
Integrating Digital Literacy to Foster Critical Thinking in English Language Learning for Marginalized Learners

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Abstract: The rapid growth of digital technology has transformed the way learners' access, interpret, and use information, making digital literacy an essential competence alongside critical thinking. However, research on integrating digital literacy to foster critical thinking among marginalized learners in resource-limited contexts remains scarce. This study aims to examine how integrating digital literacy into English language learning can foster critical thinking among marginalized learners. A qualitative case study approach was employed to explore learning experiences in a community with limited access to quality educational resources and digital learning opportunities. Data were collected through classroom observations, semi-structured interviews, and documentation of learning activities involving digital media, including educational videos, songs, and interactive online platforms. The findings indicate that contextualized digital literacy practices encourage learners to participate more actively in the learning process. Learners demonstrated an increasing ability to question ideas, interpret messages, evaluate the credibility of digital content, and express their perspectives with greater confidence. Furthermore, collaborative discussions and reflective learning activities supported the development of critical thinking skills by encouraging learners to analyze information from multiple perspectives before concluding. These findings have implications for the development of inclusive, learner-centered digital literacy pedagogy in resource-limited contexts.

Keywords: Digital Literacy; Critical Thinking; English Language Learning; Marginalized Learners; Qualitative Case Study

INTRODUCTION

The contemporary educational landscape is characterized by the pervasive influence of digital technology, which has fundamentally altered how knowledge is accessed, produced, and disseminated. In this context, the concept of literacy has evolved beyond traditional reading and writing skills to encompass a broader range of competencies, including digital literacy and critical thinking (Noordin, 2024; Zhang, 2024). Digital literacy, understood as the ability to effectively navigate, evaluate, and create information using digital technologies, has emerged as a fundamental skill for participation in contemporary society (UNESCO, 2019). Meanwhile, critical thinking, the capacity to analyze, evaluate, and synthesize information from multiple perspectives, has been recognized as an essential competency for navigating complex information environments and participating in democratic societies (Facione, 1990; Imaniah et al., 2024).

The digital transformation in education presents both opportunities and challenges, particularly in the context of English language learning. The development of digital technology has opened access to diverse resources and learning platforms that can enrich language learning experiences (Sugaku, 2025; Wiranda & Ciptaningrum, 2024). However, the acquisition of digital literacy and critical thinking skills is not uniformly distributed across populations. Marginalized learners, those facing socioeconomic disadvantage, limited educational resources, or geographic isolation, often experience significant barriers to developing digital competencies and higher-order thinking skills (Ningsih et al., 2025; Widora et al., 2025). This digital divide perpetuates existing inequalities, as those without adequate digital literacy skills are increasingly excluded from educational, economic, and social opportunities.

In the context of English language learning, integrating digital literacy presents transformative potential alongside implementation challenges. Previous research has highlighted the benefits of technology-enhanced language learning, including increased motivation, access to authentic materials, and the development of 21st-century skills (Astuti et al., 2024; Imaniah et al., 2024). However, studies specifically addressing the intersection of digital literacy, critical thinking, and English language instruction for marginalized populations remain limited. This research gap is particularly concerning given the escalating importance of both English proficiency and critical digital competencies for academic and professional success. Marginalized learners who lack these skills face compounding disadvantages, limiting their ability to participate fully in an increasingly digitalized global society.

Several studies have examined the relationship between digital literacy and critical thinking. Astuti et al. (2024) found that digital literacy had a positive and significant influence on critical thinking skills in the era of artificial intelligence. Imaniah et al. (2024) demonstrated that project-based learning integrating digital literacy in English-language contexts enhanced students' critical thinking abilities through information analysis, decision-making, and real-world problem-solving. However, these studies were generally conducted in contexts with adequate access to technology, thus providing limited insight into how digital literacy can be effectively integrated for marginalized learners in resource-constrained settings.

Research on marginalized learners in the Indonesian context reveals unique challenges faced. Ningsih et al. (2025) identified significant gaps in access to digital resources and teaching quality in remote areas of eastern Indonesia. Widora et al. (2025) found that teachers in resource-limited areas often lack formal training in digital literacy and multimodal pedagogy, which limits their ability to integrate technology effectively into instruction. These findings indicate the need for pedagogical approaches that are responsive to context and available resources.

Furthermore, without explicit pedagogical attention to critical engagement with digital content, technology integration in language education risks reproducing passive consumption patterns rather than fostering active, critical citizenship (Bali & Brown, 2020). Critical approaches to digital literacy emphasize the importance of understanding the sociopolitical contexts in which digital texts are produced and disseminated, as well as

awareness of representation and power in digital spaces (Zhao, 2022). This perspective is particularly relevant for marginalized learners, who may encounter digital content that misrepresents or excludes their experiences and perspectives.

This study aims to address this gap by examining how integrating digital literacy into English language learning can foster critical thinking among marginalized learners in resource-limited contexts. Specifically, this research explores: (1) how digital literacy integration influences the critical thinking abilities of marginalized learners; (2) the pedagogical strategies and learning activities that facilitate the development of critical thinking through digital literacy practices; and (3) the challenges and opportunities that emerge when implementing digital literacy-integrated English instruction for marginalized learners. This study contributes to the development of inclusive, learner-centered digital literacy pedagogy for resource-limited contexts and provides practical insights for educators and policymakers working with marginalized populations.

METHOD

This study employed a qualitative case study approach to explore the integration of digital literacy in English language learning for marginalized learners. The case study design was selected for its capacity to provide a rich, contextualized understanding of complex social phenomena as they unfold in natural settings (Yin, 2014; Heigham & Croker, 2009). This approach allowed the researchers to capture in depth the processes, dynamics, and meanings associated with participants' learning experiences in their specific contexts. A single-case design was used to enable in-depth exploration of a case that is representative of the conditions faced by marginalized learners in Indonesia.

The research was conducted in a community in Indonesia characterized by socioeconomic disadvantage and limited educational resources. The setting was purposively selected because it reflects the common conditions faced by marginalized learners in various regions of Indonesia, including limited access to technology, inadequate internet infrastructure, and minimal availability of educational resources. Participants were English language learners attending community-based English classes facilitated by local educators. A total of 25 learners participated in the study, aged 15 to 45 years (mean age 28 years), representing diverse educational backgrounds (from primary to secondary education) and varying English proficiency levels (from beginner to intermediate). Most participants were female (18 individuals) and male (7 individuals) and worked as farmers, daily laborers, or homemakers. Three teachers also participated as informants, with teaching experience ranging from 5 to 15 years.

Data were collected through three main methods. First, classroom observations were conducted weekly over six months. Observations focused on learner engagement, interaction patterns, the nature of critical thinking displayed in discussions and activities, and teacher facilitation strategies. Observation notes were recorded using a structured protocol documenting learning activities and their digital components, learner participation and interaction, instances of critical thinking (questioning, analyzing, evaluating), and teacher facilitation strategies. Second, semi-structured interviews were conducted with 15 learners and 3 teachers to explore their perspectives on integrating

digital literacy and developing critical thinking. Interviews lasted between 30 to 60 minutes and explored participants' prior experiences with digital technology, perceptions of digital literacy activities, experiences of critical thinking development, challenges and opportunities encountered, and perceived outcomes of the learning experiences. Third, documentation was conducted by collecting learning materials and artifacts including lesson plans, instructional materials, digital media resources (educational videos, songs, online platforms), and samples of learner work.

Data analysis followed the six-phase thematic approach developed by Braun and Clarke (2006). The first phase involved familiarization with the data through transcription of interviews and repeated reading of observation notes and documents. The second phase involved initial coding to identify significant segments of data related to the research questions. The third phase involved searching for themes by grouping codes into broader categories. The fourth phase involved reviewing themes to ensure internal and external coherence. The fifth phase involved defining and naming themes. The sixth phase involved writing the report by presenting the identified themes. Trustworthiness was established through triangulation across data sources and methods, member checking with participants, thick description to support transferability, and an audit trail to support dependability and confirmability (Lincoln & Guba, 1985). This study received ethical approval from the relevant institutional review board, and all participants provided informed consent after understanding the research purposes and procedures.

FINDINGS AND DISCUSSION

Contextualizing Digital Literacy in Resource-Limited Settings

The findings revealed that implementing digital literacy in resource-limited contexts required significant creative adaptation from teachers. Limited access to technology and internet connectivity emerged as primary constraints that had to be addressed. Teachers reported that they had to develop strategies to maximize available resources, including downloading digital materials when connections were available, rotating use of available devices, and designing activities that could be conducted without internet access. One teacher explained:

*"We had to be creative with what we had. Sometimes I downloaded videos at night when the signal was better, then used them in class the next day. Students also took turns using phones because not everyone had their own device."
(Interview, Teacher 1)*

These adaptations align with Widora et al.'s (2025) findings that teachers in resource-limited contexts often develop creative strategies to overcome infrastructure limitations. However, unlike previous research that focused more on technical constraints, the findings of this study show that resource limitations actually encouraged pedagogical innovation that enriched the learning experience. Teachers developed collaborative activities that leveraged social interaction as a substitute for individual technology access, creating a more inclusive and participatory learning environment.

Despite the limitations, learners demonstrated high enthusiasm for digital literacy activities. A participant stated:

"Before this, I thought technology was only for rich people or city school children. However, when we used videos and songs in class, I realized technology could help me learn English too. I became more excited to learn." (Interview, Participant 5)

This enthusiasm reflects what Ningsih et al. (2025) term "high learning desire" among marginalized learners, which is often disproportionate to the resources available to them. This finding suggests that when digital literacy is contextualized within learners' lived experiences, barriers to access to technology can be overcome through motivation and pedagogical creativity. This reinforces Zhao's (2022) argument that digital literacy must be understood as a socially and culturally situated practice, not merely as decontextualized technical skills.

Transformation from Passive Consumption to Critical Engagement

One of the most significant findings was the transformation in how learners engaged with digital content. At the beginning of the intervention, learners tended to approach digital media passively, accepting information at face value without questioning or evaluating it. A teacher observed:

"At the beginning, when I showed them a video, they just watched like they were watching television. They didn't question anything presented. All information on the screen was considered true without question." (Interview, Teacher 1)

However, as digital literacy activities designed explicitly to develop critical thinking were integrated, learners began to show significant behavioral changes. Observation notes documented an increasing frequency of critical questions posed by learners, including questions about information sources, content creation purposes, and perspectives that might have been overlooked. For example, during a discussion of an educational video about environmental issues, a learner questioned the video's representation of local communities:

"This video shows how city people deal with waste. But what about us in the village? We don't have facilities like that. Why doesn't the video show solutions we could actually do?" (Observation, Week 8)

This shift from passive consumption to critical engagement reflects the development of what can be termed "critical digital literacy"—the capacity to evaluate digital content critically rather than merely consuming it (Bali & Brown, 2020). This finding aligns with Astuti et al.'s (2024) research, which found that digital literacy positively influences critical thinking skills. However, this study extends those findings by demonstrating that this transformation does not occur automatically but requires intentional pedagogical design and teacher scaffolding.

Learners themselves recognized the change in how they process digital information. A participant stated:

"Before, if I saw something on the internet, I would immediately believe it. Now I ask: Who made this? Why are they showing this? Is there another side to this story? I've become more careful." (Interview, Participant 7)

This metacognitive awareness demonstrates that digital literacy integration not only develops technical skills but also shapes critical dispositions that persist beyond the

learning context. This is important because critical thinking in the digital age requires not only the ability to analyze information but also healthy skepticism and awareness of potential bias and manipulation in digital content (Noordin, 2024).

Collaborative Learning as a Catalyst for Critical Thinking

Collaborative learning activities emerged as an important mechanism for facilitating the development of critical thinking through the integration of digital literacy. When learners engaged with digital content in group discussions, they were exposed to diverse perspectives and challenged to articulate and defend their own interpretations. Classroom observations documented rich discussion dynamics where learners questioned each other's assumptions, evaluated evidence, and considered alternative interpretations.

Teachers deliberately designed collaborative activities to encourage critical engagement. For example, after watching a short video about a social issue, learners were divided into small groups to discuss questions such as: "What is the main message of this video?" "Who benefits and who is disadvantaged by this message?" "Are there perspectives not shown?", and "How does this video relate to our lives?" Group presentations then allowed comparison of perspectives across groups. A teacher explained the value of this approach:

"When students discuss together, they push each other to think more deeply. One student question the video, another agrees or disagrees, and suddenly they are engaged in real conversation about ideas. That's where I see critical thinking really happening." (Interview, Teacher 3)

This finding aligns with Vygotsky's (1978) sociocultural perspective, which emphasizes the importance of social interaction in cognitive development. Through dialogue and negotiation of meaning with peers, learners internalize critical thinking strategies that initially emerge in social interaction. This study extends understanding of how collaboration in digital literacy contexts can catalyze critical thinking development, especially when learners come from diverse backgrounds and bring different perspectives to discussions.

Unlike Imaniah et al.'s (2024) research, which focused more on project-based learning, this study's findings highlight the importance of structured collaborative discussion as a bridge between digital content consumption and critical knowledge production. Learners not only learned to analyze digital content individually but also developed the ability to articulate and defend positions in public forums skills essential for democratic participation in digital society.

Reflective Learning and Self-Expression

Reflective learning activities proved to support critical thinking development by encouraging learners to connect digital content with their own experiences and perspectives. Learners were given opportunities to write reflective journals, participate in group reflections, and create their own digital content in response to the materials studied. A participant described the value of reflective activities:

"When we had to write about what we learned and how it connected to our lives, I had to really think about the video and what it meant to me. It made learning feel more personal and meaningful." (Interview, Participant 9)

Observations confirmed that reflective activities encouraged learners to move beyond surface-level comprehension toward deeper analysis and evaluation. In reflective journals, learners not only summarized digital content but also evaluated its credibility, connected it to prior knowledge, and considered its implications for their lives. These reflective activities align with critical pedagogy approaches that emphasize the importance of critical consciousness and connections between personal experience and broader social structures (Freire, 1970).

The integration of digital content creation activities where learners produced short videos, presentations, or digital stories represented an advanced form of critical engagement. Creating digital content required learners to apply their learning, make decisions about how to represent ideas, consider their audience, and reflect on the message they wanted to convey. A participant explained:

"Making our own video was difficult and time-consuming, but it helped me understand what goes into creating a message. Now when I watch someone else's video, I notice things I didn't before like what they chose to include and what they left out, and why they made those choices." (Interview, Participant 12)

This digital content creation experience developed what Zhao (2022) terms "material awareness" about how digital content is produced and how production choices shape meaning. This finding differs from previous research that focused more on digital content consumption (Astuti et al., 2024; Noordin, 2024) by demonstrating that digital content production is an important dimension of critical digital literacy often overlooked in resource-limited contexts.

Barriers and Enabling Factors

This study identified several barriers to critical thinking development through digital literacy integration. Major barriers included limited English proficiency, which affected learners' ability to understand and analyze digital content in depth, and technical literacy challenges stemming from unfamiliarity with digital platforms and features. A teacher explained:

"Some students still struggle with English vocabulary, so they spend a lot of energy translating rather than analyzing content. Others are not comfortable with technology and spend time figuring out how to use applications rather than focusing on content." (Interview, Teacher 1)

However, several enabling factors supported critical digital literacy development. Teacher scaffolding providing explicit instruction in critical thinking strategies and digital literacy skills, proved essential. Teachers modeled questioning approaches, provided frameworks for analyzing digital content, and guided learners through collaborative discussions. A teacher explained:

"I had to teach students how to ask good questions, how to evaluate sources, how to discuss ideas politely but critically. These skills don't come naturally they need to be taught and practiced explicitly." (Interview, Teacher 2)

Additionally, the integration of familiar, culturally relevant content supported engagement and critical thinking. When learners encountered digital content connected to their lives and communities, they were more motivated to engage critically and apply their learning. A participant stated:

"When videos or articles discussed things I knew like problems in our village or our culture I felt more confident to speak up and give opinions. I didn't just accept what was said; I could compare it with my own experience." (Interview, Participant 14)

This finding supports Ningsih et al.'s (2025) research, which emphasizes the importance of culturally responsive pedagogy in digital literacy education for marginalized learners. This study extends those findings by demonstrating that cultural relevance not only increases motivation but also provides a foundation for critical engagement, as learners can use their knowledge and experience as reference points to evaluate and question digital content.

CONCLUSION

This study examined how integrating digital literacy into English language learning can foster critical thinking among marginalized learners in resource-limited contexts. The findings demonstrate that contextualized digital literacy practices, when pedagogically designed, can transform learner engagement from passive consumption toward active critical participation. Learners developed the ability to question ideas, interpret messages, evaluate the credibility of digital content, and express their perspectives with greater confidence. This transformation was facilitated by teacher scaffolding, collaborative activities that exposed learners to diverse perspectives, and reflective activities that connected digital content to learners' lived experiences.

This study contributes to the literature on digital literacy and critical pedagogy by providing empirical evidence on how to contextualize digital literacy integration for marginalized learners in resource-limited settings. The findings demonstrate that infrastructure limitations do not preclude the development of critical digital literacy as long as there is pedagogical commitment and creativity in designing learning activities responsive to context. This study also highlights the importance of approaches that value learners' cultural knowledge and experiences as resources for critical engagement, rather than as barriers to be overcome.

Practical implications of this study include the need for teacher professional development focused on strategies for integrating digital literacy and critical thinking in resource-limited contexts. Teachers need support in designing activities that scaffold critical engagement, facilitating productive collaborative discussions, and integrating culturally relevant content. Educational institutions and policymakers need to recognize that investment in teacher capacity and pedagogical resource development may be as important as investment in technological infrastructure. Furthermore, English language

curricula need to be revised to explicitly integrate critical digital literacy as a core component, rather than as an add-on activity.

Limitations of this study include the single-case design, which limits the generalizability of the findings; the six-month duration, which may not have captured the full trajectory of critical thinking development; and reliance on self-report data, which may be subject to bias. Future research should employ longitudinal designs, comparative case studies across different contexts, and objective measures of critical thinking development. Research also needs to explore the role of specific technologies and digital platforms in supporting the development of critical digital literacy and examine how factors such as gender, age, and educational background influence learning experiences. Finally, research on effective teacher professional development models to support the integration of critical digital literacy is urgently needed to inform policy and practice.

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