

PEDAGOGICAL IMPLEMENTATION OF DIGITAL STORYTELLING IN EARLY CHILDHOOD EDUCATION: INSIGHTS INTO PLANNING, INTERACTIVE TEACHING, AND AUTHENTIC ASSESSMENT

Lailatul Husni¹, Pascalian Hadi Pradana², Rizki Sevi Triana³

^{1,2,3} Pendidikan Guru PAUD FKIP Universitas PGRI Argopuro (UNIPAR) Jember

¹ lailatulhusni29@gmail.com, ² pascalian10@gmail.com, ³ rizkisevi5@gmail.com

ABSTRACT

Digital storytelling has increasingly been recognized as an innovative pedagogical approach in early childhood education; however, empirical evidence explaining how it is systematically planned, implemented, and evaluated in authentic classroom settings remains limited. This study aimed to analyze the implementation of digital storytelling in early childhood learning at KB Raudlatul Ulum Ledokombo, Jember. Previous studies have primarily emphasized its impact on learning outcomes, while limited attention has been given to the instructional processes underlying its successful application. This study contributes a comprehensive implementation framework comprising instructional planning, interactive learning implementation, and authentic assessment as an integrated pedagogical model. This study employed a descriptive qualitative approach. Data were collected from one principal and one classroom teacher through semi-structured interviews, classroom observations, and documentation. The data were analyzed using the interactive model of data analysis involving data condensation, data display, and conclusion drawing, while source and technique triangulation were applied to enhance the credibility of the findings. The findings reveal that digital storytelling was implemented through three interconnected stages. Planning involved lesson preparation, thematic story selection, and age-appropriate digital media integration. Implementation emphasized interactive storytelling supported by questioning, discussion, and story-retelling activities that promoted children's active participation. Evaluation was conducted through continuous observation, classroom interaction, and authentic assessment of children's listening, speaking, comprehension, and behavioral development. These findings demonstrate that the effectiveness of digital storytelling depends on the integration of pedagogical competence, meaningful classroom interaction, and authentic assessment rather than technological resources alone.

Keywords: Authentic Assessment; Digital Storytelling; Early Childhood Education; Interactive Learning.

ABSTRAK

Storytelling berbasis digital semakin diakui sebagai pendekatan pedagogis inovatif dalam pendidikan anak usia dini; namun, bukti empiris yang menjelaskan bagaimana hal itu direncanakan, dilaksanakan, dan dievaluasi secara sistematis di lingkungan kelas yang autentik masih terbatas. Studi ini bertujuan untuk menganalisis penerapan digital storytelling dalam pembelajaran anak usia dini di KB Raudlatul Ulum Ledokombo, Jember. Studi-studi sebelumnya terutama menekankan dampaknya terhadap hasil belajar, sementara perhatian terbatas telah

diberikan pada proses instruksional yang mendasari penerapannya yang sukses. Studi ini menyumbangkan kerangka implementasi yang komprehensif yang terdiri dari perencanaan instruksional, pelaksanaan pembelajaran interaktif, dan penilaian autentik sebagai model pedagogis terintegrasi. Studi ini menggunakan pendekatan kualitatif deskriptif. Data dikumpulkan dari satu kepala sekolah dan satu guru kelas melalui wawancara semi-terstruktur, observasi kelas, dan dokumentasi. Data dianalisis menggunakan model interaktif analisis data yang melibatkan kondensasi data, tampilan data, dan penarikan kesimpulan, sementara triangulasi sumber dan teknik diterapkan untuk meningkatkan kredibilitas temuan. Temuan menunjukkan bahwa penceritaan digital diimplementasikan melalui tiga tahap yang saling terkait. Perencanaan melibatkan persiapan pelajaran, pemilihan cerita tematik, dan integrasi media digital yang sesuai usia. Implementasi menekankan pada penceritaan interaktif yang didukung oleh pertanyaan, diskusi, dan kegiatan retelling cerita yang mendorong partisipasi aktif anak-anak. Evaluasi dilakukan melalui observasi berkelanjutan, interaksi kelas, dan penilaian autentik terhadap perkembangan mendengarkan, berbicara, pemahaman, dan perilaku anak-anak. Temuan ini menunjukkan bahwa efektivitas storytelling digital bergantung pada integrasi kompetensi pedagogis, interaksi kelas yang bermakna, dan penilaian otentik daripada hanya pada sumber daya teknologi.

Kata Kunci: Penilaian Otentik; Digital Storytelling; Pendidikan Anak Usia Dini; Pembelajaran Interaktif.

A. Introduction

Early childhood education constitutes a fundamental stage in fostering children's cognitive, linguistic, social, and emotional competencies, which serve as the foundation for their subsequent educational development (Black et al., 2021). Accordingly, learning experiences at this stage should be designed to be concrete, enjoyable, and aligned with children's developmental characteristics, thereby ensuring that every form of educational stimulation can be optimally received and processed (OECD, 2021). One of the most widely

adopted approaches to achieving these objectives is storytelling, as it enriches children's vocabulary, strengthens communication skills, and promotes imagination as well as social understanding (Isbell & Yoshizawa, 2017; Maureen et al., 2020; Rahiem, 2021). Alongside the rapid advancement of educational technology, conventional storytelling has evolved into digital storytelling, which integrates text, images, audio, animation, and video to create more interactive and meaningful learning experiences (Purnama et al., 2022; Rahiem, 2021; Robin, 2016). From this perspective, digital storytelling

functions not merely as an instructional medium but also as a pedagogical approach that meaningfully connects children's learning experiences with the digital environment.

The rapid expansion of digital technology has transformed the ways in which children interact with information from an early age, making them increasingly accustomed to receiving stimuli through integrated visual, auditory, and animated content (Demeke et al., 2022; Livingstone & Third, 2017). This transformation requires educators to implement instructional strategies that not only capture children's attention but also facilitate knowledge construction in accordance with their developmental stages (Fleer, 2022; Rahiem, 2021). According to the Cognitive Theory of Multimedia Learning, learning becomes more effective when information is presented through integrated verbal and visual channels, enabling learners to develop coherent mental representations of knowledge more efficiently (Mayer, 2021). Therefore, digital storytelling is regarded as an instructional strategy capable of integrating narrative and multimedia elements to enhance

children's attention, engagement, and comprehension throughout the learning process (Hava, 2021; Purnama et al., 2022). Consequently, the integration of technology in early childhood education should not merely emphasize the use of digital devices but should prioritize the quality of instructional design developed by teachers to ensure that learning experiences remain meaningful and developmentally appropriate.

The importance of implementing digital storytelling has become increasingly evident as growing empirical evidence demonstrates its substantial contribution to children's language development, emergent literacy, creativity, and learning engagement (Purnama et al., 2022; Puspitasari et al., 2025; Rahiem, 2021). A systematic review conducted by Purnama et al. revealed that the application of digital storytelling in Indonesian early childhood education enhances children's learning motivation, communication skills, and classroom participation, although its implementation continues to encounter challenges related to teachers' digital competence and the development of instructional media (Purnama et al., 2022). Other studies

have likewise reported that the effectiveness of digital storytelling is strongly influenced by the quality of instructional planning, the appropriateness of story content, and teachers' ability to facilitate meaningful classroom interaction throughout the learning process (Hava, 2021; Rahiem, 2021). These findings are consistent with preliminary observations conducted at KB Raudlatul Ulum Ledokombo, Jember, which indicated that storytelling activities remain predominantly dependent on conventional media, while digital media have not yet been systematically integrated into classroom instruction.

Previous studies have consistently confirmed that digital storytelling contributes positively to early childhood learning, particularly by improving literacy, communication skills, thinking abilities, and student engagement. Studies conducted by Purnama et al., and Hafidhoh et al., demonstrate that the integration of digital storytelling significantly enhances children's learning motivation, language proficiency, and classroom participation throughout the instructional process (Hafidhoh et al.,

2023; Purnama et al., 2022). Similarly, Nurhalida et al.. found that the use of digital storytelling enables teachers to create more interactive learning environments while facilitating children's understanding through engaging visual presentations (Nurhalida et al., 2025). Nevertheless, most of the research still focuses on the impact of media use on learning outcomes, while the discussion on the process of learning implementation, from the planning stage, execution, to evaluation, has not been comprehensively explained.

Furthermore, previous research generally used quantitative or experimental approaches to measure the effectiveness of digital storytelling on the improvement of certain skills in children. This approach provides an overview of the extent of media influence, but it has not yet been able to explain the dynamics of implementation that occur during the learning process. In fact, the success of an educational media is not only determined by the characteristics of the media itself but is also influenced by the readiness of the teacher, the teaching strategies used, the characteristics of the students, and the learning environment conditions.

Thus, a study that examines the implementation of digital storytelling in depth becomes important to provide a more comprehensive picture of learning practices in the field.

Based on a review of previous research, it appears that researchers' attention is still predominantly focused on the effectiveness of using digital storytelling to improve learning outcomes or children's developmental abilities. Meanwhile, studies that explain how teachers design media, integrate digital stories into learning activities, manage learning interactions, and evaluate their implementation are still relatively limited, especially in the context of early childhood education institutions in rural areas. This condition indicates that there is still room for research to be explored in order to understand the implementation of digital storytelling as a pedagogical process influenced by various factors, not just as a medium whose effectiveness is measured.

Based on that, this research is directed to analyze the implementation of learning thru digital storytelling media at KB Raudlatul Ulum Ledokombo Jember comprehensively, covering the stages

of planning, implementation, and evaluation of learning. This focus is expected to provide a deeper understanding of the practice of implementing digital storytelling in the context of early childhood education, as well as the factors that support or hinder its implementation. The results of this research are expected to not only enrich the study of technology-based learning in early childhood education but also provide an empirical foundation for educators and institution managers in developing more adaptive, interactive, and developmentally appropriate learning strategies for children.

B. Methods

This study employed a qualitative descriptive approach to explore the implementation of digital storytelling in early childhood learning at KB Raudlatul Ulum Ledokombo, Jember. A qualitative descriptive design was selected because the study aimed to understand the learning process as it naturally occurred in the classroom, with particular attention to lesson planning, instructional practices, evaluation, and the factors influencing the implementation of digital storytelling.

Rather than measuring the effectiveness of the media, the research sought to generate an in-depth understanding of teachers' pedagogical practices and children's learning experiences within their authentic educational context (Busetto et al., 2020; Doyle et al., 2020).

The research subjects consisted of the school principal, classroom teacher, and children who participated in learning activities using digital storytelling. Participants were selected purposively because they were directly involved in planning, implementing, and evaluating classroom instruction, enabling the researcher to obtain information that was relevant to the research objectives. Focusing on these participants also allowed the study to capture multiple perspectives regarding classroom practices and the contextual factors that shaped the use of digital storytelling in early childhood education (Campbell et al., 2020; Patton, 2002).

Data were collected through classroom observations, semi-structured interviews, and document analysis. Classroom observations were conducted to examine how digital storytelling was integrated into

learning activities and how children responded during the instructional process. Semi-structured interviews with the principal and teacher were used to explore instructional planning, implementation strategies, perceived benefits, and challenges encountered during classroom practice. Supporting documents, including lesson plans, teaching materials, and learning documentation, were analyzed to strengthen and contextualize the observational and interview findings. Combining these techniques enabled the researcher to obtain comprehensive and complementary evidence from different sources (Creswell & Poth, 2016; Nurfajriani et al., 2024).

The collected data were analyzed using an interactive analysis process involving data condensation, data display, and conclusion drawing. Data analysis was conducted continuously throughout the research process so that emerging findings could guide subsequent data collection and deepen the interpretation of classroom practices. To ensure the trustworthiness of the findings, the researcher applied source triangulation, technique triangulation, and member checking

by comparing evidence obtained from observations, interviews, and documents and confirming the interpretation of findings with the participants. These procedures enhanced the credibility and consistency of the research findings while ensuring that the reported results accurately represented the participants' experiences and the actual implementation of digital storytelling in the classroom (Moon, 2019; Nowell et al., 2017).

C. Result and Discussion

1. Planning of Digital Storytelling-Based Learning

The findings indicate that instructional planning was a crucial stage in ensuring the effective implementation of digital storytelling in early childhood learning at KB Raudlatul Ulum Ledokombo. Before conducting classroom activities, the teacher systematically prepared the Daily Lesson Plan (*RPPH*), formulated learning objectives, identified the learning theme, and selected digital stories that were appropriate for children's developmental characteristics. Story selection was not solely based on its

attractiveness but also considered language simplicity, thematic relevance, and the moral values embedded in the narrative. As explained by the classroom teacher, *"I prepare the lesson plan (RPPH), formulate the learning objectives, determine the learning theme, and select stories that are appropriate for the children's age."* The teacher further emphasized, *"The stories are selected according to the learning theme and use simple, engaging language that children can easily understand."*

These findings were strengthened through source triangulation with the school principal, who confirmed that digital storytelling had become part of the school's instructional planning. The principal stated, *"Teachers use digital media such as animated story videos and projectors to support thematic learning activities."* She further explained, *"The school provides LCD projectors, speakers, laptops, internet access, and basic training to support teachers in implementing digital learning."* The interview data were also consistent with classroom observations showing

that the teacher prepared digital learning media before the lesson, selected stories that matched the learning theme, and ensured that the digital content was appropriate for children's developmental level before instruction began. The consistency of evidence across interviews and observations demonstrates that instructional planning was conducted systematically and intentionally rather than being implemented spontaneously.

The findings suggest that planning for digital storytelling was not limited to preparing technological equipment but represented a pedagogical process aimed at designing meaningful learning experiences (Kim & Li, 2021; Wu & Chen, 2020). This perspective is consistent with the growing emphasis on digital literacy in educational settings, where the integration of digital technologies requires not only access to technological resources but also pedagogical readiness to use them meaningfully in learning (Hadi Pradana et al., 2024). The teacher's careful consideration of learning objectives, thematic integration,

children's developmental readiness, and story characteristics indicates that technology was positioned as a learning facilitator rather than merely a presentation tool (Aleksieva et al., 2025; Nafiu & Olaitan, 2025). Such planning reflects teachers' pedagogical competence in integrating digital resources into early childhood learning while maintaining developmentally appropriate instructional practices.

These findings are consistent with the Cognitive Theory of Multimedia Learning, which argues that meaningful learning occurs when verbal information and visual representations are deliberately integrated to facilitate knowledge construction while minimizing unnecessary cognitive processing (Mayer, 2021; Mayer & Fiorella, 2021). The teacher's decision to select age-appropriate stories with simple language and relevant visual content demonstrates the application of multimedia learning principles in classroom practice. Instead of relying on technology for its own sake, digital storytelling was deliberately organized to support children's comprehension and

active engagement throughout the learning process.

The present findings are also consistent with previous empirical studies. Harashchuk reported that careful planning of digital storytelling activities significantly improves children's engagement and language development because learning materials become more meaningful and contextually relevant (Harashchuk, 2025). Likewise, Hava found that teachers' pedagogical decisions regarding story selection, multimedia integration, and instructional sequencing substantially determine the educational effectiveness of digital storytelling (Hava, 2021). Within the context of early childhood education, Purnama et al. (2022) further emphasized that successful implementation of digital storytelling depends not only on the availability of digital technology but also on teachers' ability to design instructional activities that align learning objectives, children's developmental needs, and appropriate digital content (Purnama et al., 2022).

From a theoretical perspective, these findings

reinforce the argument that digital storytelling should be understood as a pedagogical approach rather than merely a technological innovation.

Effective implementation requires the integration of instructional design, child development principles, and multimedia learning into a coherent educational process (Noetel et al., 2022; Septiani et al., 2020). Practically, the findings imply that improving digital storytelling implementation should focus on strengthening teachers' instructional planning competencies through continuous professional development, particularly in designing developmentally appropriate digital learning experiences. In addition, educational institutions should provide sustained institutional support by ensuring the availability of technological resources and facilitating teacher training so that digital storytelling can be implemented consistently and effectively in early childhood classrooms.

2. Implementation of Digital Storytelling-Based Learning

The findings demonstrate that the implementation of digital storytelling was carried out through a structured sequence of learning activities consisting of introductory, core, and closing sessions. The lesson began with greetings, prayers, and an apperception activity to introduce the learning theme before the teacher presented a digital story using a laptop and animated educational video. Throughout the storytelling session, the teacher periodically paused the video to encourage children to identify characters, describe story events, and explain the moral messages embedded in the narrative. As explained by the classroom teacher, *"I begin the lesson with an apperception activity and then present the story using digital media."* The teacher also confirmed that *"The digital media used in the classroom consist of a laptop and animated educational videos."*

The interview findings were corroborated by classroom observations showing that children remained attentive throughout the storytelling session and actively participated in classroom

interactions. During the observation, the teacher paused the digital story several times to ask simple questions related to the characters, plot, and moral values, allowing children to respond before continuing the video. Following the storytelling session, children were invited to discuss the story and retell it using their own words, while the teacher provided praise and encouragement to both active participants and children who were still hesitant to speak. The classroom teacher further stated, *"The children were enthusiastic, remained focused, actively answered questions, and were able to retell the story."* The consistency between interview and observational findings indicates that digital storytelling successfully promoted active classroom participation rather than passive media consumption.

These findings suggest that the effectiveness of digital storytelling was strongly influenced by the teacher's instructional strategies rather than by the digital media itself (Abimbade et al., 2023). Although animated videos served as the primary instructional

medium, children's engagement emerged because the teacher transformed storytelling into an interactive learning process through questioning, guided discussion, feedback, and opportunities for children to express their own understanding. Consequently, technology functioned as a pedagogical catalyst that enriched classroom interaction instead of replacing the teacher's instructional role (Alam & Mohanty, 2023). The findings further indicate that children's comprehension developed through continuous dialogue and reflection during the storytelling process, enabling them to connect the story content with their prior experiences and moral understanding.

The observed instructional practices are closely aligned with the principles of social constructivism, which emphasize that children's knowledge develops through meaningful interaction with teachers, peers, and learning environments (Vygotskian perspective). By encouraging children to answer questions, discuss story events, and retell narratives using their own

language, the teacher created opportunities for collaborative meaning-making rather than one-way knowledge transmission. Furthermore, the implementation reflects the principles of active learning, whereby children construct understanding through participation, communication, and reflection instead of merely receiving information passively (Carney, 2022; Darling-Hammond et al., 2020a). The integration of multimedia elements with interactive dialogue therefore supported both cognitive engagement and language development during classroom learning.

The present findings are consistent with previous studies demonstrating that digital storytelling enhances children's engagement when accompanied by interactive instructional practices. Yang and Wu reported that digital storytelling significantly improves children's motivation and learning participation because multimedia narratives stimulate curiosity and sustain attention throughout classroom activities (Yang & Wu, 2012). Similarly, Hava found that

the educational value of digital storytelling depends largely on teachers' ability to facilitate discussion, questioning, and reflective learning rather than simply presenting digital content (Hava, 2021). Within the context of early childhood education, Maureen et al. (2020) also concluded that children's language development and communication skills improve more substantially when digital stories are integrated with teacher-guided interaction instead of independent media viewing (Maureen et al., 2020). These studies reinforce the present findings that pedagogical interaction remains the determining factor in maximizing the educational potential of digital storytelling (Palioura & Dimoulas, 2022).

This findings strengthen the understanding that digital storytelling should be conceptualized as an interactive pedagogical approach integrating multimedia resources with dialogic teaching practices. The technology itself does not guarantee meaningful learning; instead, its educational effectiveness depends on how teachers facilitate

interaction, scaffold children's thinking, and connect digital narratives with authentic learning experiences (Alani et al., 2026). Practically, the findings highlight the importance of strengthening teachers' competencies in questioning techniques, classroom interaction management, and digital pedagogy alongside technological skills. Early childhood education institutions should therefore prioritize professional development programs that enable teachers to design interactive storytelling sessions in which children actively observe, communicate, reflect, and reconstruct knowledge through meaningful engagement with digital stories.

3. Evaluation of Digital Storytelling-Based Learning

The findings indicate that the evaluation of digital storytelling-based learning was conducted continuously throughout the instructional process rather than being limited to the end of the lesson. The teacher assessed children's learning through classroom observation, question-

and-answer activities, simple assignments, and behavioral assessment during storytelling sessions. Assessment focused not only on cognitive achievement but also on children's language development, listening skills, story comprehension, and their ability to demonstrate moral values reflected in the story. As explained by the classroom teacher, *"Learning outcomes are evaluated through observation, question-and-answer sessions, simple assignments, and children's attitudes during classroom activities."* The teacher further stated, *"The assessment focuses on children's listening skills, speaking ability, story comprehension, and their behavior in reflecting the moral messages presented in the story."*

The interview findings were supported by classroom observations showing that evaluation activities were naturally integrated into the learning process. After the digital story had been presented, the teacher invited children to discuss the story, identify the main characters, explain important events, and retell the story using their own words.

Although several children required additional guidance, most were able to respond to the teacher's questions and communicate their understanding of the story. The teacher also provided immediate feedback through praise, encouragement, and clarification whenever children demonstrated misconceptions or hesitated to participate. Observation records further revealed that children remained attentive throughout the lesson, actively answered questions, and demonstrated increasing confidence when retelling the story, indicating that assessment occurred simultaneously with instructional interaction rather than through isolated testing activities.

These findings suggest that evaluation functioned as an integral component of the learning process rather than merely as a mechanism for measuring learning outcomes (OECD, 2021). The teacher continuously collected evidence of children's learning by observing classroom participation, monitoring communication skills, and assessing children's ability to connect story content with moral

understanding (Huda et al., 2022). Such an approach enabled the teacher to identify children's individual learning needs and provide immediate pedagogical support during instruction (Antoninis et al., 2023; Darling-Hammond et al., 2020b). Consequently, assessment served not only to determine children's achievement but also to inform instructional decisions and improve the quality of subsequent learning activities.

The evaluation practices identified in this study reflect the principles of authentic assessment, which emphasize assessing children's competencies through meaningful learning activities and observable performance rather than relying exclusively on formal testing (Antoninis et al., 2023). Within early childhood education, authentic assessment enables teachers to document children's developmental progress across multiple domains, including language, communication, social interaction, and character development, while maintaining learning activities that are natural and developmentally appropriate

(OECD, 2021). The teacher's use of observation, classroom dialogue, and story-retelling activities therefore demonstrates that assessment was embedded within children's everyday learning experiences, allowing developmental progress to be evaluated holistically.

The present findings are consistent with previous studies highlighting the importance of formative and authentic assessment in technology-supported early childhood learning. Hava (2022) argued that digital storytelling becomes educationally meaningful when teachers continuously observe children's participation, provide timely feedback, and encourage reflective communication during storytelling activities (Hava, 2021). Likewise, Crawshaw et al., (2020) reported that evaluating children's ability to interpret and reconstruct digital narratives provides richer evidence of learning than measuring factual recall alone because it reflects children's cognitive processing, language development, and communication skills simultaneously (Crawshaw et al.,

2020). Furthermore, Purnama et al. (2022) emphasized that assessment within digital storytelling should capture children's engagement, language use, and behavioral responses to ensure that technology contributes to holistic child development rather than merely increasing instructional attractiveness (Purnama et al., 2022).

From a theoretical perspective, these findings reinforce the view that assessment in digital storytelling should be conceptualized as a continuous pedagogical process that supports children's learning and development instead of functioning solely as an outcome measurement (Hwang et al., 2023). The integration of observation, classroom interaction, and performance-based assessment demonstrates that children's developmental progress can be evaluated more comprehensively through authentic learning experiences. Practically, the findings suggest that early childhood teachers should strengthen their competencies in designing authentic assessment

strategies capable of documenting children's cognitive, linguistic, and socio-emotional development throughout digital storytelling activities. Educational institutions should also encourage the systematic use of observation records, reflective documentation, and performance-based evidence to improve the quality and credibility of assessment practices in technology-enhanced early childhood education.

D. Conclusion

The findings demonstrate that the implementation of digital storytelling at KB Raudlatul Ulum Ledokombo was conducted through three interrelated stages: instructional planning, classroom implementation, and learning evaluation. During the planning stage, the teacher systematically prepared the lesson plan (*RPPH*), formulated learning objectives, selected age-appropriate stories, and integrated digital media that aligned with the thematic curriculum and children's developmental characteristics. During classroom implementation, digital storytelling was delivered through interactive learning activities in which

animated digital stories were combined with questioning, discussion, and story-retelling activities. Meanwhile, evaluation was conducted continuously through classroom observation, question-and-answer sessions, simple performance tasks, and assessment of children's listening, speaking, story comprehension, and behavioral responses. These findings indicate that the successful implementation of digital storytelling was supported not only by the availability of digital media but also by teachers' pedagogical competence in designing, facilitating, and evaluating meaningful learning experiences.

The study contributes to the growing body of knowledge on digital pedagogy in early childhood education by demonstrating that digital storytelling should be understood as a comprehensive instructional approach rather than merely a technology-based learning medium. The findings highlight that meaningful learning emerges from the integration of appropriate instructional planning, interactive classroom facilitation, and authentic assessment practices that actively engage children throughout the learning process. From a practical

perspective, the study underscores the importance of strengthening teachers' digital pedagogical competencies while ensuring institutional support through adequate technological infrastructure and continuous professional development. Such efforts are essential for maximizing the educational value of digital storytelling and creating learning environments that are engaging, developmentally appropriate, and responsive to children's needs.

This study is subject to several limitations. The findings were generated from a single early childhood education institution involving a limited number of participants, which may restrict the transferability of the results to other educational contexts. In addition, the research focused primarily on describing the implementation process and therefore did not examine the long-term effects of digital storytelling on specific developmental outcomes, such as language acquisition, literacy, creativity, or socio-emotional development. Future research is therefore encouraged to involve multiple early childhood institutions with diverse educational

settings, employ longitudinal or mixed-methods designs, and investigate the influence of different forms of digital storytelling on various domains of child development. Such studies would provide a more comprehensive understanding of how digital storytelling can be optimized to enhance the quality of early childhood education across different learning contexts.

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