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Revisiting Digital Storytelling as a Pedagogical Strategy in Educational Technology: A Systematic Literature Review of Recent Evidence

Oktovianti Pratiwi*, Cecep Kustandi, Dwi Kusumawardani, Imam Fitri Rahmadi
Master of Education Technology Study Program, Faculty of Educational Sciences,
Universitas Negeri Jakarta, Indonesia.
*Corresponding Author. Email: oktovianti.pratiwi@mhs.unj.ac.id

Abstract: This study aims to systematically examine the utilization of digital storytelling (DST) in the context of educational technology, focusing on the digital media used, supporting platforms and their impact on student learning processes and outcomes. The study was conducted using the Systematic Literature Review (SLR) method based on the PRISMA 2020 guidelines and involved 36 scientific articles from the Scopus database published in the 2020–2024 period. The results of the thematic analysis showed that the most dominant digital media used was narrative video, followed by digital comics, story-based games and interactive applications. Various platforms and technological tools are utilized, reflecting the flexibility of DST implementation across various educational levels and subject areas. DST implementation has been reported to improve students' learning motivation, emotional engagement, digital literacy, communication and collaboration skills. This study confirms that DST is a technology-based learning strategy that is relevant and adaptive to 21st-century needs. These findings are expected to serve as a reference for developing more effective and contextually grounded digital narrative-based instructional innovations. Future research is recommended to examine how specific types of DST media influence measurable learning outcomes and to develop practical, pedagogically grounded implementation models that can be effectively adopted by teachers across diverse educational contexts.

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Introduction

significantly transformed the ways people communicate, learn, and construct meaning. In educational contexts, this transformation has encouraged the adoption of technology-enhanced pedagogical approaches that emphasize learner engagement, creativity, and active knowledge construction. One such approach is digital storytelling (DST), which refers to the use of multimedia-based digital narratives to support learning, reflection, and self-expression. By integrating visual, auditory and textual elements, DST facilitates meaningful learning experiences and has been widely recognized for its potential to enhance cognitive, affective, and skill-based learning outcomes (Lambert, 2013; Ohler, 2016; Robin, 2016).

Over the past three to five years, the landscape of digital storytelling has undergone notable changes driven by the emergence of interactive media, online platforms, and emerging technologies such as artificial intelligence (AI), mobile applications, and data-driven storytelling tools. Recent studies indicate that DST has expanded beyond traditional linear narrative videos to include digital comics, game-based storytelling, GIS-based story maps, mobile storytelling applications, and AI-assisted digital story writing (Gillespie, 2022; Ng et

al., 2022; Rutta et al., 2021; Schrum et al., 2021). These developments have broadened the pedagogical potential of DST, allowing it to function not merely as a digital medium, but as a flexible pedagogical strategy that supports multimodal, collaborative, and learner-centered learning across educational levels and disciplines.

Despite this diversification, empirical evidence consistently shows that video-based digital storytelling remains the most dominant form of DST implementation. Studies across language learning, health education, geography, and teacher education report a strong reliance on narrative video formats (Abdel-aziz et al., 2022; Conlon et al., 2020; Kim et al., 2021; Ryan & Aasetre, 2021). This dominance appears to be driven by both practical and pedagogical factors. Technically, video production tools present a relatively low barrier to entry due to their accessibility, ease of use, and compatibility with existing digital infrastructures. Pedagogically, narrative video offers strong affordances for emotional engagement, reflection, and multimodal expression, making it particularly effective for supporting student-centered and reflective learning designs.

At the same time, the literature reveals a growing, though less dominant, use of alternative DST media such as digital comics, interactive games, story-mapping platforms and AI-supported tools. These non-dominant media demonstrate potential for supporting specific learning outcomes, including visual literacy, creative problem-solving, spatial thinking and AI literacy (Khamcharoen et al., 2022; Ng et al., 2022). However, their implementation often requires higher levels of digital competence, instructional design expertise and technological support, which may limit their widespread adoption in formal educational settings.

The rapid proliferation of digital platforms and tools has also introduced pedagogical challenges. With an increasing number of available DST tools, educators may experience pedagogical confusion when selecting platforms that align with learning objectives, learner characteristics, and instructional contexts. Several studies report difficulties among teachers and pre-service teachers in platform selection, instructional design and assessment, particularly in online and blended learning environments (Yuliani & Hartanto, 2022). Furthermore, although many studies report positive outcomes of DST, much of the existing evidence relies heavily on self-reported perceptions rather than measurable learning outcomes, raising concerns about the robustness of current findings.

In response to these challenges, this study conducts a Systematic Literature Review (SLR) to examine the implementation of digital storytelling in educational technology, focusing on the types of digital media used, the platforms supporting DST, and their impact on student learning processes and outcomes. Guided by the PRISMA 2020 framework (Page et al., 2021) and employing thematic analysis (Braun & Clarke, 2006), this review aims to synthesize recent empirical evidence and provide pedagogically grounded insights to inform future research and instructional practice.

Research Method

This study uses a systematic literature review method (Systematic Literature Review/SLR) with a qualitative approach. The SLR method provides an opportunity for researchers to collect and critically examine various scientific publications that are relevant to the previously formulated research objectives (Snyder, 2019). This approach aims not only to map and understand contemporary phenomena but also to strengthen existing practices and identify future directions for empirical research (Gurevitch et al., 2018; Linnenluecke et al., 2020; Newman & Gough, 2020). Unlike conventional literature reviews, SLRs require a more systematic process with standardized stages so that the results can be replicated and evaluated

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transparently (Liberati et al., 2009).

Procedure in this study refers to the Preferred Reporting Items for Systematic framework Reviews and Meta-Analyses (PRISMA) (Page et al., 2021), a set of guidelines designed to improve transparency and consistency in reporting systematic reviews and meta-analyses. PRISMA itself is an extension of the previous guideline, the Quality of Reporting of Meta-analyses (QUOROM), which was first updated and refined in 2009.The implementation of this framework ensures transparency throughout the evaluation process. The review process steps are outlined in a step-by-step manner, as shown in Figure 1.

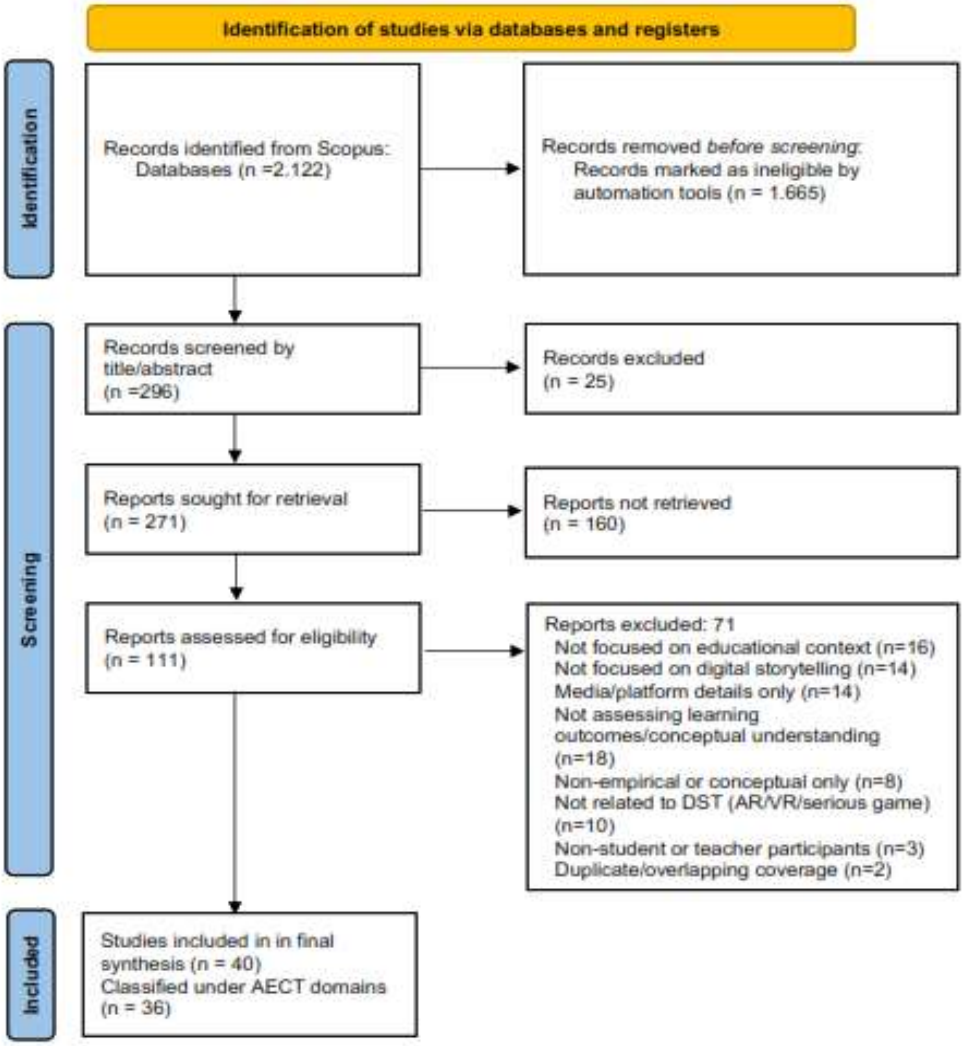

Figure 1. PRISMA 2020 Flowchart

Figure 1 illustrates the procedure for conducting a systematic literature review. Referring to the PRISMA model, the review process includes four main stages, namely: identification, screening (screening), eligibility determination (eligibility) and final inclusion of relevant research articles. Potential articles were identified from the Scopus database using specific keywords in the first week of October 2025 without restrictions on the initial year of publication, but relevant results are then focused on the period 2020 – 2024 because it shows a significant increase in research digital storytelling in the field of education. Search networks (search string) used in the Scopus database are:TITLE-ABS-KEY (("digital storytelling" OR

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"digital stories") AND ("education" OR "learning" OR "teaching" OR "educational technology" OR "e-learning")).

The initial search results in Scopus using the specified keywords yielded 2,122 articles without additional filters. After manual reading of titles and abstracts, delete duplication and irrelevant articles, leaving 457 articles that are potentially relevant to the research topic. After applying the publication year limit of 2020 – 2024, 296 relevant articles were obtained. Articles were then re-screened to ensure relevance to the context of learning and educational technology (e.g., e-learning, multimedia, or digital platforms). A total of 271 articles were retained, while articles that only discussed storytelling without digital elements or discussing educational technology without mentioning digital storytelling were removed. Based on the relationship with two main elements (digital storytelling and education), 271 articles were found to meet the inclusion criteria, while 25 other articles were excluded. Examination of full text availability resulted in 111 articles having full text and can be analyzed further. The article is available full text then assessed based on three research questions, 40 articles were obtained that met all inclusion criteria and 71 articles were excluded because they were not relevant to digital aspects, education, or learning media. The forty articles were then further analyzed based on five areas of educational technology utilization (AECT), namely media utilization, innovation diffusion, implementation and institutionalization, training and professional development and information management. From the classification results, 36 articles were categorized as included in the realm of educational technology, while 4 other articles were excluded because they did not touch on the application of technology in an educational context.

A total of 36 articles that passed the final stage were then analyzed thematically using a thematic analysis approach. The analysis was conducted by thoroughly reading the text, conducting initial coding, identifying key themes (e.g., implementation trends, types of digital media, learning outcomes), and verifying the themes with two independent reviewers to ensure reliability. The analysis results were used to answer the research questions and group the articles based on the areas of educational technology utilization (Braun & Clarke, 2006; Kushnir, 2025). This process ensured a rigorous and structured synthesis of evidence to derive meaningful insights about the implementation of digital storytelling in educational contexts.

Table 1. Inclusion and Exclusion Criteria

Reason Inclusion	Reasons for Exclusion
Original research articles (not reviews, editorials, or book chapters).	Review article, meta-analysis, systematic review, or literature review
Discussing the use of digital storytelling in the context of education/learning	Conceptual or theoretical articles without empirical data
Involving digital technology in the implementation of digital storytelling	Not relevant to the educational context (e.g.: marketing, therapy or business)
Relevant to the area of educational technology	Non-English articles
Available in full text form	Full text not available
Published in a peer-reviewed journal	Duplicate articles

The inclusion criteria used in this study include: (1) original research articles that are not reviews, editorials, or book chapter; (2) discusses the application of digital storytelling in the context of education or learning; (3) explicitly involves the use of digital technology in

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digital storytelling practices; (4) is relevant to the realm of educational technology such as e-learning, multimedia, or other digital platforms; (5) available in full text form; and (6) published in peer-reviewed journals. These criteria were established to ensure that the articles analyzed truly contribute to empirical understanding regarding the use of digital storytelling in developing technology-based learning.

Conversely, articles were excluded if: (a) they were review articles such as reviews, meta-analyses, systematic reviews, or literature reviews; (b) they were conceptual or theoretical in nature without presenting empirical data; (c) they were not relevant to the educational context, for example discussing digital storytelling in the realm of marketing, therapy, or business; (d) they were not written in English; (e) they were not available in full text; or (f) they were duplicate articles. The application of these exclusion criteria aimed to maintain topic suitability and methodological consistency of the studies analyzed.

All articles meeting the inclusion criteria were analyzed thematically to identify trends in digital storytelling implementation, the types of digital media used, and their impact on learning processes and outcomes. Adhering to the PRISMA framework (Page et al., 2021), the selection process was carried out systematically through the stages of identification, screening, eligibility, and final inclusion. The analysis continued using a Thematic Analysis approach (Kushnir, 2025), focusing on five domains of educational technology based on the AECT framework. The synthesis results not only illustrate thematic trends but also conceptual relevance in today's educational technology landscape.

Results and Discussion

Results

The findings of this study are structured around three research questions (Q&A) that guided the synthesis of 36 selected articles on the application of DST in learning contexts. Based on the evidence gathered, the first section of findings presents a descriptive overview of trends in digital media use in digital storytelling and how various digital formats, from video production to multimodal media and artificial intelligence-based tools, have been integrated into various learning settings. The second section summarizes patterns of use of digital platforms and devices that support narrative construction, creative expression and interactive learning. The final section identifies the impact of digital storytelling implementation on student engagement, digital literacy, conceptual understanding and reflective skills, as well as the pedagogical opportunities that emerge with the development of digital technology. Overall, these findings address the research questions regarding the development of DST practices, the variety of media and technologies used and the resulting pedagogical impacts across various educational contexts.

Research Trends in the Use of Digital Storytelling in Educational Technology from a Digital Media Perspective

Based on an analysis of the entire article, it appears that the trend in the use of digital storytelling (DST) in educational technology has shifted significantly over the past decade. The most prominent pattern is the dominance of video-based media as the most common form of DST. Almost all early studies, particularly prior to 2020, focused on the video production process, which combines voiceover, photos, music and transition effects. This is evident in the research of Abdel-aziz et al. (2022), Conlon et al. (2020), Kim et al. (2021), Ryan & Aasetre (2024), which positions video as a the main media to encourage reflection, conceptual understanding and student involvement.

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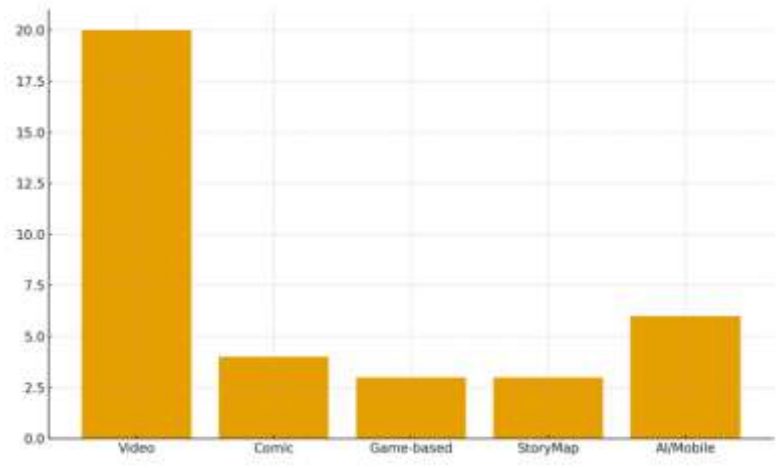

Figure 2. Distribution of Digital Storytelling Media Trends

In line with technological developments, DST trends after 2020 show media diversification. Researchers have begun utilizing digital comics, game-based digital storytelling, mobile storytelling apps, GIS-based story maps, and the integration of artificial intelligence in digital story production. In this phase, DST forms are no longer limited to linear narratives but have evolved into multimodal and interactive forms. Studies such as Rutta et al. (2021), Gillespie (2022), Andriopoulou et al. (2021), Ng et al. (2022) and Schrum et al. (2021) demonstrate how DST is beginning to enter the realm of branching narratives, interactivity and creative production based on data and digital intelligence.

Table 2. Digital Media Trends in DST Research

Media Category	Frequency	Usage Examples
Video DST	20	Health, geography, EFL, self-reflection
Digital Comics	4	CLIL, visual literacy
Game-based DST	3	Interactive narrative, engagement
GIS Story Map	3	Geospatial learning
AI/Mobile DST	6	Creativity, digital story writing

In addition to diversifying media formats, research trends are also moving toward utilizing DST to develop 21st-century competencies, such as creativity, problem-solving, collaboration, communication and digital literacy. This is reflected in studies such as those by Amelia (2021), Khamcharoen et al. (2022) and Lazareva & Cruz-Martinez (2021), which explicitly position DST as a pedagogical medium for integrating TPACK, PBL and collaborative approaches. Thus, the findings of RQ1 confirm that the DST research trend is moving not only technologically but also pedagogically, from simple media to multimodal learning ecosystems that strengthen core digital learning competencies.

Types of Digital Media, Platforms and Tools Used in DST Implementation

An in-depth analysis of 36 articles reveals a richer variety of media and platform uses. RQ2's findings are presented as a cohesive description linking media use to the pedagogical context of each study. Video editing software is the most widely used media category, particularly applications like Windows Movie Maker, iMovie, Kinemaster and Adobe Premiere Rush. These platforms are used not only in higher education but also in elementary and secondary education due to their ease of access and intuitive nature. The majority of

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articles use these platforms to produce audiovisual narratives that emphasize flow, expression, and the representation of students' personal experiences.

The analysis shows that a variety of platforms are used in DST practices, ranging from video editing tools and story-making apps to comic generators, to data and AI-driven platforms. This pattern aligns with a pedagogical shift toward multimodal learning that supports creativity, collaboration and technology integration.

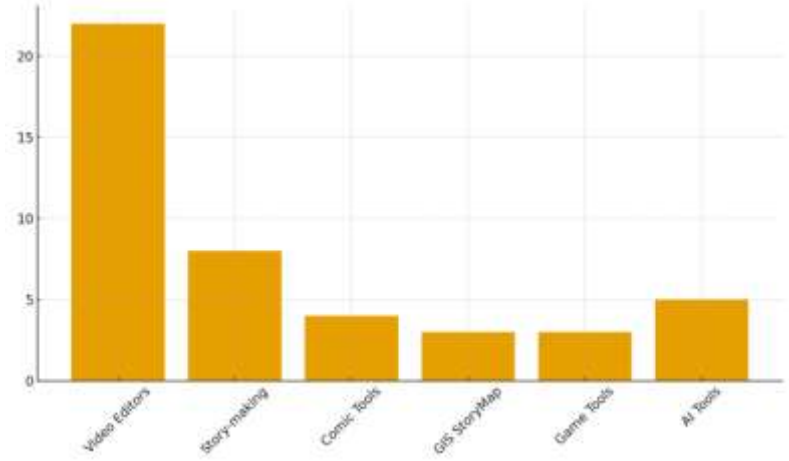

Figure 3. Distribution of DST Platform/Tools Usage

The visualization shows that video editing tools are the most dominant tool in both primary and higher education due to their ease of access and flexibility. Story-making apps are commonly used in children's education. Meanwhile, GIS StoryMap and gaming platforms are more frequently used in science and technology-based studies.

In addition to video, research also demonstrates the use of digital story-making platforms such as StoryJumper, StoryBird, MyStoryBook, and Canva. These platforms are more commonly used in studies focused on children and adolescents, particularly those that emphasize literacy skills, creativity and the gradual process of constructing meaning. Meanwhile, other studies have adopted digital comics platforms such as Pixton and MakeBeliefComix to create more visual, episodic narratives and facilitate students' story structure.

Table 3. Types of Digital Storytelling Platforms Used in the SLR Study

Platform	Frequency	Application Examples
Video Editors	22	Narrative video creation
Story-making Platforms	8	Children's literacy & narrative
Comic Tools	4	Visual literacy
GIS StoryMap	3	Geospatial narrative
Game/Interactive Tools	3	Story branching, gamification
AI/Mobile Tools	5	AI literacy, creative writing

In addition to conventional narrative tools, several articles showcase the use of GIS-based story maps, such as ArcGIS StoryMap, particularly in the context of geography, environmental literacy and science. This medium allows students to combine digital maps, field photographs and spatial narratives to visually understand spatial transformations and environmental phenomena.

The final group is the use of game-based media and artificial intelligence, which is beginning to appear in contemporary research. Game-based DST allows for the integration of

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branching narratives, problem-solving, and decision-based interactions, as demonstrated in Gillespie's (2022) study. AI integration emerged in Ng's (2022) study, which utilized AI literacy and digital narratives to strengthen critical thinking and creativity. Thus, the results of RQ2 show that DST has developed into a learning practice supported by various technologies, with a function not only as a medium for conveying stories, but also as a tool, problem-solving, self-reflection, collaboration, and data-based exploration.

The Effectiveness of Using Digital Media in DST on Student Learning Processes and Outcomes

The synthesis results show that various DST media consistently have a positive impact on student learning processes and outcomes, across the cognitive, affective, and skills domains. DST effectiveness was identified in four main domains: engagement, 21st century skills, conceptual understanding and reflection. Nearly all articles reported positive effects, particularly at the stage of digital story production, which allows students to act as creators.

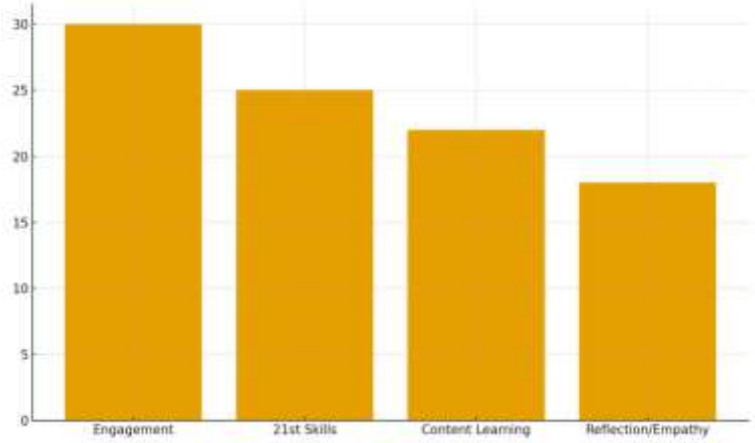

Figure 4. Aspects of DST Effectiveness on Learning

The visualization results show that the aspect that most frequently increases is engagement, followed by 21st-century skills, conceptual understanding and reflection–empathy. These four domains are highly consistent across video-based and multimodal DST media.

Table 4. Dimensions of Effectiveness Digital Storytelling

Effectiveness Aspect	Frequency	Main Impact
Engagement & Motivation	30	Active participation
21st Century Skills	25	Collaboration, creativity
Concept Understanding	22	Deep learning
Reflection & Empathy	18	Self-awareness

First, almost all studies reported that DST increased engagement and student learning motivation. Participants appear more engaged in the learning process because they play the role of creators, not simply recipients of information. Studies by Aljaraideh (2020), Lin (2021) and Hsieh & Lee (2023) show how digital story production activities foster interest, curiosity and active participation in the classroom.

Second, DST significantly contributes to strengthening digital literacy and 21st-century skills. The process of producing digital stories requires students to combine visual, audio, text and narrative elements, thus fostering critical thinking, creativity, problem-solving and collaboration. Studies by Khamcharoen et al. (2022), Lazareva & Cruz-Martinez (2021)

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and Schrum et al. (2021) consistently demonstrate improvements in these skills across various educational levels.

Third, DST has been shown to be effective in improving conceptual understanding and academic learning outcomes. In the context of geography, DST enhances deep learning through narrative mapping and documentation of spatial change (Ryan & Aasetre, 2021). In healthcare, DST enhances understanding of clinical concepts and professional empathy (Abdel-aziz et al., 2022; Conlon et al., 2020). In language learning, DST supports writing, speaking, and language construction skills (Aydin et al., 2021; Ramalingam et al., 2022).

Fourth, DST makes a strong contribution to the development of self-reflection, empathy, and social awareness. Studies by Kim et al. (2021) and Sonday (2021) confirm that digital narratives encourage learners to explore personal experiences, reinterpret emotions and develop social and moral perspectives. This effect is stronger in video media based on personal narratives, which allow for the integration of sound, music, images and storylines.

The overall RQ3 results show that digital storytelling it's not just a technological medium, but a pedagogical ecosystem that unites creativity, reflection, cognition and emotion. This combination makes DST an effective and adaptive learning strategy across various educational contexts.

Discussion

This study aims to systematically examine the application of digital storytelling (DST) in the context of educational technology by analyzing digital media trends, platform types, and their impact on student learning. These goals are consistent with previous works that highlight DST's potential to promote engagement, communication, and critical thinking (Lambert, 2013; Robin, 2016). The analysis confirms that video remains the most dominant medium in digital storytelling (DST) implementation across educational contexts (Abdel-aziz et al., 2022; Conlon et al., 2020). This dominance appears to be driven by a combination of technical accessibility and pedagogical effectiveness. From a practical perspective, video production tools generally present a low barrier to entry, as they are widely available, relatively easy to use, and compatible with existing digital infrastructures in schools and higher education institutions. From a pedagogical standpoint, narrative video offers strong affordances for multimodal expression, emotional engagement and reflection, enabling learners to integrate narration, imagery, music and motion to communicate complex ideas effectively (Kim et al., 2021; Ryan & Aasetre, 2021). At the same time, the reviewed studies also demonstrate a growing, though less dominant, use of alternative DST media, including digital comics for visual literacy and language learning (Rutta et al., 2021), game-based storytelling for engagement and problem-solving (Gillespie, 2022), GIS-based story maps for spatial and contextual learning (Ryan & Aasetre, 2021), and AI-supported digital storytelling for creativity and emerging AI literacy (Ng et al., 2022). While these non-dominant media broaden the pedagogical possibilities of DST, their adoption often requires higher levels of digital competence, instructional design expertise and technological support, which may explain why video-based DST continues to be the most prevalent format in educational practice.

In terms of tools and platforms, the study shows a broad use of software ranging from simple video editors (e.g., iMovie, Kinemaster) to more sophisticated AI-supported tools (Ng et al., 2022). This is supported by findings from other studies that emphasize the flexibility of DST across educational settings (Gillespie, 2022; Yuliani & Hartanto, 2022). Successful implementation often depends on the educator's digital literacy, the infrastructure available,

and alignment with pedagogical strategies, in line with the TPACK framework (Koehler et al., 2013).

DST has demonstrated positive effects on a range of learning outcomes, including motivation, engagement, and academic performance. Several studies confirm its capacity to foster 21st-century skills such as creativity, collaboration, and communication (Khamcharoen et al., 2022; Lazareva & Cruz-Martinez, 2021; Schrum et al., 2021). Other studies highlight its role in enhancing conceptual understanding in content areas such as science, language, and geography (Abdel-aziz et al., 2022; Ramalingam et al., 2022; Ryan & Aasetre, 2021). This is consistent with findings by Rahmadi & Hayati (2020), who highlighted the role of digital platforms in cultivating students' digital literacy and 21st-century learning competencies in online environments. Emotional and reflective dimensions also benefit from DST. Research shows that constructing personal stories supports self-reflection, empathy and social awareness, especially when using narrative video formats (Kim et al., 2021; Sonday, 2021).These affective gains support broader educational goals aligned with transformative learning theory.

However, despite these strengths, this review also identifies recurring limitations in the reviewed literature. One notable limitation identified in this review is the heavy reliance on self-reported perceptions to evaluate DST's effectiveness. The majority of the 36 studies assessed outcomes through subjective measures such as student questionnaires on engagement, motivation, or satisfaction rather than through objective assessments of learning gains. While these perception-based findings provide useful insights into participant experiences, they are inherently limited and prone to bias, positive feedback does not always equate to actual improvement in skills or knowledge. Continuing this trend could leave the evidence base for DST shallow, as we risk overestimating benefits without concrete measures of learning outcomes. In the long run, this may undermine the credibility of DST's educational value if its impact cannot be substantiated beyond personal testimonies. Indeed, this pattern echoes concerns raised by previous scholars that DST research needs stronger empirical validation (Yuliani & Hartanto, 2022).

Therefore, future DST studies should prioritize more rigorous methodologies that include measurable learning outcomes (e.g., test scores, performance tasks, or skill evaluations) alongside self-report data. By bolstering the evidence base with objective outcome data, researchers can more definitively demonstrate DST's true impact on student learning and provide stronger guidance for educators.

Conclusion

This review highlights DST as a flexible pedagogical strategy with diverse media and platform options, prominently led by video. Across contexts, DST has shown promise in supporting learner engagement, creativity, and digital competencies. To advance its impact, future studies should explore how specific media relate to particular learning outcomes and adopt more rigorous methods—including objective assessments—to substantiate effectiveness. Strengthening the empirical foundation will be key to sustaining DST's role in evidence-based educational innovation.

Recommendation

Based on the findings of this systematic literature review, future research is recommended to further investigate the relationship between specific digital storytelling (DST) media types and particular learning outcomes. Although DST has been shown to

enhance student engagement, digital literacy and 21st-century skills, comparative studies examining the effectiveness of different DST formats on cognitive and academic outcomes remain limited.

Future studies should develop structured, context-sensitive instructional models to support effective DST implementation. Many reviewed studies lack detailed reporting on instructional design, assessment strategies, and implementation duration, which limits replicability and pedagogical clarity. Longitudinal and mixed-methods research is also encouraged to examine the sustained impact of DST on students' learning development, especially in relation to reflection, critical thinking and conceptual mastery.

For practitioners, especially teachers, follow-up efforts should focus on building capacity to design DST-integrated lessons aligned with specific learning goals. This includes selecting appropriate media based on pedagogical intent, scaffolding the storytelling process and embedding DST within meaningful assessment frameworks. Addressing key challenges, such as limited digital literacy, unequal access to tools, and the cognitive demands of production, requires institutional support and professional development. Providing teachers with clear, adaptable frameworks will be essential to ensure DST is implemented not just as a creative activity, but as a purposeful, evidence-informed learning strategy.

References

Abdel-aziz, S., Galal, Y. S., Hassan, S., Hanafy, A., Ghamrawy, M., Samy, D., & Shaheen, M. (2022). *Digital Storytelling : A Video-based Approach for Engaging University Students in Health Education*. *10*, 33–39.

Aljaraideh, A. Y. (2020). The Impact of Digital Storytelling on Academic Achievement of Sixth Grade Students in English Language and Their Motivation Towards It in Jordan. *Turkish Online Journal of Distance Education*, *21*(January), 73–82.

Amelia, P. (2021). *The Journal of Asia TEFL Investigating the Development of T eachers ' TPACK and the Adoption of*. *18*(2), 701–710.

Andriopoulou, A., Giakoumi, S., Kouvarda, D., & Tsabaris, C. (2021). *Digital storytelling as an educational tool for scientific , environmental and sustainable development literacy on marine litter in informal education environments (Case study : Hell ... THE LEARNING OUTCOMES OF THE ENVIRONMENTAL EDUCATIONAL PROGRAM " GE*. *February 2022*. https://doi.org/10.12681/mms.26942

Aydin, A., Tatli, Z., & Gursoy, A. (2021). Understanding Nursing Students' Experience Through Digital Storytelling. *Balıkesır Health Sciences Journal*, *11*(1), 26–33. https://doi.org/10.53424/balikesirsbd.989705

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology Using thematic analysis in psychology. *Qualitative Research in Psychology*, *0887*(1), 77–101. https://doi.org/http://dx.doi.org/10.1191/1478088706qp063oa

Conlon, M. M. M., Smart, F., & Mcintosh, G. (2020). Does technology flatten authenticity ? Exploring the use of digital storytelling as a learning tool in mental health nurse education. *Technology, Pedagogy and Education*, *29*(3), 269–278. https://doi.org/10.1080/1475939X.2020.1760127

Gillespie, B. (2022). Using Digital Storytelling and Game-Based Learning to Increase Student Engagement and Connect Theory with Practice. *Teaching and Learning Inquiry*, *10*(Ainley). https://doi.org/10.20343/TEACHLEARNINQU.10.14

Gurevitch, J., Koricheva, J., Nakagawa, S., & Stewart, G. (2018). Meta-analysis and the science of research synthesis. *Nature*, *555*(7695), 175–182.

https://doi.org/10.1038/nature25753

Hsieh, J. C., & Lee, J. S. (2023). Digital storytelling outcomes, emotions, grit, and perceptions among EFL middle school learners: robot-assisted versus PowerPoint-assisted presentations. *Computer Assisted Language Learning*, *36*(5–6), 1088–1115. https://doi.org/10.1080/09588221.2021.1969410

Khamcharoen, N., Kantathanawat, T., & Sukkamart, A. (2022). Developing Student Creative Problem-Solving Skills (CPSS) Using Online Digital Storytelling: A Training Course Development Method. *International Journal of Emerging Technologies in Learning*, *17*(11), 17–34. https://doi.org/10.3991/ijet.v17i11.29931

Kim, D., Coenraad, M., & Park, H. R. (2021). *Digital storytelling as a tool for reflection in virtual reality projects*. *June*, 101–121.

Koehler, M. J., Mishra, P., Akcaoglu, M., & Rosenberg, J. M. (2013). The Technological Pedagogical Content Knowledge Framework for Teachers and Teacher Educators. *ICT integrated teacher mducation Models*, 1–8. http://cemca.org.in/ckfinder/userfiles/files/ICT teacher education Module 1 Final_May 20.pdf

Kushnir, I. (2025). Thematic analysis in the area of education: a practical guide. *Cogent Education*, *12*(1), 1–16. https://doi.org/10.1080/2331186X.2025.2471645

Lambert, J. (2013). Digital storytelling : capturing lives, creating community. In *Handbook of Research on the Societal Impact of Digital Media* (4th editio). Routledge. https://doi.org/10.4018/978-1-4666-8310-5.ch013

Lazareva, A., & Cruz-Martinez, G. (2021). Digital Storytelling Project as a Way to Engage Students in Twenty-First Century Skills Learning. *International Studies Perspectives*, *22*(4), 383–406. https://doi.org/10.1093/isp/ekaa017

Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P. A., Clarke, M., Devereaux, P. J., Kleijnen, J., & Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: Explanation and elaboration. *BMJ (Clinical research ed.)*, *339*, 1–34. https://doi.org/10.1136/bmj.b2700

Lin, C. (2021). *A Progressive Digital Narrative Teaching Method to Improve Learning Motivation as a Lifelong Learning Skill*.

Linnenluecke, M. K., Marrone, M., & Singh, A. K. (2020). Conducting systematic literature reviews and bibliometric analyses. *Australian Journal of Management*, *45*(2), 175–194. https://doi.org/10.1177/0312896219877678

Newman, M., & Gough, D. (2020). Systematic Reviews in Educational Research. In *Methodology, perspectives and application. In O. Zawacki-Richter, M. Kerres, S. Bedenlier, M. Bond, & K Buntins (Eds.)* (hal. 3–22). Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-27602-7

Ng, D. T. K., Luo, W., Chan, H. M. Y., & Chu, S. K. W. (2022). Using digital story writing as a pedagogy to develop AI literacy among primary students. *Computers and Education: Artificial Intelligence*, *3*(February), 100054. https://doi.org/10.1016/j.caeai.2022.100054

Ohler, J. (2016). Digital Storytelling in the Classroom: New Media Pathways to Literacy, Learning, and Creativity. In *Digital Storytelling in the Classroom: New Media Pathways to Literacy, Learning, and Creativity*. https://doi.org/10.4135/9781452277479

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D.,

Vol. 13 No. 1 : January 2026
E-ISSN: 2722-4627
pp. 349-361

Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *Bmj*, *372*. https://doi.org/10.1136/bmj.n71

Rahmadi, I. F., & Hayati, E. (2020). Literasi Digital, Massive Open Online Courses, dan Kecakapan Belajar Abad 21 Mahasiswa Generasi Milenial. *Jurnal Studi Komunikasi dan Media*, *24*(1), 91. https://doi.org/10.31445/jskm.2020.2486

Ramalingam, K., Jiar, Y. K., & Mathiyazhagan, S. (2022). *Speaking Skills Enhancement through Digital Storytelling among Primary School Students in*. *21*(3), 22–35.

Robin, B. R. (2016). The Power of Digital Storytelling to Support Teaching and Learning. *Journal on English as a Foreign Language*, *2*(1), 491–492.

Rutta, C. B., Schiavo, G., Zancanaro, M., & Rubegni, E. (2021). Comic-based Digital Storytelling for Content and Language Integrated Learning. *Educational Media International*, *58*(1), 21–36. https://doi.org/10.1080/09523987.2021.1908499

Ryan, A. W., & Aasetre, J. (2021). Digital storytelling, student engagement and deep learning in Geography. *Journal of Geography in Higher Education*, *45*(3), 380–396. https://doi.org/10.1080/03098265.2020.1833319

Schrum, K., Majury, N., & Simonelli, A. L. (2021). Authentic learning across disciplines and borders with scholarly digital storytelling. *Teaching and Learning Inquiry*, *9*(2). https://doi.org/10.20343/TEACHLEARNINQU.9.2.8

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, *104*(July), 333–339. https://doi.org/10.1016/j.jbusres.2019.07.039

Sonday, A. (2021). Digital Storytelling as a Reflective Tool in Occupational Therapy Curriculum. *Occupational Therapy International*, *2021*. https://doi.org/10.1155/2021/2463916

Yuliani, S., & Hartanto, D. (2022). Digital Online Learning by Using Digital Storytelling for Pre-Service Teacher Students. *International Journal of Language Education*, *6*(3), 221–232. https://doi.org/10.26858/ijole.v6i3.20408