and 91.76%, respectively. Content validation obtained a mean score of 4.70, categorized as highly valid, with scores of 4.60 for conceptual accuracy, 4.50 for text and typography, and 5.00 for evaluation.

3. Product Revision

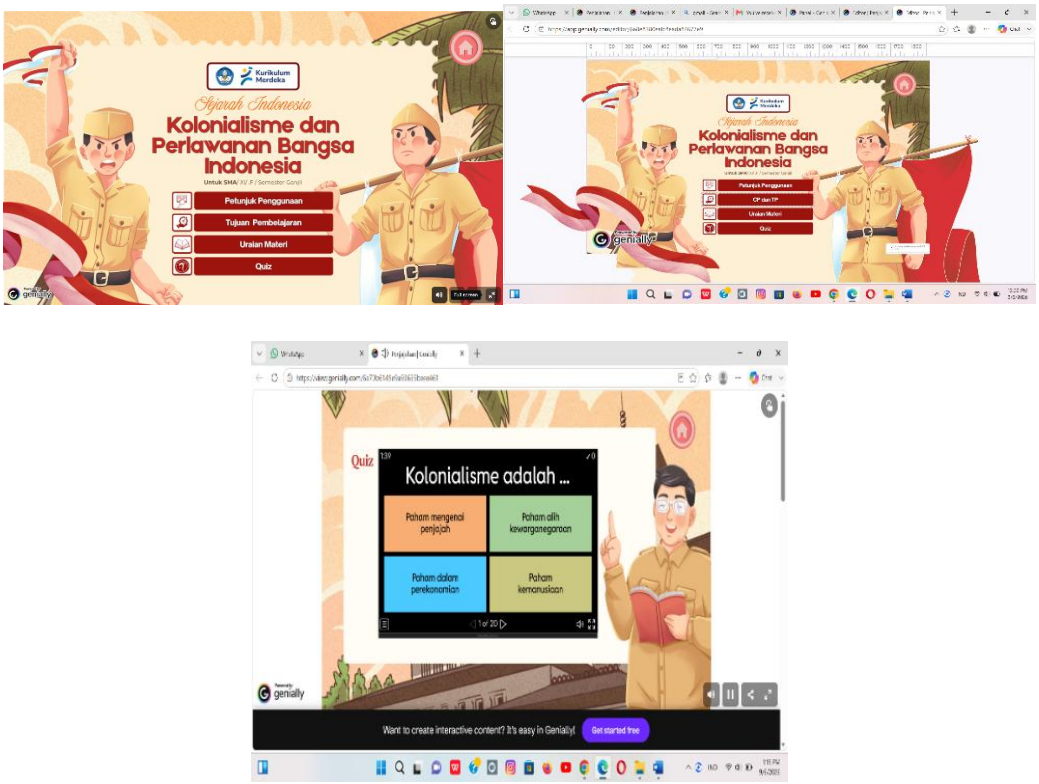


Figure 2. Revision of the Learning Media Based on Validators' Feedback

The validation results in Figure 2 indicated that several components required revision before implementation. Based on the validators' feedback, improvements were made to the user instructions, learning objectives text, quiz layout, and audio elements. After these revisions, the developed product was considered ready for the student trial stage.

4. Practicality Test Results

The practicality test was conducted after the students had used the interactive learning media during the learning process. The practicality of the media was assessed based on four aspects: visual appearance, ease of use, learning content, and language.

Table 3. Results of the Learning Media Practicality Test

No.	Assessment Aspect	Number of Items	Mean Score	Category
1	Visual Appearance	3	4.91	Highly Practical
2	Ease of Use	5	4.92	Highly Practical
3	Learning Content	2	4.91	Highly Practical
4	Language	1	4.79	Highly Practical
Overall Mean			4.88	Highly Practical

The table 3 results showed that the visual appearance aspect obtained a mean score of 4.91, ease of use obtained 4.92, learning content obtained 4.91, and language obtained 4.79. Overall, the developed media obtained a mean score of 4.88, which was categorized as highly practical.

5. Effectiveness Test Results

Table 4. Students' Pre-test and Post-test Results

Indicator	Pre-test	Post-test
Number of students	33	33
Total score	1,590	2,920
Mean score	48.18	88.48
N-Gain		0.78
N-Gain category		High

The effectiveness test table 4 involved 33 Grade XI students from class F2 using pre-test and post-test assessments. The total score increased from 1,590 (mean = 48.18) in the pre-test to 2,920 (mean = 88.48) in the post-test, representing a 40.30-point increase. The N-Gain score was 0.78, categorized as high, indicating improved student learning outcomes after using the Genially-based interactive learning media.

Overall, the study yielded three main findings. First, the Genially-based interactive learning media developed obtained final-stage media validation scores of 81.17% and 91.76%, while content validation yielded a mean score of 4.70. Second, the practicality test resulted in a mean score of 4.88, categorized as highly practical. Third, the effectiveness test demonstrated an improvement in students' mean learning outcomes from 48.18 to 88.48, with an N-Gain score of 0.78, categorized as high.

DISCUSSION

This study developed a Genially-based interactive learning medium for Grade XI History, focusing on colonialism and Indonesian resistance, using the ADDIE model (*Analysis, Design, Development, Implementation,* and *Evaluation*). The model provides a systematic framework in which each stage supports the subsequent stage, ensuring that the final product is visually engaging while remaining aligned with learning needs, instructional content, student characteristics, and learning objectives. This approach is consistent with previous Genially-based media development studies that applied the ADDIE model to produce valid and useful instructional media.

At the *Analysis* stage, the researchers examined learning needs, the curriculum, student characteristics, and existing instructional media in History education. The analysis at SMAN 1 Situjuah Limo Nagari indicated a need for more varied media to present instructional content interactively. Curriculum analysis of the Merdeka Curriculum identified the relevant learning objectives, competencies, content, and assessment methods, which subsequently guided the selection of the media type and visual design. Thus, the analysis ensured that the developed media aligned with learning objectives and students' needs.

The *Design* stage involved developing the structure, content, visual appearance, navigation, and assessment components of the interactive learning media. The media enabled students to navigate between sections using interactive buttons and presented materials on colonialism and Indonesian resistance through text and illustrations. Assessment activities were also included to help students evaluate their understanding. Thus, the design emphasized not only information delivery but also interaction through navigation, buttons, and assessments.

At the *Development* stage, the initial design was transformed into Genially-based learning media by systematically integrating the opening page, main menu, instructions, learning objectives, materials, and evaluation components. Genially enabled the integration of interactive features and visual elements, providing students with a more engaging learning experience than conventional slide-based presentations. These features support previous findings that Genially can serve as an interactive learning platform by combining visual and interactive elements in educational contexts. Afifah et al., (2022) also reported high validation results for Genially-based interactive learning media.

After the initial product was completed, validation was conducted to assess its quality and identify aspects requiring improvement before implementation. In the first stage of media validation, the first validator awarded 71.76%, categorized as valid, while the second awarded 90.58%, categorized as highly valid. The assessment covered visual appearance, text and typography, images and animations, audiovisual elements, and buttons and navigation. Based on the validators' feedback, revisions were made to the user instructions, learning objectives, audio elements, and quiz components.

The validation results are consistent with previous research on Genially-based learning media. Afifah et al., (2022) reported media, content, and language validation scores of 94%, 100%, and 92%, respectively. These findings, along with other studies reporting high validation results, indicate that Genially can effectively support the development of valid interactive instructional media through systematic development and evaluation. Thus, the present findings further support Genially as a suitable platform for developing interactive learning media.

The Implementation stage was conducted after the media had been validated and revised based on the validators' recommendations. The developed media was then used in Grade XI History learning at SMAN 1 Situjuah Limo Nagari. After using the media, students completed a practicality questionnaire to assess its ease of use from the users' perspective. The assessment covered visual appearance, learning content, language, and ease of use.

Overall, the findings demonstrate a clear connection between the ADDIE development process and the resulting product. The Analysis stage identified instructional media needs, the Design stage established the media structure and visual style, and the Development stage transformed the design into a product evaluated by experts. Validation results guided subsequent revisions before implementation. The practicality results then assessed students' ease of use, while the effectiveness results demonstrated improvements in learning outcomes. Thus, each ADDIE stage was interconnected and contributed to achieving the research objectives.

The contribution of this study lies in the development of Genially-based interactive learning media specifically designed for Grade XI History education, with a focus on the topics of colonialism and Indonesian resistance. The media does not merely present instructional content in textual form but integrates various visual and interactive components

within a single learning medium. The resulting product can serve as an alternative for teachers to provide greater variety in the presentation of History content.

These limitations should be considered when interpreting the findings. Although the high N-Gain score indicates improved learning outcomes, the results cannot be generalized to all Grade XI students or schools with different characteristics and conditions. Future research should involve larger and more diverse samples and school contexts to provide broader evidence of the applicability and effectiveness of Genially-based interactive learning media.

Further studies could develop Genially-based media for additional History topics, expand interactive activities, exercises, quizzes, navigation, and visual elements, and involve more students and schools. More rigorous research designs incorporating comparison groups could also be used to examine effectiveness. In addition, future development should consider learning environments with limited internet connectivity, as the current media requires internet access. These efforts could broaden the content, participants, contexts, and research designs used to evaluate Genially-based learning media.

CONCLUSION

This study developed a Genially-based interactive learning medium for Grade XI History education at the senior high school level, focusing on colonialism and Indonesian resistance, using the ADDIE model. The media obtained validation scores of 81.17% and 91.76% from the media validators and a mean content validation score of 4.70. The practicality test yielded a mean score of 4.88, categorized as highly practical, while the effectiveness test demonstrated an improvement in students' mean learning outcomes from 48.18 to 88.48, with an N-Gain score of 0.78, categorized as high. These findings contribute an alternative medium for History instruction that integrates instructional content, visual elements, interactive navigation, and assessment within a web-based platform. Future research is recommended to develop similar media for a wider range of topics and educational levels, involve larger and more diverse samples, and consider device availability and internet access conditions during implementation.

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