DEVELOPMENT OF AN E-MODULE ON INDONESIAN HISTORY OF THE PRE-HISTORIC PERIOD BASED ON BANYUWANGI LOCAL RESOURCES

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ABSTRACT

The purpose of this study is to: 1) Know the procedure for developing an e-module for the pre-historic Indonesian national history course based on Banyuwangi local archaeological resources; 2) Develop and implement an e-module for the pre-historic Indonesian national history course based on Banyuwangi local archaeological resources; 3) to determine the effectiveness of the e-module for the pre-historic Indonesian national history course based on Banyuwangi local archaeological resources. 4) The development of the E-Module is expected to be able to develop learning resources used by students for more contextual learning; 5) The existence of the E_Module is expected to be able to provide student motivation in learning with a Student Centered Learning or active learning approach. The method used in this development research is ADDIE, namely *Analysis, Design, Development, Implementation, and Evaluation* . The population and sample in this study were 40 students of the History Education Study Program, Faculty of Teacher Training and Education, University of 17 August 1945 Banyuwangi, divided into small group and large group trial subjects. The resulting product will be validated by media experts, material experts, and linguists. After validation, the product will be tested in several stages, namely 1) Initial Trial; 2) Main Field Trial; 3) Operational Field Trial. The results of the study show that the development of the E-Module of Prehistoric Indonesian History Based on Banyuwangi Local Resources has a significant influence in improving students' understanding of Prehistoric History in the aspects of Material, Text and Language, Visuals and Learning Process.

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INTRODUCTIONS

The Fourth Industrial Revolution has generated profound transformations across the economic, industrial, and educational sectors through the integration of advanced technologies such as artificial intelligence, the Internet of Things (IoT), and cloud computing (Fatmawati, 2023). Digital transformation has reshaped students' approaches to accessing and comprehending information, necessitating the adjustment of conventional learning models to technological progress (Pambudi & Kuswono, 2022). In this context, education must adapt to digital technology to ensure the transmission of national character values (Yudiana, 2020). History education, in particular, requires contextualizing past events within the present to maintain its relevance (Syerlita & Siagian, 2024), as it plays a pivotal role in cultivating historical awareness and strengthening national identity (Mursidi et al., 2021).

A persistent challenge lies in designing history learning that is engaging, contextual, and continuously rooted in authentic sources, since it is often considered monotonous (Tanama et al., 2023). Prehistoric Indonesian history, in particular, receives limited attention due to the scarcity of written records. Thus, the implementation of e-modules grounded in local archaeological resources offers an innovative pedagogical alternative for both secondary and higher education (I Kadek Yudiana, 2021).

Banyuwangi provides a rich archaeological landscape, representing traces of human life from prehistoric to Islamic periods. Studies by Yudiana and Miskawi (2016) demonstrate that Banyuwangi preserves a comprehensive archaeological heritage encompassing the prehistoric, Hindu-Buddhist, colonial, and Islamic eras. Subsequently, these findings were developed as alternative historical tourism resources in the region (Yudiana & Miskawi, 2018). To optimize the use of Banyuwangi's archaeological resources in education, a strategic initiative is needed: transforming these potentials into e-modules.

The development of e-modules is essential to address the shortcomings of history education, which often lacks both attractiveness and local relevance. By employing e-modules based on Banyuwangi's archaeological heritage, this study contributes to the creation of innovative, interactive, and technology-oriented pedagogical approaches. Furthermore, it fosters cultural preservation and strengthens local historical awareness among younger generations. Through this model, history education becomes more effective in enhancing student engagement and cultivating appreciation of both local and national history. The integration of multimedia features such as 3D visualization, documentary videos, and archaeological site animations further enriches learning experiences, particularly for sites inaccessible in person.

RESEARCH METHOD

This study employed the ADDIE development model, which consists of Analysis, Design, Development, Implementation, and Evaluation (Karima et al., 2022). According to Safitri and Aziz (2022), the ADDIE model illustrates a systematic approach to instructional development. The stages of the ADDIE framework include Analysis, Design, Development, Implementation, and Evaluation.

The population and sample of this study comprised 40 students enrolled in the Indonesian Prehistoric History course within the History Education Study Program, Faculty of Teacher Training and Education, University of 17 August 1945 Banyuwangi. These participants were divided into groups for preliminary trials, main field testing, and operational testing. Validation involved media experts, subject-matter experts, and language experts to ensure the developed media was ready for the trial phases. Media experts evaluated and provided revision suggestions concerning visual aspects and media quality. Meanwhile, subject-matter experts assessed the learning and content aspects, offering feedback for improvements. Once the product was deemed feasible by all experts, it was subsequently tested with students.

The product trials were conducted in three stages: (a) Preliminary Trial, (b) Main Field Trial, and (c) Operational Field Trial. Data collection instruments included observation sheets, questionnaires, and achievement tests. The trial data were classified into two types: qualitative and quantitative. Qualitative data were derived from observation results during the preliminary, main, and operational field trials. Quantitative data, obtained from achievement tests and questionnaires, were analyzed using descriptive statistics with the following rating scale: Very Poor (1), Poor (2), Fair (3), Good (4), and Excellent (5).

RESULTS AND DISCUSSION

Needs Analysis

The development of an e-module for the Indonesian National History course, particularly on the topic of prehistory, is an urgent need in higher education. Prehistoric history learning has often been abstract, monotonous, and disconnected from local realities, leading students to focus more on memorization than on understanding the relationship between historical concepts and the surrounding archaeological heritage. A study in Banyuwangi revealed that historical teachers and lecturers have not yet maximized the use of local archaeological remains in the learning process, resulting in the underutilization of rich archaeological sites in formal education (Yudiana, 2021). In contrast, other research emphasizes that history teaching materials based on local e-modules represent a significant innovation,

especially given the limited availability of local history in current learning resources (Firmansyah, 2022). Furthermore, integrating local history into the curriculum has been shown to provide greater meaning for students, as it directly connects historical knowledge to their everyday social realities (Angga Prasetya, 2022). Thus, the development of an e-module based on Banyuwangi's local archeology not only addresses pedagogical needs but also aligns with advances in learning technologies that support flexible access and motivate students to become more active and critical in understanding national history (Fatmawati, 2023).

Research in Banyuwangi indicates that many local historical and archaeological remains remain underutilized in history education. For example, Muncar District contains several historical sites with great potential as learning resources; however, their use is limited due to the lack of awareness among teachers and the community about their educational value (Mursidi, 2025). Another study on Blambangan Museum found that student visits to museums improved their historical understanding and learning motivation, although challenges such as accessibility and alignment of collections with the curriculum persisted (Mursidi, 2019). Similarly, the study *"Kendenglembu Neolithic Site as a Resource of High School History Learning in Banyuwangi Regency"* by Yudiana and Mahfud highlighted the site's educational significance and recommended its integration into the high school history syllabus (Yudiana & Mahfud, 2023). In addition, Mahfud (2024), in *An Inventory of Prehistoric Remains in Banyuwangi Regency and Their Utilization as Learning Resources in High Schools*, reported that several schools had begun using sites such as caves in Songgon, Wongsorejo, Kalipuro, and Kendenglembu for teaching, although the use was not yet systematic or comprehensive.

From a curricular and competency perspective, the Indonesian National History course emphasizes students' understanding of national historical developments chronologically, from prehistoric times to the contemporary period. However, in practice, prehistoric material is still generally delivered using examples from outside Banyuwangi, such as Sangiran in Central Java or Gilimanuk in Bali. This approach prevents students from becoming familiar with local archaeological remains, despite Banyuwangi's rich megalithic heritage that could provide meaningful learning opportunities (Yudiana, 2021). Other studies confirm that incorporating local historical sources strengthens the significance of learning by directly linking historical content with students' socio-cultural realities (Angga et al., 2022). Thus, developing an e-module based on Banyuwangi's archeology not only enriches the learning outcomes but also enables students to perceive history as closely tied to regional identity, thereby strengthening national consciousness amid globalization (Romadloni, 2024).

Second, regarding learner characteristics, higher education students in the digital era are familiar with information technology and prefer visual, audio, and interactive learning media over lengthy narrative texts (Qodrina et al., 2023). Observations reveal that students' knowledge of Banyuwangi's archaeological sites such as dolmens, menhirs, and sarcophagi remains limited, even though these still represent critical phases of prehistoric cultural development. Therefore, learning media must concretely present local archaeological heritage through photographs, maps, illustrations, and videos, enabling students to connect national historical theories with realities in their surroundings (Simanjuntak, 2013).

Third, in terms of teaching materials, prehistoric topics cover cultural developments from hunting-gathering and farming to megalithic traditions. These materials are dispersed across books, journals, and archaeological reports and have not been integrated into systematic teaching resources, particularly those linking national history with Banyuwangi's archaeology. Hence, the developed e-module should compile, organize, and present the materials in a structured manner accompanied by attractive visualizations to help students better understand the connection between national and local events.

Fourth, regarding media and technology, historical learning in higher education is still dominated by textbooks and printed modules, which lack interactivity and are incompatible with the learning styles of digital-native students (Mutiani, 2019). Students are accustomed to using smartphones, laptops, and digital platforms, making it necessary to develop e-modules in interactive formats accessible across devices. Features such as interactive quizzes, glossaries, and multimedia integration can further increase motivation and enrich learning experiences.

Fifth, from the perspective of learning motivation, conventional learning resources are typically presented in printed text with limited visualization, resulting in low engagement, particularly among students accustomed to digital media. Interactive e-modules enhance motivation by offering more engaging learning experiences through images, videos, quizzes, and digital simulations. Moreover, emphasizing Banyuwangi's local resources fosters emotional

attachment, instilling pride and encouraging students to learn by directly observing the relevance between theory and their cultural identity (Sholeh et al., 2023; Sianturi & Permatasari, 2025).

Finally, in terms of learning outcomes, the use of e-modules based on local archeology provides broader positive impacts. Students not only acquire cognitive understanding of prehistoric stages but also develop affective awareness of cultural heritage preservation and psychomotor skills through project-based activities, such as producing digital documentation or reports on archaeological site visits. This contrasts with conventional modules, which primarily focus on cognitive skills and lack comprehensive learning experiences.

Accordingly, the comparison between conventional modules and e-modules based on Banyuwangi's local resources can be illustrated as follows:

Table 1. Comparison between Conventional Modules and E-Modules Based on Banyuwangi's Local Resources

Aspect	Conventional Module	E-Module Based on Banyuwangi's Local Resources
Content Delivery	Text-dominated, generic, and less contextualized with local realities	Integrated with local archaeological resources, contextual, and relevant to students' socio-cultural environment
Learning Style	Passive, memorization-oriented, and teacher-centered	Active, interactive, student-centered, encouraging critical and reflective learning
Media Format	Printed text and limited illustrations	Digital format with multimedia features (photos, videos, 3D visualization, animations, interactive quizzes)
Accessibility	Limited to physical copies, less flexible	Accessible anytime and anywhere via smartphones, laptops, and digital platforms
Motivation	Low engagement due to monotonous presentation	Higher motivation through interactive, visual, and locally relevant learning experiences
Learning Outcomes	Focused mainly on cognitive aspects (knowledge acquisition)	Comprehensive: cognitive (knowledge), affective (awareness of cultural preservation), and psychomotor (project-based activities)
Cultural Relevance	Limited references to local heritage	Strong emphasis on Banyuwangi's local identity and cultural heritage, fostering pride and national awareness

Based on the explanation above, it can be concluded that the development of an e-module based on Banyuwangi's local archaeological resources is a strategic necessity to improve the quality of history learning. The e-module is expected to provide contextual, interactive, and relevant learning for the digital generation, while at the same time supporting the preservation of regional cultural heritage as an integral part of national history.

Design and Development

The *Indonesian National History E-Module on the Prehistoric Era* based on Banyuwangi's local resources was developed as an innovative learning medium that integrates the narrative of national history with the region's archaeological and cultural wealth. The main principles in its design are interactivity, contextuality, and digital technology-based approaches, making the learning process more engaging and meaningful. The use of interactive digital media in education has been proven to enhance student motivation and comprehension, especially when linked to real learning experiences (Mayer, 2021).

In terms of design, this e-module is regularly structured with components such as: introduction, explanation of core materials, visualization of local artifacts and sites, interactive exercises, and self-assessment-based evaluations. Its main content connects the national narrative of the prehistoric era with archaeological evidence from Banyuwangi, such as fossil findings, prehistoric sites, and local traditions rooted in the past. To strengthen understanding, the module is equipped with infographics, interactive maps, photographs of artifacts, and short videos of local historical sites. This multimedia integration can help learners grasp abstract historical concepts through a contextual visual approach (Mayer, 2021; Saputri, Sariyatun, & Yunianto, 2020).

From a development perspective, the e-module employs the ADDIE model (Analysis, Design, Development, Implementation, Evaluation). At the analysis stage, learners' needs are identified along with the mapping of local resources. The design stage includes drafting the material framework, selecting digital media, and creating a user-

friendly layout. During development, digital content is produced and technically tested. Implementation involves limited trials with university or secondary school students to assess the module's effectiveness, while the evaluation stage focuses on gathering feedback from users and experts. The ADDIE model was chosen because it is proven to be systematic and flexible for digital-based learning material development (Branch, 2009).

The main advantage of this e-module is its application of a locality-based approach, positioning Banyuwangi as a laboratory for history learning. Learners are expected not only to understand prehistoric history as part of Indonesia's broader national narrative but also to internalize local cultural values as part of their identity. History learning based on local wisdom is crucial in fostering critical awareness, nationalism, and concern for cultural preservation (Kartodirdjo, 1993; Saputri, Sariyatun, & Yunianto, 2020). Thus, this e-module functions not only as an educational medium but also as a humanistic instrument that nurtures the connection between learners and their cultural heritage.
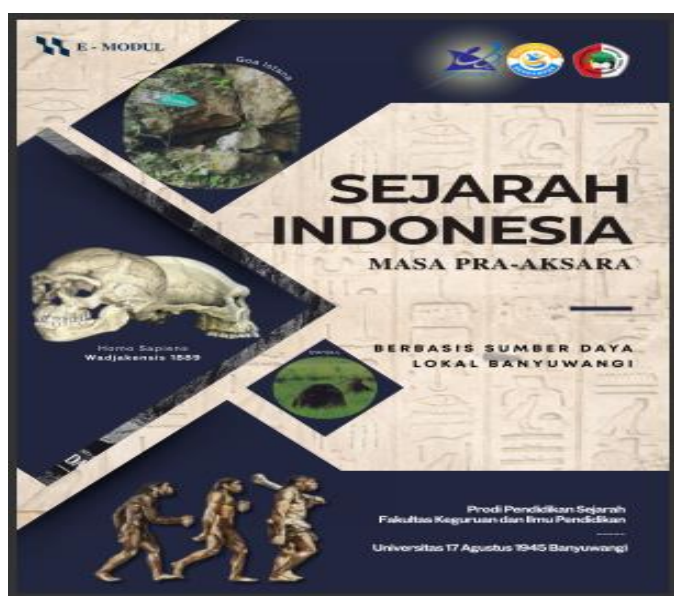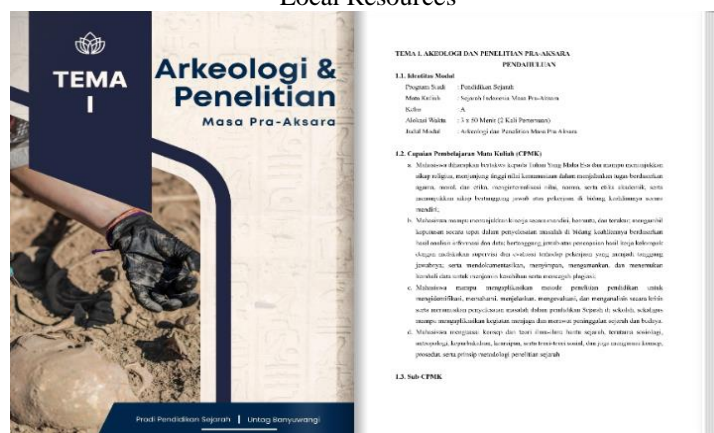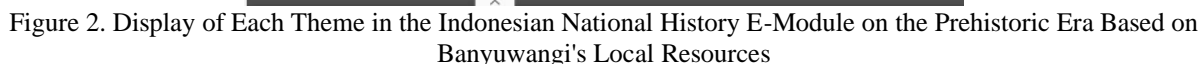

Figure 1. Front Cover Display of the Indonesian History E-Module on the Prehistoric Era Based on Banyuwangi's Local Resources

Figure 2. Display of Each Theme in the Indonesian National History E-Module on the Prehistoric Era Based on Banyuwangi's Local Resources

Expert Validation
Content Expert Validation

Content Expert Validation The validation by content experts on the Indonesian National History e-module of the Prehistoric Era based on Banyuwangi's local resources was conducted to ensure that the material content aligns with the curriculum and is scientifically accurate. The content experts assessed the completeness of the prehistoric history descriptions, the relevance of Banyuwangi's archaeological evidence (such as ancient sites and local traditions), and the connection to the national historical narrative. This validation is important so that the e-module not only presents factual information but also strengthens students' understanding of the interrelation between national history and local cultural heritage, making the learning process more contextual and meaningful. The results of the content expert validation can be seen in the following table.

Table 2. Percentage Results of Content Expert Validation

Criteria	Frequency	Percentage (%)
Very Poor	0	0%
Poor	0	0%
Fair	0	0%
Good	3	42.86%
Excellent	4	57.14%

Based on the validation results presented in the table, the Indonesian National History e-module of the Prehistoric Era Based on Banyuwangi's Local Resources received an assessment in the Good category of 42.86% (3 assessments) and in the Excellent category of 57.14% (4 assessments). No assessments were found in the Fair, Poor, or Very Poor categories, thus it can be concluded that the material in the e-module has met academic feasibility standards. The dominance of assessments in the Excellent category indicates that the content is considered aligned with the curriculum, scientifically accurate, and relevant to the context of Banyuwangi's local resources, such as archaeological sites and community traditions. Meanwhile, the presence of assessments in the Good category suggests that there is still room for improvement, particularly in terms of completeness of explanations and coherence between chapters to make them more systematic.

Overall, the results of the content expert validation confirm that the e-module has a very high level of feasibility as a history learning resource. This module has the potential to support more contextual, integrative, and meaningful learning, as well as to foster students' awareness of the importance of local cultural heritage within the framework of national history.

Media Expert Validation

Media expert validation focused on the design, technical, and visual integration aspects of the e-module on *the Prehistoric Indonesian National History based on Banyuwangi's local resources* . The evaluation included the quality

of the graphic display, the clarity of the infographics, the use of archaeological site photos, and the use of interactive maps that support the historical narrative. In addition, elements of navigation, interactivity, and multimedia integration were also examined to ensure ease of access for students. This validation plays an important role so that the e-module not only has aesthetic appeal, but is also functionally effective in presenting prehistoric historical material by optimizing Banyuwangi's local wealth. The following presents the results of the media expert validation percentage of the E-Module on the Prehistoric Indonesian National History Based on Banyuwangi's Local Resources.

Table 3. Percentage Results of Media Expert Validation

Criteria	Frequency	Percentage (%)
Very Poor	0	0%
Poor	0	0%
Fair	0	0%
Good	3	37.5%
Excellent	5	62.5%

Based on the results of the media expert validation of the Indonesian National History e-module on the Prehistoric Era Based on Banyuwangi's Local Resources, the assessments showed 37.5% (3 evaluations) in the Good category and 62.5% (5 evaluations) in the Very Good category. There were no assessments in the Fair, Poor, or Very Poor categories. These findings indicate that the overall quality of the e-module's media design is at a highly feasible level. The high proportion of assessments in the Very Good category suggests that the visual aspects, multimedia integration, and navigation systems are in line with contemporary instructional design principles. The use of visual elements such as infographics, interactive maps, and archaeological site documentation was deemed effective in enhancing the media's appeal while supporting students' conceptual understanding. Meanwhile, the assessments in the Good category suggest that certain technical aspects can still be improved, particularly in terms of consistency across pages and optimization of interactivity.

Overall, the validation results confirm that the e-module is suitable for use as a digital-based learning tool. Its high media quality is believed to provide a more engaging, interactive, and meaningful learning experience, while also strengthening the integration between the national historical narrative and Banyuwangi's rich local cultural heritage.

Language Expert Validation

The validation by language experts for the Indonesian National History e-module on the Prehistoric Era Based on Banyuwangi's Local Resources emphasizes clarity, accuracy, and comprehensibility of language. The review covered consistency in the use of historical terminology, grammar, text readability, and the narrative style that connects the national historical perspective with Banyuwangi's local context. This validation is crucial to ensure that the e-module conveys complex material in a communicative, scholarly, and easily understandable manner, thereby not only enriching students' knowledge but also fostering motivation to appreciate the historical and cultural values of their region. The percentage results of the language expert validation are as follows.

Table 4. Percentage Results of Language Expert Validation

Criteria	Frequency	Percentage (%)
Very Poor	0	0%
Poor	0	0%
Fair	0	0%
Good	3	37.5%
Excellent	5	62.5%

Based on the results of the language expert validation, the e-module received 3 assessments in the "Good" category (37.5%) and 5 assessments in the "Very Good" category (62.5%), with no evaluations in the lower categories.

Quantitatively, this distribution indicates strong acceptance of the language: the majority of evaluators rated the language use at a very good standard, while a smaller portion considered it good but still in need of refinement.

The dominance of the "Very Good" category suggests that, in general, the choice of diction, sentence structure, and adherence to standard language conventions (PUEBI/EBT) have met the expectations of language experts for higher education learning materials. This is relevant since the target users are History Education students who require accuracy in academic terminology. The presence of evaluators who assigned a "Good" rating indicates that there are still some minor issues—not fundamental errors, but subtle aspects that, if improved, would enhance readability, coherence of arguments, and accessibility of the material for students from diverse backgrounds.

Overall, these validation results confirm that the e-module has met academic feasibility standards and can be used as a digital-based history learning resource. The appropriate, clear, and consistent use of language has the potential to provide a more meaningful and communicative learning experience while fostering students' awareness of the connection between national history and the cultural wealth of Banyuwangi. Therefore, the module is not only substantively feasible but also carries strategic value in shaping students' perspectives on the importance of local cultural heritage as an integral part of the nation's historical narrative.

Implementation

The next stage carried out was the implementation or limited trial phase. In this stage, 10 respondents were involved, consisting of students from the History Education study program. During this limited trial phase, the following data were obtained.

Table 5. Limited Group Trial Data

Criteria	Material Aspect		Text and Language Aspect		Visual Aspect		Learning Process Aspect	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Very Poor	0	0%	0	0%	0	0%	0	0%
Poor	0	0%	0	0%	0	0%	0	0%
Fair	1	10%	2	20%	3	30%	1	10%
Good	6	60%	4	40%	3	30%	4	40%
Very Good	3	30%	4	40%	4	40%	5	50%

For more clarity, the following bar chart illustrates the frequency of assessments for each learning aspect based on the criteria: Fair, Good, and Very Good. Each color represents a different aspect: Material, Text & Language, Visuals, and Learning Process.
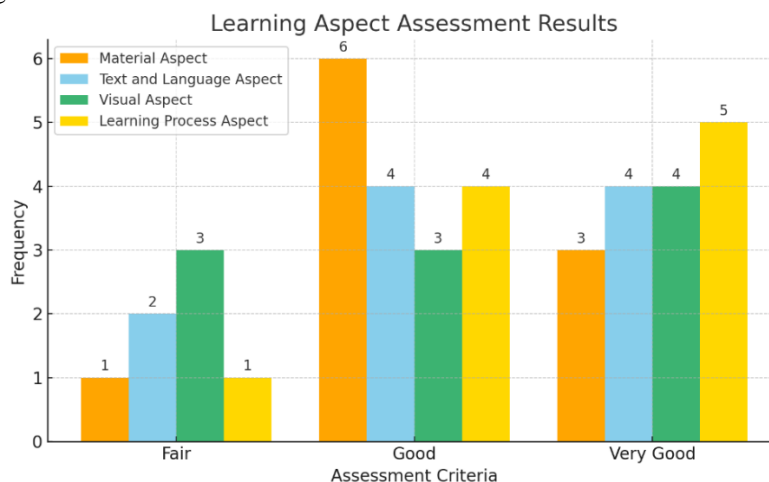
Pigure 03. Bar chart of assessment frequency in the Limited Trial
Source: Processed from Primary Data (2025)

The evaluation results indicate that the material aspect of the e-module received the majority of assessments in the "Good" category at 60% (6 respondents), followed by "Very Good" at 30% (3 respondents), and "Fair" at 10% (1 respondent). This suggests that the content provided is generally relevant and aligned with learners' needs, although there remains potential for further improvement to achieve greater comprehensiveness.

In terms of text and language, evaluations were predominantly distributed between the "Good" and "Very Good" categories, each at 40% (4 respondents), with 20% (2 respondents) in the "Fair" category. These findings demonstrate that the use of language and text structure is sufficiently clear and understandable, although minor refinements are still required to enhance communicative effectiveness.

For the visual aspect, assessments were divided into "Fair" (30%), "Good" (30%), and "Very Good" (40%). This indicates that the visual media used are informative and engaging; However, opportunities remain to further improve visual design quality in order to strengthen both comprehension and attractiveness.

Finally, the learning process aspect received the highest evaluation in the "Very Good" category at 50% (5 respondents), followed by "Good" at 40% (4 respondents) and "Fair" at 10% (1 respondent). This highlights that the learning process was effective and interactive, successfully fostering optimal learner engagement.

Overall, the evaluation demonstrates that the material, language, visual, and learning process aspects of the e-module were assessed as being at the level of "Good" to "Very Good," with only minor improvements needed to maximize effectiveness and quality in supporting learning.

Evaluation
Evaluation of Limited Trial Results of the Indonesian Prehistoric History E-Module Based on Banyuwangi Local Resources

The limited trial of the e-module, conducted with 10 students from the History Education Study Program, provided an overview of the module's effectiveness in supporting the learning process. The evaluation focuses on four main aspects: Material, Text and Language, Visuals, and Learning Process in order to assess the extent to which the module meets the learning objectives and the needs of the participants.

a. Material Aspect

The results showed that the majority of respondents (60%) rated the material aspect as *Good*, 30% as *Very Good*, and 10% as *Fair*. This indicates that the material presented is relevant, comprehensive, and aligned with the learning outcomes. Nevertheless, the small proportion of *Fair* ratings suggests opportunities for improvement, such as the inclusion of more local case studies, deeper explanations, or applied examples to enrich participants' understanding.

b. Text and Language Aspect

The distribution of assessments indicated that 40% of respondents rated this aspect as *Good*, 40% as *Very Good*, and 20% as *Fair*. These findings affirm that the language and text structure were generally clear and easy to understand. However, there remains potential to improve cohesion between sections, ensure consistency in terminology, and enhance the clarity of instructions so that the module becomes more communicative and accessible for students following the learning flow.

c. Visual Aspect

The visual aspect received ratings of 30% *Fair*, 30% *Good*, and 40% *Very Good*. This demonstrates that the design and visual media supported comprehension, although they were not yet fully optimized. Enhancements could be made through the use of more informative infographics, stronger color contrasts, and cleaner layouts so that the visuals are not only aesthetically appealing but also reinforce the learning experience.

d. Learning Process Aspect

The learning process aspect achieved the highest ratings, with 50% of respondents rating it as *Very Good*, 40% as *Good*, and 10% as *Fair*. This suggests that the learning flow, methodology, and interactivity of the module successfully facilitated maximum student engagement. Minor improvements, such as the addition of reflection activities, interactive quizzes, or discussion forums, could further enrich participant interaction and make the learning process more dynamic and collaborative.

.Table 6. Results of the Limited Trial Evaluation

Assessment Aspect	Very Poor	Poor	Fair (%)	Good (%)	Very Good (%)	Evaluation / Notes
Content	0%	0%	10%	60%	30%	The content is relevant and complete, aligned with learning outcomes. Addition of local case studies and practical examples is recommended to make it more comprehensive.
Text and Language	0%	0%	20%	40%	40%	The language is clear and easy to understand; however, cohesion between sections, consistency of terms, and clarity of instructions need improvement.
Visuals	0%	0%	30%	30%	40%	Visuals support understanding but the design of infographics, colors, and layout could be enhanced to make them more appealing and informative.
Learning Process	0%	0%	10%	40%	50%	The learning process is interactive and effective. Minor improvements can be made through reflections, interactive quizzes, or discussion forums.

Based on the evaluation table, it can be concluded that the e-module tested overall has a quality ranging from good to very good. The content aspect is relevant and complete, although the addition of local case studies and practical examples is needed to enrich the material. The text and language are clear and easy to understand, but cohesion between sections and consistency of terms can still be improved. The visuals support understanding, yet the layout, colors, and infographic design need improvement to be more attractive and informative. Meanwhile, the learning process is interactive and effective, with potential improvements through reflections, interactive quizzes, or discussion forums. Overall, this e-module is ready to be used with some minor refinements to enhance the learning experience.

CONCLUSION

The development of the *E-Module on Prehistoric Indonesian National History Based on Banyuwangi Local Resources* successfully produced an innovative and interactive learning tool tailored to the needs of history education students. The development followed systematic steps grounded in instructional design principles, ensuring content coherence, accuracy, and integration with Banyuwangi's local resources. Consequently, the e-module serves not only as an effective learning medium but also as a tool for preserving locally rooted historical knowledge.

Validation by content, media, and language experts indicated very high feasibility. The module's content, presentation, language, and visuals were positively assessed as meeting academic learning standards. Language specialists confirmed that the e-module's language adheres to scientific, communicative, and easily understandable norms for students.

A limited trial with ten history education students also yielded positive responses. Participants found the content contextual, engaging, and conducive to active participation. These results demonstrate the e-module's effectiveness in enhancing students' understanding of prehistoric history while highlighting Banyuwangi as a dynamic and authentic learning environment.

Overall, the e-module is suitable as a learning resource for the *Prehistoric Indonesian National History* course, serving both supportive and enrichment roles. Its integration of local resources enriches the learning experience and contributes to strengthening national identity through historical education grounded in local wisdom.

RECOMMENDATIONS

Despite its high quality, several enhancements are recommended. First, content could be expanded with richer material, particularly incorporating diverse local archaeological resources, to provide students with a more contextual understanding of bridging theory and field realities. Second, technical aspects such as consistent page layouts, navigation, and interactive features should be refined to optimize the digital learning experience in line with modern pedagogical principles.

Moreover, the e-module has potential for broader application beyond the history education program, including secondary schools and non-formal educational institutions, serving as both a public education tool and a medium for preserving Banyuwangi's local history. Future research should evaluate its impact on student learning outcomes through large-scale trials employing rigorous scientific methods. Finally, collaboration with local government, historical communities, and archaeological site managers is crucial to ensure the module's sustainability and its contribution to the preservation of local cultural heritage.

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