



Developing Local Culture-Based Listening Materials through Digital Storytelling

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Abstract: This study aims to develop and evaluate digital storytelling-based listening materials that integrate the local culture of Riau Islands to enhance students' listening comprehension. The research employed a Design-Based Research (DBR) approach involving iterative cycles of design, development, implementation, and evaluation. The participants consisted of 35 university students, three lecturers, and three experts in material, language, and media validation. Data were collected through questionnaires, expert validation forms, and pre-test-post-test assessments. The design phase resulted in audiovisual storytelling materials featuring local cultural narratives and interactive comprehension activities. Expert validation indicated that the materials were highly feasible, with mean scores above 85% across material, language, and media aspects. The implementation results revealed a significant improvement in students' listening comprehension, as shown by an increase in the mean score from 61.31 (pre-test) to 80.89 (post-test) with a mean gain of 19.57 points ($p < .001$). The findings suggest that digital storytelling enriched with local culture can serve as an effective and engaging alternative medium for listening instruction. This study contributes to the integration of culturally grounded digital pedagogy in language learning and supports the contextualization of English instruction in multicultural settings.

Keywords: design-based research, digital storytelling; *kepulauan riau*; listening; local culture

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INTRODUCTION

Ideally, listening instruction in English education should provide students with realistic, relevant, and culturally enriched input that mirrors real communication and fosters the development of global competency (Rashtchi et al., 2021; Richards, 2008). Under optimal conditions, students actively interact with spoken texts, discern meanings beyond the literal, and relate auditory information to pertinent cultural and situational situations. Effective listening instruction requires resources that are both linguistically appropriate and contextually engaging, enabling students to develop comprehension through experience and reflection. In practice, listening teaching in numerous EFL contexts, including Indonesian universities, frequently does not meet the criteria.

In English learning in Indonesia, listening remains one of the most formidable skills to acquire. Initial observations in the English Education Study Program at Universitas Riau Kepulauan revealed that many first-semester students struggle to understand spoken texts delivered in class. The main problems are the scarcity of contextualized materials and the excessive dependence on textbook audio resources that provide new subjects, accents, and cultural contexts. The absence of cultural and situational relevance leads students to view listening tasks as abstract, tedious, and detached from their real-life experiences (Dewi et al., 2022; Mahmoudi, 2017). Consequently, their drive diminishes, and understanding stays cursory.

This issue underscores the necessity for innovative listening education that aligns learning materials with students' cultural and experience contexts. The contextual learning theory posits that understanding is enhanced when new information is connected to students' previous experiences and social contexts (Ebikiemo, 2023). The incorporation of local culture into educational curriculum in Indonesia can enhance the significance and engagement of the learning experience (Manuhutu et al., 2025; Muhria et al., 2025). Riau Islands, recognized as one of Indonesia's culturally affluent regions, has an abundance of local narratives, traditions, and ethical principles that can function as genuine educational resources (Afriliziana & Roza, 2021). Integrating these cultural elements into English hearing materials would boost students' comprehension and cultivate their cultural pride and sense of local identity.

Regrettably, the potential of local culture as an educational resource has not been adequately harnessed in English learning. Prior research suggests that the majority of auditory resources in higher education predominantly feature Western cultural content, which often estranges students from their own cultural heritage

(Sihite et al., 2021). Despite the growing prevalence of multimedia and technology in language acquisition, local contextualization is still infrequent. Consequently, a substantial disparity exists between the accessibility of digital resources and the demand for culturally relevant products that embody Indonesian values and experiences. To address this gap, culturally responsive media should be designed to promote both linguistic competence and cultural literacy among students.

A promising educational innovation that can be tailored to address this requirement is digital storytelling. Digital storytelling integrates narrative, sound, imagery, and music into unified audiovisual experiences that emotionally and cognitively engage students (Dewi et al., 2023; Tabieh et al., 2020). It offers a robust framework for presenting language input across multimodal channels, demonstrating improvements in listening comprehension, retention, and motivation (Loniza et al., 2018). Digital storytelling facilitates students' connection to meaning through visual and auditory narratives, enhancing the learning experience by integrating linguistic and cultural elements in a holistic, immersive way. Furthermore, the story style facilitates the incorporation of local legends, customs, and moral ideals that align with students' sociocultural backgrounds (Muhria et al., 2025). This methodology corresponds with the requirements of contemporary digital-native students who are familiar with visual media and interactive educational settings (Hu & Du, 2022; Wahyuni & Dewi, 2024).

Numerous empirical studies have evidenced the advantages of digital storytelling in language learning. Students exposed to digital storytelling demonstrated enhanced listening comprehension and superior recall rates compared to those utilizing traditional materials (Loniza et al., 2018). Drajati et al. (2023) emphasized that digital storytelling enhances student engagement, creativity, and critical thinking in foreign language acquisition. Nevertheless, despite these favorable results, most previous studies have focused on broad or foreign cultural content (Dewi et al., 2023; Tabieh et al., 2020), thereby creating a deficiency in advancing digital storytelling rooted in local culture for English listening instruction. Consequently, there is insufficient information about the capacity of culturally grounded digital storytelling to improve listening comprehension while concurrently promoting cultural appreciation among Indonesian students.

In this context, it is imperative to develop an educational innovation that effectively integrates local culture and digital storytelling in a pedagogically sound manner. The creation of an audiovisual digital storytelling platform rooted in the culture of the Riau Islands signifies an initiative to localize educational resources and enhance their relevance for students. This method converts audio materials from static, decontextualized recordings into dynamic cultural tales that foster cognitive and emotional involvement. Furthermore, this development corresponds with the Indonesian government's focus on character education and cultural literacy as essential components of 21st-century learning (Sukmayadi & Yahya, 2020). A recent study has further substantiated the pedagogical efficacy of digital storytelling (DST) in language acquisition, particularly when integrated with local culture. Research from 2022 to 2025 demonstrates that DST enhances multimodal engagement, contextual comprehension, and sustained motivation in EFL students (Aini et al., 2023; Akinci & Öztürk, 2024; Christiansen, 2023; Mahmoud, 2025). When culturally grounded, DST helps students connect language to individual and collective identity, thereby improving comprehension and cultural literacy (Yang et al., 2024; Kahanurak et al., 2023; Szécsi, 2025; Wang, 2025).

Furthermore, the application of digital technologies and storytelling strategies aligns with modern educational trends that emphasize character development, intercultural competence, and learner autonomy in higher education environments (Akdoğan, 2023; Aktaş & Yurt, 2017; Yu et al., 2025). This study is relevant in exploring how culture-based DST may link language skill development with cultural awareness in listening instruction. This study aims to achieve three primary objectives: 1) to create an audiovisual digital storytelling medium that incorporates the cultural elements of the Riau Islands for English listening instruction; 2) to assess the feasibility and quality of the developed medium through expert validation in content, language, and technical dimensions; and 3) to evaluate the medium's effectiveness in enhancing students' listening comprehension skills as indicated by pre-test and post-test outcomes.

METHODS

This study was conducted as design-based research (DBR) intended to develop a valid and effective learning medium to improve students' listening comprehension. This work produced a digital audiovisual narrative that incorporates the local culture of the Riau Islands as genuine content for English listening education. The design-based research methodology was chosen for its emphasis on creating educational innovations within authentic learning environments through iterative testing, refinement, and assessment (Reeves, 2006). The product's design and development adhered to the four stages of Design-Based Research (DBR): 1) analysis of practical issues; 2) design and development of the solution; 3) iterative testing and refinement in practice, and 4) reflection to assess and establish design principles. This research resulted in a viable audiovisual storytelling medium and a realistic learning design framework for incorporating local culture into English listening training.

This research involved 35 first-semester students from the English Education Study Program at a

university in Riau Islands, Indonesia. They were intentionally selected because they were enrolled in a listening course during the semester in which the research was conducted. Furthermore, three instructors who taught listening courses collaborated during implementation and provided pedagogical assessments of the learning activities. Three specialists were engaged in the validation process to guarantee the quality of the generated product. The specialists encompassed three areas: English language teaching, learning media design, and local culture studies. Their assessments were used to assess the viability of the created audiovisual storytelling medium in terms of content, language, design, and cultural authenticity. Before data collection, study authorization and participant consent were secured in compliance with ethical research protocols. The research was executed in four phases of design-based inquiry: analysis, design, development, and implementation/evaluation, as depicted in Figure 1.

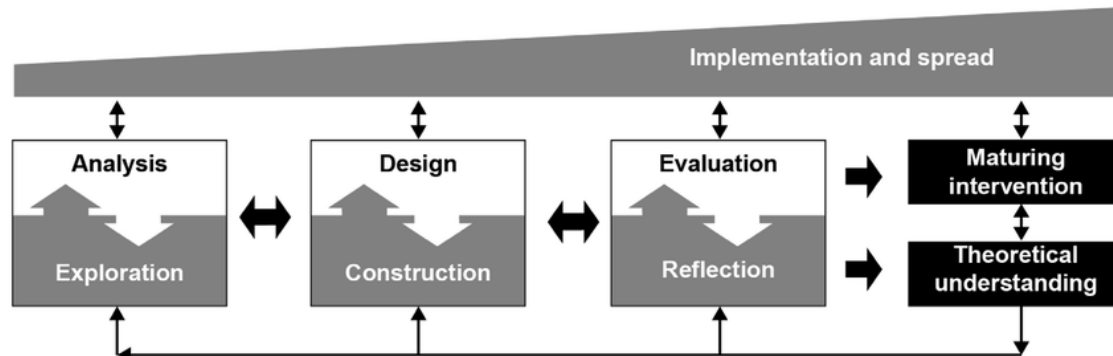


Figure 1. Design-Based Research Stages (adapted from Reeves, 2006)

The initial phase involved an analysis of practical issues, focusing on identifying the needs and challenges associated with listening teaching within the research context. Data were gathered via classroom observation, interviews with instructors, and student surveys. The investigation indicated that most students encountered challenges in comprehending authentic spoken English and showed diminished motivation due to the lack of stimulating, culturally pertinent resources. Listening resources in textbooks or on online platforms were often decontextualized and alien to students' cultural backgrounds. To resolve these issues, the researcher performed a literature analysis on digital storytelling, local cultural integration, and listening pedagogy to develop feasible solutions.

The second stage was design, encompassing the development of a prototype for the digital narrative audiovisual format. The material was derived from the folktales and cultural narratives of the Riau Islands, encompassing themes of maritime life, traditional values, and indigenous wisdom. The procedure entailed identifying appropriate narratives, composing and modifying scripts into simplified English, creating graphic storyboards, recording narration, and integrating audiovisual elements using editing applications such as Adobe Premiere Pro and Audacity. Each narrative was crafted to last between four and six minutes and incorporated comprehension exercises to evaluate listening comprehension. The third step involved development, during which the initial version of the audiovisual narrative medium was created and validated by three specialists. The specialists evaluated the product on content relevance, linguistic precision, learning design, technical excellence, and cultural representation. Input from the validators was utilized to refine and enhance the product prior to implementation. The primary improvements included aligning narration with pictures, improving sound quality, and ensuring clear communication of the moral and cultural values inherent in the stories.

The fourth step involved implementation and evaluation. The validated product underwent testing in the listening class via two phases: a limited-scale trial and a large-scale trial. In the small-scale study, a select set of students utilized the medium to assess usability and engagement. Minor enhancements were implemented based on their feedback prior to conducting the extensive experiment with all 35 students. Throughout the implementation, students viewed the digital storytelling films, engaged in listening comprehension tasks, and submitted feedback via questionnaires. Instructors monitored classroom activities and provided insights on incorporating audiovisual storytelling into their curricula. The evaluation phase assessed the product's practicality and efficacy in enhancing students' listening comprehension, as evidenced by pre-test and post-test outcomes.

The data gathered in this study comprised expert validation outcomes, student and lecturer responses, and students' listening comprehension scores. The utilized instruments included: 1) expert validation sheets evaluating the product's feasibility concerning content, language, media design, and cultural authenticity; 2) questionnaires distributed to students and lecturers to collect feedback on the product's appeal, practicality, and cultural relevance; and 3) listening comprehension tests conducted pre- and post-implementation to assess learning enhancement. All validation tools included a four-point Likert scale, ranging from "very poor" to "very good." Expert validators further furnished written remarks for qualitative assessment. The questionnaire items

for students and instructors concentrated on usefulness, engagement, and clarity of the audiovisual medium. The listening comprehension assessments included multiple-choice and short-answer questions aligned with the course learning goals.

The quantitative data derived from expert validation and user feedback were examined utilizing a percentage method. The percentage findings were further analyzed by product feasibility category. Scores of 81-100 mean very feasible, 61-80 mean feasible, 41-60 means fairly feasible, 21-40 means less feasible, and 0-20 means not feasible. The outcomes of the student and lecturer questionnaires were transformed into percentages to assess the practicality and appeal of the generated product. The students' listening comprehension scores were assessed descriptively by comparing the pre-test and post-test mean scores to evaluate improvement following the use of the audiovisual storytelling medium. Furthermore, qualitative data from interviews and observations were thematically analyzed to discern trends about student participation, understanding methods, and cultural awareness. The integration of quantitative and qualitative analyses facilitated a thorough comprehension of the validity, applicability, and efficacy of the generated product in improving students' listening abilities.

Table 1. Interpretation of Product Effectiveness Scores

Interval Scores (%)	Categories
$M_i + 1.5SD_i \leq X \leq M_i + 3SD_i$	Very effective
$M_i + 0SD_i \leq X \leq M_i + 1.5SD_i$	Effective
$M_i - 1.5SD_i \leq X \leq M_i + 0SD_i$	Fairly effective
$M_i - 3SD_i \leq X \leq M_i - 1.5SD_i$	Less effective

RESULT AND DISCUSSION

The design phase yielded a prototype of listening materials based on digital storytelling, which integrated local cultural elements from Riau Islands. The design aimed to deliver engaging, contextually relevant, and culturally rooted learning experiences to enhance students' listening comprehension. The results at this stage were obtained from the needs analysis questionnaire, interviews with lecturers, consultations with experts, and classroom observations carried out during the preliminary phase. Responses from the student questionnaire indicated that most students found traditional listening materials, including audio recordings and textbook-based exercises, tedious and devoid of context. Students demonstrated a preference for visually engaging, narrative-driven media that incorporates genuine local surroundings. Interviews with instructors indicated a necessity for hearing resources that would concurrently improve understanding and foster awareness of local culture. Experts proposed that including local tales may enhance students' engagement and listening motivation by linking the topic to their real-life experiences.

In light of these findings, a collection of digital storytelling videos was created. Each narrative illustrated a brief tale influenced by the folklore, customs, and societal life of the inhabitants of Riau Islands, including Legenda Putri Pandan Berduri, Upacara Tepuk Tepung Tawar, and Kehidupan Nelayan di Pulau Penyengat. Each film lasted 3–5 minutes and featured visual sequences, narrative, background music, and genuine sound effects to augment the aural experience. The narratives were conveyed in clear, intermediate-level English, supplemented by multilingual subtitles (English–Indonesian) to cater to diverse competence levels. Following each film, students received interactive comprehension exercises, comprising multiple-choice questions, short-answer tasks, and sequencing activities that emphasized core ideas, supporting details, and inferential meaning. Alongside the listening activities, supplementary sections were incorporated to help students link the narrative to cultural ideas. These sections included concise cultural annotations, word highlighting, and conversation prompts to enhance comprehension of the narrative's cultural elements. A feedback interface was developed to gather students' responses concerning their learning experience, perceived difficulty, and interest in the subject matter.

The comprehensive product design prioritized accessibility and user-friendliness. The contents were delivered via a straightforward digital interface that permitted pause, replay, and subtitle modification options, allowing students to choose their listening tempo. Table 2 summarizes the primary components of the generated audiovisual digital narrative material. These components were crafted to amalgamate verbal, visual, and cultural features that jointly augment students' comprehension, engagement, and cultural literacy.

Table 2. Design Components of the Audiovisual Digital Storytelling Material

Component	Description	Purpose
Story Content	Local stories from Riau Islands (folklore, daily life, traditions)	To provide authentic and culturally relevant input
Narration & Audio	English narration with natural intonation and cultural sound effects	To improve listening comprehension and contextual understanding
Visual Elements	Animated and video-based visualization of stories	To enhance engagement and support comprehension
Subtitles	English–Indonesian bilingual subtitles	To aid understanding and vocabulary acquisition
Comprehension Tasks	Multiple-choice, sequencing, and short-answer questions	To assess understanding of main ideas, details, and inferences
Cultural Notes	Brief explanations of traditions and values reflected in each story	To promote cultural literacy
Interface Features	Play/pause, replay, subtitle control, and feedback form	To support independent listening practice

At the end of the design phase, the prototype was submitted for expert validation involving three experts to evaluate its quality before proceeding to the development and implementation stages. The validation of the audiovisual digital storytelling material was conducted by three experts in content, language, and media. Each expert assessed the developed product using a structured validation instrument. The purpose of this validation stage was to determine the feasibility of the teaching materials before they were implemented in the classroom. The validation covered three main aspects: material, language, and media.

Based on the material aspect validation, the material element indicates an average proportion across all criteria of 84.67%, categorizing it as very eligible. The three experts concurred that the created digital storytelling material was exceptionally pertinent to the learning objectives of listening comprehension. The relevance to learning objectives achieved an average of 86.67%, signifying that the information effectively supported the desired abilities. Furthermore, content accuracy, appropriateness, sequence, and arrangement had ratings exceeding 83%, indicating that the material conveyed ideas logically and coherently. One expert proposed enhancing the incorporation of cultural aspects by including additional contextual examples from Riau Islands folklore, further to underscore local identity in students' educational experience.

This feedback served as a basis for minor adjustments prior to the implementation phase. Regarding language, the average feasibility percentage was 86.25%, indicating very high eligibility. The highest ratings were attained in narrative clarity and simplicity, as well as cultural authenticity, both above 88%. The results demonstrate that the language used in the storytelling script was effective, contextually relevant, and appropriate for the students' English level. One validator recommended that certain idioms be streamlined and standardized to ensure consistency among the tale portions. This input was deemed crucial to ensure that the storytelling content remained accessible and educationally effective for students with diverse language proficiency levels. The validation results for the media aspect demonstrated exceptional quality, achieving an average score of 89.00%, categorizing it as highly eligible. The component with the highest rating was visual design and appeal at 92%, followed by the integration of visuals and narration at 90.67%, indicating the efficacy of amalgamating visual, auditory, and textual aspects cohesively. The experts commended the harmonious color scheme, legible writing, and alignment between narration and animation. A minor comment was given regarding enhancing transition fluidity and background music volume to improve the overall viewing experience.

The findings from the three validation components indicated that the audiovisual digital storytelling product was feasible and prepared for classroom deployment. The validators' feedback was used to enhance several aspects of the material, including augmenting the tale's cultural depth, improving linguistic consistency, and optimizing audiovisual integration. The findings validate that the developed material adheres to the standards of content, language, and media appropriateness, consistent with the principles of Design-Based Research that prioritize iterative enhancement through expert feedback and contextual assessment (Anderson & Shattuck, 2012; McKenney & Reeves, 2019). After the product revision based on expert validation, the audiovisual digital storytelling material was implemented in a limited trial involving 35 students and 3 lecturers from the English Education Study Program. This stage aimed to evaluate the feasibility, appeal, and use of the generated material from the users' viewpoint. Data were gathered through response surveys that included indicators of presentation, practicality, material relevance, and linguistic clarity.

The findings indicate that students provided overwhelmingly positive feedback across all areas, with an average of 90.72%, suggesting that the prepared material is extremely suitable. The presentation component received the best score at 93.14%, followed by language clarity at 91.71% and material relevancy at 90.00%. The findings indicate that audiovisual digital storytelling improved students' comprehension and heightened their motivation and involvement in learning activities. Students commented that the combination of visual and

auditory elements made the cultural stories more vivid and easier to understand, aligning with previous studies that emphasize the motivational power of multimedia-based learning (Mayer, 2014; Robin, 2016).

The lecturers' responses also strongly endorsed the developed material. As summarized in Table 8, all indicators received scores above 92%, resulting in an overall average of 93.75%, categorized as *very eligible*. The lecturers highlighted that the material effectively supported the teaching of listening comprehension through culturally grounded content. They also noted that the product successfully integrated the principles of multiliteracies—combining linguistic, visual, and cultural modes to promote deeper understanding and identity building among students. One lecturer recommended offering optional subtitles to enhance inclusivity in mixed-proficiency classrooms. The highly positive responses from both students and lecturers indicate that the developed audiovisual digital storytelling material is not only feasible but also pedagogically effective. These findings align with earlier studies that reported that storytelling-based multimedia could enhance students' engagement, comprehension, and appreciation of cultural values (Smeda et al., 2014; Yang & Wu, 2012). The positive reception also validates the DBR approach used in this research, which ensures the practical applicability and relevance of the product in real educational contexts through continuous collaboration among researchers, teachers, and students.

Table 3. Paired Samples Statistics of Students' Listening Comprehension

Pair	Test	Mean	N	Std. Deviation	Std. Error Mean
1	Pre-test	61.31	35	4.431	.749
	Post-test	80.89	35	5.051	.854

The field implementation was conducted after the product revision, following expert validation and user responses. The developed audiovisual digital storytelling material was used in a classroom setting to evaluate its effectiveness in improving students' listening comprehension. The implementation involved 35 students from the English Education Study Program who participated in both pre-test and post-test sessions. The listening comprehension test consisted of tasks that measured students' ability to identify main ideas, recognize details, and infer meanings from the audiovisual stories. The results of the pre-test and post-test are presented in Table 9. The data show a substantial improvement in students' listening comprehension performance after the implementation of the audiovisual digital storytelling material. The average pre-test score was 61.31 with a standard deviation of 4.43, while the post-test average increased to 80.89 with a standard deviation of 5.05. This result indicates a significant improvement in students' listening comprehension after using the developed material.

Table 4. Paired Samples Test of Students' Listening Comprehension

Pair	Mean Difference	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	t	df	Sig. (2-tailed)
Pre-test – Post-test	-19.571	1.008	.170	-19.918 to -19.225	-114.825	34	.000

The results of the paired-samples test are displayed in Table 4. The study indicates a mean difference of 19.57 between pre-test and post-test scores, accompanied by a standard deviation of 1.01 and a standard error of 0.17. The 95% confidence interval for the difference spanned from -19.92 to -19.23, with a t-value of -114.83, indicating statistical significance at $p < .001$. The results demonstrate that audiovisual digital storytelling markedly enhanced students' listening comprehension. The results align with international research indicating that digital storytelling improves auditory and verbal skills through multimodal processing and narrative engagement (Akdamar & Sütçü, 2021; Mahmoud, 2025; Yu et al., 2025). Aini et al. (2023), Sudrajat et al. (2023), and Aktaş and Yurt (2025) found that digital storytelling grounded in local culture markedly enhances comprehension scores and learning motivation compared with conventional listening activities in Indonesian EFL classes. Gu et al. (2023), along with Khasanah et al. (2023), noted that DST fosters empathy, collaboration, and critical awareness when narratives incorporate community values and cultural symbols. From a sociocultural standpoint, incorporating familiar narratives aligns with the concept of identity-based learning. Szécsi (2025) and Murad et al. (2023) found that students participating in intercultural digital storytelling programs improved their intercultural competence and reflective thinking. Akdoğan (2023) and Chen and Hung (2024) similarly contended that including components of local culture enriches contextual learning by connecting students' real-life experiences with the application of the target language. The results collectively affirm the conclusion of the present study that culture-based DST enhances listening comprehension, cultivates cultural pride, and encourages active learner engagement in EFL environments.

These results show that the developed audiovisual digital storytelling material is effective in enhancing students' listening comprehension performance. The significant improvement demonstrates that integrating

cultural storytelling into audiovisual formats provides meaningful, engaging learning experiences that support students' comprehension development. In addition, the N-Gain score analysis was conducted to measure the magnitude of learning improvement achieved by the students. The descriptive statistics of the N-Gain results are displayed in Table 5. The normalized gain percentage ranged from 48.65% to 100%, with an average of 72.80% (SD = 14.07), indicating that most students achieved a high level of learning improvement after using the audiovisual digital storytelling material.

Table 5. Descriptive Statistics of N-Gain Scores

Variable	N	Minimum	Maximum	Mean	Std. Deviation
N-Gain (Ideal Score)	35	0.49	1.00	0.7280	0.14066
N-Gain (Percentage)	35	48.65	100.00	72.8043	14.06621

The findings of this analysis further substantiate that the prepared material substantially enhanced students' listening comprehension performance among the majority of participants. The outcomes of the design and development phases indicated that the digital storytelling-based listening resources incorporating local culture in the Riau Islands were valid, practical, and useful for enhancing students' listening comprehension. The validation process, conducted by three material experts, three media experts, and three language experts, demonstrated that the product attained a remarkably high eligibility level, with an average validation score of 92.1%. This signifies that the produced materials fulfilled the standards for content precision, cultural authenticity, linguistic clarity, and media presentation. These findings confirm that incorporating cultural narratives and digital media into English listening materials is pedagogically valid and contextually pertinent, consistent with [Rashtchi et al. \(2021\)](#) and [Richards \(2008\)](#), who stress that effective listening instruction necessitates materials that are both significant and authentic.

The empirical outcomes from the classroom application further corroborate the validity findings. The paired-samples t-test indicated a substantial enhancement in students' listening performance following the utilization of the generated materials (pre-test $M = 61.31$; post-test $M = 80.89$; $p < .001$). The gain was also evident in the N-Gain score ($M = 0.73$), indicating great improvement. The results indicate that digital storytelling rooted in local culture significantly improves students' listening comprehension. This enhancement is due to the contextual and multimodal characteristics of digital storytelling, which provide students with visual and aural stimuli that aid comprehension and retention ([Loniza et al., 2018](#); [Tabieh et al., 2020](#)). The use of recognizable cultural features from the Riau Islands enhanced the materials' relatability and significance, hence augmenting students' engagement and incentive to listen closely. The notable improvement in students' listening performance illustrates the theoretical tenet of contextual learning, which holds that understanding is enhanced when new material is linked to students' prior experiences and cultural contexts ([Ebikiemo, 2023](#)). The incorporation of local narratives, customs, and ethical principles in digital storytelling resources enabled students to comprehend spoken English within a recognizable sociocultural context. This aligns with [Manuhutu et al. \(2025\)](#) and [Muhria et al. \(2025\)](#), who found that incorporating local cultural elements into educational materials enhances comprehension and cultural literacy. This study demonstrated that digital storytelling served as both a language-learning tool and a means of cultural preservation, enabling students to acquire English through narratives that embody their identities and surroundings.

The digital storytelling strategy not only improved listening comprehension but also augmented students' affective involvement and learning motivation. Implementation observations revealed that students showed greater passion and focus when engaging with audiovisual narratives than when engaging in traditional listening exercises. This corroborates [Dewi et al. \(2023\)](#) and [Hu and Du \(2022\)](#), who contend that digital storytelling engages students by integrating sound, imagery, and narrative, hence fostering an immersive educational experience. The narrative style prompted children to deduce meaning from context and to connect language input to the emotional and moral aspects inherent in the stories, promoting both linguistic and character development. These results align with prior research indicating that digital storytelling enhances comprehension, creativity, and cultural awareness in foreign language acquisition ([Drajati et al., 2023](#); [Loniza et al., 2018](#)). This study builds on previous research by demonstrating that culture-oriented digital storytelling can serve as a significant pedagogical innovation in EFL listening instruction, especially in environments where authentic, culturally relevant materials are limited.

CONCLUSION

This study developed and evaluated local culture-based listening materials through digital storytelling using a design-based research approach. The development process, involving expert validation and field implementation, produced highly feasible and effective digital storytelling materials that integrate the cultural heritage of Riau Islands into English listening instruction. Expert validation results confirmed the product's eligibility across material, language, and media aspects, while empirical testing showed a significant

improvement in students' listening comprehension scores after using the developed materials. These findings demonstrate that digital storytelling incorporating local culture can create a more meaningful, engaging, and contextually relevant listening experience for students. The study makes a scientific contribution by offering an innovative model of material development that bridges cultural content and digital pedagogy in language learning. Furthermore, it provides practical insights for educators and curriculum developers on integrating local wisdom and digital media into EFL listening instruction, thereby promoting both linguistic proficiency and cultural appreciation among students.

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