

DOI: 10.5281/zenodo.11425189

INTEGRATING LOCAL HERITAGE INTO DIGITAL LEARNING: DEVELOPMENT OF A CULTURALLY-BASED E-BOOK FOR ENHANCING HIGH SCHOOL STUDENTS' CULTURAL LITERACY

Ahmad Zamhari^{1*}, Wartyo², Leo Agung Sutimin³

¹Universitas Sebelas Maret (UNS), Indonesia, zamhariahmad1969@gmail.com, <https://orcid.org/0009-0005-4450-8054>

²Universitas Sebelas Maret (UNS), Indonesia, wartyo2013@staff.uns.ac.id, <https://orcid.org/0000-0002-1660-5288>

³Universitas Sebelas Maret (UNS), Indonesia, leoagung@staff.uns.ac.id, <https://orcid.org/0000-0001-7303-551X>

Received: 10/10/2025

Accepted: 10/11/2025

Corresponding Author: Ahmad Zamhari
(zamhariahmad1969@gmail.com)

ABSTRACT

Cultural literacy is an essential component of education, fostering students' awareness and appreciation of their cultural identity. However, many students lack resources that represent local heritage. This study aimed to develop a culturally-based digital book incorporating the culture of Ogan Komering Ulu (OKU), Indonesia, to enhance cultural literacy among senior high school students. A developmental research design using the Four-D model (Define, Design, Develop, Disseminate) guided the creation of the digital book. Expert validations were conducted by content, media, and language specialists. Product trials involved three stages: one-to-one, small group, and field testing. The implementation phase included 120 high school students from three public schools in OKU, South Sumatra. Quantitative data were obtained from validation sheets, student questionnaires, and pretest-posttest instruments. Effectiveness was analyzed using an independent samples t-test, preceded by normality and homogeneity tests, to compare posttest scores of experimental and control groups. Expert validation rated the product "very valid" with an average score of 91.0%. Across three trial stages, students consistently rated content feasibility, presentation, interactivity, and language as "very good." Posttest results revealed a significant difference between the experimental group (mean = 87.00) and the control group (mean = 72.00), with a p-value of 0.023, confirming the effectiveness of the digital book in enhancing cultural literacy. The integration of local cultural content into digital learning proved feasible and effective. The culturally-based digital book improved students' cultural literacy and presents a promising approach for contextualized learning, supporting heritage preservation while addressing 21st-century educational needs.

KEYWORDS: Cultural Literacy, Digital Book, Local Heritage, Ogan Komering Ulu, Senior High School.

1. INTRODUCTION

The preservation and transmission of local cultural values to younger generations have become increasingly important in the face of globalization, modernization, and the rapid advancement of digital technology. As societies become more interconnected, traditional values and indigenous knowledge systems are at risk of marginalization or even extinction, particularly among youth who are growing up in highly globalized educational environments (Anza & Suyadi, 2022). In Indonesia, a nation rich with cultural diversity, the challenge of maintaining cultural identity is especially urgent. Many young learners are not adequately exposed to their local heritage, resulting in a growing disconnect between modern education and indigenous cultural values (Dada, 2024).

Cultural literacy the ability to recognize, interpret, and value cultural expressions and practices is now considered a critical component of 21st-century education (Abdulahi *et al.*, 2024). It not only fosters respect for diversity and social inclusion, but also strengthens national identity and community resilience (Mahmood *et al.*, 2024). Despite the importance of cultural literacy, current educational materials in Indonesian schools tend to be centralized and standardized, often overlooking the wealth of local wisdom that exists across various regions (Nuriadi, 2023). The integration of local culture into school curricula is still limited, both in policy implementation and instructional practice.

Numerous scholars have emphasized the potential of culturally-responsive pedagogy to enrich the learning experience, support cognitive development, and build emotional connections between students and their learning environments (Gay, 2018; Lau & Shea, 2024). One promising approach is the development of learning media that embed local culture in ways that are meaningful and accessible to students. Digital learning media, particularly e-books, offer a dynamic platform to present cultural content through multimedia formats, interactive design, and learner-centered navigation (Fatmi & Fauzan, 2022; Ngongo *et al.*, 2019). E-books have been shown to increase student motivation, comprehension, and retention especially when the content is contextually relevant (Lee *et al.*, 2024).

However, empirical studies on digital media that specifically focus on local culture integration in Indonesian secondary education remain scarce. Most existing research tends to highlight general digital literacy or multicultural content without addressing particular cultural groups or regions (Mihelj *et al.*,

2019). Moreover, very few studies have evaluated the effectiveness of such tools using quantitative measures, such as pretest-posttest gains, to determine their actual impact on students' cultural literacy. This gap becomes even more evident in regions with strong yet underrepresented cultural traditions, such as the Ogan Komering Ulu community in South Sumatra a region rich in oral traditions, traditional arts, and community values that are at risk of being forgotten.

To address these challenges, this study aims to develop a culturally-based digital book featuring the heritage of Ogan Komering Ulu and to evaluate its effectiveness in enhancing cultural literacy among senior high school students. The development process follows the Four-D model Define, Design, Develop, and Disseminate allowing for iterative validation and refinement through the involvement of content experts, teachers, and students. This approach ensures both pedagogical quality and cultural authenticity in the final product. The primary objective of this study is to determine whether the use of this digital book significantly improves students' cultural literacy, as measured by a structured posttest.

This research contributes to the broader discourse on cultural preservation in education by demonstrating how local content can be effectively integrated into digital learning resources. The findings are expected to offer valuable insights for educators, curriculum developers, and policymakers interested in promoting cultural identity through innovative and contextually relevant learning strategies. Moreover, this study advocates for embedding local wisdom in digital formats to make education more inclusive, engaging, and meaningful for Indonesian learners in the digital age.

2. LITERATURE REVIEW

2.1. Cultural Literacy in Education

Cultural literacy refers to the ability to understand, interpret, and effectively engage with the shared knowledge, values, traditions, and symbols of a particular culture. The concept was popularized by E.D. Hirsch Jr., who argued that cultural literacy is essential for individuals to function effectively within society. According to Hirsch Jr. (1987), cultural literacy includes a body of information that all members of a society are expected to know in order to communicate and participate fully in public life. This foundational knowledge includes historical references, literary works, national symbols, and other culturally significant elements. Historically, the concept of

cultural literacy emerged as a response to concerns about declining educational standards and the increasing fragmentation of knowledge among students. **Hirsch's seminal work, *Cultural Literacy: What Every American Needs to Know***, sparked debates about the content of school curricula and the role of shared cultural knowledge in national identity. While originally rooted in the American context, the idea has since evolved and gained relevance in diverse educational systems worldwide, including in multicultural and postcolonial societies such as Indonesia.

The importance of cultural literacy in education lies in its capacity to foster social cohesion, mutual understanding, and civic participation. In multicultural societies, cultural literacy also plays a key role in promoting respect for cultural diversity and strengthening national identity. It helps students navigate complex cultural landscapes, recognize their heritage, and appreciate the cultural expressions of others. Moreover, it supports the development of critical thinking, empathy, and intercultural communication skills (Banks, 2015). In practical terms, cultural literacy has been integrated into education through various means, such as national history curricula, literature, arts education, and more recently, digital media. However, much of the existing curriculum tends to emphasize dominant or globalized cultures, often overlooking local heritage and indigenous knowledge systems (Gay, 2010). This has prompted educators and researchers to advocate for culturally responsive pedagogy that centers local context and student identity in the learning process.

In the digital era, educational technologies such as e-books, virtual museums, and interactive platforms offer new opportunities to foster cultural literacy. By integrating local cultural content into digital learning tools, educators can create more meaningful and contextually relevant learning experiences. Particularly for high school students, culturally-based digital resources can serve not only as instructional materials but also as instruments of cultural preservation and identity formation (McLoughlin & Oliver, 2000). In this context, developing a culturally-based e-book that integrates local heritage is both timely and necessary. Such an approach not only enriches students' understanding of their cultural roots but also aligns with global educational goals that emphasize inclusive, equitable, and quality education.

In the global education landscape, cultural literacy is further reinforced through UNESCO's frameworks on Global Citizenship Education

(GCED) and the safeguarding of intangible cultural heritage. UNESCO (2013) emphasizes that cultural literacy enables learners to appreciate cultural diversity, participate in intercultural dialogue, and develop respect for different cultural expressions. Through its 2003 Convention for the Safeguarding of Intangible Cultural Heritage, UNESCO also highlights the importance of integrating local cultural traditions into educational systems to ensure the transmission of cultural knowledge to younger generations. These frameworks position cultural literacy as a key component of sustainable cultural development worldwide.

Similarly, the OECD's Global Competence Framework underscores the need for learners to understand local and global cultures, evaluate diverse perspectives, and engage respectfully across cultural boundaries (OECD, 2018). Within this framework, cultural literacy is viewed as an essential skill for preparing students to navigate an increasingly interconnected and multicultural world. By embedding local heritage within digital learning materials, educators support the development of global competence beginning from students' immediate cultural contexts.

Incorporating these international perspectives strengthens the relevance of cultural literacy within contemporary educational practice. It shows that the integration of local cultural content such as the development of a culturally-based e-book is not only aligned with national educational priorities but also supports global agendas promoting cultural sustainability, inclusivity, and intercultural understanding. Thus, the development of culturally grounded digital learning tools contributes both to local cultural preservation and broader international educational goals.

2.2. The Role of Local Heritage in Formal Education

Local heritage encompasses the tangible and intangible cultural assets inherited from past generations that are rooted in a specific community or region. These include traditional arts, local history, folklore, languages, rituals, architecture, and environmental knowledge. Incorporating local heritage into formal education has gained increasing attention as a means to strengthen students' cultural identity, promote national pride, and preserve cultural diversity in the face of globalization (Arsenijević & Perić, 2025). The integration of local heritage into educational curricula supports the concept of place-based education, which emphasizes learning that is grounded in the local context of

students' lives. This approach enhances the relevance of learning materials by connecting them to students' own communities, making learning more meaningful and engaging (Gruenewald & Smith, 2008). By engaging with local heritage, students are not only acquiring academic knowledge but also developing a deeper understanding of their cultural environment and socio-historical roots.

In many education systems, however, the formal curriculum often favors national or global content, sidelining regional or indigenous knowledge systems. This has resulted in a disconnect between students' cultural experiences at home and what they learn in school. Scholars have argued that neglecting local heritage in formal education contributes to cultural alienation and a loss of cultural continuity, particularly among younger generations (Macedo et al., 1999). Integrating local heritage into the classroom also supports culturally sustaining pedagogy, which seeks not only to acknowledge but to sustain cultural practices and ways of knowing. It encourages the use of local languages, narratives, and art forms as legitimate sources of knowledge. In the context of Indonesia, with its rich cultural diversity, the inclusion of local heritage in education is crucial for maintaining cultural pluralism and supporting decentralized educational goals (Saputra, 2024).

Furthermore, local heritage can be used as a vehicle to teach cross-disciplinary skills. For example, traditional crafts can be linked to geometry and measurement in mathematics, or folklore can be used to enhance language and storytelling skills. This interdisciplinary integration makes heritage-based education not only culturally enriching but also pedagogically effective. Incorporating local heritage into digital learning tools, such as e-books, further amplifies its impact by making cultural content more accessible and engaging for digital-native students. It opens up new avenues for the preservation of local knowledge and offers interactive, multimodal learning experiences. When students see their own culture represented in digital content, it fosters a sense of belonging and validates their cultural identity within the modern educational landscape.

2.3. Culturally Responsive Pedagogy and Technology Integration

Culturally responsive pedagogy (CRP) refers to an educational approach that acknowledges, respects, and integrates students' cultural backgrounds, experiences, and identities into the teaching and learning process. Initially conceptualized by Gloria Ladson-Billings in the

1990s, CRP emerged as a response to the cultural disconnect between school curricula and the lived realities of ethnically and linguistically diverse students, particularly in the United States. According to Ladson-Billings, (1995), culturally responsive teaching empowers students intellectually, socially, and emotionally by using cultural referents to impart knowledge, skills, and attitudes. Over time, the relevance of CRP has expanded globally, especially in multicultural societies where education systems are often rooted in standardized or dominant cultural narratives. The importance of culturally responsive pedagogy lies in its capacity to foster equity and inclusion by validating students' cultural identities as legitimate sources of knowledge. It not only helps to close the cultural gap in education but also increases student engagement, motivation, and academic achievement (Gay, 2010).

In the digital age, the principles of culturally responsive pedagogy have increasingly intersected with technology integration in what is now referred to as culturally responsive digital learning. This evolving practice emphasizes the design and use of digital tools such as e-books, educational platforms, and multimedia content that reflect the cultural contexts and values of learners. As digital technologies become more prevalent in classrooms, the risk of cultural homogenization also grows. Therefore, embedding local and indigenous knowledge in digital content is a vital step in maintaining cultural plurality and ensuring that digital education is not culturally neutral or exclusionary (McLoughlin, 2001). Despite the proliferation of educational technologies, many digital resources remain culturally generic or Western-centric. This presents a significant challenge in countries like Indonesia, where diverse local cultures are underrepresented in mainstream digital learning materials. As argued by Mukminin & McMahon (2013), Indonesian education still struggles to balance global trends in digital learning with the need to preserve and promote national cultural identity.

Culturally responsive digital learning emphasizes three key components (1) the contextualization of content using local heritage, language, and narratives; (2) learner-centered approaches that consider cultural learning preferences; and (3) critical engagement with cultural representation in media. E-books, in particular, provide a flexible platform for integrating multimedia elements such as traditional stories, indigenous symbols, local music, and regional languages into interactive learning experiences. For

high school students especially digital natives learning through culturally relevant digital tools can be transformative. It enables them to see their culture represented in the curriculum, which not only enhances self-esteem and cultural awareness but also aligns with 21st-century educational goals that prioritize inclusivity, diversity, and cultural literacy. Therefore, the development of a culturally-based e-book is not only a pedagogical innovation but also a culturally responsive strategy. It bridges the gap between local knowledge and modern digital pedagogy, positioning technology as a means of cultural preservation rather than cultural erasure.

3. METHODOLOGY

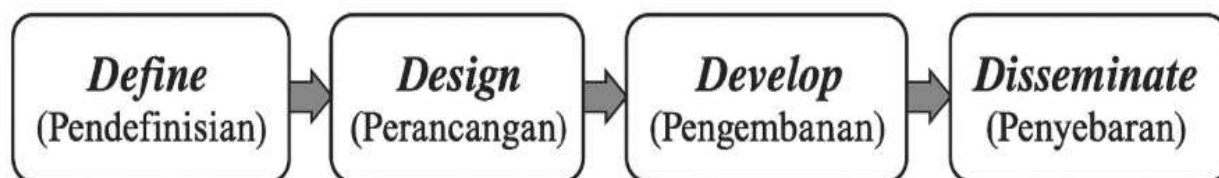


Figure 1: The Four-D (Define, Design, Develop, Disseminate) development model adapted from Thiagarajan et al. (1974)."

3.1. Participants

Participants in this study consisted of 120 senior high school students (64 females and 56 males), aged 15 to 17 years, drawn from three public high schools in Kabupaten Ogan Komering Ulu, South Sumatra, Indonesia SMA Negeri 1 OKU, SMA Negeri 2 OKU, and SMA Negeri 3 OKU.

These schools were purposively selected due to their location within the cultural heartland of the Komering ethnic community and their interest in implementing local content-based curriculum innovations. All participants were enrolled in Grade 10 and had completed preliminary modules in social science and local history. In addition, two cultural experts, two instructional media experts, and two senior teachers were involved in content validation and product review processes.

3.2. Data Collection Techniques

Data were collected using expert validation sheets, student questionnaires, interview guidelines, and pretest-posttest instruments. Validation sheets were used to assess the content, media, and language quality of the digital book. Student questionnaires measured practicality and usability using a four-point Likert scale. Pretests and posttests were administered to evaluate students' cultural literacy outcomes. Additional qualitative data were gathered

This study employed a developmental research approach using the Four-D model Define, Design, Develop, and Disseminate as proposed by (Thiagarajan, 1974). This model was chosen for its structured and iterative process in developing, validating, and refining instructional materials. The goal of this research was to develop a culturally-based digital e-book integrating local heritage from Ogan Komering Ulu (OKU) and to evaluate its feasibility and effectiveness in enhancing high school students' cultural literacy. The Four-D model was implemented in four sequential stages as illustrated in Figure 1.

through interviews with teachers and cultural experts to enrich the development and refinement process.

3.3. Data Analysis Techniques

This study employed both qualitative and quantitative data analysis. Qualitative data from interviews and expert feedback were analyzed through data reduction and thematic categorization. Quantitative data from validation sheets and student questionnaires were analyzed using descriptive statistics.

To test the effectiveness of the digital book, an independent samples t-test was used to compare posttest scores between the experimental and control groups. Prior to the t-test, assumption tests for normality (Shapiro-Wilk) and homogeneity (Levene's test) were conducted. All analyses used a significance level of 0.05.

4. RESULTS

This section presents the results of the study in four main areas validation of the developed digital book, product trials on three scales (small, medium, and large), effectiveness testing through pretest and posttest, and student feedback on the learning media. Each component provides evidence supporting the quality, usability, and impact of the culturally-based

e-book in enhancing students' cultural literacy.

4.1. Validation Results

The developed digital book was reviewed by three expert validators a cultural content expert, a digital media expert, and a language expert. Each used a structured evaluation rubric with indicators covering content relevance and accuracy, media design and interactivity, and language clarity. The validation results are summarized in Table 1.

Table 1: Expert Validation Results.

Validator	Score (%)	Category
Content expert	91.2%	Very valid
Media expert	89.5%	Very valid
Language expert	92.3%	Very valid
Average	91.0%	Very valid

The validation of the culturally-based digital book was conducted by three experts representing content, media, and language aspects. The content expert assessed the accuracy, relevance, and cultural appropriateness of the material, resulting in a score of 91.2%, which indicated that the learning content effectively represented the values and traditions of the Ogan Komering Ulu culture and aligned well with the curriculum. The media expert focused on the layout, interactivity, and technical design of the e-book and gave a score of 89.5%, suggesting that the media was visually appealing and functionally interactive, with only minor technical refinements recommended. Meanwhile, the language expert

evaluated the clarity, readability, and grammar of the text, assigning a score of 92.3%, which confirmed that the language used was appropriate for high school students and pedagogically sound. The overall average score from all validators was 91.0%, placing the product in the "very valid" category. This indicates that the digital book meets high standards in content, design, and language, and is suitable for use in learning with only minor revisions required.

4.2. Product Trials

After the digital book was validated by experts, it was then tested through three stages of student-based evaluations to assess its practicality, readability, and overall feasibility. These stages were carried out sequentially (1) One-to-One Evaluation, involving individual learners to identify potential usability issues and to collect detailed feedback; (2) Small Group Evaluation, which involved a limited number of students to examine group-based interaction, content clarity, and navigation; and (3) Field Test Evaluation, which was conducted on a larger scale to simulate real classroom implementation. The evaluations focused on six key aspects of the product: content feasibility, presentation quality, graphic design, interactivity, sound, and language. Each aspect was rated using a 5-point Likert scale. The results of all three trials are presented in Table 2, which shows the total scores, mean scores, and corresponding qualitative criteria for each aspect.

Table 2: Results of One-to-One, Small Group, and Field Test Evaluations on the Developed Digital Book.

No	Aspect	One-to-One (Total / Average)	Small Group (Total / Average)	Field Test (Total / Average)	Category
1	Content Feasibility	101 / 3.5	104 / 3.5	108 / 3.5	Good
2	Presentation Feasibility	284 / 3.8	288 / 3.8	292 / 3.8	Good
3	Visual Appearance	212 / 3.5	216 / 3.5	220 / 3.5	Good
4	Interactivity	489 / 3.7	493 / 3.7	497 / 3.7	Good
5	Audio Quality	163 / 3.7	167 / 3.7	171 / 3.7	Good
6	Language Use	105 / 3.7	109 / 3.7	113 / 3.7	Good
Total		1354 / 3.65	1377 / 3.65	1401 / 3.65	Good

Table 2 presents the results of product evaluations conducted through three different trial stages: One-to-One, Small Group, and Field Test. These evaluations focused on six key aspects of the digital book, including content feasibility, presentation feasibility, visual appearance, interactivity, audio quality, and language use. Across all three trials, the results show a consistent pattern of positive evaluations from students. In the One-to-One stage, the average scores ranged from 3.5 to 3.8, with the highest rating given to Presentation Feasibility (3.8), while Content Feasibility and Visual Appearance

received the lowest average scores (3.5). Similar patterns were observed in the Small Group and Field Test stages, with all aspects maintaining consistent average scores, reflecting stability and reliability in user perception. Notably, Interactivity and Language Use were rated slightly higher at 3.7, suggesting that the digital book effectively engaged students and provided accessible language. The mode for all aspects was consistently 4, and the qualitative category for every aspect was classified as "Good", indicating that the product was well-received overall. The total average scores were 3.65 across all

stages, further confirming the product's quality and practical feasibility for classroom implementation. These results suggest that the culturally-based digital book met students' expectations and needs in terms of both content and media functionality.

4.3. Effectiveness Test

To determine the effectiveness of the developed culturally-based digital book in improving students' cultural literacy, a quantitative comparison was conducted between the experimental group (which

used the digital book) and the control group (which used conventional printed materials). The analysis began by testing the assumptions required for parametric statistical testing. First, the data were tested for normality using the Shapiro-Wilk test. As shown in Table 3, both the experimental and control group posttest scores yielded significance values greater than 0.05 (0.285 and 0.167, respectively). These results indicate that the data for both groups were normally distributed, satisfying the assumption of normality.

Table 3: Shapiro-Wilk Normality Test Results.

Group	Statistic	df	Sig.
Experimental Posttest	0.928	20	0.285
Control Posttest	0.935	20	0.167

Following the normality test, a Levene's test of homogeneity of variance was conducted to examine whether the variances of the two groups were statistically equal. This test is essential for validating the assumption of equal variance required in an independent samples t-test. As presented in Table 4, the significance value obtained was 0.124, which is greater than the alpha level of 0.05. This result indicates that there was no significant difference in variance between the experimental and control groups. Therefore, the data met the homogeneity

assumption, and the subsequent t-test could be conducted under the assumption of equal variances.

Table 4: Levene's Test of Homogeneity of Variance.

Levene Statistic	df1	df2	Sig.
2.465	1	38	0.124

After verifying that the assumptions for parametric testing were met, an independent samples t-test was performed to compare the posttest scores between the experimental and control groups.

Table 5: Independent Samples T-Test Results.

Group	Mean Score	t	df	Sig. (2-tailed)	Mean Difference	Std. Error
Experimental	87.00	4.368	38	0.023	4.150	1.752
Control	72.00					

As shown in Table 5, the significance value (Sig. 2-tailed) obtained was 0.023, which is less than 0.05. This indicates that there is a statistically significant difference in cultural literacy scores between students who used the digital book and those who used conventional printed materials. The mean posttest score for the experimental group was 87.00, while the control group scored 72.00 on average. This represents a mean difference of 15 points, favoring the experimental group. The statistical output also showed a mean difference of 4.15 with a 95% confidence interval ranging from 0.612 to 7.688, and a standard error of 1.752, confirming the reliability and precision of the measured effect. These findings clearly demonstrate that the developed culturally-based digital book had a positive and statistically significant impact on students' cultural literacy. The intervention not only improved learning outcomes, but also resulted in higher average achievement

scores compared to the traditional learning approach.

5. DISCUSSION

The findings of this study demonstrate that the use of a culturally-based digital book had a significant impact on enhancing students' cultural literacy. Students in the experimental group who used the digital book scored significantly higher on the posttest ($M = 87.00$) compared to those in the control group ($M = 72.00$). This result supports the hypothesis that integrating local cultural content into digital learning media improves students' understanding and appreciation of their own heritage. These results align with previous research emphasizing the value of contextual and culturally responsive teaching strategies. According to Gay (2021), culturally relevant pedagogy not only

increases academic engagement but also strengthens students' cultural identity and critical consciousness. Likewise Chang et al., (2019) found that the incorporation of indigenous cultural elements in digital learning resources improved students' comprehension and motivation, particularly in social studies education.

Similar efforts to integrate cultural heritage into digital learning have also been documented worldwide. In South Korea, Jeong et al. (2019) developed a multisensory augmented reality system for cultural heritage education, which was shown to increase student engagement and improve comprehension of historical artifacts. In Japan, digital storytelling has been used as a pedagogical tool to enhance cultural understanding and media literacy among students, demonstrating the value of culturally grounded digital resources in supporting meaningful learning (Gutor et al., 2023). European contexts also show similar trends; museum-based virtual learning environments have been adopted to provide interactive cultural experiences and have been found to promote cultural literacy and deepen students' interpretation of cultural artifacts (Mamur et al., 2020). These international initiatives highlight a global movement toward leveraging digital technology to preserve culture and enrich culturally responsive education, consistent with the findings of this study.

From a cognitive perspective, the integration of visual, auditory, and interactive features in the digital book supported multi-modal learning, which has been shown to enhance information retention and critical thinking (Mayer, 2017). The interactive elements also align with constructivist learning theory, which posits that students learn best when they can actively construct knowledge based on real-world and culturally familiar experiences (Jonassen & Kim, 2010). The significant improvement in the experimental group's scores may also be attributed to the relevance and authenticity of the content. When students encounter culturally relevant materials,

they are more likely to find the learning meaningful, which in turn increases motivation and learning outcomes (Ginsberg & Wlodkowski, 2015). While the results are promising, the findings should be interpreted with some caution. The study was limited to one school and a relatively small sample size, which may affect the generalizability of the results. Future research should consider replicating this study across multiple regions and with more diverse student populations to confirm the broader applicability of the digital book.

6. CONCLUSION

This study concludes that integrating local cultural values into digital learning media represents a meaningful advancement in culturally responsive education. The development of a digital book based on the Ogan Komerang Ulu local heritage demonstrates the potential to strengthen students' cultural literacy in a way that is both pedagogically sound and contextually relevant. Beyond academic outcomes, such innovations contribute to preserving indigenous knowledge while aligning with the demands of 21st-century learning.

7. SUGGESTION

Based on the results, it is recommended that educators and curriculum developers consider adopting culturally relevant digital learning resources in classroom instruction. The digital book developed in this study could be further implemented in other schools with similar cultural contexts or adapted to fit different local traditions in other regions. Future researchers are encouraged to expand the sample size, apply the product across various grade levels, and explore its long-term impact on students' cultural awareness and civic engagement. Additionally, integrating interactive and multimedia features that align with students' digital learning habits can further increase engagement and effectiveness.

Acknowledgements: The author would like to express sincere gratitude to Universitas PGRI Palembang for providing institutional support and facilities that enabled the completion of this research.

REFERENCES

- Abdulahi, A., Andishmand, V., Bahreinizadeh, A., & Meymand, Z. Z. (2024). Examining the Components of a Curriculum Based on Cultural Literacy in Education. *Iranian Journal of Educational Sociology*, 7(4), 21-30.
- Anza, N. E.-H., & Suyadi, S. (2022). Peran Guru dalam Membangun Moralitas Positif Anak Laki-Laki Sejak Dini Terhadap Perempuan. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 6(5), 4574-4580.
- Arsenijević, J. M., & Perić, N. N. (2025). Heritage and future: Cultural and national identity management in the light of educational practices. *Baština*, 35(65).

- Banks, J. A. (2015). *Cultural diversity and education: Foundations, curriculum, and teaching*. Routledge.
- Chang, W.-H., Huang, T.-H., & Liu, Y.-C. (2019). Influence of an interactive e-book on the reading comprehension of different ethnic groups using indigenous culture as content. *International Journal of Human-Computer Interaction*, 35(4-5), 323-332.
- Dada, A. M. (2024). Global Challenges in Cultural and Indigenous Education. *Educational Perspectives*, 13(1), 38-48.
- Fatmi, N., & Fauzan, F. (2022). Kajian pendekatan etnopedagogi dalam pendidikan melalui kearifan lokal Aceh. *Al-Madaris Jurnal Pendidikan Dan Studi Keislaman*, 3(2), 31-41.
- Gay, G. (2018). *Culturally responsive teaching: Theory, research, and practice*. teachers college press.
- Gay, G. (2021). Culturally responsive teaching: Ideas, actions, and effects. In *Handbook of urban education* (pp. 212-233). Routledge.
- Ginsberg, M. B., & Wlodkowski, R. J. (2015). *Diversity and motivation: Culturally responsive teaching in college*. John Wiley & Sons.
- Gruenewald, D. A., & Smith, G. A. (2008). Creating a movement to ground learning in place. *Place-Based Education in the Global Age: Local Diversity*, 345-358.
- Gutor, L. V., Sodomora, P. A., Vasylenko, H., & Zalutskaya, H. I. (2023). Development of media literacy and communication skills by means of digital storytelling in Japan. *Information Technologies and Learning Tools*, 95(3), 88.
- Hirsch Jr, E. D. (1987). Restoring cultural literacy in the early grades. *Educational Leadership*, 45(4), 63-70.
- Jeong, E., Oh, J. E., Won, H., & Yu, J. (2019). Multisensory based AR system for education of cultural heritage. *한국컴퓨터정보학회논문지*, 24(11), 61-69.
- Jonassen, D. H., & Kim, B. (2010). Arguing to learn and learning to argue: Design justifications and guidelines. *Educational Technology Research and Development*, 58(4), 439-457.
- Ladson-Billings, G. (1995). Toward a theory of culturally relevant pedagogy. *American Educational Research Journal*, 32(3), 465-491.
- Lau, W. S., & Shea, M. (2024). Empowering English learners in the classroom through culturally responsive social-emotional teaching practices. *Journal of Multilingual and Multicultural Development*, 45(7), 2880-2897.
- Lee, Y.-F., Chen, P.-Y., & Cheng, S.-C. (2024). Improve learning retention, self-efficacy, learning attitude and problem-solving skills through e-books based on sequential multi-level prompting strategies. *Education and Information Technologies*, 29(3), 3663-3680.
- Macedo, D., Semali, L., & Kincheloe, J. (1999). *Decolonizing indigenous knowledge. What Is Indigenous Knowledge*.
- Mahmood, W., Rashid, A., & Mehran, S. A. A. (2024). CULTURAL IDENTITY AND ITS ROLE IN SHAPING COMMUNITY RESILIENCE. *Kashf Journal of Multidisciplinary Research*, 1(01), 9-16.
- Mayer, R. E. (2017). Using multimedia for e-learning. *Journal of Computer Assisted Learning*, 33(5), 403-423.
- Mamur, N., Özsoy, V., & Karagöz, İ. (2020). Digital learning experience in museums: Cultural readings in a virtual environment. *International Journal of Contemporary Educational Research*, 7(2), 335-350.
- McLoughlin, C. (2001). Inclusivity and alignment: Principles of pedagogy, task and assessment design for effective cross-cultural online learning. *Distance Education*, 22(1), 7-29.
- McLoughlin, C., & Oliver, R. (2000). Designing learning environments for cultural inclusivity: A case study of indigenous online learning at tertiary level. *Australasian Journal of Educational Technology*, 16(1).
- Mihelj, S., Leguina, A., & Downey, J. (2019). Culture is digital: Cultural participation, diversity and the digital divide. *New Media & Society*, 21(7), 1465-1485.
- Mukminin, A., & McMahan, B. J. (2013). *International Graduate Students' Cross-Cultural Academic Engagement: Stories of Indonesian Doctoral Students on an American Campus. Qualitative Report*, 18, 69.
- Ngongo, V. L., Hidayat, T., & Wiyanto, W. (2019). Pendidikan di era digital. *Prosiding Seminar Nasional Program Pascasarjana Universitas PGRI Palembang*.
- Nuriadi, N. (2023). Exploring Indonesian Regional Cultures and the Integration of Local Wisdom in the Merdeka Curriculum. *International Journal of Education and Digital Learning (IJEDL)*, 2(1), 28-37.
- Saputra, R. (2024). Governance frameworks and cultural preservation in Indonesia. *Journal of Ethnic and Cultural Studies*, 11(3), 25-50.
- Thiagarajan, S. (1974). *Instructional development for training teachers of exceptional children: A sourcebook*.

- UNESCO. (2013). *Global Citizenship Education: An Emerging Perspective*. Paris: UNESCO.
- UNESCO. (2003). *Convention for the Safeguarding of the Intangible Cultural Heritage*. Paris: UNESCO.
- OECD. (2018). *Preparing our youth for an inclusive and sustainable world: The OECD PISA Global Competence Framework*. Paris: OECD Publishing.