

The Potential for Integrating Educational Values of Local Literature from Hulu Sungai Selatan into AI-Based Innovative Learning

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Abstract. Local literature possesses educational values that are essential for character education among the younger generation, especially within the context of Indonesian culture. This study aims to examine the potential integration of educational values from the local literature of Hulu Sungai Selatan, specifically the legends of Batu Laki and Batu Bini, as well as Hampang Datuo, into AI-based learning. Values such as filial piety, mutual cooperation, and social solidarity are identified as important components that can be strengthened through interactive and personalized AI technology applications. Several AI technologies applied in this research include Natural Language Processing (NLP) to create chatbots representing characters in the legends, Machine Learning (ML) for adaptive learning systems, Computer Vision for cultural artifact visualization, and Intelligent Tutoring Systems (ITS) to provide personalized guidance. The study results show that AI can enhance student engagement and comprehension of moral values in local literature by providing a more engaging, adaptive, and relevant learning experience. The implications of this study include opportunities for local cultural preservation through modern learning relevant to the digital generation, as well as improving the effectiveness of character education based on local wisdom.

Keywords: Local literature, artificial intelligence, educational values, character education, chatbot, adaptive learning, cultural visualization, AI-based education

1. Introduction

Local wisdom is a cultural element that reflects the identity and noble values of a community. In the context of local literature, this wisdom is often conveyed through folklore, legends, and oral traditions that are rich in philosophical and moral meaning (Harpriyanti, H., & Wulandari, 2024); (Nurgiyantoro, 2019). Hulu Sungai Selatan Regency in South Kalimantan holds a diverse legacy of oral literature, including the legends of Batu Laki and Batu Bini, the legend of Hampang Datuo, and other folk tales. This local literature is not merely a collection of stories; it also contains educational values that can serve as sources of moral learning, such as respect for parents, mutual cooperation, and love for nature (Arifin, 2018).

Previous studies have shown that these legends are still alive in the community of Hulu Sungai Selatan and play a vital role in preserving the local cultural identity (Rochyadi, 2020). For example, the legend of Batu Laki and Batu Bini teaches the importance of filial piety, while the legend of Hampang Datuo illustrates the significance of mutual cooperation in community life. These values not only shape the character of the local community but are also relevant for conveying to younger generations as part of character education (Hasan, R., & Sutrisno, 2022).

Despite its rich educational values, local literature in Hulu Sungai Selatan faces challenges in preservation, especially among younger generations who tend to be more interested in digital media and

interactive technology (Hermawan, 2021). Research by (Wijayanto (2023) suggests that current technological advancements open up new opportunities to introduce local literature to the younger generation through a more innovative approach. Artificial Intelligence (AI), for instance, can be utilized to create interactive learning media that bring folklore to life in an engaging and accessible way. Additionally, AI enables the development of adaptive applications that can tailor learning materials to students' needs and interests, making the learning process more effective and personalized (Siregar, 2021).

In the context of formal education, integrating local cultural values into the curriculum through innovative technology has the potential to support the achievement of national educational goals. The Indonesian National Education System Law No. 20 of 2003 states that national education aims to develop the potential of students to become individuals who are faithful, pious, and of noble character. The integration of local literature into AI-based learning can serve as a strategic step to instill these values among students effectively. As Astuti (2019) has noted, the values in local literature can be utilized to strengthen character education, especially when delivered through teaching methods aligned with technological advancements and the learning styles of today's generation.

This study aims to examine the potential of integrating the educational values of local literature from Hulu Sungai Selatan into AI-based learning. This approach is expected not only to enhance students' understanding of local culture but also to support the preservation of cultural heritage amid technological development. Furthermore, it is hoped to contribute to improving the quality of education through innovative and adaptive learning media. Thus, this study is expected to serve as a guide for educators and policymakers in developing local wisdom-based learning that meets the needs of the younger generation.

2. Method

This study employs a descriptive qualitative approach aimed at exploring the potential for integrating educational values from the local literature of Hulu Sungai Selatan into innovative AI-based learning. A qualitative approach was chosen because the research focuses on analyzing the content of local literature and developing an adaptive and interactive learning concept using technology (Creswell, 2013). The research methodology consists of several main stages: data collection, data analysis, and the development of an AI-based learning media concept.

Data collection was carried out through several techniques, namely documentation, in-depth interviews, and literature review. Documentation Study: The documentation technique was used to gather various forms of local literature from Hulu Sungai Selatan, such as legends, folklore, and myths that potentially contain educational values. Collected documents include written records, books, and other publications containing relevant local stories (Bogdan & Biklen, 2007). In this study, the legends of Batu Laki and Batu Bini, as well as Hampang Datuo, were the main focus, as they embody values such as filial piety and mutual cooperation, which are relevant in character education.

In-depth Interviews: In-depth interviews were conducted with several cultural figures, traditional leaders, and literary activists in Hulu Sungai Selatan Regency who have a deep understanding of these local stories. This technique aims to gain a deeper understanding of the meanings, values, and moral messages within each story. Interviews also focused on the relevance of these stories in the context of educating the younger generation (Patton, 2002). All interviews were recorded and transcribed for analysis purposes. Literature Review: A literature review was conducted to identify and understand previous studies that are relevant, particularly those discussing the use of technology in culture-based learning. Some of the referenced literature includes a study by (Harpriyanti & Kamariah, 2019) on the role of local literature in character education and an article by Wijayanto (2023) exploring the potential use of AI in cultural learning.

This review helps establish a theoretical foundation for developing AI-based learning media that incorporates the values of local literature.

The collected data were analyzed using a thematic analysis approach, where each story or legend was broken down to identify key themes containing educational values. Thematic Analysis: Each story or legend was analyzed to identify relevant themes, such as filial piety, mutual cooperation, environmental love, and other important values in character education (Braun & Clarke, 2006). This analysis also examines how these themes can be integrated into innovative learning processes. For example, the Batu Laki and Batu Bini legends, which emphasize filial piety, were identified as values that could be applied in AI-based learning, where AI could present the story in an interactive dialogue format that allows students to experience the narrative more deeply.

Data Triangulation: Data triangulation was conducted to ensure the validity of the findings. This technique involves comparing data from interviews, documentation, and literature to derive robust conclusions about the values within local literature (Denzin, 1978). The results of this analysis form the basis for developing an effective learning media concept.

Based on the data analysis results, the next step is to design an AI-based adaptive learning media concept that allows the interactive integration of local literature values. Design of Adaptive AI-Based Learning Media: The learning media concept designed involves the use of AI to create an adaptive learning application, which adjusts the material and delivery methods according to students' needs (Siregar, 2021). For instance, an AI-based chatbot can be developed to introduce characters from Hulu Sungai Selatan folklore, enabling students to interact directly and delve into the values within the stories. AI also allows real-time analysis of student responses to provide personalized and adaptive feedback.

3. Results and Discussion

This study focuses on the potential integration of educational values embedded in the local literature of Hulu Sungai Selatan into AI-based learning. The findings reveal that legends such as Batu Laki and Batu Bini, as well as Hampang Datuo, contain profound moral messages and cultural values highly relevant to character education. Moreover, this study demonstrates that AI technology can be effectively applied to convey these values through more interactive and adaptive learning methods.

1. Educational Values in the Local Literature of Hulu Sungai Selatan

Previous studies indicate that folklore and legends from Hulu Sungai Selatan hold important moral values for character education. These values can serve as a foundation for building strong personalities rooted in local culture. The primary findings from this study highlight two legends popular within the local community:

- a. The Legend of Batu Laki and Batu Bini: This tale emphasizes the importance of filial piety. In this story, a disobedient child is ultimately cursed into stone by his mother. The moral message of this tale is relevant for instilling in students the importance of respecting parents and maintaining family bonds. Nurgiyantoro (2019) asserts that folklore that conveys moral values through storytelling can shape children's character more effectively, as it touches the emotional aspects of students. This makes the legend of Batu Laki and Batu Bini an ideal example for educating students about the value of filial piety and the negative consequences of disobedience.
- b. The Legend of Hampang Datuo: This story teaches the importance of mutual cooperation and social solidarity. In the tale, villagers work together to protect the peace and safety of their village from external threats. The value of mutual cooperation in this story aligns closely with Indonesian culture, which emphasizes togetherness and helping one another. (Hasan & Sutrisno, 2022) explain that mutual cooperation is one of the fundamental pillars of Indonesian society that should be preserved and strengthened through culture-based education. This story can be used as a concrete example to teach students about the importance of cooperation in community life.

The following table summarizes the educational values found in these legends:

Table 1. Educational Values in the Legends of Hulu Sungai Selatan

Legend	Main Educational Value	Description
Batu Laki and Batu Bini	Filial piety and respect for parents	Depicts the negative consequences of disobedience, emphasizing the importance of respecting parents as a fundamental cultural value.
Hampang Datuo	Mutual cooperation and solidarity	Teaches the importance of working together to face threats, symbolizing unity within the community.

2. AI Technology Integration in Educational Value-Based Learning of Local Literature

AI technology opens up opportunities for local wisdom-based learning by providing a more modern, engaging, and interactive approach, particularly for younger generations. The moral and cultural values from the legends of Hulu Sungai Selatan, such as filial piety, mutual cooperation, and social solidarity, can be effectively conveyed through various AI applications. Below are relevant ways to integrate AI technology to bring the legends of Batu Laki and Batu Bini, as well as Hampang Datuo, to life in an educational context.

a. Natural Language Processing (NLP)

Natural Language Processing (NLP) is a technology that enables natural language processing, allowing machines to understand and respond to human language. In this context, NLP enables the creation of chatbots that can represent characters in the legends and interact with students.

Implementation for the Legend of Batu Laki and Batu Bini: A chatbot can be programmed to play the roles of the mother and child characters from the legend. In this dialogue, students can role-play as the child and directly experience a conversation that emphasizes respect for parents. For instance, students can ask questions to the chatbot (acting as the mother) about her views on the child's behavior, and the chatbot can respond with advice and moral messages. Through this type of dialogue, students directly experience the moral lesson about the importance of filial piety, deepening their understanding through meaningful interaction.

Implementation for the Legend of Hampang Datuo: Chatbots can be used to represent village characters who work together to protect their village from threats. Students can interact with the chatbot, which emphasizes the importance of cooperation, mutual assistance, and social solidarity. They can ask the chatbot characters about the challenges faced by the village or how villagers united to confront these threats. This interaction helps students understand that mutual cooperation is an essential social value displayed through direct engagement with the story.

According to Lee et al (2022), learning through interactive chatbots allows students to experience a more personal and emotional learning experience, helping them better understand and internalize the values within the stories.

b. Machine Learning (ML)

Machine Learning (ML) enables adaptive learning, where learning material is tailored to students' interests and comprehension levels. This technology can be used to create a learning system that presents different content based on student responses.

Implementation for the Legend of Batu Laki and Batu Bini: An ML system can be designed to detect student responses to the theme of filial piety. If a student shows a high interest in the value of respect, the system will expand content related to this story by adding reflective quizzes on respecting parents or deeper dialogue simulations. For instance, students showing a high interest in understanding the moral aspects of the story might receive additional scenarios that depict further consequences of disobedience.

Implementation for the Legend of Hampang Datuo: An adaptive learning system can detect student interest in the theme of mutual cooperation and adjust content to reinforce this value. If a student is intrigued by the concept of social solidarity, the system can present additional material, such as modern examples of mutual cooperation in society and how this value applies in real life.

(Santoso, 2022) state that AI-based adaptive systems can increase student engagement, as students feel the material is tailored to their personal interests.

This approach provides each student with a personalized learning experience, making their understanding of the moral values in the legends deeper and more relevant.

c. ComputerVision

Computer Vision enables the visualization of local cultural elements in an interactive digital format. This technology can be used to create a visual learning experience that enhances students' understanding of the stories.

Implementation for the Legend of Batu Laki and Batu Bini: Computer Vision technology can display images or 3D models of the stone believed to represent the disobedient child in the legend. Students can view and interact with the visualization of the stone associated with the story, helping them internalize the moral lesson about respect for parents. This stone visualization can also be integrated with the narrative of the child's transformation into stone as a consequence of disobedience, allowing students to feel the emotional impact deeply.

Implementation for the Legend of Hampang Datuo: The visualization of the cooperating village in the story can be shown in images, illustrations, or interactive models depicting the setting. Students can see symbols of mutual cooperation, such as villagers working together during village events or ceremonies. (Putra, 2018) note that the use of visuals in cultural learning helps students form an emotional attachment to the culture they study, as they can see and experience visual elements relevant to local culture.

d. Intelligent Tutoring Systems (ITS)

Intelligent Tutoring Systems (ITS) provide personalized guidance and feedback to students, helping them better understand complex material, such as cultural values.

Implementation for the Legend of Batu Laki and Batu Bini: ITS can provide additional guidance when students struggle to understand the moral messages in this legend. For instance, after students read the story or interact with the chatbot, the system can offer further reflection through quizzes or discussion questions on the importance of filial piety and provide additional explanations as needed. (Hidayat, S., & Susilo, 2020) state that ITS, which offers personalized feedback, helps students overcome confusion and ensures a deeper understanding of the material.

Implementation for the Legend of Hampang Datuo: ITS can be used to encourage further reflection on the importance of mutual cooperation. After interacting with the village visuals or chatbot characters, ITS can provide an interactive quiz that prompts students to reflect on the benefits of cooperation in daily life. If students answer correctly or provide relevant insights, ITS can offer additional guidance to enhance their understanding of solidarity. This creates a learning experience that reinforces their understanding through guidance and personalized feedback, orienting them toward strengthening their character in terms of mutual cooperation and solidarity.

The following table summarizes AI technology applications that can be implemented in educational value-based learning of local literature:

Table 2. AI Technology in Educational Value-Based Learning of Local Literature

AI Technology	Application in Local Wisdom-Based Learning	Benefits
Natural Language Processing (NLP)	Interactive chatbot as characters in the legends	Enhances student interaction with story characters, deepening their understanding of story values.
Machine Learning (ML)	Adaptive learning based on interests and comprehension level	Provides content tailored to students' needs and interests, increasing engagement and motivation.

AI Technology	Application in Local Wisdom-Based Learning	Benefits
Computer Vision	Visualization of local cultural artifacts	Offers a visual experience that enriches understanding of culture within the story context.
Intelligent Tutoring Systems (ITS)	Personalized feedback and guidance	Supports more personalized learning, helping students to gain a deeper understanding of the material.

3. Impact of AI-Based Learning on Student Character Education

By integrating AI technology into culture-based learning, students not only gain knowledge about cultural values but also experience a more personal and immersive learning environment. Some positive impacts of implementing AI-based learning include:

- a. **Increased Student Engagement:** AI technology allows students to engage directly in a more interactive learning experience. The use of chatbots and interactive visualizations helps students understand moral and cultural values more deeply. According to (Sanchez, 2022), interactive AI-based learning approaches can increase student participation and motivation, as students feel more connected to the material presented.
- b. **Personalized Learning:** Machine Learning enables personalized learning, where content is tailored to students' interests and needs. This customized learning approach motivates students and makes them feel valued, as the learning material aligns with their interests. Rahmawati & Aditya (2020) state that personalization in AI-based learning can significantly enhance student interest, especially in understanding cultural values that may feel relevant to their daily lives.
- c. **Strengthening Cultural Identity:** Understanding local cultural values through an immersive approach not only helps students grasp moral concepts but also strengthens their own cultural identity. With AI-based learning focused on local wisdom, students can develop a stronger emotional attachment to their culture, which helps to reinforce their sense of belonging. Harpriyanti & Wulandari (2024) affirm that culture-based learning helps students to better understand and appreciate the cultural values around them.

4. Discussion

The use of AI in local wisdom-based learning offers opportunities to introduce traditional values in a way that is relevant to the digital generation. Nugroho (2021) state that AI technology can adapt cultural content into a modern and interactive format, making it more accessible for today's students. By utilizing this technology, stories such as Batu Laki and Batu Bini, as well as Hampang Datuo, can be delivered in an engaging manner, allowing students to grasp moral values without feeling bored.

However, it is important to ensure that AI technology does not replace the authentic cultural values embedded in these stories. As noted by Hidayat & Susilo (2020), implementing AI in cultural education must consider ethics and cultural sensitivity, so that AI serves as a tool that enriches the learning experience without diminishing the authentic values of the culture.

5. Conclusion

This study shows that local literature from Hulu Sungai Selatan, such as the legends of Batu Laki and Batu Bini and Hampang Datuo, holds great potential as a medium for character education by integrating educational values into AI-based learning. Values such as respect for parents, mutual cooperation, and social solidarity not only reflect the culture of the Banjar community but are also relevant to character education for students today. AI technology, through applications like Natural Language Processing (NLP), Machine Learning (ML), Computer Vision, and Intelligent Tutoring Systems (ITS), offers an interactive, adaptive, and personalized learning approach that can enhance students' engagement and understanding of the moral values within these folktales.

The use of AI technology in learning facilitates the delivery of local wisdom-based content that aligns with the learning preferences of the digital generation, who tend to be more attracted to interactive media and personalization. With chatbots that can represent story characters, visualization of cultural

artifacts, and intelligent tutoring systems, students can understand cultural values not only cognitively but also emotionally and experientially. This approach provides a more holistic perspective in character education and the preservation of local culture.

Implications

Based on the conclusions, several important implications can be drawn from this study:

1. **Educational Implications:** Integrating educational values from local literature into AI-based learning offers educational institutions an opportunity to strengthen culture-based character education. A curriculum that combines local wisdom with modern technology allows students to learn in a more contextual and relevant way. This can also serve as an innovative model of culture-based learning that not only educates but also preserves local culture. Therefore, schools and government agencies should consider implementing this learning model in primary and secondary education as part of the national character education program.
2. **Technological Implications:** When developing AI-based learning systems, it is crucial to incorporate cultural elements to ensure that the values contained in local literature are not lost in the digitalization process. Educational technology developers should collaborate with cultural experts and educators to ensure that AI applications, such as chatbots or adaptive learning systems, maintain local cultural context and ethics. Additionally, developing AI technology in cultural education requires ethical programming oriented toward preserving moral values, so the technology truly functions as a tool that enriches learning.
3. **Implications for Cultural Preservation:** AI-based learning with a focus on local wisdom also has important implications for cultural preservation. By providing engaging and relevant access for younger generations, AI helps ensure that folklore and cultural values are not forgotten amidst changing times. These AI-based programs can also be expanded into broader digital resources, such as a digital folklore library or an interactive cultural learning platform accessible to anyone, not just in school settings.
4. **Implications for Further Research:** This study opens up opportunities for further research on the development of AI-based learning media focused on local culture. Future studies could explore the effectiveness of various AI technologies in enhancing students' understanding of cultural values and the long-term impact on character formation. Additionally, studies are needed to assess how AI-based learning contributes to students' attitudes and behaviors in appreciating their culture, which could provide valuable insights for the development of technology and culture-based curricula.

Overall, this study demonstrates that integrating educational values from local literature into AI-based learning not only supports effective character education but also aids in cultural preservation in a relevant and innovative way. Thus, this approach can serve as an adaptive educational model that meets the needs of the times while preserving cultural heritage for future generations.

References

- Arifin, M. (2018). *Legends and Local Wisdom in Hulu Sungai Selatan: A Study of Oral Literature*. Kencana.
- Astuti, S. (2019). *Character Education Based on Local Wisdom*. Gadjah Mada University Press.
- Bogdan, R., & Biklen, S. K. (2007). *Qualitative Research for Education: An Introduction to Theory and Methods*. Allyn & Bacon.
- Braun, V., & Clarke, V. (2006). Using Thematic Analysis In Psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Creswell, J. W. (2013). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches (3rd ed.)*. Sage Publications Ltd.
- Denzin, N. K. (1978). *The Research Act: A Theoretical Introduction to Sociological Methods*. McGraw-Hill.
- Harpriyanti, H., & Wulandari, N. I. (2024). Mamanda as a Medium for Cultural Education (Ethnopedagogical Study). *Onoma Journal: Education, Language, and Literature*, 10-(1), 43–58.

- Harpriyanti, H., & Kamariah. (2019). Character Education in the Folklore of South Kalimantan (The Perspective of Literary Sosciology). *Socia Jurnal Ilmu-Ilmu Sosial*, 16(1). <https://journal.uny.ac.id/index.php/sosia/article/view/25553>.
- Hasan, R., & Sutrisno, A. (2022). The use of AI in Innovative Culture-Based Learning. *Journal of Educational Technology*, 20(123–130).
- Hermawan, B. (2021). Digital Learning for Generation Z. *Indonesian Journal of Educational Innovation*, 10(1), 98–104.
- Hidayat, S., & Susilo, A. (2020). Culture-Based Learning in Education. *Journal of Character Education*. *Journal of Character Education*, 12(3), 187–201.
- Lee, J., Choi, H., & Park, S. (2022). The Use of Chatbots in AI-Based Learning. *Journal of Educational Technology*, 14(2), 102–120.
- Nugroho, S., et al. (2021). AI Innovation in Traditional Arts. *Journal of Art and Technology*, 8(1), 34–46.
- Nurgiyantoro, B. (2019). *Literature and Character Education*. Angkasa.
- Patton, M. Q. (2002). *Qualitative Research & Evaluation Methods (3rd ed.)*. CA: Sage Publications.
- Putra, A. W. (2018). Pamali as the Product of Ethnic Wisdom of the Indigenous People of Kampung Kita Ciamis. *Proceedings of the International Symposium on Social Sciences, Education, and Humanities (ISSEH 2018)*. <https://www.atlantis-press.com/proceedings/isseh-18/55915147>
- Rahmawati, Y., & Aditya, D. (2020). AI-Based Adaptive Learning and Its Impact on Student Motivation. *Journal of Educational Technology*, 15(2), 88–99.
- Rochyadi, D. (2020). *Local Wisdom as a Source of Moral Education in Schools*. Airlangga University Press.
- Sanchez, F., et al. (2022). Student Participation in AI Learning. *Journal of Education and Culture*, 10(1), 55–70.
- Santoso, R. (2022). Peran Teknologi dalam Mewujudkan Keadilan Sosial di Bidang Pendidikan. *Jurnal Pemberdayaan Masyarakat*, 9(1), 54–67.
- Siregar, A. (2021). Adaptive Potential of AI in Character Education. *Journal of Technology and Digital Learning*, 11(2), 101–112.
- Wijayanto, M. (2023). The Potential of AI in Culture-Based Literature Learning. *Journal of Educational Science*, 12(1), 88–96.