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Developing Contextual-Based History Learning Media: A Videoscribe Project on the Bongkotan Temple Site for Hindu-Buddhist Heritage Material

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ABSTRACT

This research addresses the gap in local history education by developing and validating Videoscribe-based learning media focused on the Bongkotan Temple Site, a Hindu-Buddhist heritage site in Wonosobo, Indonesia. Using the ADDIE model within a Research and Development (R&D) framework, the study involved needs analysis, product design, expert validation, and classroom implementation. Data were collected through interviews, questionnaires, and document analysis involving teachers and students at MAN 2 Wonosobo. Validation results from material, media, and practitioner experts showed an average score of 89.04%, indicating very high feasibility. Student responses further affirmed the media's effectiveness, with an average approval rating of 87%. The findings demonstrate that locally contextualized digital media can enhance historical literacy, engagement, and regional awareness. This study contributes to the discourse on innovative, place-based history pedagogy in post-colonial educational settings.

KEYWORDS
Videoscribe; local history education; Hindu-Buddhist heritage; contextual learning media; historical literacy

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ABSTRAK

Penelitian ini menjawab kesenjangan dalam pendidikan sejarah lokal dengan mengembangkan dan memvalidasi media pembelajaran berbasis Videoscribe yang berfokus pada Situs Candi Bongkotan, warisan Hindu-Buddha di Wonosobo, Indonesia. Menggunakan model ADDIE dalam kerangka Penelitian dan Pengembangan (R&D), penelitian ini meliputi analisis kebutuhan, desain produk, validasi ahli, dan implementasi di kelas. Data dikumpulkan melalui wawancara, kuesioner, dan analisis dokumen yang melibatkan guru dan siswa di MAN 2 Wonosobo. Hasil validasi dari ahli materi, media, dan praktisi menunjukkan skor rata-rata 89,04%, yang mengindikasikan kelayakan sangat tinggi. Respons siswa semakin mengukuhkan efektivitas media, dengan persetujuan rata-rata 87%. Temuan membuktikan bahwa media digital yang dikontekstualisasikan secara lokal dapat meningkatkan literasi sejarah, keterlibatan, dan kesadaran kewilayahan. Studi ini berkontribusi pada wacana pedagogi sejarah inovatif berbasis tempat dalam setting pendidikan pascakolonial.

KATA KUNCI
Videoscribe; pendidikan sejarah lokal; warisan Hindu-Buddha; media pembelajaran kontekstual; literasi sejarah

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Introduction

Indonesia is endowed with a wealth of historical heritage sites, which are legacies of past civilizations in the form of locations containing archaeological remains (Widianto et al., 2023). These sites function as vital repositories of historical information (Urpi, 2021), serving to enrich the national historical narrative (Paulson et al., 2020). Beyond their intrinsic value, researched historical events from such sites offer instructive, inspirational, and recreational benefits for contemporary society (Ludvigsson et al., 2022). Consequently, historical sites are recognized as potent primary sources for education, enabling a more tangible understanding and reconstruction of the past.

Despite this national richness, numerous local sites remain under-explored for pedagogical purposes. A case in point is Wonosobo Regency, a region with significant socio-cultural and historical potential that has not been fully leveraged to foster regional identity pride (Grimshaw & Mates, 2022). Historically, Wonosobo was a significant area during the Hindu-Buddhist period under the Syailendra and Sanjaya dynasties (Bronner, 2023), resulting in a diverse collection of classical-era relics from the 7th to 9th centuries AD, including statues, yoni, lingga, and temple sites (Miksic, 2022; Pullen, 2021). The Bongkotan Temple Site stands as one such complex local heritage asset.

The Bongkotan Temple Site holds clear potential as a learning resource, particularly for topics on Hindu-Buddhist cultural heritage. This aligns with the Merdeka Curriculum's mandate for Class X History, which emphasizes utilizing local environmental sources (Badan Standar, Kurikulum, dan Asesmen Pendidikan [BSKAP], 2022). Such place-based investigation provides authentic learning experiences and strengthens local historical literacy (Ludvigsson et al., 2022; Üztemur & Dere, 2023), a principle echoed in the Ministry of Education's guidebooks. However, practical constraints hinder direct student visits to the site. Furthermore, observations and surveys at MAN 2 Wonosobo reveal that many students are unfamiliar with this nearby historical relic.

Interviews with history teachers at MAN 2 Wonosobo confirm that the Bongkotan Temple Site has not been introduced in classrooms. This omission stems from a lack of prepared in-depth material and dedicated learning media about the site. While existing textbooks suggest using local relics, they predominantly cite national examples like Borobudur Temple. This gap between curricular intent and practical resource availability results in students' lack of awareness of their immediate historical environment, indicating a need for localized teaching materials.

To bridge this gap, the development of structured teaching materials is proposed. Teaching materials are defined as a systematically designed set of learning tools—encompassing content, methods, and evaluation—aimed at achieving specific competencies (Brown & Green, 2024). They empower teachers and facilitate student knowledge acquisition. Among various formats, non-print audio-visual and interactive multimedia materials are particularly engaging as they present information dynamically through sound and moving images (R. Mayer, 2020; R. E.. Mayer & Fiorella, 2022).

Video-based media is selected for its demonstrated advantages in making learning more engaging, interactive, and efficient (Belt & Lowenthal, 2021; Seo et al., 2021; Weng et al., 2023) , with research indicating a significant positive impact on learning outcomes. The choice of a VideoScribe format addresses the current limitation at MAN 2 Wonosobo, where history learning primarily relies on textbooks, PowerPoint, and generic internet

sources. Therefore, developing VideoScribe-based learning media on the Bongkotan Temple Site is positioned as an innovative intervention to diversify instructional tools, increase student interest in history, and effectively translate the Merdeka Curriculum's local context mandate into practice.

Research Questions

1. To what extent does locally contextualized Videoscribe-based learning media meet the feasibility criteria for history education as assessed by material, media, and practitioner experts?
2. How effective is the developed Videoscribe media on the Bongkotan Temple Site in enhancing student engagement and perceived understanding of local Hindu-Buddhist heritage?
3. How can digital learning media bridge the gap between national curriculum objectives and the pedagogical utilization of under-explored local historical sites in post-colonial educational contexts?

Theoretical Framework

The development of localized Videoscribe learning media for history education is grounded in the constructivist theory of learning, which posits that knowledge is actively constructed by learners through experience and reflection. This approach emphasizes the importance of connecting new information to prior knowledge and authentic contexts (Sawyer, 2022). In history education, this translates to moving beyond rote memorization of national narratives toward engaging with tangible, local evidence. Utilizing local historical sites as primary sources allows students to construct understandings rooted in their immediate environment, making abstract historical concepts more concrete and meaningful (Ludvigsson et al., 2022; Luís & Rapanta, 2020; Üztemur & Dere, 2023). The act of investigating local heritage fosters critical thinking as students analyze and interpret sources, a core constructivist practice (Jay, 2021; López-Fernández et al., 2023). Therefore, the media serves as a scaffold, facilitating this active knowledge construction by presenting localized content in an accessible format.

This study further draws upon multimedia learning theory, particularly the Cognitive Theory of Multimedia Learning (CTML), which outlines how people learn more effectively from words and pictures than from words alone. The theory is based on the dual-channel assumption (auditory/visual processing) and the limited capacity of working memory (R. Mayer, 2020; R. E. Mayer, 2021). The Videoscribe format, integrating animated visuals, synchronized narration, and minimal on-screen text, is designed to manage cognitive load by presenting information through complementary channels. This aligns with findings that video media can enhance understanding, interest, and retention by leveraging both sight and sound (Chan et al., 2020; Förster et al., 2022; Seo et al., 2021; F. Wang et al., 2020; Weng et al., 2023). By transforming information about the Bongkotan Temple Site into a dynamic visual narrative, the media aims to facilitate deeper cognitive processing and schema formation, making the historical material more memorable than traditional text-based resources.

The pedagogical rationale is reinforced by place-based education theory, which advocates for using the local community and environment as a primary context for learning.

This theory argues that education rooted in local phenomena increases relevance, engagement, and civic responsibility (Hamilton & Marckini-Polk, 2023; Yemini et al., 2025). In the context of post-colonial history education, incorporating local sites like Bongkotan Temple challenges a centralized historical narrative and empowers regional identity (MacDonald, 2022; MacDonald & Kidman, 2022; Sapto et al., 2022). The learning media acts as a conduit for place-based pedagogy, allowing students to explore and connect with a heritage site within their regency, even if physical visits are not feasible. This approach aligns with curriculum goals that encourage the use of local sources to foster contextual understanding and regional pride (Badan Standar, Kurikulum, dan Asesmen Pendidikan [BSKAP], 2022), thereby bridging the gap between national curriculum standards and local historical consciousness.

The operationalization of these learning theories is structured through instructional design theory, specifically the ADDIE model (Analysis, Design, Development, Implementation, Evaluation). This systematic framework provides a proven, iterative process for developing effective educational interventions (Branch, 2009; Brown & Green, 2024; Guitert et al., 2020; van den Berg & de Villiers, 2021). The analysis phase identifies specific gaps, such as the underutilization of local sites and student preferences for audiovisual media. The design and development phases translate pedagogical principles (constructivism, multimedia learning) into a concrete product, ensuring alignment between learning objectives, content, and media format (Branch, 2009; Brown & Green, 2024). The model's emphasis on formative evaluation through expert validation and summative evaluation via field testing ensures the product's feasibility, practicality, and effectiveness, making the development process rigorous and evidence-based (Guitert et al., 2020; van den Berg & de Villiers, 2021).

In the end, the project is situated within the theory of historical consciousness, which involves an individual's or community's understanding of the relationship between past, present, and future. Effective history education aims to develop this consciousness by creating meaningful links between personal/local history and broader national and global narratives (Edling et al., 2022; Popa, 2023). The localized learning media serves as a catalyst for this development. By engaging with the story of Bongkotan Temple, students are not merely learning isolated facts but are participating in an interpretive process that connects Wonosobo's Hindu-Buddhist past to their present identity and the preservation of cultural heritage for the future. This fosters a more nuanced, multi-layered historical awareness that is both personally relevant and academically robust (Grimshaw & Mates, 2022; Lévesque & Croteau, 2022).

Method

This study employed a Research and Development (R&D) approach. The core objective of R&D is to produce a specific product and test its effectiveness to ensure it can fulfill identified needs within a broader community context (McKenney & Reeves, 2019). In the realm of education, development research is a conscious, directed, and planned process aimed at creating new or enhancing existing educational products whose outcomes are accountable (Brown & Green, 2024; Lyons et al., 2021; McKenney & Reeves, 2019; Y.-H. Wang, 2020). Therefore, this method was deemed appropriate to systematically develop

and validate a novel learning media product tailored to address a specific pedagogical gap in local history education.

Research Design and Model

The design of this development process was guided by the ADDIE instructional model, which provides a structured framework encompassing five iterative phases: Analysis, Design, Development, Implementation, and Evaluation (Branch, 2009; Brown & Green, 2024; Guitert et al., 2020; van den Berg & de Villiers, 2021). This model was selected for its systematic and logical sequence, which ensures the final product is grounded in a thorough needs assessment and validated through expert review and field testing. The goal was to produce a feasible and effective Videoscribe-based learning media about the Bongkotan Temple Site.

Stages of Development

1. Analysis Stage

This initial stage involved a comprehensive analysis to establish the foundation for development:

The initial analytical phase was conducted through three interconnected strands. First, a curriculum analysis was undertaken, examining the Merdeka Curriculum for Class X History to precisely align the developing media's learning content and objectives with formal competency standards and expected learning outcomes. Following this, a needs analysis was executed, employing classroom observations, interviews with the history teacher, and student questionnaires at MAN 2 Wonosobo to gather empirical data. This process identified critical gaps, notably an absence of localized instructional media, a predominant reliance on text-heavy resources, and a clear student preference for dynamic audiovisual materials. Finally, a potential analysis assessed the historical and environmental assets of Wonosobo Regency, evaluating the underutilized Bongkotan Temple Site to determine its viability and relevance as the foundational subject for contextualized learning media.

2. Design Stage

Based on the analysis, a product design was formulated. This stage focused on creating a detailed blueprint for the Videoscribe media, including:

Based on the established learning objectives derived from curriculum materials and supplementary academic sources, the narrative structure and content flow of the media were meticulously delineated. This blueprint guided the strategic design for integrating diverse multimedia elements, encompassing visual assets such as animations, static images, and original on-site footage, synchronized with audio components including clear narration, contextual background music, and authentic interview clips, alongside minimal, supportive textual information. Furthermore, comprehensive frameworks were established to govern content feasibility, linguistic appropriateness, and visual presentation standards, ensuring the final product would be both pedagogically sound and engaging for its intended audience.

3. Development Stage
In this stage, the design was transformed into a tangible product. The development of the Videoscribe media followed a production pipeline (pre-production, production, post-production) using Sparkol Videoscribe and Kinemaster software. The initial prototype was then subjected to rigorous validation by three experts: a material expert, a media expert, and a learning practitioner. Their feedback, collected via validated questionnaires, was used to revise and improve the product.
4. Implementation Stage
The validated media prototype was implemented in a real classroom setting with 32 students of Class X-6 at MAN 2 Wonosobo. The trial aimed to observe student engagement and gather direct user feedback on the media's practicality and appeal in an authentic learning environment.
5. Evaluation Stage
The final stage involved a summative evaluation to assess the product's overall effectiveness. Data from expert validation (quantitative scores and qualitative suggestions) were correlated with quantitative data from student response questionnaires. This comprehensive evaluation determined the media's feasibility and its alignment with the initial development objectives.

Data Collection and Analysis Techniques

Data were collected through multiple techniques to ensure triangulation: interviews, observations, document studies, and questionnaires. The analysis employed a mixed-methods approach:

To comprehensively analyze the collected data, a dual analytical approach was employed. Qualitative descriptive analysis was utilized to process and interpret non-numerical data derived from interviews, observational notes, and the open-ended commentary provided by expert validators. This method offered depth and rich contextual insight, illuminating underlying needs, practical implementation challenges, and specific areas for product refinement. Concurrently, quantitative descriptive analysis was applied to the numerical data obtained from structured validation instruments and student response questionnaires. Scores based on a Likert scale were calculated and converted into percentage values using the standard formula: Percentage Score = (Total Obtained Score / Total Maximum Score) × 100%. The resulting percentages were then evaluated against established eligibility criteria, as detailed in Table 1.

Table 1. Learning Media Eligibility Criteria

Percentage Range	Eligibility Criteria
81.25% – 100%	Very Good
62.50% – 81.25%	Good
43.75% – 62.50%	Fair
25.00% – 43.75%	Poor

This quantitative analysis provided a clear, measurable standard for assessing the product's feasibility from both expert and user perspectives (Ratika Zahra, 2018).

Results

This study employed a Research and Development (R&D) approach, utilizing the ADDIE instructional design model (Analysis, Design, Development, Implementation, Evaluation) as its foundational framework. The ADDIE model provides a systematic and iterative process for developing effective educational tools. The research commenced with an in-depth analysis phase to identify specific pedagogical needs and problems within the target learning environment. Following this, a product design was conceptualized based on the analysis findings. The design was then realized during the development stage, resulting in a prototype learning media. This prototype underwent rigorous validation by subject matter, media, and practitioner experts to ensure its feasibility. Once validated, the media was implemented in a real classroom setting. Finally, a comprehensive evaluation was conducted, synthesizing feedback from both experts and students to assess the media's effectiveness and overall impact on the learning process concerning Hindu-Buddhist heritage material.

Section 1: Analysis Phase – Identifying Needs and Problems

The initial analysis stage is critical for grounding the development process in authentic contextual needs. This phase involved direct observation, interviews, and surveys at MAN 2 Wonosobo on January 6 and 9, 2023. The investigation revealed several key issues: (1) significant constraints in allocated learning time for history; (2) a heavy reliance on conventional teaching aids, primarily PowerPoint presentations and textbook packages, which limited engagement; and (3) a pronounced need for learning media that incorporates local historical resources to make learning more relevant for students.

An interview with the history teacher uncovered a specific gap: the Bongkotan Temple Site, as the only temple complex in Wonosobo and a significant local heritage asset, had not been introduced in classroom instruction. This omission was attributed to a lack of curated reference materials, developed content, and suitable media specifically about the site. The teacher emphasized the site's potential relevance for the Class X, Semester II curriculum on Hindu-Buddhist history, noting that well-packaged, accountable, and engaging media could significantly enhance student interest and understanding of this local dimension of national history.

To triangulate these findings, a questionnaire was administered to 35 Class X students. While respondents generally found history interesting and the teacher's delivery comprehensible, they critiqued the text-heavy nature of existing materials, which they found difficult and less engaging. A strong preference was expressed for video-based media that engages both visual and auditory senses with minimal on-screen text. Students indicated that videos accompanied by music, soundscapes, synchronized image slides, and animation would make historical material easier to absorb and more memorable. They also highlighted the importance of accessibility across various devices and platforms.

These findings collectively justified the development of learning media. Educational theory supports this, as learning media act as a bridge that facilitates engaging instructional activities and supports learning success (R. Mayer, 2020; Y. Wang et al., 2023). The

choice of video format was further reinforced by research on learning psychology; for instance, (F. Wang et al. (2020) and Zheng et al. (2022) note that the senses of sight and hearing can absorb approximately 82% and 11% of information, respectively, suggesting that combined audiovisual stimuli can yield optimal learning outcomes. The expressed student interest in local history, specifically the Bongkotan Temple Site, confirmed the project's relevance and feasibility for the subsequent design stage.

Section 2: Design Phase – Planning the Learning Media

The design phase translated the identified needs into a concrete blueprint for product development. Preparations focused on three core components: content mapping, media scripting, and audio material preparation. Content was meticulously mapped against the competency standards and subject matter in the Class X Social Studies-History textbook under the Merdeka Curriculum, supplemented by additional scholarly references to ensure depth and accuracy. This ensured the media would align with prescribed learning objectives without curricular deviation.

Following content mapping, a detailed media script was created to serve as a production guide. The script broke down the material into scenes, specifying visual elements (images, animations), corresponding audio (narration, sound effects), and background music for each segment. This script was essential for harmonizing the final product's informational, visual, and auditory layers. The Sparkol VideoScribe software was selected as the primary development tool due to its ability to create animated, whiteboard-style videos that minimize text, emphasize visual storytelling, and seamlessly integrate narration and music—directly addressing the student preferences identified in the analysis.

To ensure authenticity and enhance engagement, the design plan included original multimedia assets. Primary source videos and photographs of the Bongkotan Temple Site were captured on location. Furthermore, interviews were conducted with key informants: the site caretaker, Mr. Agus Rohmat, and a staff member from the local Tourism and Culture Office (Disparbud), Mr. Andhika Dwi Nugroho. These authentic testimonials and visuals were integrated to provide students with direct, relatable insights into the site's significance. Finally, the narration script was finalized for professional dubbing, ensuring the audio delivery would be clear, paced appropriately, and aligned with the visual flow of the media.

Section 3: Development and Validation Phase – Production and Expert Assessment

The development phase involved the actual production of the teaching material according to the design specifications, followed by a critical validation process. Production using Sparkol VideoScribe followed a three-stage pipeline: pre-production, production, and post-production.

Pre-production involved assembling necessary hardware (laptop, smartphone, tripod) and software (Sparkol VideoScribe, Kinemaster for audio/video editing). Production began by segmenting the narrative into manageable video parts. The gathered assets—original site footage, interview clips, and images—were then assembled within VideoScribe. Scenes were crafted to visualize concepts, with animated drawings and text reveals

synchronized to the narration. All elements (VideoScribe output, interview clips, dubbed narration, background music) were composited and edited in Kinemaster to produce a cohesive final video. Post-production focused on quality review and, most importantly, expert validation.

The validation process was conducted to assess the media's quality before classroom implementation. Three validators participated: a material expert (Dr. Ufi Saraswati, M.Hum., a history lecturer), a media expert (Andy Suryadi, S.Pd., M.Pd., a history education technology lecturer), and a learning practitioner (Muhammad Fathurrohman Allutfi, S.Pd., Gr., the history teacher at MAN 2 Wonosobo).

The material expert validation yielded a score of 88.63% ("Very Good"). While minor notes were given on indicators like precise alignment with objectives and material attractiveness, the overall verdict was that the product was feasible for use without mandatory revision. The media expert provided a score of 87.5% ("Very Good") but recommended revisions, citing issues like inconsistent audio volume and the lack of a location map or site plan to aid spatial understanding. The practitioner validation scored 83.3% ("Very Good") and also suggested revisions, specifically to lower the background music volume to ensure narration clarity.

Table 2. Recapitulation of Stage I Validation Results

No.	Assessment Component	Average Score	Criteria
1.	Material	88.63%	Very Good
2.	Media	87.5%	Very Good
3.	Learning Practitioner	83.3%	Very Good
Overall Average		86.47%	Very Good

Despite the high average (86.47%), the revision suggestions were incorporated to perfect the product. A second validation (Stage II) was conducted with the media expert and practitioner. The material expert did not re-validate as their initial assessment had already deemed the product feasible. The revisions significantly improved scores: the media expert's rating rose to 94.6%, and the practitioner's to 91.6%.

Table 3. Recapitulation of Validation Results Stages I and II

Validator	Stage I Score	Stage II Score	Final Average
Material Expert	88.63%	-	88.63%
Media Expert	87.5%	94.6%	91.05%
Learning Practitioner	83.3%	91.6%	87.45%
	Grand Average		89.04%
	Criteria		Very Good

The final aggregate validation score of 89.04% (Very Good) confirmed that the Videoscribe-based learning media on the Bongkotan Temple Site was highly feasible and ready for implementation in history learning.

Section 4: Implementation Phase – Classroom Trial

The implementation phase involved testing the validated media in an authentic classroom setting with 32 students from Class X-6 at MAN 2 Wonosobo on February 20, 2023. The trial was conducted in collaboration with the history teacher. An initial logistical

challenge arose due to damaged AV facilities in the regular classroom, necessitating a last-minute move to a meeting room with adequate equipment.

During the screening, researchers observed high levels of student engagement and enthusiasm. Students watched attentively, and spontaneous positive comments were noted, particularly appreciating the inclusion of real-site footage and authentic interviews with the caretaker and Disparbud staff, which added credibility and local context. Following the media presentation, students were asked to complete a response questionnaire to quantitatively assess the media's effectiveness from a user perspective.

Section 5: Evaluation Phase – Synthesizing Expert and Student Feedback

The evaluation phase integrated all data to assess the product's overall success against its development objectives. The student response questionnaire, containing 20 statements across learning, material, language, and media-interest aspects, provided crucial user-feedback data.

Table 4. Product Trial Results by Students

Aspect	Sample Indicator	Average Score (%)
Learning	Ease of learning, provides enthusiasm, not boring	86.2%
Material	Conformity, coherence, clarity of illustrations, ease of understanding	87.4%
Language	Comprehensibility, conformity to standards, text clarity	85.4%
Interest	Usefulness, attractiveness, memorability	87.5%
	Overall Student Average Score	87%

The student assessment resulted in an overall approval rating of 87%, categorized as "Very Good." This positive reception strongly correlates with the high expert validation score of 89.04%. The convergence of expert judgment and user experience confirms the product's validity, feasibility, and effectiveness. The evaluation demonstrates that the developed Videoscribe media successfully addressed the initial problems: it provided a localized, engaging, and accessible learning resource that required minimal class time, effectively bridging the gap between the national curriculum and local historical heritage, thereby enhancing historical literacy and regional awareness among students.

Discussion

The development and validation of the Videoscribe-based learning media focusing on the Bongkotan Temple Site yielded significant findings with clear implications for history pedagogy. The overall feasibility score of 89.04% from expert validation, complemented by an 87% approval rating from students, strongly indicates that the developed media is not only viable but also effective. This high level of acceptance aligns with the core purpose of instructional media, which is to bridge teaching materials and learners, thereby facilitating clearer communication and more engaging learning activities (R. Mayer, 2020; Seo et al., 2021; Weng et al., 2023). The systematic process followed, underpinned by the ADDIE model, provided a structured framework that ensured the product was grounded in identified needs, soundly designed, and rigorously evaluated—a methodology endorsed

for developing effective educational tools (Brown & Green, 2024; Guitert et al., 2020). This process effectively translated the theoretical potential of local sites into a concrete pedagogical resource.

The success of this media underscores the critical importance of contextualizing history education through local resources. Historical sites are recognized as invaluable primary sources that provide tangible connections to the past, offering instructional, inspirational, and recreational value (Grimshaw & Mates, 2022; Liao & Bartie, 2022; Ludvigsson et al., 2022). However, as identified in the analysis phase, many such sites remain pedagogically underexploited. This study directly addresses this gap by activating the Bongkotan Temple Site, a local heritage asset in Wonosobo (Grimshaw & Mates, 2022; Ludvigsson et al., 2022), transforming it from an abstract monument into a central learning subject. This approach resonates with the mandates of the Merdeka Curriculum, which encourages the utilization of local environmental sources to foster deeper student investigation and connection (Kementerian Pendidikan Dasar dan Menengah Republik Indonesia, 2025, Panduan Mata Pelajaran Sejarah dan Sejarah Tingkat Lanjut; (Grimshaw & Mates, 2022; Ludvigsson et al., 2022). By doing so, the media moves beyond national generic examples to cultivate regional awareness and pride.

The choice of the Videoscribe whiteboard animation format proved to be a pivotal factor in the media's effectiveness. Student feedback explicitly favored video media that engages audiovisual senses with minimal text, a preference supported by cognitive theory on multimedia learning. The combination of animated visuals, narration, and sound leverages dual coding channels, potentially enhancing information processing and retention (R. Mayer, 2020; F. Wang et al., 2020). Furthermore, research confirms that video media can make learning more interesting, interactive, and efficient, leading to improved learning outcomes (Chan et al., 2020; Förster et al., 2022; Seo et al., 2021; F. Wang et al., 2020; Weng et al., 2023). The inclusion of authentic elements like on-site footage and interviews with local custodians (Disparbud staff and the site caretaker) added a layer of credibility and realism, making the historical narrative more compelling and relatable than purely textual or illustrative representations.

Pedagogically, this media development project demonstrates a tangible application of constructivist and place-based learning principles. By providing a structured, visually engaging exploration of a local site, the media empowers students to construct their understanding of Hindu-Buddhist history within a familiar geographical context. Teaching materials, as defined by Brown & Green, 2024) are systematic tools designed to achieve competencies, and this media fulfills that role by offering a curated, accessible learning journey. It addresses practical classroom constraints such as limited time and logistical hurdles for field visits, offering a viable "virtual field trip" alternative. The positive student response, noting increased enthusiasm and ease of understanding, reflects the media's success in achieving its instructive and motivational objectives (Grimshaw & Mates, 2022; Ludvigsson et al., 2022; Patiar et al., 2021).

Despite the positive results, this study is not without limitations, which in turn highlight areas for future research and development. The research was conducted within a single school and with one specific historical site, limiting the generalizability of the findings. A broader implementation across diverse schools and regions with different local heritage sites is necessary to test the model's adaptability. Furthermore, while the media

significantly improved engagement and perceived understanding, its direct impact on specific learning outcomes, such as performance in standardized assessments or long-term retention of material, was not quantitatively measured in this development phase. Future studies should employ quasi-experimental designs to isolate and measure the media's causal effect on academic achievement.

Finally, this study validates the development of localized Videoscribe media as an effective strategy for innovating history education. It provides a replicable model—from analysis of local potential and user needs through systematic ADDIE development—for other educators and researchers to follow. Future work should focus on creating repositories of similar localized digital content for various regions, exploring the integration of interactive elements beyond linear video, and conducting longitudinal studies on the impact of such media on historical literacy and regional identity formation. By continuing to bridge the gap between rich local heritage and digital pedagogy, history education can become more engaging, relevant, and meaningful for students in diverse post-colonial contexts.

Conclusion

This study successfully developed and validated a Videoscribe-based learning media focusing on the Bongkotan Temple Site, a local Hindu-Buddhist heritage site in Wonosobo. Employing the systematic ADDIE model (Analysis, Design, Development, Implementation, Evaluation), the research produced a media product that integrates animated visuals, narration, and authentic local assets such as site footage and expert interviews. The product achieved a very high feasibility score of 89.04% from expert validators (material, media, and practitioners) and an 87% approval rating from students, confirming its viability and effectiveness as a learning tool. These results demonstrate that a structured, user-centered development approach can effectively translate local historical potential into a compelling digital resource, directly addressing identified gaps in contextual learning materials and student engagement in history education.

The findings carry significant practical and theoretical implications. Practically, this research provides a replicable template for educators and curriculum developers to create localized digital content, aligning with the Merdeka Curriculum's emphasis on utilizing environmental learning sources. It offers a practical solution to constraints like limited time and field-trip logistics by providing an engaging "virtual field trip." For history pedagogy, it underscores the efficacy of place-based learning integrated with multimedia principles, showing how local sites can be leveraged to foster historical literacy, critical thinking, and regional identity among students. Theoretically, the study reinforces and operationalizes constructs from multimedia learning theory and constructivism, demonstrating how digitally mediated local contexts can serve as effective scaffolds for active knowledge construction and enhanced cognitive engagement in post-colonial educational settings.

Despite its contributions, this study acknowledges several limitations that warrant consideration. First, the research was conducted in a single school (MAN 2 Wonosobo) with a relatively small sample size, which may affect the generalizability of the findings to other educational contexts with different demographics or resources. Second, the study primarily measured feasibility and user perception; it did not employ a controlled experimental design to quantitatively measure the media's direct impact on specific learning outcomes, such as long-term retention or performance on standardized assessments.

Third, the sustainability and scalability of such localized media development depend on institutional support and teacher technological proficiency, factors not deeply explored in this phase. Future research should involve broader, multi-site testing, employ quasi-experimental designs to measure learning outcome gains, and investigate implementation challenges and teacher training needs for wider adoption.

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