

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

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### 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This study aims to: first, explore the historical content of the Sriwijaya Kingdom based on authentic evidence; second, develop an AI-generated educational video that presents the civilization of Sriwijaya in an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 Findings show that the AI-generated video significantly enhanced students' understanding of historical content by offering vivid, contextualized learning experiences.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)<sup>1</sup> 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.<sup>2</sup> 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,<sup>3</sup> 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.<sup>4</sup>

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.<sup>5</sup> 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 7<sup>th</sup> and 13<sup>th</sup> centuries AD,<sup>6</sup> played a crucial role in shaping the cultural and economic landscape of Southeast Asia.<sup>7</sup> 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.<sup>8</sup> AI-enhanced educational videos offer interactive, personalized, and accessible learning experiences.<sup>9</sup> 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.<sup>10</sup> 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.<sup>11</sup> Wang et al., highlighted the role of multimedia technologies in providing comprehensive data and public access to cultural heritage.<sup>12</sup> Mishra and Lourenço noted that AI-assisted image processing techniques help monitor physical degradation in heritage sites, supporting the preservation of authenticity.<sup>13</sup> 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.<sup>14</sup> Pasikowska-Schnass illustrated how AI can reconstruct damaged artifacts, complete artworks, and identify ancient authorship.<sup>15</sup> 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.<sup>16</sup>

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.<sup>17</sup> Similarly, Kindenberg reported that AI simulations of events such as the French Revolution enriched students' learning experiences.<sup>18</sup> 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.<sup>19</sup> Tirado-Olivares et al., showed that AI-generated historical texts significantly improved students' learning outcomes and historical thinking.<sup>20</sup>

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.<sup>21</sup> 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,<sup>22</sup> public awareness of its historical significance remains limited. In fact, the Kedukan Bukit inscription<sup>23</sup> marks Sriwijaya as Indonesia's oldest known city. Moreover, Sriwijaya played a central role in Southeast Asian trade networks.<sup>24</sup> As Alnoza noted, Telaga Batu Inscription reveals diplomatic relations between Sriwijaya and countries such as India, China, and Arabia.<sup>25</sup> This legacy contributes not only to the cultural heritage of Palembang<sup>26</sup> but also to regional studies across disciplines in both the natural and social sciences.<sup>27</sup>

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.<sup>28</sup> Fakhruddin et al., emphasized the educational potential of historical artifacts discovered in the region.<sup>29</sup> Similarly, Darne et al., highlighted how pre-Sriwijaya and Sriwijaya-era relics have been used as interactive tools in history teaching.<sup>30</sup> 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.<sup>31</sup>

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.<sup>32</sup> 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.<sup>33</sup>

AI-generated educational videos are increasingly recognized as effective learning tools. They help students acquire knowledge more efficiently and meaningfully.<sup>34</sup> Studies comparing AI-based videos with paper-based materials<sup>35</sup> 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.<sup>36</sup> 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<sup>37</sup> and a research and development (R&D) model based on the ADDIE instructional design framework.<sup>38</sup> 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.<sup>39</sup> 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.<sup>40</sup> Once the data had been collected, the researcher conducted both internal and external source criticism to ensure data validity.<sup>41</sup> This was followed by analysis and synthesis processes to reconstruct the historical narrative systematically.<sup>42</sup> The resulting historical account was then translated into a video script focusing on the Sriwijaya Kingdom.<sup>43</sup> 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).

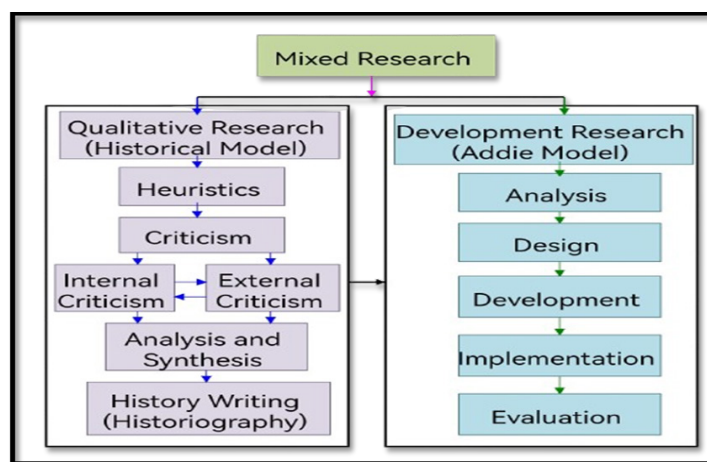


Figure 1: Research Method.

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,<sup>44</sup> 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.<sup>45</sup> 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,<sup>46</sup> which supported its rise as the most powerful maritime empire in the archipelago.<sup>47</sup>

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.<sup>48</sup> Fifth, Seguntang Hill Inscription – holds significance in the spread of Buddhism in Palembang and marks an important site of Buddhist worship.<sup>49</sup>

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.

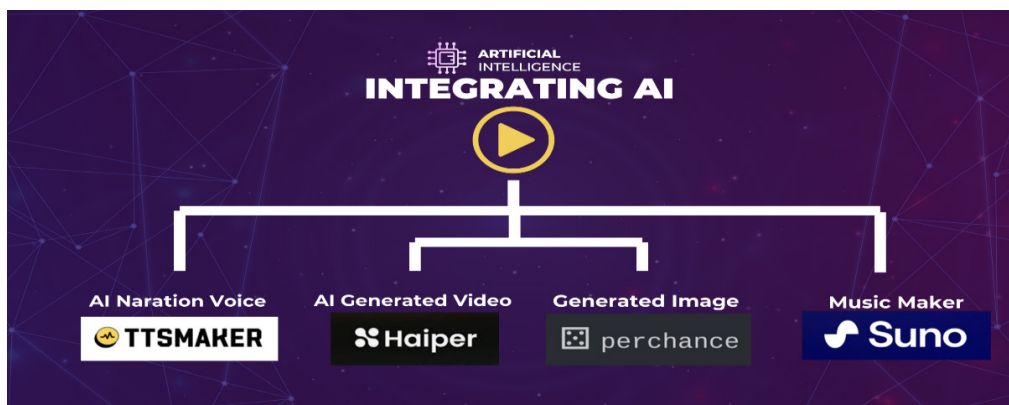


Figure 3: Integrating Sriwijaya Kingdom inscription data through AI applications.  
Source: Author's data, 2024.

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.

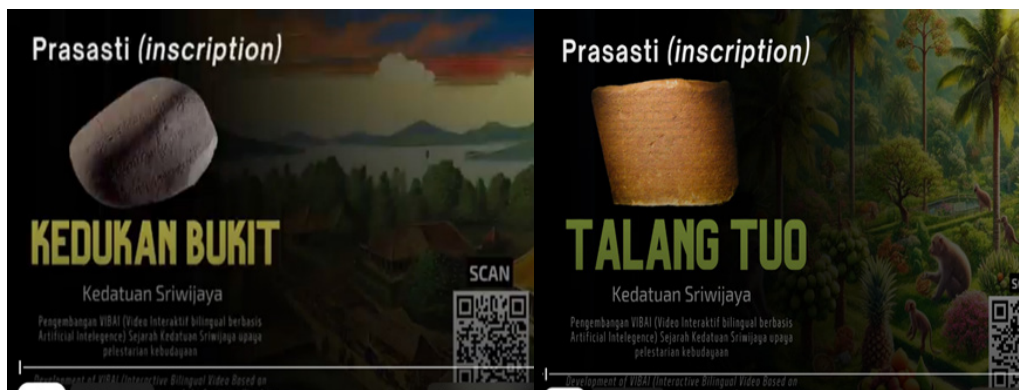


Figure 4: Video of the Kedukan Bukit and the Talang Tuo Inscriptions.

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 Palembang City, 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.<sup>50</sup> Therefore, there is a growing need to develop innovative learning models that make history more engaging and accessible.<sup>51</sup> This can be achieved by shifting from classical to modern pedagogical approaches.<sup>52</sup> 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).<sup>53</sup> These approaches enable teachers to facilitate more effective and efficient learning experiences.<sup>54</sup>

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.<sup>55</sup>

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.<sup>56</sup> 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.<sup>57</sup> 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.<sup>58</sup> 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.<sup>59</sup>

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.<sup>60</sup> 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.<sup>61</sup> Teachers can use the history of Sriwijaya as a learning resource for both school and university students.<sup>62</sup> 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.<sup>63</sup>

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.<sup>64</sup> With proper direction, students will gain a deeper understanding of the material.<sup>65</sup> 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.<sup>66</sup> 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.<sup>67</sup> 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.<sup>68</sup> 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.<sup>69</sup>

## 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. Furthermore, 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. Furthermore, 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.

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