AI-Generated Historical Videos of the Sriwijaya Kingdom: An Innovation in History Learning and Cultural Preservation

HUDAIDAH[1]*, ADITYA NUGROHO WIDIADI[2] & L.R. RETNO SUSANTI[3]

[1,3]History Education Program, Faculty of Teacher Training and Education,
Sriwijaya University, 30862, Indralaya, Indonesia
[2]History Education Program, History Faculty of Social Science,
State University of Malang, 65145, Malang, Indonesia
Corresponding author: hudaidah@fkip.unsri.ac.id

Abstract

This study aims to: first, explore the historical content of the Sriwijaya Kingdom based on authentic evidence; second, develop an AI-generated educational video that presents the civilization of Sriwijaya in an engaging and informative way; and third, evaluate its impact on history learning in higher education. A mixed-methods design was used, combining a qualitative historiographical approach and a research and development (R&D) model guided by the ADDIE framework. The historiographical method involved heuristics, source criticism, analysis, synthesis, and historical writing, while ADDIE comprised analysis, design, development, implementation, and evaluation phases. Historical data were collected through interviews, field observations at Sriwijaya inscription sites, and a review of relevant documents. Data on video development and implementation were gathered via student interviews, classroom observations, and questionnaires from 159 students at both secular and religious universities. The study resulted in an AI-generated video script and a final product that reconstructed key historical events of the Sriwijaya Kingdom using verified sources. Findings show that the AI-generated video significantly enhanced students' understanding of historical content by offering vivid, contextualized learning experiences. The integration of AI also increased student engagement and fostered a forward-looking educational atmosphere. Overall, AI-generated historical videos not only improve the quality of history teaching but also contribute to preserving the Sriwijaya legacy through formal education.

Keywords: AI-Generated; Cultural Preservation; Historical Videos; History Education; Sriwijaya

Introduction

Nearly two decades into the 21st century, the world has undergone significant transformations driven by modern technological advancements. Among these, Artificial Intelligence (AI)[1] has emerged as a pivotal force, forming the foundation of numerous industries and revolutionizing the future workplace. While AI is capable of supporting and interacting with human at the advanced level, it is also recognized as a disruptive innovation with the potential to reshape various sectors, including education.[2] In the current era, AI is viewed as a critical component of the Fourth Industrial Revolution, leading to substantial shifts in teaching and learning practices. AI-assisted learning is increasingly being integrated into educational curricula,[3] offering broader access to information and reshaping pedagogical approaches. Although technology is often perceived primarily as a tool for entertainment, its role in enhancing access to knowledge is undeniable.[4]

AI has made it easier to fulfil human needs, offering solutions to both minor and major complex problems – sometimes even addressing issues beyond human capability.[5] In this study, AI is employed to explore and preserve historical relics from the Sriwijaya Kingdom. The urgency of this research lies in the need to protect and sustain these artifacts so that the historical legacy of the Sriwijaya Kingdom remains intact. Leveraging AI technology for cultural preservation represents a proactive effort to safeguard historical values and transmit them to future generations. This is particularly important because the Sriwijaya Kingdom exemplifies communal values that can inspire the younger generation in today's globalized world.

The Sriwijaya Kingdom, a powerful maritime state that flourished between the 7th and 13th centuries AD,[6] played a crucial role in shaping the cultural and economic landscape of Southeast Asia.[7] Despite its historical importance, awareness of Sriwijaya among younger generations is in decline – primarily due to the lack of engaging and accessible learning materials. Traditional history teaching methods often fail to spark student interest, leading to a disconnect between learners and their cultural heritage. Technological innovations, especially in AI, present new opportunities to revitalize history education.[8] AI-enhanced educational videos offer interactive, personalized, and accessible learning experiences.[9] When paired with bilingual features, these tools can bridge language barriers, increasing inclusivity and global relevance.

Efforts to preserve culture heritage are essential for strengthening regional identity and facilitating dialogue with cosmopolitan cultures in an era marked by globalization. Technology serves as a powerful medium to manage and promote cultural assets, ensuring their continued relevance and sustainability. Advances in Information and Communication Technology (ICT) allow for the digital recording, inventorying, and dissemination of cultural content. Such content, including artifacts, values, and historical narratives, can be stored in accessible cultural databases, ensuring wide public reach and ongoing preservation.[10] In this context, AI technology plays a critical role in enhancing cultural competitiveness and safeguarding heritage in the globalized world.

Several prior studies have explored the intersection of AI and cultural preservation. Zhang et al., emphasized the importance of advanced technology in accelerating and improving the quality of heritage documentation.[11] Wang et al., highlighted the role of multimedia technologies in providing comprehensive data and public access to cultural heritage.[12] Mishra and Lourenço noted that AI-assisted image processing techniques help monitor physical degradation in heritage sites, supporting the preservation of authenticity.[13] Akyol and Avcı further discussed AI's capacity to digitize, document, analyze, restore, and preserve historical artifacts using tools such as 3D modeling, automated scanning, and virtual reality.[14] Pasikowska-Schnass illustrated how AI can reconstruct damaged artifacts, complete artworks, and identify ancient authorship.[15] Münster et al., described AI as a digital heritage innovation that supports planning, education, and cultural tourism through virtual experiences that expand public access and engagement.[16]

Beyond cultural preservation, generative AI has also shown promise in the context of history education. Santamaría-Velasco et al., demonstrated that using ChatGPT to simulate historical figures enhances students' critical thinking and historical understanding.[17] Similarly, Kindenberg reported that AI simulations of events such as the French Revolution enriched students' learning experiences.[18] Fareed et al., underscored the effectiveness of AI-generated visuals (e.g., Leonardo AI) in promoting historical engagement, while also emphasizing the need for guided interpretation.[19] Tirado-Olivares et al., showed that AI-generated historical texts significantly improved students' learning outcomes and historical thinking.[20]

The novelty of this study lies in its approach to combining in-depth historical research with AI-generated educational video content. The researcher employed historiographical methods to construct a script, which was then transformed into an AI-enhanced educational video. This

video was implemented in history learning at both secular and religious universities. Unlike prior studies, which have not explored AI-driven video learning tools in this context, the current research bridges cultural preservation and education by introducing AI-generated videos as a novel learning medium. These videos offer a dynamic way to preserve the cultural legacy of the Sriwijaya Kingdom. Cultural preservation involves contributions from policy, community participation, technological innovation, and education—with the latter playing a vital role through internalization, maintenance, and application.[21] Therefore, AI serves as a critical balancing factor between modern education and cultural preservation. This alignment ensures meaningful learning, especially when studying local history through visual media. However, the integration of AI into history education in Indonesia remains underutilized.

This study addresses three core research questions: First, how can historical content about the Sriwijaya Kingdom be constructed based on authentic historical sources? Second, how can AI-generated educational videos effectively present the civilization of the Sriwijaya Kingdom in an engaging format? Third, what is the impact of using AI-generated videos on history learning in higher education? This research aims to develop and evaluate bilingual, AI-generated interactive videos as a solution to the dual challenges of cultural preservation and effective history instruction. By using AI for adaptive learning and bilingual narration, these tools are expected to deepen student engagement with Sriwijaya's history and foster cultural pride. The outcomes of this study can serve as a historical reference that showcases the past glory of the Sriwijaya Kingdom, supporting the protection of the Sriwijaya inscriptions as valuable cultural assets of South Sumatra.

The Sriwijaya Kingdom is recognized not only as a prominent polity in South Sumatra but also as a major center for Buddhist learning after Nalanda. Its existence is evidenced by inscriptions and statues that serve as essential cultural resources and references for further academic inquiry. While some archaeologists argue that Sriwijaya extended beyond Palembang into Jambi, Kedah, and Thailand,[22] public awareness of its historical significance remains limited. In fact, the Kedukan Bukit inscription[23] marks Sriwijaya as Indonesia's oldest known city. Moreover, Sriwijaya played a central role in Southeast Asian trade networks.[24] As Alnoza noted, Telaga Batu Inscription reveals diplomatic relations between Sriwijaya and countries such as India, China, and Arabia.[25] This legacy contributes not only to the cultural heritage of Palembang[26] but also to regional studies across disciplines in both the natural and social sciences.[27]

Numerous studies have explored the Sriwijaya Kingdom, particularly in the humanities. Some have also addressed educational aspects. For instance, Susanti examined the influence of Indian Buddhist teachings on spiritual education in Palembang.[28] Fakhruddin et al., emphasized the educational potential of historical artifacts discovered in the region.[29] Similarly, Darme et al., highlighted how pre-Sriwijaya and Sriwijaya-era relics have been used as interactive tools in history teaching.[30] Aritenang et al., demonstrated that technologies such as photogrammetry and color analysis can guide restoration efforts in cultural preservation. Despite this growing body of literature, few studies have explored the use of AI-enhanced video as a learning tool in history education.[31]

Teaching methods globally, including in Indonesia, continue to evolve in response to emerging technologies. One such method is the use of AI-generated learning videos. As Orak and Turan noted, AI can generate diverse digital content – from instructional guides to personalized educational experiences.[32] Through AI, video creation becomes more innovative, feature-rich, and tailored to various learner needs. These videos not only enhance learning outcomes but also offer broad creative possibilities for educators.[33]

AI-generated educational videos are increasingly recognized as effective learning tools. They help students acquire knowledge more efficiently and meaningfully.[34] Studies comparing AI-based videos with paper-based materials[35] have shown that short videos significantly benefit students with

lower prior knowledge, while more advanced learners may prefer traditional materials. This suggests that AI technology plays a key role in supporting diverse learning needs.[36] While international research has explored the potential of AI in history learning, such discussions remain limited in the Indonesian context – particularly concerning Indonesian historical themes. Therefore, this study integrates AI technology into the development of historical videos focused on the Sriwijaya Kingdom and implements them in student learning contexts as an educational innovation aimed at enhancing academic outcomes.

Based on studies conducted between 2018 and 2024, it is evident that AI-generated historical learning videos are becoming central to student engagement. These videos simplify the understanding of historical events through visual narratives that can be replayed multiple times. This learning model is particularly beneficial for students with slower cognitive processing, offering greater flexibility and accessibility. The need to better understand AI's role in improving learning outcomes – and its potential as a tool for cultural preservation – has inspired this research. The study focuses on four universities in South Sumatra that offer programs in history or history education.

Methods

This study employed a mixed-methods approach by integrating two research designs: a qualitative historical model[37] and a research and development (R&D) model based on the ADDIE instructional design framework.[38] The research process began with qualitative inquiry and was subsequently followed by the development phase. The initial stage involved the historical method, particularly the heuristic phase, which included observations and interviews to collect in-depth data.[39] Field observations were conducted at various historical sites where Sriwijaya inscriptions were found, as well as at two museums in Palembang City. Interviews were conducted with museum staff, local community members, and university students.[40] Once the data had been collected, the researcher conducted both internal and external source criticism to ensure data validity.[41] This was followed by analysis and synthesis processes to reconstruct the historical narrative systematically.[42] The resulting historical account was then translated into a video script focusing on the Sriwijaya Kingdom.[43] In the next phase, the development process followed the ADDIE model, aiming to design an effective, efficient, and relevant learning tool for university students. The ADDIE model consists of five stages: Analysis, Design, Development, Implementation, and Evaluation (see Figure 1).
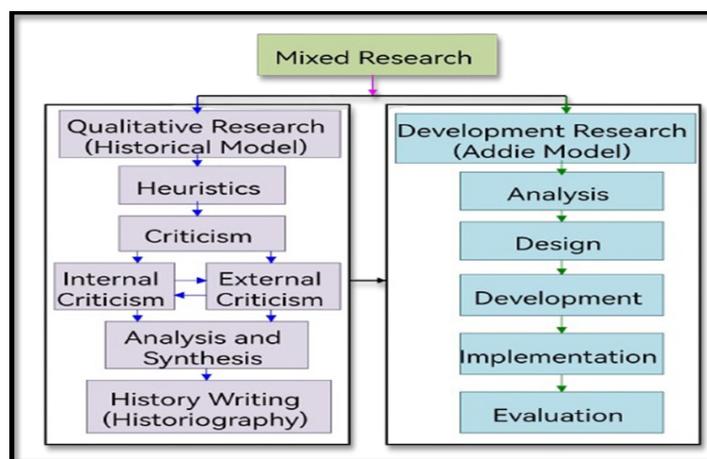

Figure 1: Research Method.
Source: The historical research method was adapted from
Smith and the ADDIE development model was adapted from Branch.

The analysis phase began by examining the historical content of the Sriwijaya Kingdom based on the prepared video script, including the identification of key inscriptions from the era. The video was then designed and developed using various AI tools such as TTSMaker, Haiper, Perchance, and Suno to produce relevant and contextual visual content. After development, the AI-generated video was implemented in history learning sessions, and at the final stage, a questionnaire was administered to evaluate students' understanding and awareness regarding the preservation of Sriwijaya civilization. The video was implemented among 159 students from higher education institutions in Palembang, consisting of two categories: secular and religious universities. The student demographic data are presented in Table 1.

Table 1: Characteristics of university students in Palembang City

No.	Type of University	Male	Female	Total
1.	Secular University	36	74	110
2.	Religious University	20	29	49
Total		56	103	159

Source: Author's data, 2024.

Results

Needs Assessment

Observations revealed that lecturers predominantly used PowerPoint presentations during classroom instruction. However, they also encouraged students to visit historical sites associated with the Sriwijaya Kingdom, particularly in Palembang City. These direct field visits significantly enhanced students' understanding of the historical content. Regarding the use of educational videos, especially those covering ancient Indonesian history and the inscriptions of the Sriwijaya Kingdom, such materials have not been thoroughly utilized by lecturers. The limited use of video content in history instruction can be attributed to several constraints, including the scarcity of comprehensive and detailed videos on historical inscriptions available through online platforms or social media. This limitation presents challenges for students seeking to deepen their understanding of topics introduced in class. Although this gap can be partially addressed through the use of books, scholarly articles, and field visits, the learning process would benefit considerably from the integration of high-quality video resources to reinforce instructional content.

Based on interview results, students reported that video-based learning made historical content easier to comprehend. Videos function as multimedia learning tools that integrate visuals, animations, text, audio, and narration. These multimodal elements offer interactive and engaging learning experiences, accommodating a variety of learning styles, such as visual, auditory, kinesthetic, and linguistic. Adapting to students' diverse learning preferences is essential in modern education, as it supports more effective and personalized instruction.

The use of AI-generated educational videos offers a promising alternative in the context of technological advancement. The process of producing these videos involves several key stages to ensure historical accuracy and educational relevance. The stages include: First, script preparation – developing a video script based on verified historical data. Second, AI processing – inputting the script into an AI script-to-video platform to generate the initial draft. Third, editing and enhancement – refining the video using Adobe Premiere, and adding visual and explanatory elements using Canva

or Photoshop.

Following these stages, the researcher produced an AI-generated historical video on the Sriwijaya Kingdom for students at four universities in South Sumatra, aligned with course content in semesters 1 and 5. The analysis explored how AI technology could serve as an effective learning resource. Given the widespread use of digital devices in daily life, the integration of such media into learning, especially through social media, offers valuable opportunities for educators. AI-generated videos can be powerful tools to support meaningful learning in a modern, technology-driven educational environment.

Content Design of AI-Generated Historical Videos Sriwijaya Kingdom

South Sumatra is recognized as a region rich in historical relics from the Sriwijaya period,[44] with most discoveries centered in Palembang City. Evidence of Sriwijaya's existence includes the Kedukan Bukit, Talang Tuo, Telaga Batu, Boom Baru, and Seguntang Hill inscriptions.[45] These inscriptions are generally written in Pallava script and Old Malay. Their discovery is unsurprising, given the Sriwijaya Kingdom's strong diplomatic and commercial relationships with Asian countries such as India, China, and Arabia,[46] which supported its rise as the most powerful maritime empire in the archipelago.[47]

The AI-generated educational video presents and explains the content of each inscription: First, Kedukan Bukit Inscription – narrates a sacred expedition in 604 Saka led by Dapunta Hiyang. He embarked on a sea journey with 2,000 troops from Minanga to Mukha Upang, where they founded a new settlement (wanua). Second, Talang Tuo Inscription – conveys a moral message depicting the king of Sriwijaya as a wise, just, and firm leader who also served as a guardian of Buddhism. Third, Telaga Batu Inscription – functions as a political and legal warning to high-ranking officials and members of the royal court, emphasizing consequences for betrayal and rebellion. Fourth, Boom Baru Inscription – contains curses or threats directed toward those who disobey the authority of Datu Sriwijaya.[48] Fifth, Seguntang Hill Inscription – holds significance in the spread of Buddhism in Palembang and marks an important site of Buddhist worship.[49]

These inscriptions served as the core content for the AI-generated video. The objective was to create an alternative learning medium that aligns with technological advancements in education. The content design process followed four stages: First, script preparation – writing a script based on historical inscription data. Second, AI processing – inputting the script into a text-to-video AI platform. Third, editing and enhancement – refining the generated video using Adobe Premiere, and adding further explanations and visuals with Canva or Photoshop. Fourth, final upload – publishing the completed video to the selected platform for classroom use. An overview of the AI-generated video production process is illustrated in Figure 2 below.

Figure 2: Making learning videos from AI.
Source: Author's data, 2024.

Material Development

This study explores the development of an engaging learning model designed to enhance students' understanding of historical content. Specifically, the research introduces digital media in the form of AI-generated learning videos as an innovative educational tool. In today's digital era, technology has become an inseparable aspect of everyday life, whether in family, work, or social settings. Leveraging this reality, the study integrates digital learning videos to bridge prehistoric and historical periods in the curriculum. Prehistory is defined as the time before the existence of written records, whereas history refers to the era marked by the presence of writing. This study focuses on the historical period of the Sriwijaya Kingdom, which was based in Palembang City, South Sumatra Province. The content includes the discovery and interpretation of key inscriptions found in Palembang. Traditionally, lecturers have not employed video explanations when teaching such topics. However, videos enhance learning by providing visual representations of past events, making complex historical material more accessible and engaging for students.

At this stage of development, the script was designed to narrate the history of the Sriwijaya Kingdom through the lens of its major inscriptions, namely the Kedukan Bukit Inscription, Talang Tuo Inscription, Telaga Batu Inscription, Boom Baru Inscription, and Seguntang Hill Inscription. These inscriptions form the backbone of the video narrative, which is grounded in verified historical sources (Figure 3). Researchers collected extensive data to construct an accurate and coherent historical storyline. Once the data was compiled, the narrative was input into an AI platform, where it was processed and transformed into a video aligned with the script developed by the research team.
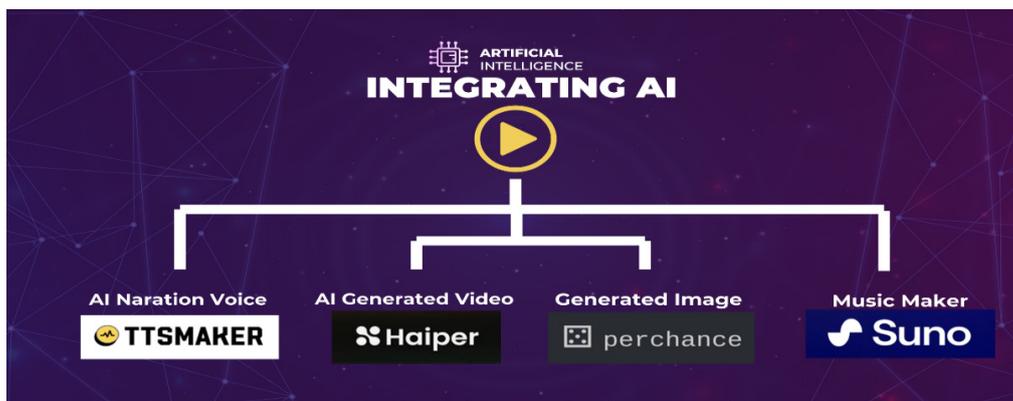

Figure 3: Integrating Sriwijaya Kingdom inscription data through AI applications.
Source: Author's data, 2024.

After the historical data had been collected, the video manuscript was developed following scriptwriting procedures aligned with authentic records of the Sriwijaya Kingdom. The video script was constructed based on historical narratives derived from key inscriptions, including the Kedukan Bukit Inscription, Talang Tuo Inscription, Telaga Batu Inscription, Boom Baru Inscription, and Seguntang Hill Inscription. The video development process involved not only manuscript and script creation but also the preparation of a prototype. The prototype was designed to visually represent historical remnants from the Sriwijaya era, particularly the inscriptions located in Palembang City. As primary historical evidence, the prototype included visual reconstructions of both the form and content of the inscriptions, as well as the original sites where they were discovered. Physical examples of these inscriptions can be viewed directly at the Sriwijaya Kingdom Tourism Park Museum (Taman Wisata Kerajaan Sriwijaya [TWKS]) or at the Balaputra Dewa Museum (South Sumatra State Museum). To identify the precise locations where the inscriptions were originally found, field visits

were conducted. Researchers used mobile GPS applications to mark the exact coordinates of each site. These geographic data points provided contextual accuracy for the prototype development. The results of this process are illustrated in Figure 4.

Figure 4: Video of the Kedukan Bukit and the Talang Tuo Inscriptions.
Source: Editing from Authors, 2024.

Based on Figure 4, the video was developed using the script centered on the Kedukan Bukit Inscription from the Sriwijaya Kingdom period. Once the script was finalized, it was processed using an AI-generated Script-to-Video tool, followed by further refinement and editing using Adobe Premiere. To enhance the video's audio and visual quality, supporting applications such as TTSMaker: Free Text-to-Speech Online, Canva, and Adobe Photoshop were utilized. To increase accessibility and public engagement, the video also included a QR code that directs viewers to the geographic location where the inscription was originally discovered. The same process was applied to the creation of videos for the Telaga Batu Inscription, Boom Baru Inscription, and Seguntang Hill Inscription, following the same workflow as that used for the Kedukan Bukit Inscription.

Implementation and Student Assessment of AI-generated Bilingual Learning Video

The implementation of the interactive bilingual learning video powered by AI was carried out in history learning sessions at both secular and religious universities offering history education programs. The initial phase was conducted at a secular university, where general material about the Sriwijaya Kingdom was first delivered. This was followed by the presentation of an AI-generated learning video featuring five important inscriptions related to the Sriwijaya Kingdom found in PalembangCity, serving as a medium to reinforce conceptual understanding. After watching the video, students were asked to complete a questionnaire to provide their evaluations and opinions on the developed video. The same procedure was replicated at a religious university. The results of the implementation indicated a high level of enthusiasm among students, as evidenced by the numerous questions raised regarding both the historical content and the video production process. The integration of AI-generated videos into history education was shown to significantly enhance students' understanding of historical content. Overall, the use of this media proved effective in improving the quality of history learning in higher education.

Evaluation

History is often taught using textbooks, digital media, and written transcripts. However, such traditional methods can lead to student disengagement and boredom.[50] Therefore, there is a growing need to develop innovative learning models that make history more engaging and accessible.[51] This can be achieved by shifting from classical to modern pedagogical approaches.[52] Teachers must be equipped with the skills to identify and implement learning strategies that align with their students' needs. Some effective models include field trips, contextual learning, problem-solving, self-directed learning, project-based learning (PBL), and problem-project-based learning (PjBL).[53] These approaches enable teachers to facilitate more effective and efficient learning experiences.[54]

In this study, self-directed learning was identified as the most appropriate model for teaching history. This approach is particularly suitable because it empowers students to engage with the learning material, especially videos, independently. Through independent learning, students can revisit content multiple times, thereby gaining a deeper understanding than would be possible from a single exposure. Despite the emphasis on autonomy, teachers remain central to the learning process. Their varied teaching styles reflect diverse roles as informers, organizers, motivators, directors, initiators, transmitters, facilitators, mediators, and evaluators who guide students toward achieving their learning objectives.[55]

Interviews conducted with students who used the AI-generated videos revealed that they found the content highly engaging and memorable. The videos were aligned with historical materials from the first-semester course on the Sriwijaya Kingdom, making them especially beneficial for understanding this period. By visualizing past events, students were better able to comprehend the historical narrative. These videos serve as valuable educational resources that can be utilized across multiple educational levels, including schools and universities. Thus, the Sriwijaya Kingdom history videos represent a significant innovation in history education.

The implementation of these videos at the university level was intended to assess their effectiveness and observe learning outcomes. The results emphasize the importance of teachers in ensuring the success of any instructional strategy. Whether or not learning objectives are achieved depends largely on how teachers facilitate the process. The integration of historical videos into classroom instruction enhances student engagement and makes abstract historical concepts more accessible. In today's digital era, where technology is deeply embedded in everyday life, educators must adapt by leveraging digital tools. Video-based learning, particularly when enhanced by AI, offers students an interactive and efficient means to deepen their understanding of historical content. It also enables learners to extend their knowledge beyond traditional sources, contributing to more comprehensive educational outcomes, as reflected in the questionnaire results presented in Table 2.

Table 2: Student assessment of AI-generated learning video

No.	Institution	Number of Students	Average Score	Category
1.	Secular University	110	83.3	Very good
2.	Religious University	49	81.7	Very good
	Total	159	82.5	Very good

Source: Processed data, 2024.

This indicates that the AI-generated bilingual interactive learning video was generally well received by students and was considered effective in supporting the learning process. The practicality of the media, reflected in the consistent high scores, suggests that it aligns well with students' learning needs and contributes to cultural preservation efforts. The strong validity of the media is also in line with the positive perceptions expressed by students. Therefore, the use of AI-generated video in history education can serve as an effective and efficient learning tool that helps students acquire historical information more easily.

Discussion

Based on observations during the learning process, it was evident that students showed great enthusiasm while watching the AI-generated historical video. The video presentation, designed in accordance with advancements in the digital era, sparked students' interest and encouraged active engagement with the lesson. The visuals created by AI conveyed a realistic atmosphere, as if depicting the actual environment of the Sriwijaya Kingdom in its time. The imagery resembled a historical film, bringing past events to life in both imaginative and informative ways. Additionally, the audio was enhanced with background music that reflected the cultural nuances of Sriwijaya. This aspect sets the AI-generated video developed in this study apart from conventional educational videos. The integration of AI technology has made the civilization of Sriwijaya more vivid and captivating, thereby fostering a more engaging and contextual learning environment.

A study by Tao Xu et al., shows that generative AI (GAI) and AI-generated content (AIGC) are increasingly utilized in both professional and everyday contexts, offering novel learning experiences for students.[56] Research by Quinga-Bravo, Avello-Martínez, and Tapia-Bastidas also found that the use of AI-generated videos in education promotes meaningful learning, enhances historical thinking, and positively transforms students' learning experiences. These findings underscore the importance of integrating new technologies in critical, ethical, and pedagogically sound ways to address current challenges in the classroom.[57] Similarly, a study by Pellas indicates that AI-generated content has significant potential to improve student engagement, with factors such as age, device usage, and prior AI training influencing students' attitudes toward AI-assisted learning.[58] Thus, the integration of AI-generated videos into education holds great promise for transforming learning experiences, promoting active participation, and making quality educational content more globally accessible.[59]

The use of media in learning activities is an effective way to foster greater engagement. However, media use must follow certain principles to ensure alignment with learning objectives. Sanjaya as cited by Suryani et al., emphasized that learning media must be appropriate to the teaching material. Each subject has its own uniqueness and depth, so the media used must be both comprehensive and relevant. For example, when using instructional videos, they must align with the historical material on the Sriwijaya Kingdom.[60] Therefore, teachers need to prepare video illustrations that reflect the history of the Sriwijaya Kingdom to ensure that the content supports and enhances students' understanding of the topic.

The Sriwijaya plays an important role in studying history, as it focuses on the regional heritage of South Sumatra.[61] Teachers can use the history of Sriwijaya as a learning resource for both school and university students.[62] Traditionally, material about the Sriwijaya Kingdom has been delivered through conventional methods. Therefore, a new learning model that incorporates historical videos, developed in line with the explanations provided in previous subthemes, is needed. These videos, created by the researchers, aim to provide clearer and more engaging explanations and are accessible through social media platforms or directly on YouTube. In earlier studies, the history of Sriwijaya was typically conveyed through written texts only. The innovation of using AI-generated videos offers

history teachers a new tool to enhance students' enthusiasm for learning. This approach allows for the implementation of a fresh and unconventional learning model.

Utilizing AI-generated videos also makes it easier for history teachers to deliver content effectively, as the audio-visual format enhances student engagement and comprehension. According to Kustandi and Sutjipto as cited in Hapudin audio-visual learning materials have the following characteristics: (1) linear structure—presenting content in a sequential manner; (2) dynamic visualization—combining static and moving images to depict concepts dynamically; (3) predefined use—designed for specific purposes as determined by the creator; (4) representation of ideas—conveying real or abstract concepts visually; (5) based on behavioral and cognitive principles—developed using behaviorist and cognitive learning theories; and (6) teacher-oriented—primarily focused on teacher delivery, with limited learner interaction.[63]

 It is important that video presentations be accompanied by explanations from the teacher. Students need guidance to fully understand the content presented in the videos.[64] With proper direction, students will gain a deeper understanding of the material.[65] Teachers must possess 21st-century skills, such as the ability to facilitate and inspire student learning and creativity, design and develop digital-era learning experiences, model effective learning strategies, promote responsible digital citizenship, and engage in ongoing professional development.[66] Thus, teachers using Sriwijaya Kingdom history videos must adapt their teaching skills to meet students' learning needs. This adaptability is crucial for developing a history learning model that not only captures students' interest but also delivers meaningful educational outcomes.

This study found that students demonstrated a high level of awareness regarding the legacy of the Sriwijaya civilization. They strongly agreed that, after watching the video, they gained valuable knowledge about this cultural heritage and recognized its significance in strengthening national identity. This finding aligns with Tang and Zhang who found that cultural preservation through AI-generated short videos can enhance the protection and transmission of traditional arts, such as music.[67] Arkhipova and Viidalepp the use of semiotics in AI-generated video art also offers a framework for understanding cultural meanings and the dynamics of the semiosphere.[68] According to Ba'ai and Aris AI technology serves as an innovative means of documenting, analyzing, and sharing cultural artifacts and practices, thereby contributing to cultural preservation. However, in the global era, the use of AI-generated videos for cultural heritage must also consider issues of accuracy and ethical responsibility in their production.[69]

Conclusion

Based on the description above, it can be concluded that the implementation of history learning using AI-assisted videos effectively illustrates events from the Sriwijaya era through the Kedukan Bukit Inscription, Talang Tuo Inscription, Telaga Batu Inscription, Boom Baru Inscription, and Seguntang Hill Inscription. The video presents the discovery, contents, and current condition of these inscriptions. Specifically, the discovery locations are identified using QR codes, allowing learners to access the original findings through a video thumbnail page. By using bilingual, interactive videos powered by AI, the historical relics of the Sriwijaya Kingdom – presented in audiovisual format – serve as meaningful representations of its grandeur. These historical values reinforce the narrative that the Sriwijaya Kingdom was centered in Palembang. Therefore, these inscriptions must be protected and preserved as part of South Sumatra Province's cultural heritage.

Through these videos, teachers can adopt an innovative learning model to help students better understand the history of the Sriwijaya Kingdom via audiovisual illustrations grounded in historical data. When employing instructional videos in the learning process, teachers must possess

a range of 21st-century skills. These include broad-based knowledge, critical thinking, adaptability, and problem-solving capabilities. Mastery of these competencies enables teachers to leverage AI-generated historical videos as interactive tools that enhance the learning process, making it more engaging, inspiring, and innovative. Thus, teachers play a pivotal role in ensuring the success of learning activities, both inside and outside the classroom.

The history of the Sriwijaya Kingdom, as presented in the AI-generated video, offers several advantages. It enables students to recognize and learn about the Sriwijaya inscriptions located in Palembang without needing to physically visit the sites, as the video provides QR codes indicating each discovery location. Futhermore, this approach is innovative, leveraging modern technology to simplify the learning process and make the content of the inscriptions more accessible. The explanation is delivered in clear, straightforward language, making it suitable not only for students but also for the general public. Ultimately, this video-based learning serves as a digital platform for preserving and promoting the cultural heritage of the Sriwijaya civilization.

Implications of the Study

The AI-generated inscription preservation strategy consists of three main components: 3D mapping, data-driven analysis, and interactive educational applications. First, 3D mapping: this technology allows for accurate documentation of inscriptions by creating digital models that can be used for analysis and restoration without risking damage to the original artifacts. In this study, laser scanning devices were used to map major inscriptions in South Sumatra, producing detailed visual representations. Second, AI-generated optical character recognition (OCR): this technology was applied to translate the ancient scripts found on the inscriptions. It recognizes character patterns and converts them into modern languages, making the content more accessible to both researchers and the general public. Third, data-driven analysis: this component facilitates the identification of linguistic and historical patterns, offering new insights into the broader historical context of the inscriptions. In addition, an interactive educational application was developed to increase public awareness of the significance of the Sriwijaya inscriptions. The application integrates virtual reality (VR) and augmented reality (AR) technologies, allowing users to virtually explore inscription sites and learn about their historical background through interactive narratives. Survey results revealed that 82.48% of users felt more connected to the history of Sriwijaya after using the application, indicating the potential of this technology to enhance cultural engagement and historical understanding.

Limitations and Recommendations

This research has several limitations related to the implementing of AI-generated history learning videos, as observed during field trials. The identified limitations include: 1) limited historical references: developing AI-generated historical videos are particularly challenging due to the scarcity of Southeast Asian historical within AI databases. As a result, script must be prepared manually and undergo extensive editing to ensure historical accuracy; 2) high production costs: producing videos with AI applications incurs significant expenses, as many of the necessary tools and software are subscription-based or require one-time purchases; and 3) design and editing expertise: creating high-quality videos requires advanced design and editing skills. Futhermore, the developing of historical videos demands the use of accurate and credible historical data to preserve the integrity of the content. Looking ahead, AI-generated preservation strategies can be improved by integrating blockchain technology for data authentication and establishing collaborative platforms for facilitate knowledge sharing among researchers. Additionally, expanding interactive educational applications

to the international level could help promote the rich cultural heritage of the Sriwijaya Kingdom to a global audience.

Acknowledgment

Notes

[1] S. Larry Goldenberg, Guy Nir, & Septimiu E. Salcudean, "A New Era: Artificial Intelligence and Machine Learning in Prostate Cancer," *Nature Reviews Urology*, 16, no. 7, 2019, pp. 391–403.

[2] Xuesong Zhai et al., "A Review of Artificial Intelligence (AI) in Education from 2010 to 2020," *Complexity*, 6, 2021, pp. 1–18.

[3] Robert W. Lawler & Nick Rushby, "An Interview with Robert Lawler," *British Journal of Educational Technology*, 44, no. 1, 2013, pp. 20–30.

[4] Yun Dai et al., "Promoting Students' well-Being by Developing Their Readiness for the Artificial Intelligence Age," *Sustainability* (*Switzerland*), 12, no. 16, 2020, pp. 1–15.

[5] Ahmad Yani, "Peran artificial intelligence sebagai salah satu faktor dalam menentukan kualitas mahasiswa di era society 5.0," *Journal of Education Research*, 5, no. 2, 2024, pp. 1089–1096.

[6] Hermann Kulke, "Śrīvijaya Revisited: Reflections on State Formation of a Southeast Asian Thalassocracy," *Bulletin de l'Ecole Française d'Extrême-Orient*, 102, no. 1, 2016, pp. 45–95.

[7] M. Nu'man Mohd Nasir & Zuliskandar Ramli, "Ancient Kedah: A Srivijayan Mandala in The Malay Peninsula," *Jurnal Arkeologi Malaysia*, 35, no. 2, 2022, pp. 77–87.

[8] Gamze Akyol & Ali Berkay Avci, "AI Applications in Cultural Heritage Preservation: Technological Advancements for the Conservation," in *Baskent International Conference on Multidisciplinary Studies, 24th Agustus 2023*, Figshare, Ankara, 2023, pp. 94–101.

[9] Silvi Aryanti, Hartati, & Syafaruddin, "Learning of Badminton Model through Animation Video on Physical Education Students," *International Journal of Human Movement and Sports Sciences*, 8, no. 6, 2020, pp. 47–50.

[10] Mariapina Trunfio & Cecilia Pasquinelli, "Smart Technologies in the Covid-19 Crisis : Managing Tourism Flows and Shaping Visitors' Behaviour," *European Journal of Tourism Research*, 29, no. 2910, 2021, pp. 1–20.

[11] L. Zhang et al., "3D Documentation of Cultural Heritage: The Case Study of Banteay Srey Temple in Angkor, Siem Reap," *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives*, 43, no. B2, 2020, pp. 919–923.

[12] Benshuo Wang, Li Dai, & Bojing Liao, "System Architecture Design of a Multimedia Platform to Increase Awareness of Cultural Heritage: A Case Study of Sustainable Cultural Heritage," *Sustainability* (*Switzerland*), 15, no. 3, 2023, pp. 1–15.

[13] Mayank Mishra & Paulo B. Lourenço, "Artificial Intelligence-Assisted Visual Inspection for Cultural Heritage: State-of-the-Art Review," *Journal of Cultural Heritage*, 66, 2024, pp. 536–550.

[14] Ibid.

[15] Magdalena Pasikowska-Schnass, "Artificial Intelligence in the Context of Cultural Heritage and Museums: Complex Challenges and New Opportunities," *European Parliamentary Research Service Introduction*, April 28, 2023, pp. 1-11.

[16] Sander Münster et al., "Artificial Intelligence for Digital Heritage Innovation: Setting up a R&D Agenda for Europe," *Heritage*, 7, no. 2, 2024, pp. 794–816.

[17] Juan Santamaría-Velasco, Aracelly Núñez-Naranjo, and Ximena Morales-Urrutia, "Critical Thinking and AI: Enhancing History Teaching through ChatGPT Simulations," *International Journal of Innovative Research and Scientific Studies*, 8, no. 1, 2025, pp. 564–575.

[18] Björn Kindenberg, "The Role of AI in Historical Simulation Design: A TPACK Perspective on a French Revolution Simulation Design Experience," *Education Sciences*, 15, no. 2, 2025, pp. 1–19.

[19] Mohamed W. Fareed, Ali Bou Nassif, and Eslam Nofal, "Exploring the Potentials of Artificial Intelligence Image Generators for Educating the History of Architecture," *Heritage*, 7, no. 3, 2024, pp. 1727–1753.

[20] Sergio Tirado-Olivares et al., "From Human to Machine: Investigating the Effectiveness of the Conversational AI ChatGPT in Historical Thinking," *Education Sciences*, 13, no. 8, 2023, pp. 1–13.

[21] Ilyas, Sawa Suryana, & Mualim, "Preservation of Javanese Cultural Values Through Conservation Education Course (A Study on the Students of Faculty of Education Passed Conservation Education Course)," in *Proceedings of the 5th International Conference on Science, Education and Technology, June 29th, 2019*, Semarang: EAI, 2020, pp. 1–7.

[22] Truman Simanjuntak, "Sriwijaya for Our Nation," *Kalpataru*, 23, no. 2, 2014, pp. 81–86.

[23] Nadhifa Khairunnisa et al., "The Study of Kedukan Bukit Inscription as the Oldest Evidence of Srivijaya Empire Nadhifa," *Criksetra: Jurnal Pendidikan Sejarah*, 13, no. 1, 2024, pp. 97–111.

[24] Nur Ardyansah Susilo, Eka Wulandari, & Kabib Sholeh, "Peranan Sungai Musi dalam Perdagangan Masa Sriwijaya Abad ke VII-IX," *Bandar Maulana: Jurnal Sejarah Kebudayaan*, 28, no. 2, 2023, pp. 35–42.

[25] Muhamad Alnoza, "Serpent Sculpture on Telaga Batu Inscription: An Interpretation Based on Peirce's Semiotic Approach," *Berkala Arkeologi*, 40, no. 2, 2020, pp. 267–286.

[26] Wahyu Rizky Andhifani, Kurniawati, & Made Darme, "The Perspective of Palembang People towards the Seguntang Hill Site as the Center of Buddhism," *PURBAWIDYA: Jurnal Penelitian dan Pengembangan Arkeologi*, 13, no. 2, 2024, pp. 182–199.

[27] Sondang Martini Siregar, "Hinduism - Buddhism Sites Dispersal and Trade Route in South Sumatra (Traces Indication of Trade on the Musi Drainage Basin)," *Kindai Etam: Jurnal Penelitian Arkeologi*, 2, no. 1, 2018, pp. 1–10.

[28] L.R. Retno Susanti, "Pemanfaatan Warisan Kedatuan Sriwijaya sebagai Sumber Pembelajaran," *Siddhayatra: Jurnal Arkeologi*, 24, no. 2, 2019, pp. 120–127.

[29] M. Fakhruddin et al., "Utilization Balaputra Dewa Museum as an Implementation of the Merdeka Curriculum for Learning History at SMAN 18 Palembang," *Naditira Widya*, 18, no. 1, 2024, pp. 49–64.

[30] Made Darme, Kurniawati, & Nur Aeni Marta, "Museum Balaputra Dewa sebagai Sarana Pembelajaran Interaktif bagi Guru Sejarah di Kota Palembang," *Fajar Historia: Jurnal Ilmu Sejarah dan Pendidikan*, 8, no. 1, 2024, pp. 78–92.

[31] Adiwan F Aritenang et al., "Assessing Participatory Practices in a Cultural Preservation Workshop of the Sriwijaya Museum," *Journal of Regional and City Planning*, 32, no. 2, 2021, pp. 165–178.

[32] Cihan Orak & Zeynep Turan, "Using Artificial Intelligence in Digital Video Production : A Systematic Review Study," *Journal of Educational Technology & Online Learning*, 7, no. 3, 2024, pp. 286–307.

[33] Tao Yu et al., "Barriers to Industry Adoption of AI Video Generation Tools : A Study Based on the Perspectives of Video Production Professionals in China," *Applied Sciences*, 14, no. 5770, 2024, pp. 1–29.

[34] Chen Wang, "Application of AI Intelligent Learning System in Multimedia Demonstration," *Procedia Computer Science*, 228, 2023, pp. 71–78.

[35] Maojin Sun, "An Intelligent Retrieval Method for Audio and Video Content: Deep Learning Technology Based on Artificial Intelligence," *IEEE Access*, 12, 2024, pp. 123430–123446.

[36] Yidi Zhang et al., "The Effect of Student Acceptance on Learning Outcomes: AI-Generated Short Videos versus Paper Materials," *Computers and Education: Artificial Intelligence*, 7, 2024, p. 100286.

[37] John W. Creswell, *Penelitian Kualitatif dan Desain Riset,* Yogyakarta: Pustaka Pelajar, 2014.

38 Matthew B. Miles, A. Michael Huberman, & Johnny Saldana, *Qualitative Data Analysis: A Methods Sourcebook*, third edit, SAGE, Arizona State University, 2014.

39 Lexi J. Moleong, *Metodologi Penelitian Kualitatif*, 38 edit, PT Remaja Rosda Karya, Bandung, 2018.

40 Peter Merrotsy, "On the History of Heuristic," *Journal of Genius and Eminence*, 2, no. 1, 2017, pp. 58–64.

41 David J A Clines, "Historical Criticism: Are Its Days Numbered," *Teologinen Aikakauskirja*, 6, 2009, pp. 542–558.

42 I Howard Marshall, *New Testament Interpretation: Essays on Principles and Methods*, The Paternoster Press Ltd. Exeter: William B. Eerdmans, 2006.

43 Nathan Smith, "History in the Pub: The Historiography of J.D. Wetherspoon," *Endeavour*, 48, no. 1, 2024, p. 100889.

44 Isrina Siregar, Arueng Sy Pranata, & Budi Purnomo, "The Kingdom of Sriwijaya as a Form of Maritime Culture in Indonesia," *HISTORIA: Jurnal Program Studi Pendidikan Sejarah*, 11, no. 2, 2023, pp. 181–190.

45 Suwardono, *Sejarah Indonesia Masa Hindu-Buddha*, Penerbit Ombak, Yogyakarta, 2013.

46 Agus Aris Munandar et al., *Kerajaan Hindu-Budhha*, ed. Taufik Abdullah & A.B. Lapian, PT Ichtiar Baru van Hoeve, Jakarta, 2012.

47 Sartika Intaning Pradhani, "Sejarah Hukum Maritim Kerajaan Sriwijaya dan Majapahit dalam Hukum Indonesia Kini," *Lembaran Sejarah*, 13, no. 2, 2018, pp. 186–203.

48 George Coedes et al., *Kedatuan Sriwijaya*, second edit, Komunitas Bambu, Depok, 2014.

49 Ibid.

50 Ibid.

51 Sin Wei Lim et al., "Learning History through Project-Based Learning," *Journal of Education and Learning (EduLearn)*, 17, no. 1, 2023, pp. 67–75.

52 Rahma Ashari Hamzah et al., *Strategi Pembelajaran Abad 21*, ed. Sarwandi, first edit, PT Mifandi Mandiri Digital, Medan, 2023.

53 Heri Retnawati et al., "Teachers' Knowledge about Higher-Order Thingking Skills and Its Learning Strategy," *The Central and Eastern European Online Library*, 76, no. 2, 2018, pp. 215–230.

54 Putu Adi Sanjaya, "Konstruksi Pembelajaran Sejarah Kontekstual melalui Pendekatan Regresif Model Problem Based Learning," *Candra Sangkala*, 3, no. 1, 2021, pp. 1–10.

55 Muhammat Rahman & Sofan Amri, *Model Pembelajaran ARIAS Terintegratif*, ed. Umi Athelia Kurniati, PT Prestasi Pustakaraya, Jakarta, 2014.

56 Tao Xu et al., "From Recorded to AI-Generated Instructional Videos: A Comparison of Learning Performance and Experience," *British Journal of Educational Technology*, 56, no. 4, 2025, pp. 1463–1487.

57 Norma Elizabeth Quinga-Bravo, Raidell Avello-Martínez, and Tatiana Tapia-Bastidas, "Analyze the Impact of AI-Generated Videos on Motivation and History Learning in the Third Year of High School at Unidad Educativa Henry Dunant," *MQRInvestigar*, 9, no. 2, 2025, pp. 1–21.

58 Nikolaos Pellas, "The Influence of Sociodemographic Factors on Students' Attitudes toward AI-Generated Video Content Creation," *Smart Learning Environments*, 10, no. 57, 2023, pp. 1–20.

59 Naina Chaturvedi and Ananda Gunawardena, "LLMs and NLP for Generalized Learning in AI-Enhanced Educational Videos and Powering Curated Videos with Generative Intelligence," in *NLP4Science 2024 - 1st Workshop on NLP for Science, Proceedings of the Workshop*, ed. Lotem Peled-Cohen et al., Association for Computational Linguistics, 2024, pp. 148–154.

60 Nunuk Suryani, Achmad Setiawan, & Aditin Putria, *Media Pembelajaran Inovatif dan Pengembangannya*, ed. Pipih Latifah, first edit, PT Remaja Rosda Karya, Bandung, 2018.

61 Dedi Irwanto Muhammad Santun, "The Glory of Srivijaya's Capital City Symbolized in Three Srivijaya Inscriptions in Palembang," *Mozaik Humaniora*, 13, no. 2, 2013, pp. 136–148.

62 Kabib Sholeh, "Values in Indonesian History Textbook," *International Journal of Multicultural and Multireligious Understanding*, 10, no. 10, 2023, pp. 60–68.

[63] Muhammad Soleh Hapudin, *Teori Belajar dan Pembelajaran: Menciptakan Pembelajaran yang Kreatif dan Efektif*, first edit, Kencana, Jakarta, 2021.

[64] Syafaruddin et al., "Development of Interactive Multimedia the Subjects Course of Work," *International Journal of Physical Education, Sports and Health*, 5, no. 2, 2018, pp. 1–3.

[65] Merianti, Maria Ulfah, & Astrini Eka Putri, "Pengaruh Penggunaan Media Pembelajaran Video Interaktif dalam Meningkatkan Kesadaran Sejarah Siswa Kelas X IPA di SMA Negeri 3 Pontianak," *Jurnal Pendidikan dan Pembelajaran Khatulistiwa*, 11, no. 6, 2022, pp. 1–9.

[66] Ibid.

[67] Wenyu Tang and Sisi Zhang, "Exploring the Role of Artificial Intelligence in the Protection of Intangible Cultural Heritage through Short Video Communication," *Journal of Electrical Systems*, 20, no. 3, 2024, pp. 1085–1098.

[68] Daria Arkhipova and Auli Viidalepp, "Lotman's Semiotics of Culture in the Age of AI: Analyzing the Cultural Dynamics of AI-Generated Video Art in the Semiosphere," *Semiotica*, no. 255, 2023, pp. 149–160.

[69] Nazirah Mohamad Ba'ai and Asliza Aris, "AI and Cultural Heritage: Preserving and Promoting Global Cultures Through Technology," *Nanotechnology Perceptions*, 15, no. 20, 2024, pp. 170–176.

References

Akyol, Gamze, and Ali Berkay Avci. 2023. "AI Applications in Cultural Heritage Preservation: Technological Advancements for the Conservation." In *Baskent International Conference on Multidisciplinary Studies, 24th Agustus 2023*, 94–101. Ankara: Figshare, 2023. https://doi.org/10.6084/m9.figshare.24077862

Alnoza, Muhamad. 2020. "Serpent Sculpture on Telaga Batu Inscription: An Interpretation Based on Peirce's Semiotic Approach," *Berkala Arkeologi* 40, no. 2: 267-286. https://doi.org/10.30883/jba.v40i2.591

Andhifani, Wahyu Rizky, Kurniawati, and Made Darme. 2024. "The Perspective of Palembang People towards the Seguntang Hill Site as the Center of Buddhism," *PURBAWIDYA: Jurnal Penelitian dan Pengembangan Arkeologi* 13, no. 2: 182-199. https://doi.org/10.55981/purbawidya.2024.3807

Aritenang, Adiwan F, Zahara Sitta Iskandar, Pingkan Safitri, and Riela Provi. 2021. "Assessing Participatory Practices in a Cultural Preservation Workshop of the Sriwijaya Museum," *Journal of Regional and City Planning* 32, no. 2: 165-178. https://doi.org/10.5614/jpwk.2021.13.2.5

Arkhipova, Daria, and Auli Viidalepp. 2023. "Lotman's Semiotics of Culture in the Age of AI: Analyzing the Cultural Dynamics of AI-Generated Video Art in the Semiosphere," *Semiotica*, no. 255: 149-160. https://doi.org/10.1515/sem-2023-0167

Aryanti, Silvi, Hartati, and Syafaruddin. 2020. "Learning of Badminton Model through Animation Video on Physical Education Students," *International Journal of Human Movement and Sports Sciences* 8, no. 6: 47-50. https://doi.org/10.13189/saj.2020.080708

Ba'ai, Nazirah Mohamad, and Asliza Aris. 2024. "AI and Cultural Heritage: Preserving and Promoting Global Cultures Through Technology," *Nanotechnology Perceptions* 15, no. 20: 170-176. https://doi.org/10.62441/nano-ntp.vi.3454

Chaturvedi, Naina, and Ananda Gunawardena. 2024. "LLMs and NLP for Generalized Learning in AI-Enhanced Educational Videos and Powering Curated Videos with Generative Intelligence." In *NLP4Science 2024 - 1st Workshop on NLP for Science, Proceedings of the Workshop*, edited by Lotem Peled-Cohen, Nitay Calderon, Shir Lissak, and Roi Reichart, 148-154. Association for Computational Linguistics. https://doi.org/10.18653/v1/2024.nlp4science-1.12

Clines, David J A. 2009. "Historical Criticism: Are Its Days Numbered," *Teologinen Aikakauskirja* 6: 542-558.

Coedes, George, Louis-Charles Damais, Hermann Kulke, and Pierre-Yves Manguin. 2014. *Kedatuan Sriwijaya*. Second edit. Depok: Komunitas Bambu.

Creswell, John W. 2014. *Penelitian Kualitatif dan Desain Riset*. Yogyakarta: Pustaka Pelajar.

Dai, Yun, Ching Sing Chai, Pei Yi Lin, Morris Siu Yung Jong, Yanmei Guo, and Jianjun Qin. 2020. "Promoting Students'well-Being by Developing Their Readiness for the Artificial Intelligence Age," *Sustainability (Switzerland)* 12, no. 16: 1-15. https://doi.org/10.3390/su12166597

Darme, Made, Kurniawati, and Nur Aeni Marta. 2024. "Museum Balaputra Dewa sebagai Sarana Pembelajaran Interaktif bagi Guru Sejarah di Kota Palembang," *Fajar Historia: Jurnal Ilmu Sejarah dan Pendidikan* 8, no. 1: 78-92. https://doi.org/10.29408/fhs.v8i1.24927

Fakhruddin, M., Made Darme, Wahyu Rizky Andhifani, and Luh Suwita Utami. 2024. "Utilization Balaputra Dewa Museum as an Implementation of the Merdeka Curriculum for Learning History at SMAN 18 Palembang," *Naditira Widya* 18, no. 1: 49–64. https://doi.org/10.55981/nw.2024.3010

Fareed, Mohamed W., Ali Bou Nassif, and Eslam Nofal. 2024. "Exploring the Potentials of Artificial Intelligence Image Generators for Educating the History of Architecture," *Heritage* 7, no. 3: 1727-1753. https://doi.org/10.3390/heritage7030081

Goldenberg, S. Larry, Guy Nir, and Septimiu E. Salcudean. 2019. "A New Era: Artificial Intelligence and Machine Learning in Prostate Cancer," *Nature Reviews Urology* 16, no. 7: 391-403. https://doi.org/10.1038/s41585-019-0193-3

Hamzah, Rahma Ashari, Romi Mesra, Karmila Br Karo, Nur Alifah, Aditya Hartini, HT Gita Prima Agusta, Frida Maryati Yusuf, et al. 2023. *Strategi Pembelajaran Abad 21*. Edited by Sarwandi. First edit. Medan: PT Mifandi Mandiri Digital.

Hapudin, Muhammad Soleh. 2021. *Teori Belajar dan Pembelajaran: Menciptakan Pembelajaran yang Kreatif dan Efektif*. First edit. Jakarta: Kencana.

Ilyas, Sawa Suryana, and Mualim. 2020. "Preservation of Javanese Cultural Values Through Conservation Education Course (A Study on the Students of Faculty of Education Passed Conservation Education Course)." In *Proceedings of the 5th International Conference on Science, Education and Technology, June 29th*, 2019: 1-7. Semarang: EAI. https://doi.org/10.4108/eai.29-6-2019.2290436

Khairunnisa, Nadhifa, Nyayu Angelica Salsabila, Hudaidah, and Risa Marta Yati. 2024. "The Study of Kedukan Bukit Inscription as the Oldest Evidence of Srivijaya Empire Nadhifa," *Criksetra: Jurnal Pendidikan Sejarah* 13, no. 1: 97-111. https://doi.org/10.36706/jc.v13i1.7

Kindenberg, Björn. 2025. "The Role of AI in Historical Simulation Design: A TPACK Perspective on a French Revolution Simulation Design Experience," *Education Sciences* 15, no. 2: 1-19. https://doi.org/10.3390/educsci15020192

Kulke, Hermann. 2016. "Śrīvijaya Revisited: Reflections on State Formation of a Southeast Asian Thalassocracy," *Bulletin de l'Ecole Française d'Extrême-Orient* 102, no. 1: 45-95. https://doi.org/10.3406/befeo.2016.6231.

Lawler, Robert W., and Nick Rushby. 2013. "An Interview with Robert Lawler," *British Journal of Educational Technology* 44, no. 1: 20-30.
https://doi.org/10.1111/j.1467-8535.2012.01372.x

Lim, Sin Wei, Rosmawijah Jawawi, Jainatul Halida Jaidin, and Roslinawati Roslan. 2023. "Learning History through Project-Based Learning," *Journal of Education and Learning (EduLearn)* 17, no. 1: 67-75.
https://doi.org/10.11591/edulearn.v17i1.20398

Marshall, I Howard. 1977. *New Testament Interpretation: Essays on Principles and Methods*. The Paternoster Press Ltd. Exeter: William B. Eerdmans.

Merianti, Maria Ulfah, and Astrini Eka Putri. 2022. "Pengaruh Penggunaan Media Pembelajaran Video Interaktif dalam Meningkatkan Kesadaran Sejarah Siswa Kelas X IPA di SMA Negeri 3 Pontianak," *Jurnal Pendidikan dan Pembelajaran Khatulistiwa* 11, no. 6: 1-9.
https://doi.org/10.26418//jppk.v11i6.54742

Merrotsy, Peter. 2017. "On the History of Heuristic," *Journal of Genius and Eminence* 2, no. 1: 58-64.
https://doi.org/10.18536/jge.2017.04.02.01.06

Miles, Matthew B., A. Michael Huberman, and Johnny Saldana. 2014. *Qualitative Data Analysis: A Methods Sourcebook*. Third edit. Arizona State University: SAGE.

Mishra, Mayank, and Paulo B. Lourenço. 2024. "Artificial Intelligence-Assisted Visual Inspection for Cultural Heritage: State-of-the-Art Review," *Journal of Cultural Heritage* 66: 536-550.
https://doi.org/10.1016/j.culher.2024.01.005

Moleong, Lexi J. 2018. *Metodologi Penelitian Kualitatif*. 38 edit. Bandung: PT Remaja Rosda Karya.

Munandar, Agus Aris, Bambang Budi Utomo, Edhie Wurjantoro, I Gede Semadi Astra, I Wayan Ardika, Machi Suhadi, Moehamad Habib Mustopo, et al. 2012. *Kerajaan Hindu-Budhha*. Edited by Taufik Abdullah and A.B. Lapian. Jakarta: PT Ichtiar Baru van Hoeve.

Münster, Sander, Ferdinand Maiwald, Isabella di Lenardo, Juha Henriksson, Antoine Isaac, Manuela Milica Graf, Clemens Beck, and Johan Oomen. 2024. "Artificial Intelligence for Digital Heritage Innovation: Setting up a R&D Agenda for Europe," *Heritage* 7, no. 2: 794-816.
https://doi.org/10.3390/heritage7020038

Nasir, M. Nu'man Mohd, and Zuliskandar Ramli. 2022. "Ancient Kedah: A Srivijayan Mandala in The Malay Peninsula," *Jurnal Arkeologi Malaysia* 35, no. 2: 77-87.
https://arkeologimalaysia.org.my/jurnalarkeologi/index.php/jurnalarkeologi/article/view/258

Orak, Cihan, and Zeynep Turan. 2024. "Using Artificial Intelligence in Digital Video Production : A Systematic Review Study," *Journal of Educational Technology & Online Learning* 7, no. 3: 286-307.
https://doi.org/10.31681/jetol.1459434

Pasikowska-Schnass, Magdalena. 2023. "Artificial Intelligence in the Context of Cultural Heritage and Museums: Complex Challenges and New Opportunities." *European Parliamentary Research Service Introduction*, April 28.
https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2023)747120

Pellas, Nikolaos. 2023. "The Influence of Sociodemographic Factors on Students' Attitudes toward AI-Generated Video Content Creation," *Smart Learning Environments* 10, no. 57: 1-20.
https://doi.org/10.1186/s40561-023-00276-4

Pradhani, Sartika Intaning. 2018. "Sejarah Hukum Maritim Kerajaan Sriwijaya dan Majapahit dalam Hukum Indonesia Kini," *Lembaran Sejarah* 13, no. 2: 186-203.
https://doi.org/10.22146/lembaran-sejarah.33542

Quinga-Bravo, Norma Elizabeth, Raidell Avello-Martínez, and Tatiana Tapia-Bastidas. 2025. "Analyze the Impact of AI-Generated Videos on Motivation and History Learning in the Third Year of High School at Unidad Educativa Henry Dunant," *MQRInvestigar* 9, no. 2: 1-21.
https://doi.org/10.56048/mqr20225.9.2.2025.e700

Rahman, Muhammat, and Sofan Amri. 2014. *Model Pembelajaran ARIAS Terintegratif*. Edited by Umi Athelia Kurniati. Jakarta: PT Prestasi Pustakaraya.

Retnawati, Heri, Hasan Djidu, Kartianom Kartianom, and Ezi Apino. 2018. "Teachers' Knowledge about Higher-Order Thingking Skills and Its Learning Strategy," *The Central and Eastern European Online Library* 76, no. 2: 215-230.
https://doi.org/10.33225/pec/18.76.215

Sanjaya, Putu Adi. 2021. "Konstruksi Pembelajaran Sejarah Kontekstual melalui Pendekatan Regresif Model Problem Based Learning," *Candra Sangkala* 3, no. 1: 1-10.
https://doi.org/10.23887/jcs.v3i1.33918.

Santamaría-Velasco, Juan, Aracelly Núñez-Naranjo, and Ximena Morales-Urrutia. 2025. "Critical Thinking and AI: Enhancing History Teaching through ChatGPT Simulations," *International Journal of Innovative Research and Scientific Studies* 8, no. 1: 564-75.
https://doi.org/10.53894/ijirss.v8i1.4403

Santun, Dedi Irwanto Muhammad. 2013. "The Glory of Srivijaya's Capital City Symbolized in Three Srivijaya Inscriptions in Palembang," *Mozaik Humaniora* 13, no. 2: 136–148.
https://doi.org/10.20473/mozaik.v13i2.3840

Sholeh, Kabib. 2023. "Values in Indonesian History Textbook," *International Journal of Multicultural and Multireligious Understanding* 10, no. 10: 60–68.
https://doi.org/10.18415/ijmmu.v10i10.5078

Simanjuntak, Truman. 2014. "Sriwijaya for Our Nation," *Kalpataru* 23, no. 2: 81-86.
https://doi.org/10.24832/kpt.v23i2.55

Siregar, Isrina, Arueng Sy Pranata, and Budi Purnomo. 2023. "The Kingdom of Sriwijaya as a Form of Maritime Culture in Indonesia," *HISTORIA: Jurnal Program Studi Pendidikan Sejarah* 11, no. 2: 181-90.
https://doi.org/10.24127/hj.v11i2.7488

Siregar, Sondang Martini. 2018. "Hinduism - Buddhism Sites Dispersal and Trade Route in South Sumatra (Traces Indication of Trade on the Musi Drainage Basin)," *Kindai Etam: Jurnal Penelitian Arkeologi* 2, no. 1: 1-10.
https://doi.org/10.24832/ke.v2i1.5

Smith, Nathan. 2024. "History in the Pub: The Historiography of J.D. Wetherspoon," *Endeavour* 48, no. 1: 100889.
https://doi.org/10.1016/j.endeavour.2023.100889

Sun, Maojin. 2024. "An Intelligent Retrieval Method for Audio and Video Content: Deep Learning Technology Based on Artificial Intelligence," *IEEE Access* 12: 123430–123446.
https://doi.org/10.1109/ACCESS.2024.3450920

Suryani, Nunuk, Achmad Setiawan, and Aditin Putria. 2018. *Media Pembelajaran Inovatif dan Pengembangannya*. Edited by Pipih Latifah. First edit. Bandung: PT Remaja Rosda Karya.

Susanti, L.R. Retno. 2019. "Pemanfaatan Warisan Kedatuan Sriwijaya Sebagai Sumber Pembelajaran," *Siddhayatra: Jurnal Arkeologi* 24, no. 2: 120-127.
https://doi.org/10.24832/siddhayatra.v24i2.154

Susilo, Nur Ardyansah, Eka Wulandari, and Kabib Sholeh. 2023. "Peranan Sungai Musi dalam Perdagangan Masa Sriwijaya Abad ke VII-IX," *Bandar Maulana: Jurnal Sejarah Kebudayaan* 28, no. 2: 35-42.
https://doi.org/10.24071/jbm.v28i2.7949

Suwardono. 2013. *Sejarah Indonesia Masa Hindu-Buddha*. Yogyakarta: Penerbit Ombak.

Syafaruddin, Hartati, Destriana, and Silvi Aryanti. 2018. "Development of Interactive Multimedia the Subjects Course of Work," *International Journal of Physical Education, Sports and Health* 5, no. 2: 1–3.
www.kheljournal.com

Tang, Wenyu, and Sisi Zhang. 2024. "Exploring the Role of Artificial Intelligence in the Protection of Intangible Cultural Heritage through Short Video Communication," *Journal of Electrical Systems* 20, no. 3: 1085–98.
https://doi.org/10.52783/jes.3436

Tirado-Olivares, Sergio, Maria Navío-Inglés, Paula O'Connor-Jiménez, and Ramón Cózar-Gutiérrez. 2023. "From Human to Machine: Investigating the Effectiveness of the Conversational AI ChatGPT in Historical Thinking," *Education Sciences* 13, no. 8: 1-13.
https://doi.org/10.3390/educsci13080803

Trunfio, Mariapina, and Cecilia Pasquinelli. 2021. "Smart Technologies in the Covid-19 Crisis: Managing Tourism Flows and Shaping Visitors' Behaviour," *European Journal of Tourism Research* 29, no. 2910: 1–20.
https://doi.org/10.54055/ejtr.v29i.2437

Wang, Benshuo, Li Dai, and Bojing Liao. 2023. "System Architecture Design of a Multimedia Platform to Increase Awareness of Cultural Heritage: A Case Study of Sustainable Cultural Heritage," *Sustainability (Switzerland)* 15, no. 3: 1-15.
https://doi.org/10.3390/su15032504

Wang, Chen. 2023. "Application of AI Intelligent Learning System in Multimedia Demonstration," *Procedia Computer Science* 228: 71–78.
https://doi.org/10.1016/j.procs.2023.11.010

Xu, Tao, Yuan Liu, Yaru Jin, Yueyao Qu, Jie Bai, Wenlan Zhang, and Yun Zhou. 2025. "From Recorded to AI-Generated Instructional Videos: A Comparison of Learning Performance and Experience," *British Journal of Educational Technology* 56, no. 4: 1463-1487.
https://doi.org/10.1111/bjet.13530

Yani, Ahmad. 2024. "Peran Artificial Intelligence sebagai salah satu faktor dalam menentukan kualitas mahasiswa di era society 5.0," *Journal of Education Research* 5, no. 2: 1089–1096.
https://doi.org/10.37985/jer.v5i2.963

Yu, Tao, Wei Yang, Junping Xu, and Younghwan Pan. 2024. "Barriers to Industry Adoption of AI Video Generation Tools : A Study Based on the Perspectives of Video Production Professionals in China," *Applied Sciences* 14, no. 5770: 1-29.
https://doi.org/10.3390/app14135770

Zhai, Xuesong, Xiaoyan Chu, Ching Sing Chai, Morris Siu Yung Jong, Andreja Istenic, Michael Spector, Jia Bao Liu, Jing Yuan, and Yan Li. 2021. "A Review of Artificial Intelligence (AI) in Education from 2010 to 2020," *Complexity* 6: 1-18.
https://doi.org/10.1155/2021/8812542

Zhang, L., F. Wang, X. Cheng, C. Li, H. Lin, and Y. Song. 2020. "3D Documentation of Cultural Heritage: The Case Study of Banteay Srey Temple in Angkor, Siem Reap," *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives* 43, no. B2: 919–923.
https://doi.org/10.5194/isprs-archives-XLIII-B2-2020-919-2020

Zhang, Yidi, Margarida Lucas, Pedro Bem-haja, and Luís Pedro. 2024. "The Effect of Student Acceptance on Learning Outcomes: AI-Generated Short Videos versus Paper Materials," *Computers and Education: Artificial Intelligence* 7: 100286.
https://doi.org/10.1016/j.caeai.2024.100286