



Digital Storytelling Research Trends in Indonesia: A Systematic Literature Review

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ABSTRACT

New technologies have largely brought about positive changes in educational settings, enabling educators to improve their expertise and, consequently, elevate the quality of education. Studies reveal that incorporating these technologies leads to increased student engagement, higher levels of achievement, and greater motivation. Digital storytelling is perceived as an ideal method to meet the learning needs of digital native students while also improving their skills for the 21st century as it can be used as a medium for literacy and creativity. This research was conducted through a library approach, analyzing numerous articles focused on digital storytelling. This systematic literature review aims to provide a comprehensive overview of digital storytelling research in Indonesia, shedding light on emerging trends, challenges, and opportunities in this field. The findings highlight key responsibilities for teachers using digital storytelling, emphasizing the importance of developing technology skills, as well as, it uncovers any shifts in focus over time and highpoints gaps in the existing literature, providing valuable insights for future research directions.

Keywords: digital storytelling, literature review, research trends



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1. INTRODUCTION

1.1. Introduction

Throughout history, storytelling has been a widely used educational tool, serving as a means to transfer knowledge and information from one generation to the next. Stories are universally appreciated. They have a remarkable ability to captivate, entertain, and connect people, transcending cultural and linguistic boundaries. Stories, in its broad sense, are able to be used to

educate learners about the language since they offer an authentic application of language and present a diverse vocabulary relevant to their immediate environment, making the learning experience engaging and captivating (Febriyanti & Hidayat, 2023). Stories have played a crucial role in transmitting traditions, preserving heritage, and conveying historical narratives to subsequent generations. However, there have been some significant transformations in the methods of creating and telling stories, the diverse range of media employed to communicate the stories, and the audiences for the stories themselves.

Even now, people still continue to make and tell stories but with the help of technology. The integration of digital technology into education has brought about significant shifts in instructional methodologies. One innovative and promising approach gaining prominence is digital storytelling, which merges the art of traditional storytelling with the power of multimedia technology. The advent of digital media has revolutionized the storytelling landscape, offering educators new tools and platforms to engage students in meaningful and dynamic ways. Recent studies indicate that digital storytelling can effectively support both the art of storytelling and the incorporation of information and communication technology (ICT) in education. This offers numerous advantages for educators and students across all academic stages that bring impacts to instruction and students' interactions (Coutinho, 2010; Gyabak & Godina, 2011; Kearney, 2011; Hung, Hwang, & Huang, 2012; Yang & Wu, 2012; Foley, 2013; O'Byrne et al, 2018).

Digital storytelling involves the use of multimedia elements such as images, audio, video, and interactive elements such as music to enhance the narrative experience (Robin, 2006; Keengwe, 2015; Preradovic, Lesin, & Boras, 2016). By combining text with these dynamic elements, educators can create a more immersive and compelling learning environment to enhance the traditional art of storytelling. This approach has the potential to cater to different learning styles, making it particularly valuable in diverse classroom settings. Furthermore, digital storytelling is proven to be a powerful and engaging tool to capture students' attention, participate in discussion, and guide their learning (Alismail, 2015; O'Byrne et al, 2018; Rahiem, 2021). This avenue empowers educators to embrace inventive and enhanced teaching methodologies, thus lending support to pedagogy (Robin, 2006).

In the realm of education, teachers hold a significant position in the domain of digital storytelling. Within the classroom context, teachers have the ability to motivate students to collaboratively construct digital narratives, assuming distinct responsibilities such as writer, director, editor, and narrator (Wyman, n.d.). Moreover, teachers themselves can generate digital stories to enrich ongoing lessons within a broader curriculum, thereby fostering discourse around

the subjects being addressed. Teachers are seamlessly incorporating multimedia resources to nurture various student skills encompassing synthesis, analysis, evaluation, and presentation of information (Alismail, 2015). The potency of digital storytelling lies in its capacity to enable teachers to blend instructional messages with immersive learning experiences. Students become not just consumers but also producers of knowledge, as they design and share their own digital narratives (Stenger, 2018). Crafting a digital story requires students to think about narrative structure, character development, plot progression, and other storytelling elements. These skills are valuable not only for academic purposes but also for effective communication in various contexts. This participatory aspect of students in digital storytelling aligns with modern educational paradigms that emphasize student-centered and active learning. Additionally, evidence suggests that digital storytelling contributes positively to students' engagement, motivation, critical thinking skills, and literacy proficiencies (Robin, 2006; Foelske, 2014; O'Byrne et al, 2018).

Utilizing digital storytelling as an instructional method within educational settings possesses significant transformative potential for students' learning. Digital stories, being in a portable digital format, are easily created and disseminated through digital tools and texts. This empowers educators to capture and record the learning journey and outcomes of students, while simultaneously enabling students to access and appreciate the projects of their peers. The outcomes produced via digital storytelling extend beyond conventional classroom tasks, granting students the opportunity to delve into self-identity and the interpretation of personal experiences through diverse channels (Alonso et al, 2013).

Despite the promising potential of digital storytelling, there is a need for empirical research to assess its effectiveness across various educational domains, especially in Indonesia. In addition, exploring digital storytelling's trends and impact within the local educational framework is paramount. This systematic literature review aims to provide a comprehensive overview of digital storytelling research in Indonesia, shedding light on emerging trends, challenges, and opportunities in this field. By conducting a systematic review of digital storytelling in Indonesia, this enables this research to evaluate and chart the current state of knowledge, identifying both existing insights and areas where further development is needed to enhance the knowledge base. Furthermore, by examining the experiences of both educators and students, this research will provide valuable insights into the practical implementation of digital storytelling in Indonesian educational contexts.

1.2. Research questions

This review study was guided by one primary research question, that is: What are the trends in digital storytelling in Indonesia?

The research question seeks to discern prevalent tendencies in digital storytelling, tracking aspects such as publication years, geographical implementation, academic tiers, subject matter, pedagogical approaches, research methodologies, and overarching orientations. These elements collectively offer a panoramic view of the field.

1.3. Significance of the study

This study systematically reviews a range of research articles related to digital storytelling in the Indonesian educational context. The findings of this systematic review have several implications for educators, policymakers, and researchers in Indonesia. By understanding the trends in digital storytelling, educators can design more adequate and culturally relevant teaching strategies, and as technology continues to advance, understanding how digital storytelling is integrated into the education system can help educators keep pace with technological changes and use them effectively in education. Then, policymakers can identify areas where technology integration into formal education systems can be supported. It will also serve as a foundation for future empirical studies, helping researchers to design focused investigations that address specific gaps and challenges identified through this systematic review. Ultimately, the aim of this research is to provide a comprehensive and updated understanding of the trends in digital storytelling research in Indonesia. By analyzing these sources, the study will identify prevalent themes, research methodologies, and areas of application within digital storytelling.

2. METHOD

2.1. Research Design

This study uses a systematic literature review (SLR) method with a qualitative approach or known as meta-synthesis to answer questions formulated in this research. A Systematic Literature Review (SLR) is a scientific process governed by a defined and rigorous set of principles aimed at ensuring the methodological thoroughness, absence of bias, transparency, accountability, and effective implementation (Dixon-Woods, 2010). A well-executed procedure for the Systematic Literature Review (SLR) is crucial, ensuring careful planning before commencing the actual review process. In contrast, meta-analysis involves the application of statistical techniques to derive results from the combination of data from multiple related studies, contributing to more

precise estimates on the studied topic (Moher et al, 2015). The research process began with the formulation of review question, followed by the development of inclusion and exclusion criteria, a literature search, and an assessment of the selected materials. After the completion of the study selection process, the subsequent step in data analysis entailed extracting and organizing relevant data, and then combining these categories for the purposes of interpretation and reporting. This review process referred to Wu and Chen (2020). The three steps in the process are generalized as review questions, selection process, and analysis process.

In the reviewing process, the research question for this study is as follows: "*What are the trends in digital storytelling in Indonesia?*" This query seeks to elucidate the prevailing patterns in digital storytelling in Indonesia by scrutinizing various indicators, including publication year, educational levels, subject matter, pedagogical approaches, research methodologies, and theoretical orientations. The examination of these indicators collectively offers a comprehensive overview of the field or innovations made by each study.

2.2. Samples

For the selection process, the study was used as the main database is DOAJ (Directory Of Open Access Journals). DOAJ stands as a distinctive and comprehensive repository, encompassing a wide array of open-access journals from across the globe. The only search phrase or term employed in our search was "digital storytelling in Indonesia". Then, in the criteria aspect for limited selection which intended studies in the review. A total of 16 studies were found from 2010 to 2022. Subsequently, the search for peer-reviewed empirical studies written in English and then reduced to 14 studies. Afterward, the last used two criteria, context (primary, secondary, and higher education); in the Indonesian context of level education, the education system is structured into three main levels: primary, secondary, and higher education. Primary education typically spans six years, providing students with foundational knowledge and basic skills. Secondary education follows, comprising three years of lower secondary and three years of upper secondary education. Upon successful completion of secondary education, students can pursue higher education at universities or vocational schools. Then, relevant studies that involve the learner and/or learning process, it was found in 9 studies.

2.3. Instruments

This research starts by developing inclusion criteria as an instrument adopted from Wu dan Chen (2020) to determine which studies will be included in the review (see Table 1).

Table 1. The aspect of inclusion for review and the number of studies meeting the criteria

Aspects	Inclusion Criteria	Number of articles meeting the criteria
Keywords	Digital Storytelling in Indonesia	16
Literature Type	Journal Articles DOAJ search database	16
Publication	January 2010 - December 2022	16
Quality assurance	Empirical Studies and Peer Review	15
Language	Written in English	14
Context	Primary, secondary, and higher education in Indonesia	12
Transparency	The methodology employed in the literature should be clearly stated, including details such as sample size, instruments used, and the analysis method.	14
Reliability/Validity	To the best of our knowledge, the results presented in the literature should be deemed valid and reliable, taking into account the study's nature.	14
Relevance	On learning and/or learners	9

After identifying relevant studies in various articles based on DOAJ search database, the researchers screened each article according to the inclusion criteria. Then, the researchers describe the methodology and findings of the included study, including the transparency, and the reliability and validity of each study.

2.4. Data Analysis

In the analysis process, the sequence of activities comprises data extraction, coding, and synthesis. Concerning the aforementioned criteria associated with Research Question 1 (excluding orientation), the initial tasks were undertaken by Author 1, involving the retrieval and coding of relevant information as per the review protocol outlined in Appendix A. Subsequently, Authors 1 and 2 convened to collectively categorize the data with the intent of identifying potential trends and patterns. As an illustrative example, subjects were categorized into distinct groupings, including those within the domains of certain topics in educational contexts and those studies that

did not specify their disciplinary domain. This categorization served the purpose of exploring trends across different academic disciplines. Similarly, the categorization of educational levels extended to classifying them into primary, secondary, and higher education tiers, allowing for an examination of their distribution across these educational levels. A comprehensive examination of the studies was conducted, leading to the extraction of significant findings. This was succeeded by the coding of these outcomes to facilitate their arrangement and classification. Subsequently, both authors convened to engage in a comparative discussion and collectively arrive at a consensus regarding the categorization of outcomes.

3. FINDINGS AND DISCUSSION

3.1. Findings

In this section, the researcher reports the findings related to the research question: *What are the trends in digital storytelling in Indonesia?*

Since the year of publication, the search has been exclusively focused on the term 'digital storytelling in Indonesia.' Subsequently, the researchers established specific criteria to narrow down the selection of studies for the review. In total, nine relevant studies were identified and categorized based on their publication year. Specifically, there are two studies published in 2020, five studies published in 2021, and two studies published in 2022. The table 1. shows, that there are 9 studies which show the aspect of inclusion meeting the criteria.

Next, the context (primary, secondary, and higher education) and the sample sizes of the nine studies are examined. Specifically, two studies were conducted at the primary level which involved 20 students and four English teachers, four studies were conducted at the secondary level which involved 132 students and one teacher, and three studies were conducted at the higher education level which involved one student teacher, and 152 students.

Furthermore, concerning the research methods employed in the selected studies, the table reveals six types of research methods. Specifically, three studies utilized the case study method, two studies employed narrative inquiry, and two studies adopted descriptive qualitative methods. Additionally, one study each utilized the quasi-experimental and phenomenological method. In terms of the formulation of research questions, seven studies implicitly stated their research questions, while two studies explicitly presented their research questions.

Table 2. The literature meets the inclusion criteria

Number	Authors	Context	Methods	Sample Size/ Participant	Relate RQ (1-2)
1	Lestari and Nirmala (2020)	Higher Education	Descriptive Qualitative	23 students	Implicit
2	Nuroh, et al (2021)	Primary	Case Study	20 Students and 2 English Teachers	Explicit
3	Sudarmaji et, at (2020)	Secondary	Quasi Experiment	72 Students	Implicit
4	Budianto, et al (2021)	Secondary	Case study	30 Students and 1 teacher	Implicit
5	Wisnumurti, et al (2021)	Higher Education	Narrative inquiry	1 student teacher	Implicit
6	Purnama (2021)	Primary	Phenomenological	4 Teachers	Explicit
7	Rohayati, et al (2021)	Secondary	Case Study	20 Students	Implicit
8	Sumbayak and Tamala (2022)	Higher Education	Descriptive Qualitative	129 students	Implicit
9	Puspitasari, et al (2022)	Secondary	Narrative inquiry	10 students	Implicit

3.2. Discussion

This discussion summarizes the findings based on five types of research methods. The first is quasi-experiment, this study explored the efficacy of digital storytelling in enhancing the visual memory and writing skills of tenth-grade students in a secondary level in Indonesia (Sudarmaji et al, 2020). The research, involving 72 students and employing a randomized pretest-posttest control group design, revealed that both the digital storytelling technique and conventional teaching methods yielded similar proficiency, focus, and concentration among students. Despite the comparable outcomes, the post-test results indicated a notable emphasis on visual memory over writing skills in students who underwent digital storytelling. The intriguing revelation that both digital storytelling and conventional teaching methods elicited comparable levels of proficiency, focus, and concentration implies the effectiveness of both approaches in engaging students during the learning process. However, the noteworthy emphasis on visual memory over writing skills in students exposed to digital storytelling in the post-test results introduces a thought-provoking

dimension to the findings, suggesting that this innovative method may play a distinctive role in enhancing students' ability to retain and recall visually presented information. This nuanced understanding contributes to the broader discourse on optimizing teaching strategies tailored to specific cognitive outcomes.

Second, from phenomenological method, the research offers recommendations to early childhood education instructors on incorporating technology into children's learning through digital storytelling (Purnama, 2021). The findings also have the potential to enhance teachers' comprehension of how the use of such technology can positively influence the advancement of technological literacy in early childhood education. The study aims to provide guidance for teachers in incorporating technology into educational activities for children.

Early childhood education has traditionally relied heavily on traditional text-based writing, including storytelling, and has rarely utilized digital technology. Digital storytelling produces concise narratives that aid students and educators in enhancing their information retrieval, problem-solving proficiency, and collaborative teamwork skills. Therefore, from the research summary, it is evident that the study provides crucial guidelines for Early Childhood Education (ECE) teachers, focusing on the integration of technology into children's learning activities through digital storytelling. The research underscores a significant shift from traditional, text-based writing methods prevalent in early childhood education towards the incorporation of digital technology. Digital storytelling emerges as a transformative tool, offering short, engaging narratives that not only enhance information-gathering and problem-solving skills but also promote collaborative teamwork among both students and teachers.

Third, descriptive qualitative, Digital storytelling can be recorded and presented audibly or audio-visually, and can be designed using software programs like Photo Story 3 for Windows. Students are encouraged to prepare their own stories, and it is seen as an effective way to shape narratives. Digital storytelling has significant relationships with autonomous learning, as It promotes the integration of four learning strategies centered around students: active engagement, deep learning through reflection, project-based learning, and the proficient integration of technology into instruction (Sumbayak, 2022). Advantages of using digital storytelling in education include providing more variety, personalizing the learning experience, making explanations more compelling, creating real-life situations easily and cheaply, and improving student involvement in the learning process. This aligns with the concept of autonomous learning,

which allows students to take charge of their learning. Digital storytelling has been used in various contexts of teaching and learning a foreign language.

From this research summary in descriptive qualitative method, it emerges that digital storytelling serves as a versatile and impactful tool in education, capable of being presented both audibly and audio-visually through platforms like Photo Story 3 for Windows. The research emphasizes the effectiveness of having students create their own stories, showcasing digital storytelling as a potent means of shaping narratives. Notably, it establishes a connection between digital storytelling and autonomous learning, revealing its capacity to foster student engagement, deep learning through reflection, project-based learning, and the seamless integration of technology into instruction. The advantages of employing digital storytelling in education are manifold, ranging from enhancing variety and personalizing learning experiences to creating compelling explanations and cost-effective real-life situations.

Fourth, narrative inquiry, this study investigates the implementation of digital storytelling in teaching English to Young Learners in an elementary school in Indonesia (Puspitasari et al, 2022). The study centers on a pre-service teacher's experience utilizing digital storytelling for teaching English to fifth-graders. Data collection involved video recording, field notes, and reflections from students. The findings suggest that digital storytelling can be implemented through diverse models, allowing for technology combinations. One model outlined in this research involves general steps like an opening, story focus, additional exercises, and closure. Activities involving teacher-student interaction, such as Question and Answer sessions, are notably favored by the students.

The study highlights the versatility of digital storytelling, emphasizing that it can be delivered through various models and is adaptable to different technological combinations. The specific model discussed in the study involves distinct steps such as opening, story focus, additional exercises, and closing. Notably, the study reveals that student preference is observable during interactive activities like question-and-answer sessions, emphasizing the importance of teacher-student interaction in the context of digital storytelling. Overall, the research provides insights into the practical application of digital storytelling in TEYL, offering a glimpse into effective models and showcasing the significance of interactive elements for student engagement.

Fifth, from case study method, The research discovered that students perceived digital storytelling as more captivating, intriguing, and inspiring for enhancing their listening skills.

However, the most challenging activities were related to students' limited vocabulary during the communication stage using Bahasa Indonesia. The study suggests that EFL teachers need to provide learners with relevant vocabulary to support their communication skills during the implementation of digital storytelling. The study recommends further research to address learners' limited vocabulary as a hindering factor in teaching listening. In the rapidly changing world of technology, the integration of technology in education has been shown to positively affect students' motivation, engagement, and interest in learning.

Therefore, it becomes apparent that digital storytelling is perceived by students as a more engaging and motivating tool, particularly for improving listening skills. The study highlights the positive impact of integrating technology, emphasizing how digital storytelling enhances students' interest and engagement in the learning process. However, the research identifies a challenge related to students' limited vocabulary during communication stages, particularly in Bahasa Indonesia. This finding underscores the importance of addressing language proficiency gaps, suggesting that EFL (English as a Foreign Language) teachers should focus on providing relevant vocabulary support to enhance students' communication skills when utilizing digital storytelling.

This comprehensive discussion synthesizes findings from five distinct research methods on the implementation and impact of digital storytelling in various educational contexts. In a quasi-experiment, digital storytelling proved comparable to conventional teaching methods in enhancing proficiency, focus, and concentration among tenth-grade students, with a noteworthy emphasis on visual memory. In a phenomenological approach, guidelines for Early Childhood Education (ECE) teachers were proposed, emphasizing the transformative role of digital storytelling in shifting from traditional text-based methods to technology integration, promoting collaborative teamwork and problem-solving skills. Descriptive qualitative insights highlighted the versatility of digital storytelling, underscoring its role in autonomous learning, personalization, and engagement. Narrative inquiry delved into the practical application of digital storytelling in Teaching English to Young Learners (TEYL), revealing various adaptable models and emphasizing the significance of teacher-student interaction. Finally, a case study reinforced the positive impact of digital storytelling on students' engagement and motivation while addressing challenges related to limited vocabulary. The collective findings advocate for the diverse benefits of digital storytelling in education, emphasizing its transformative potential, adaptability, and positive influence on student engagement and learning outcomes across different educational levels and subjects.

4. CONCLUSIONS

4.1. Conclusion

Digital storytelling has become a popular method in Indonesian education, combining traditional storytelling with multimedia technology. This approach has been found to enhance student engagement, achievement, and motivation. The integration of digital technology into education has led to significant shifts in instructional methodologies, with digital storytelling emerging as a promising approach. It involves the use of multimedia elements such as images, audio, video, and interactive elements like music to enhance the narrative experience. This approach caters to different learning styles and is particularly valuable in diverse classroom settings. It is a powerful and engaging tool that captures students' attention, participates in discussions, and guides their learning.

This systematic literature review provides a comprehensive overview of digital storytelling research in Indonesia, shedding light on emerging trends, challenges, and opportunities in this field. The findings highlight key responsibilities for teachers using digital storytelling, emphasizing the importance of developing technology skills and identifying any shifts in focus over time. The review also highlights gaps in existing literature, providing valuable insights for future research directions.

4.2. Suggestions

The integration of digital storytelling into Indonesian education presents a transformative pedagogical approach that has proven to enhance student engagement, achievement, and motivation. As a multimedia-rich method, digital storytelling seamlessly blends traditional narrative techniques with technological elements, including images, audio, video, and interactive features like music. This unique combination caters to diverse learning styles, making it an invaluable tool in the multicultural and varied classroom settings of Indonesia. The immersive nature of digital storytelling captures students' attention, encouraging active participation in discussions and guiding their learning experiences. As educational technology continues to evolve, understanding the evolving landscape of digital storytelling is crucial for educators seeking to leverage its benefits effectively.

This systematic literature review not only consolidates existing knowledge on digital storytelling in Indonesian education but also serves as a foundational resource for shaping future research directions. It underscores the responsibilities placed on teachers utilizing digital storytelling, emphasizing the need for continuous development of technology skills to adapt to the

evolving educational landscape. Moreover, by identifying shifts in focus over time, the review sheds light on the dynamic nature of digital storytelling research, offering insights into emerging trends, persistent challenges, and potential opportunities. The highlighted gaps in the current literature pave the way for future investigations, guiding researchers toward areas that require further exploration and contributing to the ongoing enhancement of digital storytelling practices in Indonesian education.

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