Artificial Intelligence In Project-Based Learning as a Resource for Learning Local History In Bandung

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Abstract

The history learning process today needs to optimize the use of technology. Optimizing technology, especially artificial intelligence, can avoid the negative effects of students' use of gadgets. Project Based Learning is a model that AI can integrate into history learning. This article outlines the Project Based Learning (PjBL) model that utilizes Artificial Intelligence (AI) as an ICT platform in the Local History curriculum. The research methodology is descriptive and qualitative, involving data collection methods such as observation, interviews, and documentation. The project focuses on historic buildings that reflect Bandung's history, architecture, and culture, particularly Gedong Tjai Tjibadak. The study results show that 1) the PjBL model effectively combines with Artificial Intelligence (AI). 2) Presenting Local History content in a different format makes the learning experience more diverse and exciting. And 3) Utilizing AI-based projects as educational tools for history allows students to demonstrate their abilities effectively. The AI-integrated PjBL model enhances the learning of Local History content in a way that meets the requirements. AI technology makes learning smoother, more convenient, and more captivating.

Keywords

To cite this article

Introduction

Technological developments today are growing rapidly. Technology is developing with gadgets and the internet, which the general public can easily use—level of gadget use among students. Data from the World Health Organization (WHO) in 2019 shows that gadget users among school children aged 9-15 were 93.52%, and internet users were 65.34%(Mariyama et al., 2023). This data has the potential to use technology-based teaching media in learning. History teachers, since COVID-19, have developed digital literacy through digital training by the government and the private sector. They need to optimize the use of technology in learning. Moreover, the independent curriculum is implemented with full nuance in the use of technology. The Indonesian government encourages teachers to use technology in learning. Technology's purpose is to develop the times and the needs of students' abilities and skills in the 21st century (Hanipah, 2023; Nirmala et al., 2023). The independent curriculum emphasizes project learning in its implementation.

Education and technology can optimize history learning. Artificial Intelligence (AI) in learning history can provide a positive impression. AI in history learning helps quickly find history learning resources. Apart from that, AI can also develop students' cognitive abilities in analyzing historical events. AI in history learning can be integrated using Project-Based Learning (PjBL) (Sheng, 2023). Education can adopt technology in PjBL due to its relevance. PjBL uses technology to make learning fun. Apart from that, PjBL also helps students develop 21st-century skills (Lim et al., 2023). Previous studies on PjBL have often utilized local history in learning but have not integrated AI technology (Pan et al., 2023; Salam & Wahyuni, 2021). The project-based learning model (PjBL) can enhance students' abilities and character development through its various stages. This model includes complex tasks based on challenging questions and problems, problem-solving, decision-making, investigative activities, and opportunities for students to work independently within a specified timeframe to produce a product for presentation (Chistyakov et al., 2023; You, 2024). The PjBL model supports students' comprehensive development in knowledge and skills. They can also integrate the PjBL model with Artificial Intelligence (AI).

Artificial Intelligence (AI) in education contributes significantly to the learning process. It assists educators and students by providing teaching materials, sourcing learning resources, and generating products from learning outcomes. It automates tasks, thereby facilitating the work of both educators and students. AI can also help develop learning models tailored to specific needs, enhancing the effectiveness and outcomes of students' learning experiences individually (Afrita, 2023; Rahiman & Kodikal, 2024). AI supports the integrated learning process within various educational models, streamlining the steps involved in assignments (Fedoriv et al., 2023). Learning to use technology can reduce the negative impact of using gadgets. Gadgets such as technology have negative consequences, such as addiction to playing games, surfing social media, and declining health. Playing video games and surfing social media gives them an addictive effect so that they continuously do not realize they have time to take a break from doing their activities. As a result, gadget users among students quickly feel tired due to lack of sleep. They also socially tend to be alone. These students, who tend to be alone, miss out on face-to-face social interaction in their environment. They feel that using social media is enough to have digital friends (Mujahid et al., 2023). This negative impact needs to be reduced by optimizing the use of gadgets in learning. They can optimize gadgets with the potential to increase creativity and innovation. Besides using gadgets, the group project model can reduce student social activity.

The PjBL model is designed to be implemented in groups. Students in the PjBL model can increase cooperation and social interaction between them. Group activities enable students to communicate continuously through discussion, exploration, and decision-making activities. They will also be used to argue, thinking creatively and critically to achieve common goals (Hermawati & Chen, 2023). The PjBL model reduces the adverse effects of gadgets through discussion and collaboration activities. Students can optimize products in the form of AI through PjBL so that they can work with their gadgets for positive

purposes. Students can also creatively and innovatively create AI media according to their imagination by optimizing historical learning resources.

The younger generation can recognize, understand, and reflect on historical values using historical learning resources. Students can utilize cultural heritage buildings near them to develop contextual learning. Contextual learning provides optimal understanding because historical sources can be closely visualized during learning (Eka et al., 2023). Using local history-based learning resources in history education is recommended as it fosters self-dignity in one's region and national identity (Novia et al., 2023). Using local historical sources in history education requires students to develop cognitive, affective, and psychomotor skills (Evitasari et al., 2020). Educators can implement PjBL models to meet these challenges.

PjBL with AI products has several indicators that need to be considered, such as appreciation, suitability of narrative to theme, storytelling, and aesthetics. Comprehension includes several aspects, namely speaking confidently and variations in speaking pace and use of pauses, variations in pitch and volume (Kazemitabar et al., 2019; Nur et al., 2022; Rahman, 2024). The suitability of the narrative to the theme includes usefulness as a learning resource, a variety of sources used, interpretation of the narrative, and emphasis on argumentation (Dai et al., 2022; Hossein-Mohand et al., 2021; Salem, 2022). Storytelling has criteria: chronological order, fluent storytelling, comprehensive explanation, and integration of narrative elements (Nair & Md Yunus, 2022; Petousi et al., 2022). Next, Aesthetics includes visualization in the author's narrative, background music and interaction (Lili & Hang, 2023; Zheng et al., 2024).

AI is also a source of historical learning for the younger generation as an effort to preserve threatened cultural heritage. Preservation of colonial heritage structures is essential for safeguarding the historical and cultural identity of a nation or area (Prabowo & Yuuwono, 2021). Learning local history for students and the surrounding community can provide information about cultural heritage buildings that are vulnerable to eviction. Colonial heritage buildings often witness historical journeys and thus must be preserved to prevent permanent loss. Acting as silent observers, these cultural landmarks in Bandung City reflect the region's history, architecture, and traditions. These structures, referred to as 'artefacts' in historical research, are valuable sources of information, representing the development of different periods and communities (Sjamsuddin, 2012). Bandung boasts numerous cultural heritage buildings with high historical, architectural, and cultural value (Permata et al., 2015). The cultural heritage buildings in Bandung can serve as valuable learning resources for younger generations. When targeted for modernization, these structures are inevitably pushed out (Margana, 2017). Development in Bandung has also led to the demolition of many old buildings with historical value.

Technology in PjBL can be adopted because it is relevant. Many previous studies regarding PjBL adopted learning using local history (Pan et al., 2023; Salam & Wahyuni, 2021) focused on improving attitudes and skills such as creativity, learning motivation and learning achievement using infographics but needed to be integrated using AI technology. Apart from that, research from (Fatimah & Octaviani 2023; Wibowo et al., 2023) regarding AI in history learning only describes ideas based on literature studies, while in this research, there is already an application. Therefore, from the introduction that has been explained regarding cultural heritage in Bandung, the PjBL and AI learning models produce a goal in this article. The research question can be asked in this research is how to implement AI-based PJBL in local history courses. This article describes implementing the PjBL model in local history courses in the cultural heritage thematic History Education Study Program in North Bandung. This research implies that it inspires history educators to integrate AI in history learning in an effort to provide fun and relevant learning to the 21st century.

Research Methods

This article's research method employs a qualitative and descriptive approach. This method provides an overview of situations or events, yielding meanings and implications for the addressed issue (Sugiyono, 2020). The descriptive method in this study tries to depict the implementation of the PjBL model in local history courses, where the product utilizes AI and incorporates storytelling supported by iconic animation.

The researcher conducted the study at Universitas Pendidikan Indonesia, Bandung. The course involved in the study is Local History. The subjects of this research are 48 first-semester History Education students who were assigned a project to document, observe, and interview at the Gedong Tjai Tjibadak Cultural Heritage site located in Ledeng, North Bandung. Students in semester 1 are Generation Z, born in 2005-2006. They use AI-based applications such as Canva, Dupdub AI, Rask AI, Runwayml, and Clipchamp to complete product AI tasks using the PjBL model. The task was to research historical buildings in Gedong Tjai Tjibadak. Next, they create an AI product as the final result.

This research employs observation, interviews, and documentation as data collection techniques. Observation monitors students' activities while designing, implementing, and evaluating the PjBL model. Observations were conducted using non-participant observation, so the researcher's whereabouts were unknown to the subjects studied. The interviews attempted to collect data related to the design, implementation, obstacles and solutions during the implementation of the PjBL with 10 local history class students. Meanwhile, documentation comes from notes such as student worksheets, photos and minutes during lectures, pictures of their activities when implemented, and the results of the AI media they created as a result of the project. The assessment sheet in this research is as follows.

Table 2
Assessment Indicators and Criteria

No	Assessment Indicator	Assessment Criteria		
		Excellent (3)	Sufficient (2)	Flawed (1)
1	Immersion	1. 1. Speak confidently and clearly; 2. 2. Variation in speaking pace and use of pauses; 3. 3. Incorporate variations in pitch and volume.	Meets Two criteria	Meets One criteria
2	Conformity between narration and theme	1. 1. Usefulness as a learning resource; 2. 2. A variety of sources used; 3. 3. Interpretation of the narrative, 4. 4. Emphasis on argumentation,	Meets Three criteria	Meets 2-1 criteria
3	Storytelling	1. 1. Chronological order, 2. 2. Fluent storytelling, 3. 3. Comprehensive	Meets Three criteria	Meets 2-1 criteria

		explanation, 4. 4. Integration of narrative elements with vocal delivery		
4	Aesthetics	1. 1. Visual: author and narrative elements presented simultaneously 2. 2. Audio: background music, alternating narrators, 3. 3. Interactive and interesting media concept	Meets Two criteria	Meets One criteria

The data analysis technique in this study uses Miles and Huberman's interactive data analysis method (Asipi et al., 2022; Miles & Huberman, 1994). This analysis begins with data collection, followed by data reduction, data presentation, and conclusion. The researcher examined the data gathered through observation, interviews, and documentation to select relevant information and reduce irrelevant data. Researchers carried out various types of data checks using student interviews, documentation in the form of student worksheets, photos during the project and AI media. Then, they validate the data through triangulation, member checks, and expert opinions. The selected data are then presented and concluded. This flexible technique allows researchers to revisit collecting, reducing, delivering, and concluding data when new findings emerge.
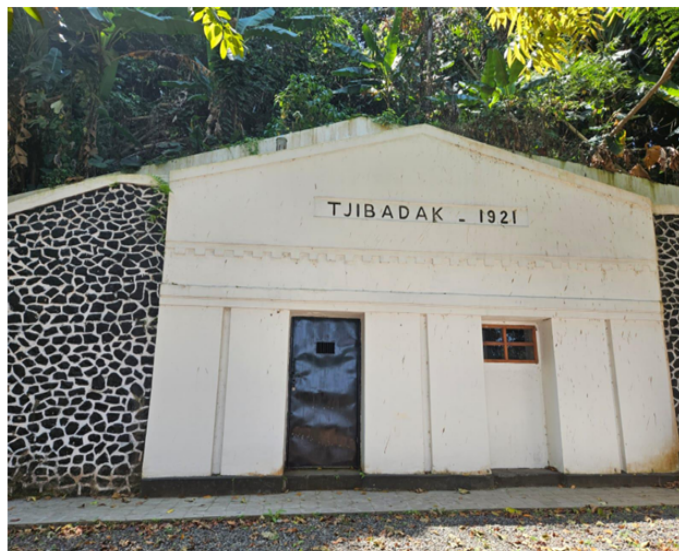
Result

Figure 1. Gedong Tjai Tjibadak

One of the cultural heritage sites in the Cidadap District is Gedong Tjai Tjibadak, located in North

Bandung near Terminal Ledeng. Gedong Tjai Tjibadak was built in 1921, making it 102 years old when this picture was taken. The building remains well-preserved, maintaining its original appearance. Gedong Tjai Tjibadak features architecture that clings to the edge of a valley with a triangular shape. The Dutch engineers designed the structure solidly and precisely to prevent landslides. The sound of rushing water with a high flow rate is noticeable around the building. Inside, there are water channels connecting pipes from the spring. These pipes, constructed during the Dutch colonial period, are still used today. The Bandung Regional Water Company (PDAM) at Badak Singa now manages the building to utilize the water for the people of Bandung. Additionally, the local community around this heritage site collaborates to collect the spring water to meet their daily needs.

Gedong Tjai Tjibadak is a project learning site for the Local History course in the History Education Program at Universitas Pendidikan Indonesia. The project chooses this location due to its proximity and accessibility, relatively unexplored status as a functioning cultural heritage building, and untapped potential as a local history learning resource in North Bandung. The professor designed the project assignment by providing topics and guidelines for conducting the project on the Gedong Tjai Tjibadak cultural heritage site.

Students explore Gedong Tjai Tjibadak by dividing into four groups, each focusing on different aspects: archival sources of Gedong Tjai Tjibadak, oral history of Gedong Tjai Tjibadak, and oral traditions of Gedong Tjai Tjibadak. The professor provides guidelines for the project implementation: students divide themselves into four groups; each group selects one of the available topics, and students explore Gedong Tjai Tjibadak according to their chosen theme. They regularly report their activities during class meetings—the exploration results in AI-generated media available on a website or application.

The professor presents the project assignment to the students in the first meeting. During this session, they explained the finalized project design and what the students would be required to do. The professor instructs the students to trace the historical footprint of Gedong Tjai Tjibadak, located near UPI. They also outline the steps they need to follow for this project. Additionally, guidelines and sub-themes were discussed with the students on class consensus to ensure their commitment to the assignment.

During the 10th meeting, the professor divides the students into eight groups and assigns the available subtopics. They planned the distribution of individual tasks, scheduled field visits, and organized essential items and travel routes. Before the fieldwork, the professor advises students to seek literature references to understand and explore with adequate knowledge. The activities in the 10th meeting finalized the agreed-upon project plan. Students also planned to complete their assignments in class while discussing with the professor to ensure clarity and alignment with class agreements during their exploration.

In the second meeting, the students reported the progress of their respective tasks. Over the week leading up to the 11th meeting, they studied the references related to their subtopics, using online sources and books on the history of Greater Bandung. The instructor guided the students in applying historical methods, emphasizing the importance of external and internal source criticism. During this meeting, the students also received guidance on conducting source investigations within the local community through oral history sources.

In the third meeting, the students gathered the necessary data from their literature studies and visits to the Gedong Tjai Tjibadak cultural heritage site. They began interpreting the collected data. The professor guided them in data interpretation and historiography. During this meeting, the students presented their process, covering heuristic methods, source criticism, interpretation, and historiography. The professor reviewed their work and provided feedback to help them compile the local history content of the Gedong Tjai Tjibadak Cultural Heritage site.

In the fourth meeting, the students presented their plans for processing the content material into

AI products. They utilized various applications and websites that offer AI content creation tools. The applications used included Canva, Dupdub AI, Rask AI, Runwayml, and Clipchamp. Using these applications, the students created AI products for local history learning, lasting 5-7 minutes. These tools facilitated the practical creation of AI products by incorporating the material content gathered from their field exploration at Gedong Tjai Tjibadak.

The professor also summarized the students' project-based fieldwork conclusions in this meeting. The conclusion was that Gedong Tjai Tjibadak is a significant water reservoir, channelling abundant water to households in Bandung. The establishment of Gedong Tjai Tjibadak was a response to the need for clean water during the Dutch colonial era when the residents of Bandung faced a disease outbreak due to inadequate clean water. The reflection from this course is that students could diligently and creatively explore the history of Gedong Tjai Tjibadak. Today, Gedong Tjai Tjibadak remains a key water conservation site in Bandung. The surrounding environment is well-preserved to ensure the site's sustainability, maintaining a strong and clean water flow.

This Project-Based Learning (PjBL) approach incorporates Artificial Intelligence (AI) and storytelling with iconic animation focusing on the Gedong Tjai Tjibadak cultural heritage building as a learning resource for the Local History course. The instructor divides the students into four groups: one focusing on AI products using archival sources due to the limited availability of archives. The remaining three groups used oral sources, including oral history and oral tradition.

Abdullah (1982) in Arsip Nasional emphasized that instructors can utilize oral sources to develop historical material and that oral history methods can help students understand communities and accustom them to research tasks. Although information from oral tradition is passed down through generations, potentially introducing biases in the historical narrative of Gedong Tjai Tjibadak, it remains crucial in complementing archival sources. As Mulyana and Gunawan (2007) described, oral traditions preserved through verbal memory typically flourish in societies without a writing culture and can be valuable in historical studies.

In this PjBL initiative, oral history and oral tradition are not strictly separated, as many eyewitnesses from the post-independence period to the present can provide stories and information about the development of Gedong Tjai Tjibadak. Each group, consisting of 11-12 members, created projects based on agreed-upon themes. Due to the limited availability of written sources, mainly archives, oral sources were prioritized, forming three groups focused on oral history and tradition. The produced AI content, presented as iconic animations, offers storytelling about Gedong Tjai Tjibadak based on the selected subtopics, as detailed in Table 1 below:

Table 2
Project Groups and AI Product Results

No	Group	Project Result
1	AI- Archives	
		https://drive.google.com/drive/folders/1lB92Sw3xnfHq85iUu8wniAkfY5JzY0Ts

2	AI-1 Oral Sources	
		https://drive.google.com/drive/folders/1lB92Sw3xnfHq85iUu8wniAkfY5JzY0Ts
3	AI-2 Oral Sources	
		https://drive.google.com/drive/folders/1lB92Sw3xnfHq85iUu8wniAkfY5JzY0Ts
4	AI-3 Oral Sources	
		https://drive.google.com/drive/folders/1lB92Sw3xnfHq85iUu8wniAkfY5JzY0Ts

Each group proceeded to plan the distribution of tasks among its members, scheduling field visits, and organizing essential items and travel routes. Additionally, the professor advises students to seek literature references to gain sufficient knowledge before conducting fieldwork. They study literature from online sources and books on the history of Greater Bandung. Some groups faced challenges due to limited information sources. Several groups also utilize various social media platforms to gather information due to the scarcity of literature sources. Some groups even sent preliminary teams to assess access and collect initial data by visiting Gedong Tjai Tjibadak. The professor guided students in applying historical methods, including external and internal source criticism. They also guide students in conducting source investigations within the local community through oral sources.

Figure 2. Interview with Correspondence (Top and Lower Left) and an Archive of Gedong Tjai Tjibadak's Official Launching (Lower Right)

Students were given one month to complete the assigned project, and using the PjBL model encouraged greater creativity (Suradika et al., 2023). The stages involved included discussions on implementation, guidance, data collection, project assessment, and student feedback. These discussions helped optimize student focus during the project (Wu & Hou, 2014). Several criteria determine the effectiveness of AI products on the Gedong Tjai Tjibadak cultural heritage building as learning resources for Local History. These criteria include ease of use, visual appeal, alignment between content and product design, and the relevance of the content to the assigned tasks. Each group then presents its final products. The research states specific guidelines to evaluate whether the AI products met the agreed-upon criteria. The discussion section then presents the results or scores for each criterion. Table 2 below

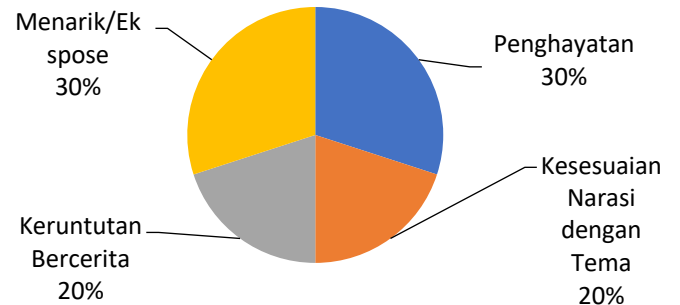outlines the indicators and criteria for assessing the products.

Table 2
Assessment Results

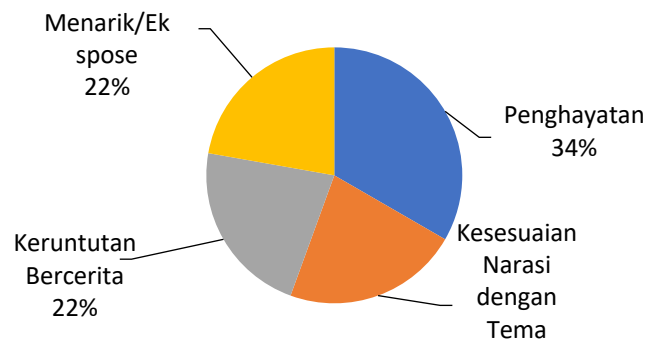| No	Group	Assessment Indicator dan Criteria				
		Immersion	Conformity between narration and theme	Storytelling	Aesthetics	Total
1	AI-Archives	2	2	2	3	9
2	AI-Oral Sources 1	3	2	2	3	10
3	AI-Oral Sources 2	2	2	2	2	8
4	AI-Oral Sources 3	3	2	2	2	9
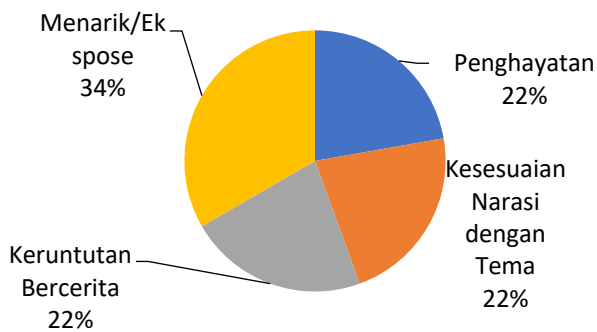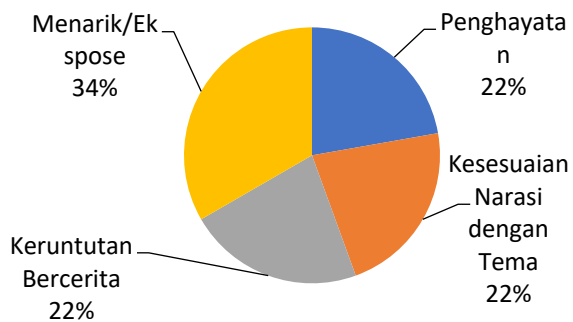
Figure 3. AI Products' Scoring Diagram

The assessment results show that the AI-Archive group can create AI products with a score of 9. The composition of AI-Archive stands out in the aesthetic aspect by 34%. At the same time, other aspects such as immersion, Storytelling, and Conformity are 22%. In the AI-1 Oral Source group, they score 10 for AI products. They are quite prominent in aesthetics and immersion. The AI-2 Oral Source group scores 8, comprising 25% immersion, 25% conformity, 25% storytelling, and 25% aesthetics. The AI-3 Oral Source group scored 9 in AI products, with an advantage in immersion of 34%. The rest is conformity, aesthetics, and storytelling by 22%. Based on these results, the AI product of the AI-1 Oral Source group is in first place because it has advantages in the aesthetic and immersion aspects. Next are the AI-Archive group and the AI-3 Oral Source group, which have advantages in aesthetics and immersion. Meanwhile, the AI-2 group is in last place with an even score in all aspects of 25% with a score of 8.

Discussion

Implementing the Project-Based Learning (PjBL) model can be an alternative to teaching and learning across all educational levels. Specifically, the application of this model using Artificial Intelligence (AI) platforms is conducted in groups, utilizing technology to facilitate communication without spatial limitations. The current trend of AI usage as a learning medium may support 21st-century skills (Wahyudi et al., 2022). When integrated with Local History, the AI products generated inherently positively impact students. This section will discuss the extent to which applying the PjBL model using AI platforms in the Local History course produces effective and engaging learning resources.

Two groups scored the same in the immersion indicator, each receiving a score of 2 and 3. They performed well in the first criterion—speaking confidently and clearly— and received optimal scores. However, the immersion indicator related to varying pitch and volume, as well as varying speaking speed and using pauses, was not maximized. This result suggests that groups with adequate scores might have been underprepared in their practice.

Although the immersion indicator might seem simple, this aspect requires attention in the AI platform. As a learning resource, it will influence those who use it. Learning resources using AI enhances students' communication skills (Ito et al., 2021). They discuss and connect through technology without spatial constraints. The current trend of using AI in learning supports 21st-century skills (Ng et al., 2023). AI storytelling motivates students to learn effectively (Chen Hsieh & Lee, 2023). When integrated with local history, AI products undoubtedly impact students.

Regarding the second indicator, the conformity between narration and theme (precisely the criteria for narrative interpretation and argument emphasis), all groups scored a 2, indicating a sufficient level. This result suggests that the academic abilities of all groups need improvement. Several reasons could account for this: a) The Local History course is offered to first-semester students, meaning they have just graduated from high school, so their abilities in this area are still developing. b) The assessment criteria for the two indicators require students to possess imaginative and critical thinking skills regarding the facts they have gathered from their sources. As Kartodirdjo (2017) emphasized, a narrative always contains facts about what, who, when, and where, and researchers must establish those elements precisely. A narrative needs imagination to animate the story from this series of facts and fill in the gaps or deficiencies, much like everyday experiences.

However, the results show that the arguments presented in all four AI products are superficial and lack strength. It could be that historical sources, both archival and oral, have not been effectively managed, especially during interviews where detailed information extraction was insufficient. Local history contexts often fail to attract attention and are considered insignificant (Samad et al., 2020). Therefore, regarding the second indicator concerning interpretation and the ability to present arguments, students must possess storytelling skills, both in writing and oral form. Through AI, local history can raise

historical awareness. Historical awareness through local history improves because students can easily access historical sources around them (G. Awa-ao & M. Roperez, 2024; Muhtarom, 2023).

For the third indicator, the results for coherence in storytelling (precisely chronological criteria and completeness of explanation) are not yet optimal, which is understandable because a) understanding of chronological time has not fully developed, especially among students in their early semesters; b) completeness of explanation is closely related to student's ability to access archival sources, and for groups using oral sources, it depends on their skill in extracting information by asking questions to the informants. Oral statements from recorded interviews represent a non-written source and can complement written sources (Winarti & Darmawan, 2020). Therefore, skills in asking questions are necessary to ensure completeness and detail in the explanation for the third indicator.

Chronology is crucial in historical studies to understanding the sequence of time and events. A coherent timeline of events will determine the completeness of the narrative of the Gedong Tjaik Tjibadak cultural heritage building's historical journey. A comprehensive description should answer the 4 Ws (what, when, where, why) and 1 H (how) questions, which have not received optimal attention. Discussions can optimize students' focus on projects by arranging a chronological sequence (Wu & Hou, 2014). They can collaborate to answer these questions and create meaningful learning experiences with teamwork skills to prepare for the future (Sirait & Amnie, 2023). Student collaboration involves decision-making, allocating roles based on individual abilities, and mutual attention to each group member's tasks to complete a project (Desyarti, 2019). The PJBL model impacts students' collaborative skills and creativity (Khoiri et al., 2023).

Lastly, the indicator of aesthetics shows a balanced score between 2-3, indicating that overall, AI platforms have made PJBL as engaging as possible. However, there is room for optimization, particularly regarding the interactive media concept. In presenting AI-based content, the challenge lies mainly in time management for the two groups that did not achieve the maximum score to hone their skills. Presentation style is closely related to personal preference and technical skills. Visual or oral narratives must use relevant evidence in presenting themselves. In historical research, what matters most are proofs, documents, or testimonies (Kartodirjo, 2017). As a learning medium, it should be packaged as effectively and engagingly as possible, as modern generations describe it as interactive. Longer durations, such as 10 minutes, might provide ample time for other groups to achieve optimal scores. It is worth noting that students creating AI products are part of Generation Z and are already familiar with information technology.

Students demonstrate their problem-solving skills through creativity using AI (Chang et al., 2022). In this case, students explored the history of the cultural heritage site Gedong Tjai Tjibadak. They encountered challenges related to the availability of sources. Despite these obstacles, they sought alternative solutions and resolved the issues to complete their PJBL task. Through training in problem-solving via creativity, PJBL empowers students to be innovative in addressing everyday challenges. Creativity within the PJBL model is implemented through AI product exploration, creation, interpretation, and development (Fitri et al., 2024).

Project-based learning (PJBL) at the higher education level presents an alternative to 21st-century education. PJBL is highly relevant to 21st-century learning as it enhances educators' efficacy and trains 21st-century skills for Generation Z students (Martinez, 2022). PJBL supports collaboration between educators and students to achieve skill development goals ((Roemintoyo & Budiarto, 2023). Additionally, PJBL's implementation can boost student motivation and interest (Almazroui, 2023). This improvement is evident in students' active engagement in gathering data and creating compelling products. They actively participate in project activities, exploring fieldwork to solve problems. PJBL encourages problem-solving activities ((Rehman et al., 2023), enhancing students' problem-solving skills.

Conclusion

Implementing the PJBL model in local history courses with AI-based products benefits students. It allows them to practice collaboration, communication, and creativity—three critical skills for facing 21st-century challenges. Integrating PJBL effectively with Artificial Intelligence enhances the learning process in local history, making the material more diverse and engaging through alternative formats. AI-based projects as history learning resources allow students to showcase their skills optimally. Using PJBL based on AI platforms facilitates local history learning according to educational needs. The presence of AI platforms complements the learning process, making it more accessible, practical, and engaging. This study has limitations in measuring the effectiveness of AI use. So, future research can be continued on the efficacy of using AI in local history learning.

Acknowledgement

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