

Integrating collaborative digital media in contextual teaching and learning to enhance narrative writing skills: A systematic review

Sri Suryaningsih¹, Yeni Wardatunnissa², Ika Purnamasari³

¹²STKIP Harapan Bima, Indonesia

³Universitas Negeri Yogyakarta, Indonesia

¹Email: suryaningsih90@gmail.com

²Email: wardatunnissa25@gmail.com

³Email: kaika21902@gmail.com



(✉ Corresponding Author)

Abstract

This systematic review investigates the integration of collaborative digital media in Contextual Teaching and Learning (CTL) to enhance narrative writing skills. The study aims to synthesize recent empirical research that explores how collaborative platforms such as Google Docs, Canva, and Flipbook are used within CTL-based writing instruction. Using a PRISMA-guided systematic review, relevant studies published between 2020 and 2025 were identified through structured searches across Scopus, Web of Science, ERIC, and Google Scholar databases. A total of 212 articles were initially identified, and ten studies were selected for final synthesis through a rigorous screening and eligibility assessment. Findings indicate that collaborative digital media effectively support student engagement, peer collaboration, and narrative writing development when combined with CTL strategies. These tools facilitate real-time co-construction of texts, encourage critical peer feedback, and foster active participation. CTL-based instruction further strengthens student motivation by connecting learning to real-life contexts. can significantly enhance narrative writing outcomes while promoting responsible digital tool use. The findings offer valuable implications for teachers, curriculum designers, and researchers aiming to optimize writing instruction in increasingly digital learning environments.

Keywords: collaborative digital media, CTL, writing skill, student engagement, digital literacy.

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Contribution to Literature: This article provides a systematic synthesis of collaborative digital media integration in CTL-based narrative writing instruction, focusing on student engagement, digital literacy, and pedagogical innovation, offering a comprehensive model that has not been explored in prior systematic reviews.

1. Introduction

The development of writing skills is a fundamental goal in language education. Narrative writing, in particular, plays a critical role in enabling students to organize ideas, express personal experiences, and structure coherent texts (Derewianka & Jones, 2016; Hyland, 2019). However, many students face challenges in generating ideas, sequencing events, and maintaining narrative coherence (Pham, 2021; Saputra, 2022). These difficulties are often exacerbated by a lack of motivation and limited exposure to interactive learning environments that support collaborative writing (Elola & Oskoz, 2017).

Recent advances in educational technology have introduced a range of collaborative digital media that can transform writing instruction. Tools such as Google Jamboard, Miro, Mentimeter, and Linoit enable students to co-construct texts in real time, share feedback instantly, and build narrative structures together (Suwantarathip & Wichadee, 2014; Zeng & Takatsuka, 2009). When integrated within Contextual Teaching and Learning (CTL), these digital platforms offer opportunities for authentic, student-centered writing experiences that connect classroom activities with real-life contexts (Johnson, 2002; Sugiartini et al., 2015). CTL, which emphasizes learning through active participation, inquiry, and reflection, aligns well with the interactive and social nature of collaborative digital tools (Febriana et al., 2018).

Previous studies have demonstrated the effectiveness of CTL in improving writing outcomes when paired with engaging media such as flipbooks, Canva, and Wordwall (Febriana et al., 2025; Mirnawati & Fabriya, 2022; Ramadhina & Pranata, 2022). However, the literature remains fragmented, with most research focusing on individual learning processes or limited media types (Febriana et al., 2025; Yuningsih et al., 2023). There is a lack of systematic synthesis that specifically examines the integration of collaborative digital media within CTL to enhance narrative writing skills. Furthermore, few studies comprehensively explore the potential of real-time collaborative platforms to foster not only writing proficiency but also student engagement and digital literacy (Elola & Oskoz, 2017; Suwantarathip & Wichadee, 2014).

Therefore, this systematic review aims to analyze recent empirical studies that investigate the use of collaborative digital media in CTL-based narrative writing instruction. This review will synthesize how such media are integrated pedagogically, how they impact student writing development, and how they influence collaborative engagement. Unlike previous reviews that examined writing outcomes in isolation, this study contributes a holistic framework by linking CTL, collaborative digital tools, and narrative writing development to guide future instructional design and research.

Table 1. Previous research.

No	Title	Reference
1	The application of the CTL model assisted by flipbook media in improving narrative writing skills	Febriana, et al. (2025)
2	The use of canva media in developing anecdotal text writing skills	Yuningsih et al. (2023)
3	Improving writing skills through CTL using puzzle media	Febriana et al. (2018)

No	Title	Reference
4	Development of flipbook-based e-modules in primary schools	Ramadhina & Pranata (2022)
5	The application of flipbook media to improve reading literacy of elementary students	Mirnawati & Fabriya (2022)

2. Literature Review

2.1. Collaborative Digital Media in Writing Instruction

Collaborative digital media have significantly changed writing instruction by enabling students to engage in real-time co-construction of texts. Tools such as Google Jamboard, Miro, Mentimeter, and Linoit allow learners to contribute ideas, revise collaboratively, and visualize narrative structures collectively ([Suwantarathip & Wichadee, 2014](#); [Zeng & Takatsuka, 2009](#)). These platforms encourage students to participate more actively, share responsibility for writing products, and develop a sense of authorship in a collaborative setting ([Elola & Oskoz, 2017](#); [Pham, 2021](#)). Collaborative digital media not only support the technical process of writing but also foster critical discussion, peer feedback, and negotiation of meaning. However, research also notes that the successful application of these platforms depends on adequate teacher facilitation and structured task design to ensure meaningful collaboration and prevent superficial engagement ([Suwantarathip & Wichadee, 2014](#)).

2.2. Contextual Teaching and Learning (CTL) in Writing Instruction

Contextual Teaching and Learning (CTL) emphasizes the connection between learning content and students' real-life experiences ([Johnson, 2002](#)). CTL is grounded in constructivist theory and encourages active, inquiry-based, and reflective learning processes ([Febriana et al., 2018](#); [Sugiartini et al., 2015](#)). When applied in writing instruction, CTL creates opportunities for students to develop writing skills that are both academically rigorous and personally meaningful ([Ramadhina & Pranata, 2022](#)). Studies have shown that CTL, when combined with engaging media, can significantly improve student writing outcomes by providing authentic learning experiences ([Febriana et al., 2025](#); [Mirnawati & Fabriya, 2022](#)). Despite these benefits, most previous research on CTL in writing has been limited to conventional or teacher-centered media, with minimal exploration of collaborative digital platforms.

2.3. The Integration of Digital Collaboration in Narrative Writing Tasks

Narrative writing tasks are particularly well-suited for collaborative learning environments because they allow students to build storylines, sequence events, and negotiate perspectives in a shared space ([Hyland, 2019](#); [Pham, 2021](#)). Studies that incorporate digital collaboration tools in narrative writing have found that students develop stronger organizational skills and more creative story content when supported by interactive technologies ([Elola & Oskoz, 2017](#); [Niño, 2020](#)). However, most of these studies focus on Google Docs or text-based collaboration, with limited attention to visual and interactive platforms like Google Jamboard or Miro. This gap highlights the need to explore how digital collaboration tools with visual features can enrich narrative writing processes and foster greater learner engagement.

2.4.Digital Literacy and Collaborative Writing

Integrating collaborative digital media in writing instruction not only impacts writing proficiency but also contributes to the development of digital literacy skills (Godwin-Jones, 2018). Students must learn to navigate digital platforms, evaluate peer contributions critically, and manage collaborative workflows responsibly (Zhang & Torres-Hostench, 2022). Digital literacy in collaborative writing includes the ability to curate content, exercise ethical communication, and reflect on the use of digital tools in academic contexts. Despite its importance, many studies on CTL and writing instruction have not explicitly addressed how digital literacy is developed through collaborative writing tasks. This represents a crucial gap in both theory and practice, as modern classrooms increasingly rely on digital environments.

3. Research Method

3.1.Research Design

This study employed a qualitative systematic literature review (SLR) approach to synthesize recent empirical findings on the integration of collaborative digital media in Contextual Teaching and Learning (CTL) for narrative writing instruction. The review followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework to ensure a transparent and replicable selection process.

3.2.Data Sources and Search Strategy

Relevant articles were retrieved from four major academic databases: Scopus, Web of Science, ERIC, and Google Scholar. The following Boolean search string was used: "collaborative digital media" OR "Google Jamboard" OR "Miro" OR "Mentimeter" AND "Contextual Teaching and Learning" AND "narrative writing" OR "writing skills". The search was limited to articles published in English within the specified time frame between January 2020 and April 2025.

3.3.Inclusion and Exclusion Criteria

Articles were included: (1) Presented empirical research using qualitative, quantitative, or mixed-methods approaches; (2) Focused on the use of collaborative digital media in writing instruction; (3) Were situated in ESL or EFL educational settings; (4) Incorporated Contextual Teaching and Learning (CTL) as the pedagogical approach. Articles were excluded if they: (a) focused on media without collaborative features; (b) targeted writing skills other than narrative writing; (c) were conceptual papers without data; (d) were not peer-reviewed or not written in English.

3.4.Screening Process and PRISMA Flow

Figure 2 illustrates the search initially identified 212 records. After removing 94 duplicates, 37 records were screened based on title and abstract. 200 articles were excluded for not meeting relevant criteria. The remaining 94 full-text articles were assessed for eligibility, and 27 studies were excluded due to methodological misalignment or scope mismatch. A total of 10 articles were selected for final analysis.

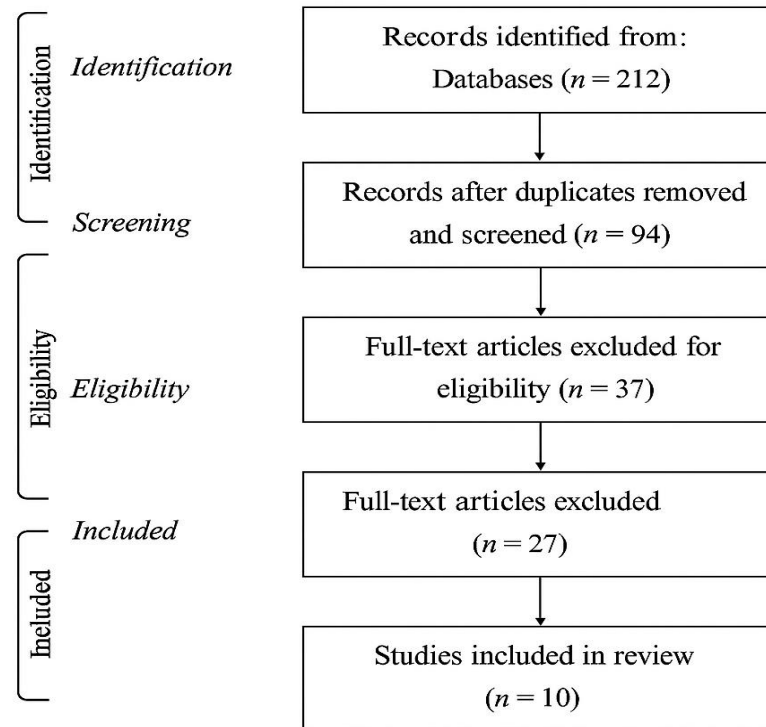


Figure 2. PRISMA flow diagram.

3.5. Data Extraction and Thematic Synthesis

Data from each selected article was systematically extracted, including information on authors, publication year, research context, educational level, collaborative media used, CTL integration strategies, and key findings related to narrative writing. Thematic analysis was conducted using Braun & Clarke's (2006) framework to identify recurring themes, best practices, and research gaps across the studies. The analysis focused on four key categories: (1) collaborative digital media usage, (2) CTL-based instructional practices, (3) narrative writing outcomes, and (4) digital literacy development.

4. Results and Discussion

4.1. Studies on E-Portfolio in EFL Education

This section presents the synthesized findings of the ten selected studies, organized into four main themes: (1) collaborative digital media usage, (2) CTL-based instructional practices, (3) narrative writing outcomes, and (4) digital literacy development. Table 2 provides a summary of the reviewed studies.

Table 2. Overview of reviewed studies on e-portfolio in EFL education.

No	Author(s) & Year	Focus Area	Media Used	Key Findings
1	Febriana et al. (2025)	Narrative writing development	Flipbook	Improved writing fluency and coherence
2	Yuningsih et al. (2023)	Anecdotal writing	Canva	Increased creativity and task engagement
3	Febriana et al. (2018)	Personal letter writing	Puzzle	Enhanced motivation and writing accuracy

No	Author(s) & Year	Focus Area	Media Used	Key Findings
4	Ramadhina & Pranata (2022)	Reading comprehension	Flipbook	Boosted literacy and writing preparation
5	Mirnawati & Fabriya (2022)	Reading literacy improvement	Flipbook	Strengthened reading-writing connection
6	Suwantarathip & Wichadee (2014)	Collaborative writing	Google Docs	Improved writing quality through real-time edits
7	Zeng & Takatsuka (2009)	Peer collaborative writing	Text-based chat	Increased language output and peer negotiation
8	Pham (2021)	Narrative writing proficiency	Collaborative tasks	Improved organization and content development
9	Elola & Oskoz (2017)	Digital collaborative writing	Google Docs	Enhanced student interaction and self-editing
10	Zhang & Torres-Hostench (2022)	MT awareness and writing	Google Translate	Increased self-editing and error awareness

4.2. Collaborative Digital Media Usage in Writing Tasks

The selected studies consistently demonstrate the positive impact of collaborative digital media on student writing engagement and output. Tools such as Google Docs, Canva, and Flipbook facilitated real-time text production, collaborative revision, and peer negotiation ([Suwantarathip & Wichadee, 2014](#); [Yuningsih et al., 2023](#)). Students using these platforms exhibited increased participation and were able to co-construct writing products more efficiently compared to conventional instruction ([Elola & Oskoz, 2017](#); [Zeng & Takatsuka, 2009](#)). However, successful integration of these tools required clear task structures and active teacher facilitation to maintain focus and prevent superficial participation.

4.3. CTL-Based Instructional Practices to Support Writing

Contextual Teaching and Learning (CTL) strategies provided authentic learning experiences that grounded writing tasks in real-life contexts. Studies such as [Febriana et al. \(2025\)](#), [Febriana et al. \(2018\)](#), and [Ramadhina & Pranata \(2022\)](#) showed that CTL combined with engaging media like Flipbooks and Puzzles enhanced students' writing motivation, idea generation, and writing fluency. By connecting classroom activities to students' daily lives, CTL helped learners produce more coherent and meaningful narratives. However, most studies applied CTL in isolated contexts without exploring its full potential in digital collaboration environments.

4.4. Narrative Writing Outcomes through Digital Collaboration

The integration of collaborative digital media in narrative writing instruction led to measurable improvements in writing fluency, text organization, and creativity. Tools like Google Docs and Canva provided students with the flexibility to edit and revise in real time, supporting collaborative story-building processes ([Elola & Oskoz, 2017](#); [Pham, 2021](#)). The collaborative approach encouraged peer feedback, which helped students refine narrative structure and language choices. Nonetheless, studies highlighted the importance of teacher guidance to ensure that students move beyond surface-level corrections toward deeper narrative development.

4.5. Digital Literacy Development in Collaborative Writing

An emerging benefit of using collaborative digital platforms is the development of students' digital literacy skills. Zhang & Torres-Hostench (2022) emphasized that collaborative writing using digital tools fosters metacognitive awareness, ethical communication, and critical engagement with digital resources. Students became more aware of their editing processes and learned to evaluate peer contributions more effectively. However, some studies noted that digital literacy development is often incidental and not explicitly scaffolded in instructional design, indicating a need for deliberate digital literacy training within writing instruction (Godwin-Jones, 2018).

5. Conclusion

This systematic review analyzed ten empirical studies on the integration of collaborative digital media within Contextual Teaching and Learning (CTL) to enhance narrative writing skills. The review found that tools such as Google Docs, Canva, and Flipbook significantly support student engagement, real-time collaboration, and writing fluency when appropriately scaffolded. CTL-based instructional practices provided meaningful contexts that motivated students to write and improved the coherence of their narratives. Collaborative writing activities further encouraged peer feedback, critical reflection, and shared responsibility in text construction. The integration of collaborative digital platforms also contributed to the incidental development of digital literacy skills, including editing awareness, ethical tool use, and effective online collaboration. However, most studies did not explicitly design instructional strategies to develop these skills systematically. The review emphasizes the importance of deliberate scaffolding to balance collaborative digital media use with pedagogical goals that promote sustained writing improvement and digital literacy. Future research should explore the longitudinal impacts of collaborative digital media in writing instruction, as well as the design of targeted digital literacy frameworks that complement narrative writing development.

Conflict of Interest Statement

The authors declare that there is no conflict of interest regarding the publication of this article.

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Author Contributions

Suryaningsih: Conceptualization, initial draft writing; Wardatunnissa: Methodology, data collection; Purnamasari: Editing and revision.

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