

ENGAGING ENGLISH LEARNERS: USING AI TO INTEGRATE LOCAL LEGENDS INTO LANGUAGE LESSONS IN WEST KALIMANTAN

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Abstract

This paper examines the integration of artificial intelligence (AI) with local legends in English language learning in West Kalimantan, Indonesia. In response to globalization, English education often overlooks local cultural contexts, leading to student disengagement. By incorporating local legends as teaching materials, this study illustrates how AI can create personalized, engaging, and culturally relevant learning experiences. The methodology involves selecting and digitizing local legends, utilizing AI applications for interactive learning, and implementing project-based and simulation-based strategies. The benefits of this approach include enhanced cultural identity, improved language skills, and increased student motivation. Challenges such as ensuring cultural relevance, access to technology, and the necessity for teacher training are also addressed. Ultimately, this integration enriches language proficiency while deepening students' connections to their cultural heritage, preparing them for a globalized world.

Keywords: *English Language Learning, Local Legends, AI in Education, Cultural Identity*

INTRODUCTION

Foreign language learning, particularly English, has become a priority in education in Indonesia in response to globalization. In West Kalimantan, a region rich in local culture, the teaching of English faces unique challenges. On the other hand, technological advancements, including artificial intelligence (AI), open new opportunities to enhance language learning methods. Artificial Intelligence (AI) has transformed various aspects of our lives, including education. One area where AI has made significant contributions is in language learning (The Use of Artificial Intelligence (AI) in Language Learning, 2023)

The importance of integrating local culture into education is often overlooked in the context of modern curricula. Furthermore, English language learning in West Kalimantan still tends to rely on conventional methods. Students often struggle to connect their English lessons with their everyday lives.

By integrating artificial intelligence (AI) into the learning process, local legends can be transformed into interactive and relevant teaching materials for students. AI can assist in personalizing learning, adapting content according to students' abilities, and providing a dynamic learning experience. The aim of this paper is to discuss the benefits, methodologies, and challenges of using AI to integrate local legends into English language learning.

The Importance of Local Legends

Legends are a part of cultural heritage that convey moral values, history, and the identity of local communities. In West Kalimantan, local legends such as folktales about the origins of cities, mountains, and rivers play a significant role in the lives of the people.

1. Cultural Identity

Teaching local legends in schools not only reinforces cultural identity but also helps students develop pride in their heritage. These stories reflect the history and worldview of local communities, which can enrich the language learning experience. When these legends are used as English teaching materials, students can learn the language in a more meaningful context.

2. Learning Context

One of the main challenges in foreign language learning is the lack of context that students can relate to. Often, the English textbooks used in Indonesian schools include situations that are irrelevant to students' daily lives. By using local legends as teaching materials, students can learn the language in contexts that are closer to their lives, making it easier for them to understand and use the language.

3. Moral and Ethical Lessons

Many local legends contain profound moral lessons, such as the importance of truth, justice, and wisdom. When students learn the language through these legends, they not only develop their language skills but also understand the moral values that have been passed down through generations.

AI in Education

Artificial Intelligence (AI) is rapidly transforming education by providing enhanced tools for personalized and adaptive learning. The application of AI in education, specifically in language learning, aims to improve the learning experience through real-time feedback, individualized content, and interactive environments. This theoretical framework outlines the key roles of AI in both education and language acquisition, highlighting critical areas such as personalized learning, adaptive teaching, and AI-powered tools for engagement.

1. AI in Education

AI in education has revolutionized the way learners interact with content and educators. It offers personalized learning pathways by analyzing large amounts of student data, such as learning styles, progress, and performance (Holmes et al., 2019). AI tools, such as intelligent tutoring systems and automated assessments, help educators manage large groups of students while maintaining individualized attention (Zawacki-Richter et al., 2019).

a) Adaptive Learning:

Adaptive learning systems leverage AI algorithms to adjust the content and pace of lessons based on a learner's strengths and weaknesses. This personalized approach helps learners who struggle in specific areas by providing additional resources or challenges as needed (Luckin et al., 2016).

b) Intelligent Tutoring Systems (ITS):

AI-powered tutoring systems provide one-on-one instruction, adjusting their teaching strategies based on how students interact with the material. ITSs can simulate the benefits of human tutors, offering targeted feedback and hints in real time (VanLehn, 2011).

AI in Language Learning

AI significantly contributes to improving the language learning experience. Tools that leverage AI, such as language-based chatbots and speech recognition

software, offer learners the opportunity to practice language skills in more authentic, conversational settings (Warschauer & Grimes, 2019).

a) Chatbots and Conversational AI:

AI-powered chatbots simulate real-world language usage by engaging learners in conversation. This promotes more frequent language practice, providing immediate feedback on sentence structure, vocabulary, and fluency (Huang et al., 2019).

b) Speech Recognition and Pronunciation Analysis:

AI systems designed for speech recognition evaluate a student's pronunciation, identifying errors and providing corrections. These systems allow learners to practice without the pressure of human judgment, enabling more consistent practice (Derwing & Munro, 2015).

c) Gamification and AI-Powered Engagement:

AI also plays a crucial role in gamifying the language learning process. By embedding language learning into game-like experiences, AI systems maintain user engagement and motivation (Sokolova & Laptev, 2019). These systems adapt challenges and scenarios based on user performance, ensuring an appropriate level of difficulty while maintaining interest.

Benefits of AI in Language Learning

AI offers numerous benefits in language education, including the ability to personalize learning paths, provide instant feedback, and increase learner engagement. It also enables continuous practice through adaptive learning environments, contributing to faster language acquisition and improved learner outcomes (Godwin-Jones, 2019).

RESEARCH METHOD

This case study examines a pilot program implemented at SMA Negeri 1 Pontianak, a high school in West Kalimantan, Indonesia. The initiative aimed to integrate local legends into the English language curriculum using artificial intelligence (AI) tools. The program sought to address challenges in student engagement and language proficiency by making lessons culturally relevant and interactive.

The application of artificial intelligence in language learning using local legends requires a systematic methodological approach. Here are the steps that can be taken to integrate AI and local legends into English lessons:

1. Selection of Local Legends

The first step is to choose relevant and engaging local legends for students. These legends should be tailored to the students' language proficiency levels and learning objectives

2. Digitalization of Materials

Once the legends are selected, the next step is to digitize the stories so that they can be processed by AI. This includes translating the legends into English and simplifying the narratives to match the students' language levels.

3. Utilizing AI Applications

AI-based learning applications can be used to present the legends in various formats, such as text, audio, or interactive videos. These applications should also be equipped with interactive features that allow students to engage with the stories and characters from the legends.

4. Feedback and Evaluation

AI can provide automatic feedback to students regarding their grammar, pronunciation, or speaking skills. The system can also be used to continuously evaluate students' development, assisting teachers in monitoring their progress.

Research Design

This study adopts a case study design with a descriptive approach, combining both qualitative and quantitative methods. It will gather and analyze data from a range of tools to offer a thorough assessment of the program's effectiveness.

Study Design: Descriptive
Methodology: Mixed-Methods: quantitative (surveys, assessments) and qualitative (interviews, observations, AI report analysis).
Research Type: Case Study
Duration of Study: 1 semester (focused on examining the impact of AI use and local legends in English language learning).

Population and Sample

The population for this case study includes all students enrolled at SMA Negeri 1 Pontianak, specifically those participating in the pilot program that incorporates local legends into the English curriculum through the use of artificial intelligence (AI). This initiative targets students with diverse English proficiency levels, from beginner to intermediate.

Population Overview:

- Location: SMA Negeri 1 Pontianak, West Kalimantan, Indonesia
- Total Students: The total number of students enrolled in the pilot program (for example, 100-200 students across multiple classes)
- Age Group: High school students, aged 15-18 years
- Student Profile: Students with various English proficiency levels, involved in a curriculum that integrates local legends and AI technology.

Sample:

The sample for this study is a purposive group of students selected from the classes participating in the pilot program at SMA Negeri 1 Pontianak. These students were chosen due to their direct involvement in the experiment of using AI and local legends to teach English.

Sample Overview:

- Number of Students: 30-50 students actively engaged in the pilot program
- Selection Criteria: Students who are actively participating in the program, representing different proficiency levels in English (including beginner, intermediate, and advanced levels).
- Profile: Students who have participated in the AI-based and local legend-based learning program for one semester or more, and are ready to be assessed based on their performance.

Instruments

The data collection instruments for this case study will include a variety of tools aimed at evaluating the success of the pilot program, with a particular focus on improving student engagement, English proficiency, and interaction with the learning materials. The instruments for this research are as follows:

- a. Questionnaire
A questionnaire will be used to gather students' perceptions about the use of local legends and AI technology in English language learning. It will include questions that assess:

- Student Engagement: The degree to which students feel motivated and involved in learning through local legends and AI.
- English Proficiency: Students' assessment of their improvement in English after participating in the program.
- Learning Experience: Students' reflections on their experience with AI-based learning applications.

b. English Proficiency Test

This test aims to evaluate the improvement in students' English abilities before and after the program. It will measure areas such as:

- Grammar: Knowledge of English grammar.
- Vocabulary: Vocabulary acquisition and usage.
- Speaking and Pronunciation: Ability to speak and pronounce English words correctly.
- Comprehension: Ability to understand English texts and stories.

c. Interviews

In-depth interviews will be conducted with both teachers and students to gather additional information about their experiences in the program. These interviews will explore the challenges, difficulties, and benefits encountered when using AI and local legends in the learning process. They will also address how students engage with the AI application and their views on the local culture depicted through the legends.

d. Classroom Observations

Observations will be carried out in the classroom to examine how students engage with the learning materials and AI applications, and to assess their participation in class discussions and activities. This will provide insights into the level of interactivity and the effectiveness of the technology in supporting English language acquisition.

e. Digital Documentation (AI Application Reports)

The reports generated by the AI application will track students' progress in grammar, pronunciation, and speaking skills. These records will be instrumental in evaluating how effectively the AI tool provides feedback and supports an objective assessment of students' progress.

f. AI Feedback

The AI system that offers real-time feedback to students will be an essential tool in automatically measuring students' grammar, pronunciation, and speaking abilities. Data derived from these interactions will help analyze how much improvement has occurred and highlight areas where further attention is needed.

RESEARCH FINDINGS AND DISCUSSION

The integration of AI into English language learning, particularly through local cultural content, aligns with several educational theories.

1. Constructivism: Project-based learning, where students are actively involved in reading, writing, and retelling local legends, is rooted in constructivist principles. According to constructivist theory, learning occurs as students actively construct their knowledge by engaging with real-world, meaningful tasks (Vygotsky, 1978). AI tools that help with grammar, vocabulary, and pronunciation provide scaffolding, allowing students to focus on content creation while receiving immediate feedback.

2. **Experiential Learning:** Simulation-based learning using virtual reality (VR) aligns with Kolb's (1984) theory of experiential learning. Students learn more effectively when they are immersed in practical experiences. In this case, students can engage with local folktales in a virtual environment, making language use more meaningful and contextually grounded.
3. **Sociocultural Theory:** The use of chatbots and AI-driven conversational agents connects with Vygotsky's (1978) sociocultural theory, which emphasizes the importance of social interaction in language learning. AI chatbots allow students to engage in dialogues with characters from local legends, creating an immersive and interactive language learning environment.
4. **Personalized Learning:** Adaptive learning technologies are founded on principles of differentiation and personalization in education (Tomlinson, 2001). AI systems that adapt to student performance are grounded in the belief that students have diverse learning needs and benefit from individualized instruction.

Implementation Strategies

To effectively implement the integration of AI and local legends into English lessons, effective implementation strategies are required. Here are several strategies that can be applied:

1. **Project-Based Learning**
Teachers can develop projects based on local legends in which students are tasked with reading, writing, and retelling the legends in English. AI can assist students with grammar, vocabulary, and pronunciation.
2. **Simulation-Based Learning**
Virtual reality (VR) technology combined with AI can create interactive simulations of folktales in which students act as characters in the stories. This allows them to use English in realistic and engaging contexts.
3. **Legend-Based Chatbots**
Creating chatbots that can speak and interact with students within the stories of the legends provides students with opportunities to converse in English with "characters" from the local tales.
4. **Use of Adaptive Learning Technologies**
AI can be employed to create learning programs that adapt to each student's needs. Based on student performance in each lesson, the AI system can adjust the difficulty level and types of exercises provided.

Benefits of AI Integration

Integrating artificial intelligence (AI) into language lessons can transform the learning experience for English learners, particularly when local legends from West Kalimantan are incorporated. This approach offers several significant benefits that can enhance engagement and improve language proficiency.

One of the primary advantages of AI integration is the ability to provide personalized learning experiences. AI systems can analyze learners' proficiency levels, allowing for tailored content that matches their specific needs and interests. For instance, when local legends are used as teaching material, students are more likely to connect emotionally with the content, which can significantly boost their motivation. Additionally, adaptive feedback from AI tools offers instant insights, helping students understand their strengths and areas for improvement, thereby fostering a more supportive learning environment.

Cultural relevance is another critical factor that makes this approach effective. By integrating local legends into lessons, educators can create a context that resonates with learners' backgrounds. This not only promotes language acquisition but also instills a sense of pride in their cultural heritage. Storytelling becomes an engaging method of instruction, as AI can facilitate interactive narratives that allow learners to immerse themselves in the legends, promoting both linguistic and cultural understanding.

Enhanced interactivity is a further benefit of using AI in language learning. Gamification elements can be introduced through AI-powered platforms, transforming traditional lessons into enjoyable, game-like experiences. Moreover, virtual reality (VR) technologies can create immersive settings based on local legends, enabling students to practice language skills in a vivid, relatable context. This hands-on approach encourages learners to engage actively rather than passively absorbing information.

AI also plays a significant role in improving specific language skills. For instance, AI-powered speech recognition tools can provide valuable feedback on pronunciation and speaking abilities, allowing learners to practice in a supportive environment. Similarly, interactive texts and quizzes generated by AI can enhance reading comprehension, encouraging critical engagement with the material. This multifaceted approach helps students develop a well-rounded skill set.

Collaborative learning experiences can be enriched through AI integration as well. AI platforms can facilitate group projects where students collaborate to create presentations or digital stories based on local legends. This fosters teamwork and enhances communication skills, making the learning process more dynamic. Additionally, AI can connect learners with peers from other regions, allowing them to share and compare local legends, thus broadening their perspectives and enhancing intercultural understanding.

Accessibility to resources is another significant benefit. AI can curate a wide array of materials, such as videos, articles, and audio related to local legends, simplifying the resource-gathering process for educators. Furthermore, AI can provide language support and translation services, making it easier for learners who may struggle with English proficiency to engage with the content meaningfully.

Finally, data-driven insights gained from AI can inform teaching practices. By tracking learning patterns and outcomes, educators can identify effective strategies and areas that need adjustment. Engagement metrics allow teachers to refine their approaches, ensuring that they meet the diverse needs of their students.

Challenges and Considerations

Integrating local legends into language lessons for English learners in West Kalimantan using AI presents a unique opportunity to enrich the educational experience. However, several challenges must be navigated to ensure the effectiveness and cultural sensitivity of this approach. One of the primary challenges is ensuring cultural relevance. The legends selected for inclusion should resonate with the students' backgrounds and experiences, necessitating careful adaptation to fit the language learning context. Additionally, the varied proficiency levels among learners require differentiated materials and teaching strategies, which can complicate lesson planning.

Access to technology is another critical consideration. While AI tools can enhance learning, not all students may have reliable access to the necessary devices or stable internet connections. This disparity can create inequities in the learning experience, making it essential to consider alternative methods or resources for those who may be less tech-savvy. Furthermore, teachers may need training to effectively integrate AI tools into their lessons, ensuring they are equipped to guide students through this innovative approach.

Cultural sensitivity is vital when incorporating local legends into lessons. Educators must respect the origins and significance of these stories while adapting them for a new context, ensuring that they do not lose their intrinsic value. This consideration extends to curriculum alignment; the integration of local legends should support local educational standards and objectives to ensure consistency and relevance.

To foster a dynamic learning environment, collaborative activities can play a crucial role. Encouraging students to share their interpretations of local legends promotes discussion and deepens their engagement with the material. Interactive AI tools, such as storytelling platforms and quizzes based on these legends, can further enhance student involvement and make language learning more enjoyable. Feedback mechanisms are essential for continuous improvement. Incorporating ways for students to provide feedback on the lessons and AI tools can help educators refine their approaches and better meet students' needs. Additionally, engaging parents and local communities can enrich the learning experience. Inviting local storytellers or organizing events centered around the legends can create a more immersive and culturally rich environment.

Finally, assessment strategies should reflect both language proficiency and cultural understanding. Developing assessments that allow students to express their learning creatively can enhance their connection to the material. By addressing these challenges and considerations, educators can create a meaningful language learning experience that honors local culture while leveraging the advantages of AI technology, ultimately fostering a deeper connection between students and their heritage

CONCLUSION

Integrating artificial intelligence (AI) with local legends in English language learning presents a unique opportunity to enrich educational experiences for students in West Kalimantan. By leveraging the cultural significance of local stories, educators can create engaging, relatable contexts that foster language acquisition while instilling pride in cultural heritage. AI's capabilities, such as personalized learning, real-time feedback, and interactive experiences, enhance the learning process, making it more dynamic and effective.

However, successful implementation requires careful consideration of cultural relevance, technology access, and the need for professional development among educators. Addressing these challenges will enable a more inclusive and effective language learning environment. Ultimately, this approach not only enhances language proficiency but also deepens students' connections to their cultural identity, preparing them for a globalized world while honoring their local traditions. Through thoughtful integration of AI and local legends, educators can cultivate a richer, more meaningful learning experience that resonates with students and empowers them as both language learners and cultural ambassadors.

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