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Transforming Elementary Literacy Education Through Digital Innovation and Fiction Comprehension Strategies

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Abstract

This study aims to analyze the utilization of Information and Communication Technology in literacy education within elementary schools and elementary students' literary comprehension of fictional texts. The study used a mixed-method design and involved 160 students and 20 teachers from eight schools, with the public elementary school of Kuningan 01 Semarang having the most significant student representation. The research found that educators frequently integrate laptops, projectors, and digital applications into literacy instruction, though limited connectivity and inadequate infrastructure regularly present implementation challenges. Similarly, an investigation of students' fiction comprehension shows that primary learners consistently display positive reading behaviors and generally demonstrate solid abilities in fundamental literary understanding tasks. The study recommends comprehensive strategies for literacy improvement through infrastructure development, teacher training, careful text selection, reading strategy integration, and reflective practices that address diverse learning needs.

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INTRODUCTION

Literacy is a fundamental skill that needs to be developed since primary education, especially in understanding fictional texts, to develop learners' critical and creative thinking skills. However, literacy learning in primary schools still faces significant challenges. Some of the main problems identified include the limited variety of fictional texts used in learning, learners' difficulty in distinguishing fact from fiction, limited vocabulary that hinders understanding of fictional texts, difficulty understanding storylines and identifying narrative elements, lack of engaging learning activities, and lack of teacher guidance in literacy instruction (Subakti et al., 2021; Widiastuti et al., 2022; Zakiah & Sukmandari, 2024).

Previous research shows that literary comprehension is an introductory level that lays the foundation for more complex reading skills. Through a meta-analysis, Bogaerds-Hazenberg et al. (2021) found that text structure instruction can improve learners' reading comprehension, although the effect varies depending on the learning method used. Meanwhile, 'Azizah et al. (2023) revealed that grade IV learners have better literary comprehension than appreciative comprehension but still need development to reach the optimal level.

In the past decade, various efforts have been made to overcome literacy problems in primary schools. Implementing the School Literacy Movement (Prabaningrum et al., 2021; Safitri & Dafit, 2021) and using local wisdom-based fictional texts (Handayani et al., 2022) are some examples of solutions offered. Smith and Hiebert (2022) emphasize the importance of considering text complexity, type, and format in literacy learning, while Pugh et al. (2023) reveal that using a variety of text types contributes positively to learners' word recognition and reading comprehension.

Although previous research has made significant contributions, there are still gaps in integrating information and communication technology (ICT) in literacy learning. Karbla et al. (2021) found that learning text comprehension strategies significantly improved learners' literary comprehension but did not explore the role of technology in the process. Similarly, Hwang et al. (2022) showed positive effects on vocabulary (ES = 0.91) and comprehension (ES = 0.40) when literacy instruction was integrated with content areas but did not touch on the aspect of technology as a learning medium.

ICT in literacy learning opens new opportunities to improve learner engagement and understanding. Khusna et al. (2022) explained that the School Literacy Movement is important in creating a literate learning environment, especially when integrated with ICT. Junindra et al. (2023) added that ICT literacy-based learning design can increase learners' innovation and creativity. However, implementation challenges remain, such as the literacy gap between urban,

suburban, and rural learners (Yudiana, 2023) and teachers' barriers to adopting new technologies (Mahmudah et al., 2023).

The originality of this study lies in the comprehensive effort to integrate aspects of literacy instruction and ICT utilization to improve literary comprehension of fiction texts in elementary school students. Unlike previous studies focusing on one aspect only, this study combines pedagogical approaches, material development, and learning technology utilization in a holistic framework. The research hypothesis assumes that ICT-based literacy instruction positively affects elementary school students' literary comprehension of fiction texts.

The main problems identified in this study center around significant challenges in literacy education for primary school students, particularly in understanding fictional texts. These challenges include a limited variety of fictional texts in learning materials, students' difficulty distinguishing fact from fiction, vocabulary limitations that impede comprehension, struggles with understanding storylines and narrative elements, lack of engaging learning activities, and insufficient teacher guidance in literacy instruction. Additionally, the study highlights a notable research gap in integrating Information and Communication Technology (ICT) in literacy learning, as previous research has not adequately explored technology's role in improving comprehension skills. Implementation barriers persist, including literacy disparities between urban, suburban, and rural learners and teachers' resistance to adopting new technologies. The study also appears to lack a specific and clear literature review to effectively guide its research findings, as noted in the feedback annotation [A1], potentially limiting the theoretical foundation needed to support its aim of enhancing literacy learning strategies in the digital age.

This study aims to analyze the utilization of Information and Communication Technology in literacy education within elementary schools and to examine elementary students' literary comprehension of fictional texts. This research aims to substantially enhance the formulation of effective literacy learning strategies in the digital age.

METHODS

This study employed a mixed-method design to examine literacy instruction using ICT and literary comprehension of fiction texts in elementary school learners in Semarang, Central Java, Indonesia. This approach was chosen to comprehensively understand the phenomenon under study through integrating quantitative and qualitative data (Creswell & Clark, 2017). This design allowed the researchers to identify common literacy learning patterns and explore the participants' experiences and deep meanings.

The study included 160 student participants from 8 elementary schools in Semarang, Indonesia. Additionally, 20 teacher participants from 8 schools were interviewed. Participant distribution varied across schools, with *SD Negeri Kuningan 01* having the most significant student representation. The mixed method approach allowed for collecting quantitative data through surveys and comprehension tests, complementing qualitative insights from teacher interviews. It provided a more holistic understanding of ICT integration in literacy instruction and its effects on students' fiction text comprehension abilities. The research population encompassed all grade 5 teachers and students in Semarang City's 603 elementary schools. Sampling utilized the Purposive Random Sampling technique based on school type representation, geographical distribution, teacher experience, and participation willingness.

The research procedure was conducted in two main sequential phases. The quantitative phase involved developing and validating the questionnaire instruments, while the qualitative phase involved in-depth interviews. Data analysis was conducted through a systematic stepwise approach, including data cleaning, descriptive statistical analysis, reliability testing, exploratory factor analysis, Pearson correlation, linear regression analysis, and independent sample t-test.

The authors used NVivo software for data analysis, coding responses from 160 students and 20 teacher participants. They used methodological triangulation, member checking, and a comprehensive audit trail to ensure research rigor and credibility. The results provided a comprehensive understanding of ICT-based literacy instruction and fiction text comprehension among Indonesian elementary students, revealing patterns of technology integration and their influence on literacy development in the Semarang context.

RESULTS

1. Implementation of Literacy Learning Using ICT Media

Implementing literacy learning using Information and Communication Technology (ICT) media has become a significant educational innovation supporting the development of reading, writing, and digital literacy skills among students. As educational systems adapt to the demands of the digital era, integrating ICT in literacy instruction presents numerous opportunities for enhancing learning experiences, increasing student engagement, and improving academic outcomes. Based on interviews with 20 primary school teachers, it was found that most teachers view ICT as an important component in literacy learning. The teachers believe integrating technology into learning can create a more interesting learning atmosphere and increase learner engagement. This finding aligns with Meliyanti and Aryanto's (2022) view, which emphasizes the importance of the planning cycle for integrating digital technology into literacy instruction.

ICT media in literacy learning encompasses various tools, including computers, tablets, smartphones, digital storybooks, interactive whiteboards, educational software, and online platforms. In their implementation, teachers use a variety of ICT media, such as LCD projectors (85%), laptops (90%), smartphones (65%), and Smart TVs (30%). Applications include Canva for visual content creation (75%) and the YouTube platform to access learning videos (80%). These media were selected based on the school facilities' availability and ability to visualize abstract concepts. This finding reinforces Nurmahanani's (2023) argument that literacy learning needs to be developed since primary education to develop students' critical and creative thinking skills.

Through ICT, learners can access diverse reading materials in various formats, such as e-books, audiobooks, videos, and animations, catering to different learning preferences and literacy levels. This multimodal approach enhances comprehension and retention by engaging multiple senses and supporting differentiated instruction. ICT integration in literacy learning activities is done through several approaches. Seventy percent of teachers create and display interesting reading texts using Canva, which are then displayed through an LCD projector, while 65% of teachers show videos relevant to the learning material. Fifty-five percent of teachers use interactive multimedia and digital animation videos to simulate processes that are difficult to do manually.

Research on the implementation of ICT in literacy education reveals several positive outcomes. One of the most prominent benefits is the increased motivation and enthusiasm among learners. Digital media offers dynamic and interactive content that can make learning to read and write more enjoyable. For instance, digital storybooks with audio narration, animations, and clickable elements provide a rich literacy experience that captivates young learners. Furthermore, ICT allows instant feedback and gamified learning activities, which foster a sense of achievement and encourage sustained engagement with literacy tasks.

Another significant advantage is the ability of ICT to support personalized learning. With adaptive learning technologies and data analytics, teachers can tailor instruction to meet students' individual needs. ICT platforms often include diagnostic tools that assess literacy levels and recommend appropriate learning paths. This individualization ensures that learners receive support at their own pace, enabling them to progress more effectively. For students with learning difficulties or special needs, ICT can offer accessible features such as text-to-speech, speech-to-text, and adjustable font sizes that remove barriers to literacy acquisition.

The integration of ICT in literacy learning also enhances collaborative learning. Online discussion boards, collaborative writing tools, and video conferencing enable students to communicate meaningfully, share ideas, and co-construct knowledge. These collaborative opportunities not only develop traditional literacy skills but also

foster digital literacy and communication competencies vital in the 21st century. Moreover, ICT encourages a student-centered learning environment where learners actively seek information, solve problems, and construct meaning, which promotes critical thinking and autonomy.

However, the successful implementation of ICT in literacy education depends on several critical factors, including teacher competence, infrastructure availability, curriculum alignment, and pedagogical strategies. The main obstacles faced by teachers in implementing ICT media include limited internet networks (65%), limited facilities and infrastructure (55%), and limited skills in using technology (40%). 45% of teachers use hotspots via personal cellphones or download materials before learning to overcome network constraints. Sixty percent of teachers develop their technology skills by learning independently, while 35% collaborate with peers. This finding reinforces the results of Mahmudah's research (2023), which revealed that some teachers are still hesitant to adopt new technology due to a lack of knowledge and experience.

Teachers play a central role in integrating technology effectively into their literacy instruction. Professional development programs must equip educators with the necessary digital skills and pedagogical knowledge to use ICT tools purposefully. Teachers must be able to select appropriate digital resources, design meaningful learning activities, and monitor student progress using ICT. Without adequate training and support, the potential benefits of ICT in literacy learning may not be fully realized.

Infrastructure also plays a vital role in enabling ICT-based literacy instruction. Schools require reliable internet connectivity, sufficient digital devices, and technical support to maintain a conducive learning environment. Implementing ICT in regions with limited resources can be challenging and may exacerbate educational inequalities. Therefore, policies and investments that ensure equitable access to digital tools and infrastructure are crucial for the widespread and effective adoption of ICT in literacy education.

Curriculum alignment is another important consideration. The integration of ICT should be embedded within the broader literacy curriculum rather than being treated as an add-on or supplementary activity. It means that ICT tools should be used to achieve clearly defined literacy objectives and should be integrated into daily teaching practices. Moreover, assessment practices should evolve to capture both traditional literacy outcomes and digital literacy competencies, such as evaluating online information, using digital tools ethically, and communicating effectively in digital environments.

Pedagogically, the use of ICT in literacy learning should be guided by constructivist principles that emphasize active, meaningful, and contextualized learning. Teachers should design learning experiences that encourage exploration,

creativity, and problem-solving through digital media. For example, students can create digital stories, blogs, or multimedia presentations to express their understanding of texts, combining literacy skills with digital creativity. Such activities promote higher-order thinking skills and enable learners to become producers of content rather than passive consumers.

While the benefits of ICT in literacy education are well-documented, challenges and limitations must also be acknowledged. Digital distraction, screen fatigue, and overreliance on technology can hinder learning if not adequately managed. Educators need to strike a balance between digital and traditional literacy practices to ensure holistic development. Moreover, ethical considerations regarding online safety, data privacy, and responsible technology must be addressed to create a safe and respectful digital learning environment.

In brief, implementing literacy learning using ICT media represents a transformative shift in educational practices that aligns with the demands of the digital age. By leveraging the power of technology, educators can create more engaging, personalized, and inclusive literacy experiences that cater to diverse learners. However, the success of this approach depends on strategic planning, ongoing teacher development, adequate infrastructure, and pedagogical innovation. As schools and educators continue to embrace ICT in literacy education, fostering a balanced and reflective approach that maximizes the benefits while mitigating the challenges, ultimately preparing students for a future where digital and traditional literacies are deeply intertwined, is essential.

2. Learners' Literary Comprehension of Fiction Texts

Literary comprehension of fiction texts represents a foundational aspect of reading proficiency that underpins higher-order thinking and deeper engagement with literature. This fundamental level of understanding involves grasping and recalling explicit information presented in a text, including facts, details, characters, settings, and sequence of events. Such comprehension skills are essential because they form the basis for building interpretative and critical reading skills. Without a firm grasp of the literary meaning of a text, learners cannot effectively analyze, evaluate, or draw inferences from what they read. Examining how students comprehend fiction at this level is crucial for understanding their reading development and informing literacy instruction strategies.

A comprehensive study of 160 primary school learners revealed encouraging patterns in their literary comprehension of fictional texts, beginning with their fundamental attitudes toward reading. The research demonstrated that students maintain remarkably positive dispositions toward reading activities, with 46.88% expressing strong interest in reading stories and 45% showing moderate interest. Only 6.88% of learners disliked reading activities, while a mere 1.25% strongly

disliked such activities. These findings, illustrated in Chart 1, show that student's interest in reading stories aligns with Prabaningrum's (2021) research, which indicates that using book corners in elementary schools contributes significantly to students' creativity and understanding. With 92% of students demonstrating positive attitudes toward reading when combining "very interested" and "somewhat interested" categories, this data indicates a strong foundation for literary education and suggests that students are highly receptive to fiction-based learning activities.

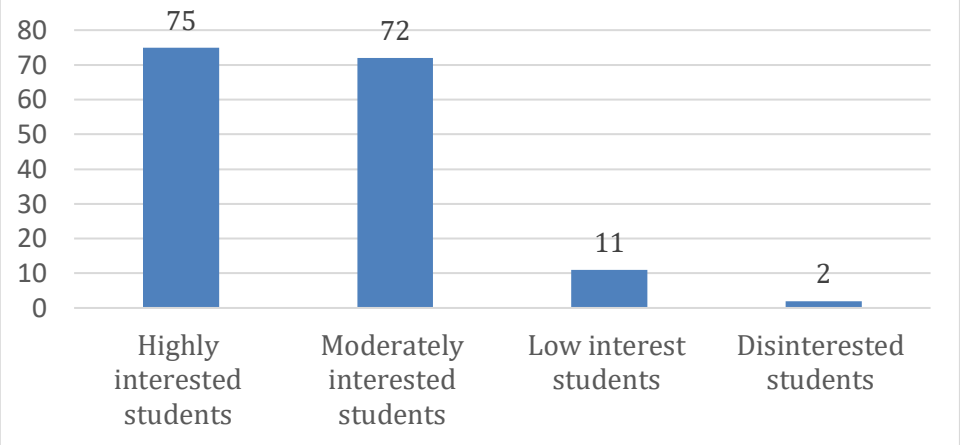


Chart 1. Students' Interest in Reading Stories

Building on this foundation of interest, students' reading preferences reveal important insights about their engagement with different types of literature. Chart 2, depicting preferred story types, shows a strong preference for traditional tales, which reflects cultural familiarity and suggests that culturally relevant literature resonates powerfully with students. The popularity of adventure and mystery genres indicates students' natural attraction to engaging, plot-driven narratives. At the same time, the minimal interest in non-fiction demonstrates that students at this age strongly prefer imaginative, fictional content over factual texts. This preference pattern has significant implications for educational approaches and text selection strategies.

The contexts in which students engage with reading further illuminate their literary behaviors. Chart 3, showing student reading locations, reveals a relatively balanced distribution between home and school reading, suggesting that students actively engage with literature across multiple environments. The slight predominance of home reading indicates strong family support for reading activities, while the significant library usage (24.4%) demonstrates awareness and utilization of formal reading resources. The small percentage of infrequent readers aligns closely with the high reading interest in the earlier findings, creating a coherent picture of engaged young readers.

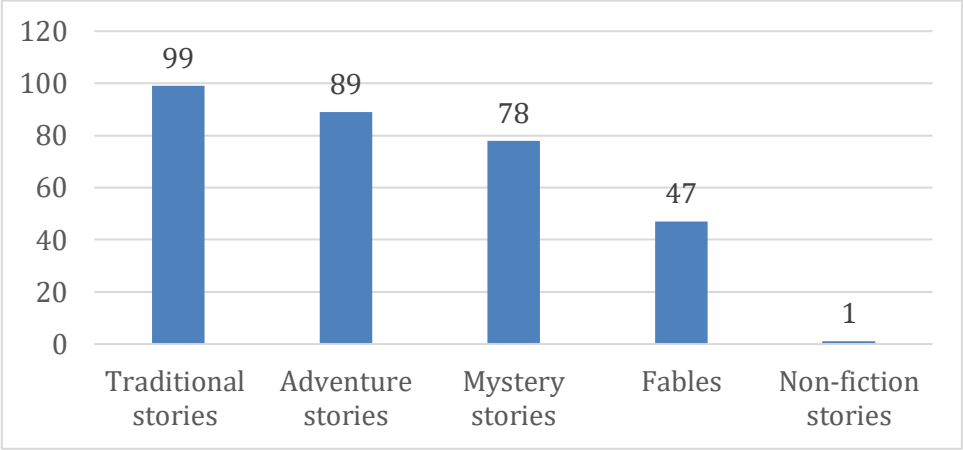


Chart 2. Preferred Story Types

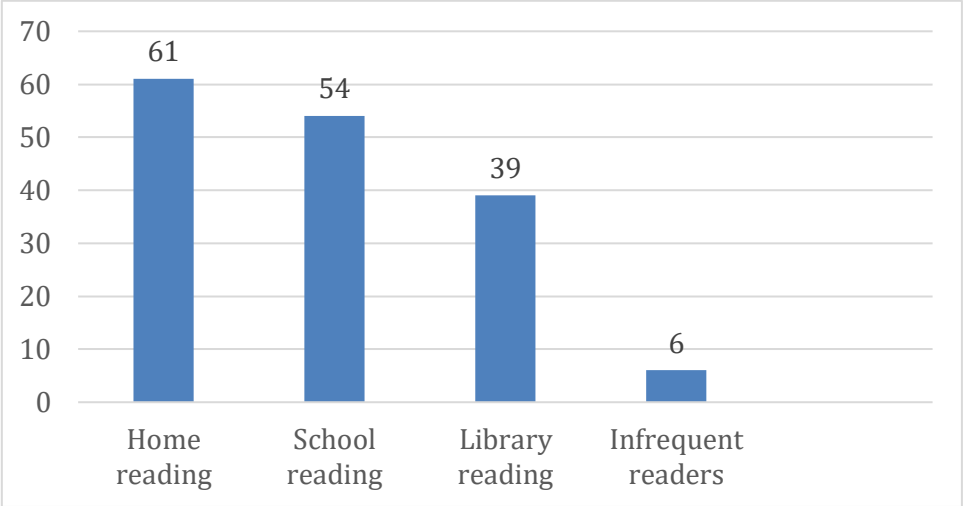


Chart 3. Student Reading Locations

Students demonstrate considerable competence in fundamental literary understanding tasks when examining specific comprehension abilities. Fiction texts present complex narratives that require readers to track characters, plot developments, dialogue, and descriptive elements, providing young readers with essential practice in extracting concrete information from continuous prose and identifying who did what, when, where, and how. Identifying characters in stories proves particularly strong, with 36.25% of learners demonstrating high competence and 55.63% showing adequate ability. Only 7.5% of learners struggled with character identification, and a mere 0.63% could not identify characters in the stories they read. This finding reinforces research by Azizah et al. (2023), which demonstrates that grade IV learners have a better literary understanding than appreciative understanding.

Students also show solid comprehension of story settings, though they employ various strategies to understand them. When identifying story settings, 40% of

learners relied on direct descriptions within the text, 34.38% used pictures or illustrations as their primary source, and 25.62% inferred settings from conversations between characters. For temporal settings specifically, most learners (56.88%) successfully identified periods from explicit time descriptions mentioned in the stories. These findings support Johansson's (2023) observation that learners often encounter obstacles in understanding the lexical and cultural aspects underlying texts, yet they develop adaptive strategies to overcome these challenges.

The ability to sequence events represents another crucial comprehension skill where students demonstrate general competence despite some variations in ability levels. Overall, 31.25% of learners proved highly competent at sequencing story events, while 55.63% showed adequate capability. However, 11.25% of learners experienced difficulties with sequencing, and 1.88% could not sequence events effectively. These results align with findings by Widiastuti et al. (2022) regarding learners' difficulties in understanding storylines and identifying narrative elements, highlighting the complexity of this particular comprehension skill.

Student attention patterns reveal fascinating insights about their reading strategies when initially encountering texts. The aspects that most attracted learners' attention when first reading stories were dominated by titles (45%) and pictures or illustrations (40%), suggesting that visual and textual cues work together to engage student interest. Regarding vocabulary challenges, most learners (65%) reported not encountering difficult words in the stories they read. In comparison, 35% did identify unfamiliar vocabulary, indicating that text selection and reading level appropriateness generally matched student capabilities.

Despite these generally positive outcomes, challenges persist, particularly for struggling readers or those from linguistically diverse backgrounds. Difficulties in decoding, limited vocabulary knowledge, and inadequate background knowledge can significantly hinder learners' ability to grasp literary content. Fiction texts, while engaging, often contain idiomatic language, unfamiliar settings, or culturally specific references that are not immediately accessible to all readers. Consequently, students may misinterpret key details, leading to comprehension gaps requiring targeted instructional intervention.

When students encounter difficulties, they employ specific strategies to overcome comprehension obstacles. The most frequently used approaches include rereading (44.38%) and asking teachers for help (38.75%), demonstrating independent problem-solving skills and awareness of available support resources. These findings reinforce Hwang et al.'s (2022) emphasis on the importance of vocabulary enrichment in improving learners' comprehension abilities and highlight the value of explicit instruction in vocabulary and pre-reading activities that activate prior knowledge.

Gender differences in comprehension abilities present intriguing patterns worthy of further investigation. Analysis revealed notable differences in the ability to identify story characters, with female learners showing a higher proportion of "very able" responses (58.97%) compared to male learners (28.57%). However, for the ability to sequence events, gender differences proved less significant, suggesting that gender-related factors may influence specific comprehension skills while others remain relatively consistent across gender lines. These findings open avenues for further research on the role of gender in the literary comprehension of fiction texts.

Practical pedagogical approaches significantly enhance students' literary comprehension development. Studies consistently demonstrate that many students, particularly in early grades, can achieve basic levels of understanding when appropriate instructional support is provided. Structured reading environments where texts are appropriately leveled and carefully guided questions enable students to demonstrate strong abilities in recalling story elements and answering literary comprehension questions accurately. These findings indicate that with proper scaffolding, learners can successfully navigate surface meanings of texts and consolidate their understanding of narrative structures with repeated exposure to fiction through read-aloud and guided reading sessions, further strengthening their comprehension and retention capabilities.

The types of questions posed during and after reading play crucial roles in developing comprehension skills. Questions requiring students to locate and recall specific details from texts encourage close reading practices and help reinforce literary understanding. Teachers who model information scanning techniques, passage highlighting strategies, and content summarization contribute significantly to developing learners' textual awareness. When literary questions are embedded in discussions or written responses, learners can articulate their understanding and refine their recall skills, fostering active engagement with texts and reinforcing the cognitive strategies necessary for adequate comprehension.

Technology and multimedia tools have emerged as valuable resources for enhancing learners' literary comprehension of fiction. Interactive e-books, digital story platforms, and comprehension applications often include built-in features such as highlighting capabilities, read-aloud narration, and embedded questions that draw attention to literary elements within stories. These digital supports prove especially beneficial for visual and auditory learners, making texts more accessible while providing immediate feedback on comprehension progress. Additionally, visual storytelling and graphic fiction can support literary comprehension by offering concrete illustrations that align with textual information, helping learners establish connections between words and images.

Assessment of literary comprehension typically employs various methodological approaches, including oral retellings, multiple-choice questions, and short-answer responses. Oral retellings provide valuable insights into how well students remember and sequence story events and how accurately they reproduce character actions and settings. These assessment techniques reveal not only what students remember but also how they organize information mentally, with accurate recounting of significant story events and recall of specific details serving as strong indicators of literary comprehension skill development.

Contemporary educational perspectives increasingly recognize that literary comprehension should not be viewed in isolation but rather as part of a comprehensive continuum of reading skills. While learners must master literary comprehension foundations, educators must simultaneously help them bridge gaps between literal understanding and inferential and evaluative comprehension levels. Instructional approaches must gradually transition from focusing solely on surface details toward encouraging learners to consider why events occur, how characters develop and change, and what themes are conveyed through narratives. This progression becomes possible when students establish solid foundations in literary understanding, enabling them to anchor their interpretations firmly within textual evidence.

Literary comprehension can be significantly influenced by learners' language proficiency levels and cultural familiarity with content in multilingual and multicultural classroom contexts. Fiction texts that reflect students' lived experiences or cultural backgrounds tend to be more accessible, as students can draw upon their background knowledge to comprehend events and character motivations more effectively. Conversely, culturally distant texts may require additional scaffolding to ensure adequate comprehension. Teachers must remain mindful of text selection decisions and employ inclusive practices that validate diverse backgrounds while building students' capacity to engage meaningfully with various literary texts.

Literary comprehension of fiction texts ultimately represents a critical component of reading development that enables students to access and enjoy literature while providing essential foundations for more advanced comprehension processes and supporting academic success across multiple disciplines. While many learners can achieve literary understanding through guided instruction, ongoing challenges for particular student groups highlight the continuing need for differentiated teaching strategies, culturally responsive materials, and multimodal instructional supports. The role of educators remains pivotal in fostering this comprehension level through intentional instruction, strategic questioning, and the utilization of engaging and accessible texts. As literacy instruction continues evolving to meet diverse learners' needs, focusing on literary comprehension will remain essential in cultivating confident, competent, and motivated readers who

can engage meaningfully with fictional literature throughout their academic and personal lives.

DISCUSSION

The research by the authors and other scholars presented complementary perspectives on the implementation of ICT media in literacy learning, with several areas of convergence and divergence in their findings and approaches. Based on interviews with 20 primary school teachers, the authors' research emphasized the practical aspects of ICT implementation in literacy instruction. Her findings indicate that teachers view ICT as a crucial component in creating engaging learning environments, with specific statistics on technology usage: 85% use LCD projectors, 90% use laptops, 65% use smartphones, and 30% use Smart TVs. The broader literature synthesized in the second document provides a more theoretical framework, highlighting how digital tools foster literacy, critical thinking skills, and classroom interactivity (Kailani et al., 2021).

Both research perspectives acknowledged the importance of teacher competency in successful ICT integration. The authors noted that 40% of teachers face challenges due to limited technology skills, with 60% developing these skills through independent learning and 35% through peer collaboration. This finding aligned with Suwarjo et al.'s (2022) research, which indicated that while elementary teachers could incorporate technology, continuous professional development remains essential for optimizing ICT integration in literacy instruction.

Infrastructure constraints emerged as a significant challenge in both research sources. The authors identified limited internet connectivity (65%) and inadequate facilities (55%) as major obstacles, noting that 45% of teachers resort to using personal hotspots or pre-downloading materials to overcome network limitations. The other researchers similarly recognized infrastructure as crucial, particularly highlighting its role during rapid transitions like the COVID-19 pandemic (Mumpuni et al., 2021; Poerwanti et al., 2021).

The pedagogical approaches to ICT implementation differed slightly between the research sources. The authors emphasized constructivist principles and described specific teaching strategies: 70% of teachers created engaging reading texts using Canva displayed through LCD projectors, 65% showed relevant videos, and 55% used interactive multimedia and digital animation. The comparative literature offered a broader perspective, introducing innovative physical learning environments like "literacy corners" and interactive learning stations as effective methods to stimulate student interest and provide access to digital resources (Mumpuni et al., 2023).

A notable difference in research focus appeared regarding the ecosystem of literacy learning. While the authors concentrated primarily on classroom-based

implementation and teacher practices, the other researchers adopt a more holistic view, emphasizing the importance of aligning ICT integration with related educational entities such as school libraries and parental involvement to reinforce literacy skills across different contexts (Mahendra et al., 2024).

Both research perspectives acknowledged the gap between technology access and effective educational use. The authors cited Mahmudah's (2023) findings that some teachers hesitate to adopt new technology due to knowledge and experience deficits. Similarly, Amaruddin et al. (2021) noted that while elementary students often had access to personal digital devices, a significant gap exists between possessing these tools and utilizing them effectively for academic purposes.

The research by the authors and the other scholars collectively painted a comprehensive picture of ICT implementation in literacy learning as a multifaceted process requiring coordinated efforts across curriculum development, teacher training, infrastructure support, and innovative classroom practices. Both highlight the transformative potential of technology in creating more engaging, personalized, and inclusive literacy experiences while acknowledging the challenges that should be addressed to realize these benefits fully.

Furthermore, the authors' research on learners' literary comprehension of fiction texts offered a comprehensive examination of primary school students' reading abilities, with findings that aligned with and diverged from other scholarly perspectives. The authors' study of 160 primary school learners revealed strong interest in reading fiction, with 46.88% of learners reporting they "really like" reading stories and 45% stating they "quite like" the activity, leaving only a small percentage (8.13%) expressing dislike for reading. This emphasis on reading interest was connected to Prabaningrum's (2021) findings about the positive impact of book corners in elementary schools on students' creativity and understanding, highlighting the importance of creating engaging reading environments.

In contrast to the authors' focus on reading interest and preferences, researchers like Martins-Reis et al. (2023) approached literary comprehension from a more cognitive perspective, demonstrating that literary comprehension questions function primarily as memory events related to recalling factual information from texts. While the authors examined specific comprehension skills such as character identification and event sequencing, Martins-Reis and colleagues investigated the underlying cognitive processes that enable these skills. However, both research perspectives affirm that elementary students typically perform better on literary comprehension tasks than those requiring inferential reasoning.

The authors' findings on character identification revealed strong performance, with 36.25% of learners being "very able" and 55.63% "quite able" to identify characters in stories. This observation aligned with 'Azizah et al.'s (2023) research showing that fourth-grade learners demonstrate better literary than appreciative

understanding. Similarly, other researchers, such as Alonzo et al. (2009), utilized a one-parameter Rasch model to determine that literary comprehension items tend to be easier for students compared to inferential or evaluative items, reinforcing the notion that narrative texts naturally encouraged memory-based reading strategies beneficial for early readers.

An interesting divergence appeared in the methodological approaches. While the authors employed traditional survey and observation methods to assess comprehension abilities, researchers like Kim et al. (2023) used innovative techniques such as eye-tracking technology to investigate reading patterns, finding that parameters like average and total fixation duration significantly predict performance on literary comprehension tasks. This technological approach provided a deeper understanding of the visual engagement processes underlying comprehension that the authors' research did not address.

The authors' study identified specific strategies learners use to overcome comprehension difficulties, with rereading (44.38%) and asking the teacher (38.75%) being the most common approaches. This practical finding complements Hwang et al.'s (2022) emphasis on vocabulary enrichment for improving comprehension. The comparative literature, however, took a more structural approach, with Juhanaini et al. (2018) reporting that early-graded reading activities enhance students' abilities to correctly identify words and understand syntax and context—critical skills for accurate literary comprehension.

Gender differences emerged as a unique aspect of the authors' research, with female learners showing a higher proportion of being "very able" (58.97%) in character identification compared to male learners (28.57%). However, differences in sequencing abilities were less significant. This gender-based analysis offers a dimension not prominently featured in the comparative research, suggesting an area for further investigation into how gender might influence specific aspects of literary comprehension.

Both research perspectives acknowledged the developmental nature of comprehension skills. The authors discussed how literary comprehension formed the foundation for inferential and evaluative reading skills, noting that "without a strong grasp of the literary meaning of a text, learners cannot effectively analyze, evaluate, or draw inferences from what they read." Similarly, Kim and Petscher (2021) emphasized the necessity of focusing on literary comprehension as a critical step in fostering advanced reading skills, providing a solid foundation for developing more complex comprehension abilities in later educational stages.

The role of text presentation received different emphases across the research. The authors found that 40% of learners identified settings from direct story descriptions, 34.38% from illustrations, and 25.62% from character conversations. This attention to how various textual elements contributed to comprehension

complements findings from Alonzo et al. (2009) regarding how the mode of text presentation influences comprehension outcomes. Both perspectives recognized that fiction texts' structural and visual elements significantly impact how successfully students extract and process information.

In conclusion, while the authors' research provided detailed insights into the practical aspects of how primary school learners engage with and comprehend fiction texts, comparative research offered complementary perspectives through innovative methodological approaches and deeper examination of cognitive processes. Together, these research perspectives created a complete understanding of literary comprehension as both a foundational skill set and a complex cognitive process that developed through strategic instruction and appropriate text engagement, ultimately preparing students for more sophisticated reading comprehension tasks.

This study's practical implications highlighted several key strategies for enhancing literacy education: ICT implementation requires adequate infrastructure and teacher training; fiction text selection should consider difficulty level and cultural relevance, with attention to visual elements and titles that initially attract learners; literacy instruction should holistically integrated reading strategies, vocabulary guidance, and guided discussions; gender differences in comprehension require differentiated approaches, particularly for male learners who demonstrate lower character identification skills; ICT integration should be implemented gradually and collaboratively among teachers; assessment of literary comprehension should be comprehensive, examining both outcomes and processes; and reflection practices should be incorporated as an essential component of literacy learning to develop metacognitive awareness and consolidate understanding. Together, these implications provided a framework for more effective, inclusive, and technologically integrated literacy education that addresses the diverse needs of all learners.

CONCLUSION

A comprehensive study of ICT implementation in literacy education reveals a complex landscape of promising opportunities and persistent challenges. In practice, educators predominantly utilize laptops (90%), LCD projectors (85%), smartphones (65%), and Smart TVs (30%), with popular applications including YouTube for learning videos (80%) and Canva for visual content creation (75%). Teaching approaches involve creating engaging reading texts displayed through projectors (70%), showing relevant videos (65%), and using interactive multimedia for complex concepts (55%). The implementation demonstrates significant benefits, including increased student motivation, personalized learning opportunities, and enhanced collaborative experiences. However, challenges persist, with limited

internet connectivity affecting 65% of implementations, inadequate infrastructure impacting 55%, and insufficient technology skills hindering 40% of efforts. To address these obstacles, 45% of educators use personal hotspots or pre-download materials, 60% develop their digital competencies independently, and 35% seek peer collaboration. The research underscores that successful ICT integration in literacy education requires adequate infrastructure, teacher training, and strategic pedagogical approaches to maximize benefits while addressing digital divide challenges.

In addition to examining ICT implementation in literacy education, primary school students demonstrate strong foundational literacy skills and overwhelmingly positive attitudes toward fiction reading, according to recent comprehensive research findings. The study of 160 learners demonstrated overwhelmingly positive reading attitudes, with 92% expressing interest in reading stories when combining strong (46.88%) and moderate (45%) interest levels. Students showed strong preferences for traditional tales, adventure, and mystery genres while displaying minimal interest in non-fiction and engaged with reading across balanced home and school environments with notable library usage (24.4%). Comprehension abilities proved solid across key areas: 91.88% demonstrated adequate to high competence in character identification, while various strategies emerged for understanding story settings, including direct textual descriptions (40%), visual illustrations (34.38%), and character dialogue inference (25.62%). Event sequencing capabilities showed 86.88% of learners performing adequately or better, though this represented the most challenging comprehension skill. When encountering difficulties, students primarily employed rereading strategies (44.38%) and sought teacher assistance (38.75%), with most learners (65%) reporting minimal vocabulary challenges. Notably, gender differences appeared in character identification abilities, with female learners demonstrating higher competence rates (58.97%) than males (28.57%). At the same time, event sequencing showed less significant gender variation, suggesting gender-related factors may influence specific comprehension skills.

The study suggests strategies for improving literacy education, including adequate infrastructure and teacher training, considering difficulty level and cultural relevance in fiction text selection, integrating reading strategies, vocabulary guidance, and guided discussions, addressing gender differences in comprehension, implementing ICT integration gradually, comprehensively assessing comprehension, and incorporating reflection practices for metacognitive awareness.

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