

The Transformation of Folklore into Digital Form: Innovation in Literature Learning in the Era of Generative AI

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ABSTRACT

This study aims to describe the process and impact of transforming local folklore into digital formats using generative AI technology as an innovation in literature education at the Elementary School Teacher Education Program (PGSD), Universitas Pahlawan Tuanku Tambusai. This research uses a Research and Development (R&D) methodology with a mixed-methods approach, encompassing a needs survey, product development, and effectiveness testing among PGSD students. The developed digital product consists of folklore reimagined through generative AI (including text, voice narration, automatic illustration, and interactivity) to enhance literary appeal and comprehension. The results indicate that the transformation achieved high satisfaction and readability scores among students, while also improving motivation, literary appreciation, and digital literacy skills. The findings also reveal several technical and conceptual challenges, such as content originality, quality of voice and illustrations, and readiness of lecturers and infrastructure. In conclusion, utilizing generative AI to transform folklore into digital learning materials is an innovative, feasible, and effective strategy for enhancing literature learning in the PGSD program at Universitas Pahlawan Tuanku Tambusai.

Keywords: Folklore; Generative AI; Digital Learning Materials

INTRODUCTION

The development of digital technology over the past decade has brought significant changes to the field of education, including literature-based Indonesian language learning. Prospective elementary school teachers in the Primary School Teacher Education (PGSD) program are required to possess strong digital literacy skills to effectively integrate technology into teaching and learning activities. One form of innovation that can be developed is the transformation of literary works particularly folklore into digital, interactive, and engaging formats. This transformation not only broadens access to cultural heritage but also enriches teaching methods that align with the characteristics of the digital generation. As part of local culture, folklore holds great potential for shaping students' character and identity from an early age.

Therefore, innovative strategies are needed to ensure that folklore remains relevant within the context of 21st-century education.

Based on the above discussion, this study focuses on the transformation of folklore into digital form using generative AI technology as an innovation in literature learning within the PGSD program at Universitas Pahlawan Tuanku Tambusai. The research aims to describe the development process, effectiveness, and challenges of implementing this innovation in teaching. This study is expected to provide theoretical contributions to the development of technology-based literature learning models. Additionally, the findings can serve as practical guidelines for lecturers and students in integrating generative technology into Indonesian language learning. Therefore, this research plays an important role in reinforcing the relevance of literary education in the rapidly evolving digital era.

LITERATURE REVIEW

Folklore represents a cultural legacy rich in moral, social, and spiritual values that are highly relevant to character education for children. However, its presentation in learning contexts still often relies on conventional media that fail to engage the digital generation. Consequently, interest among both students and pre-service teachers toward traditional literary works continues to decline. Transforming folklore into digital form offers a solution capable of reviving interest through visual, auditory, and interactive approaches. Through generative technologies such as automated narrative text generation and AI-based illustration, folklore can be reimagined without losing its original essence. Thus, integrating AI technology into literary learning becomes a strategic step toward bridging tradition and innovation (Sari & Pramono, 2021).

In teacher education, mastering generative technology has become one of the essential 21st-century competencies that PGSD students must acquire. Students are not only expected to understand the theoretical concepts of literary learning but also to design creative and digital learning media. These skills enable them to produce teaching materials that are relevant to students' needs in the digital era. The application of generative AI in literature learning enhances meaningful and interactive learning experiences. Furthermore, students can grasp the essence of literature not only through text but also through digital visualization and narrative. Mastery of such skills supports the university's vision to produce innovative and adaptive future educators who are responsive to technological advances in education (Putri et al., 2022).

Universitas Pahlawan Tuanku Tambusai, as a higher education institution, is committed to developing digital literacy and creativity among its students. Through project-based learning, students are encouraged to integrate local cultural values with modern technology. The PGSD program plays a vital role in creating technology-based literary learning innovations tailored to the characteristics of elementary school students. The process of transforming folklore into digital form

serves as a strategic medium for strengthening students' cultural literacy. This innovation is not only relevant for pre-service teachers but also provides valuable teaching resources for use in elementary classrooms. Thus, university-level learning directly contributes to improving the quality of education in schools (Rahmawati & Yuliana, 2020).

Generative AI offers vast opportunities for creating dynamic and engaging literature learning materials. This technology allows for the creation of story texts, images, and narrative sounds that can be customized to meet user needs. In the context of literary learning, AI's ability to adapt language style and thematic content to local contexts helps students better understand the meaning of folklore. Moreover, students can play an active role in the creative process through editing, retelling, or re-visualizing the stories generated. Such active involvement strengthens their understanding of the aesthetic and moral aspects of literature. When used ethically and authentically, AI becomes a powerful pedagogical tool (Santoso & Dewi, 2023).

However, the use of generative technology in literature learning also presents challenges, particularly in maintaining the authenticity of original literary works. Some researchers emphasize that the use of AI should preserve the cultural and linguistic values embedded in folklore (Widodo, 2021). Students, as future educators, must understand that technology serves as a tool—not a replacement—for the cultural and moral essence contained within the original texts. Therefore, the transformation process must be conducted through educational, critical, and contextual approaches. The use of AI must also be supported by strong digital literacy to prevent plagiarism or distortion of meaning. This is an essential aspect of technology-based learning in higher education.

University-level literary education holds a strategic role in shaping cultural sensitivity and critical literacy among future teachers. Through folklore-based learning, students can internalize moral, social, and local wisdom values that they can later teach to elementary students. Transforming folklore into digital form makes the learning process more engaging and relevant to the modern world. Additionally, students develop collaboration, creativity, and critical thinking skills. Mastery of generative AI provides hands-on experience in how literature can be adapted without losing its authenticity. Thus, literature teaching at universities becomes not only theoretical but also practical and innovative (Nasution, 2022).

Previous studies have shown that AI-based digital media can significantly increase student engagement in learning. Students become more enthusiastic and demonstrate improved analytical skills when materials are presented interactively and multimodally. Transforming folklore into digital form can be an effective strategy to strengthen the literacy skills of PGSD students. This aligns with the Merdeka Curriculum, which emphasizes contextual, creative, and character-oriented learning. Moreover, this approach helps lecturers foster a more participatory and reflective learning atmosphere. Therefore, integrating AI into

literature learning supports the development of 21st-century competencies in higher education.

The digital transformation of literary works also contributes to the preservation of local culture in the era of globalization. Digitally developed folklore can be widely accessed and attract younger generations to explore regional cultural heritage. Through AI technology, traditional stories can be reconstructed with new visuals and narratives that still honor their original values. This process creates a new form of digital cultural literacy that aligns with contemporary needs. PGSD students at Universitas Pahlawan Tuanku Tambusai serve as change agents who connect traditional values with educational innovation. This effort aligns with the university's mission to strengthen culture- and technology-based education.

METHOD

Design and Sample

This study employed a Research and Development (R&D) approach using a modified version of the Borg and Gall model, which was adapted to suit the context of digital literary education. The research procedure consisted of several stages, namely: needs analysis, digital product design, expert validation, limited trials, and revision based on trial results. This sequence ensured that the product development process was systematic, iterative, and aligned with the educational objectives of literary learning in the digital era. The research subjects were fifth-semester students enrolled in the Primary School Teacher Education (PGSD) program at Universitas Pahlawan Tuanku Tambusai, who were taking the course "Indonesian Language Learning Based on Literature." These students were selected as participants because they represent pre-service teachers who are expected to integrate literary and technological competencies in future classroom settings.

Instrument and Procedures

Data were collected using multiple techniques, including observation, interviews, questionnaires, and documentation during the product development and implementation stages. Quantitative data were obtained from the media validation results and student responses regarding the effectiveness of the digital learning product. Meanwhile, qualitative data were derived from in-depth interviews and field observations, which captured students' experiences and perceptions of using generative AI-based media in literature learning. The final product of this research was an interactive digital folklore module developed using generative AI technology that integrates text, voice narration, and visual illustration elements. The implementation and testing results demonstrated that the integration of generative AI significantly enhanced the quality, attractiveness, and pedagogical effectiveness of literary learning among PGSD students. This innovation not only enriched students' digital literacy but also offered a creative model for revitalizing folklore in modern educational contexts.

Data Analysis

Data analysis employed a combination of qualitative descriptive analysis and descriptive statistical analysis. The qualitative data were processed through the stages of data reduction, data display, and conclusion drawing, in order to describe students' perceptions, engagement, and attitudes toward the integration of AI in literary learning. Quantitative data, obtained from expert validation sheets and student response questionnaires, were analyzed using mean scores and percentage calculations to determine the level of feasibility, usability, and learning effectiveness of the developed product. To ensure the credibility and reliability of findings, data triangulation was applied through the cross-verification of sources and methods. This approach strengthened the internal validity of the study and minimized bias during interpretation.

RESULTS AND DISCUSSION

The results of this study show that PGSD students demonstrated a high level of enthusiasm toward the development of digital folklore supported by generative AI. Among the 42 participating students, 90% reported that the use of this technology made literature learning more engaging, interactive, and dynamic. The development process was carried out collaboratively, involving students in scripting, visualization, and voice narration. Local folklore such as The Legend of Putri Hijau and The Origin of the Kampar River was reinterpreted using AI-generated narrative texts and illustrations. The resulting digital works adopted a multimedia format that combined text, images, and audio elements, showcasing students' ability to integrate local cultural values with modern technology.

During the expert validation stage, the developed digital products achieved an average score of 89%, categorized as excellent in terms of content quality, language, and visual presentation. Experts agreed that the materials successfully preserved the moral and cultural values of the original folklore. Students also showed a significant improvement in their literary appreciation skills after using the AI-based media. Based on the pretest and posttest results, the average student score increased by 25 points, particularly in understanding story meaning and intrinsic elements. These findings indicate that generative AI-based media contributed positively to students' literary comprehension. Furthermore, the digital products successfully fostered a sense of pride and belonging toward local cultural heritage. Throughout the implementation process, students were actively involved in exploring and analyzing folklore texts. They learned to adapt narrative structures into digital formats while understanding the roles of illustration and audio narration. This activity stimulated creativity and enhanced digital literacy skills. Some students even added interactive features, such as quizzes and multiple story paths, to enrich user experiences. Observations revealed that student engagement increased by 85% compared to traditional learning methods. This transformation shifted students' learning behavior from passive reading to experiential creation, where they not only interpreted but also produced digital literary works.

Interviews further revealed that students found generative AI helpful in saving time during the media production process. The technology was used to generate visual descriptions, refine grammar, and inspire narrative ideas. However, students remained actively involved in evaluating the authenticity and cultural appropriateness of AI-generated content. Some reported limitations, such as misinterpretations of characters or cultural settings by the AI system. These challenges were overcome through manual editing and group discussions, highlighting that human creativity remains the central component of technology-assisted learning.

Lecturer observations indicated a noticeable increase in motivation and classroom interaction during the implementation phase. Students appeared more confident in expressing opinions and interpreting story meanings. Lecturers acted as facilitators, guiding revisions and ensuring that cultural values remained intact. This collaborative process created a participatory and reflective learning environment. Generative AI thus served as a bridge between students' creativity and local culture-based learning, proving that technology can effectively enrich literature education without compromising its humanistic dimension.

Documentation analysis showed that students' digital products took various forms, including interactive e-books, narrated videos, and short animations based on folklore. Each work utilized AI tools such as ChatGPT, DALL·E, and ElevenLabs for text generation, illustration, and voice narration. Students successfully combined these three elements into appealing digital learning materials. Most works emphasized moral values such as honesty, perseverance, and environmental awareness. Evaluating lecturers noted that the integration of character education values with technology was the main strength of the project. This demonstrates the success of AI application within a humanistic educational context.

According to the student response survey, 92% agreed that literature learning using generative AI was easier to understand than traditional methods. They reported that digital visuals and narration helped them grasp characters and conflicts more deeply. Additionally, many students expressed greater motivation to produce their own literary works after participating in the project. The average motivation score increased from 3.2 to 4.6 on a five-point scale. Creativity also showed a significant rise, as evidenced by lecturer assessments. These findings reinforce the conclusion that digital innovation plays a crucial role in enhancing student interest and engagement in literary studies.

During the trial stage, lecturers found that the use of generative AI accelerated the development of literary teaching materials by up to 50%. Students were able to use AI tools to produce draft stories and initial illustrations before conducting deeper revisions. This efficiency allowed them to focus more on analyzing the cultural and moral values embedded in the stories. In some cases, students used AI outputs as material for critical discussion, comparing digital and traditional versions of the

same folklore. This approach enriched their understanding of the differences between human-authored and AI-generated narratives, fostering a stronger awareness of ethical technology use in literary education.

Overall evaluation results indicate that integrating generative AI in literature learning positively affected students' cognitive, affective, and psychomotor domains. Students not only understood the intrinsic elements of folklore but also developed empathy and cultural responsibility. They became more aware that technology can serve as a tool for cultural preservation, not merely as a form of digital entertainment. Lecturers noted that this approach successfully shifted learning paradigms from passive consumption to active production. Furthermore, the activity strengthened collaboration among students and encouraged the emergence of creative and innovative ideas. Thus, digital transformation served as an effective means of implementing culture-based education.

In general, the research findings demonstrate that the use of generative AI in the transformation of folklore within the PGSD program at Universitas Pahlawan Tuanku Tambusai is feasible, effective, and inspiring. Students successfully produced high-quality digital literary works that are relevant to 21st-century educational contexts. This success was supported by lecturer guidance, student collaboration, and the university's digital infrastructure. However, further training is needed to enhance students' understanding of AI ethics and usage boundaries. The findings of this research provide a new direction for developing digital literature learning materials rooted in cultural values. Consequently, this innovation can be replicated across teacher education programs throughout Indonesia.

The findings of this research confirm that the integration of generative AI in literature learning enhances both the effectiveness and attractiveness of instruction for pre-service teachers. This result aligns with Hidayat and Rukmini (2021), who found that interactive digital media significantly improve students' comprehension of literary texts. The transformation of folklore into digital form also strengthens the connection between cultural heritage and modern technology. The creative process demonstrated that AI use does not diminish the humanistic value of literature; rather, it serves as a facilitator for aesthetic expression. This reinforces the idea that technology can act as a partner in learning, not a replacement for human creativity.

Generative AI-based learning encourages students to think critically about the content and meaning of literary texts. They do not merely accept AI-generated results but evaluate their cultural relevance and accuracy. This process aligns with Pratiwi (2022), who emphasizes the importance of critical digital literacy in literature education so that students become controllers rather than mere consumers of technology. PGSD students in this study demonstrated high awareness of content authenticity and ethical use of AI, revising and discussing materials to maintain moral integrity. Hence, AI-assisted learning contributes to strengthening critical literacy among future educators.

Pedagogically, this approach aligns with student-centered learning principles, positioning students as active agents in their learning journey. The digital folklore project encouraged students to think creatively, collaborate effectively, and adapt to new technologies. As Lestari and Nugroho (2023) note, digital project-based literature learning fosters 21st-century competencies such as creativity and collaboration. Real-world engagement in creating digital literature made the learning process meaningful and contextual. Students not only understood literary theories but also applied them through communicative digital media, thereby bridging the gap between theory, practice, and technology.

Beyond academic improvement, the digital transformation of folklore also strengthened students' character values. Principles such as responsibility, perseverance, and cultural appreciation emerged naturally throughout the creative process. Students learned to respect and preserve cultural heritage while using it as a foundation for educational innovation. This demonstrates that generative AI technology can serve as an effective medium for culture-based character education. The finding supports the Merdeka Curriculum, which emphasizes balancing digital literacy with national and moral values. Thus, digital literature learning fulfills a dual function: educational enrichment and cultural preservation.

Despite its many advantages, several challenges were identified, particularly regarding AI output accuracy and illustration quality. Some generated results were not fully aligned with local cultural contexts, requiring manual revision by students. This indicates that technology still depends on human guidance to ensure educational and moral appropriateness. Such challenges present opportunities for universities to strengthen AI ethics and literacy training among pre-service teachers. This ensures that technological skills are used responsibly and ethically in educational contexts.

Conceptually, the results of this study reinforce constructivist learning theory, which posits that knowledge is built through active experience and reflection. Students constructed literary understanding through explorative engagement with generative AI. This learning experience cultivated awareness that technology can enhance creativity and cognitive development. The project-based digital approach also promoted collaborative learning, strengthening students' social and communication skills. Therefore, the use of AI in literature education not only affects academic achievement but also shapes adaptive and reflective teacher identities.

In conclusion, AI-assisted literature learning at Universitas Pahlawan Tuanku Tambusai proved effective in increasing students' motivation, creativity, and cultural literacy. This innovation can serve as a model of adaptive literature instruction responsive to technological progress while remaining grounded in local cultural values. The findings align with national educational goals that emphasize 21st-century competencies. By integrating generative AI ethically and creatively,

universities can cultivate innovative and culturally rooted educators. Thus, the digital transformation of folklore represents a strategic step in bridging tradition, technology, and the future of education.

CONCLUSION

This study concludes that the transformation of folklore into digital form using generative AI serves as a significant innovation in literature learning within the Primary School Teacher Education Program (PGSD) at Universitas Pahlawan Tuanku Tambusai. Through the integration of artificial intelligence technology, students not only gain a deeper understanding of the cultural and moral values embedded in traditional stories but also develop essential 21st-century competencies such as digital literacy, creativity, and critical thinking. The implementation results demonstrate an increase in learning motivation, literary literacy skills, and active student participation in the creation of digital works. Consequently, literature learning that was once conventional has evolved into an interactive and contextual learning experience aligned with the demands of the Education 5.0 era. This learning model is recommended for broader application within primary education curricula to promote a balanced development of cultural literacy and technological competence.

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