

## Integrating Digital Literacy in EFL Teaching and Learning Contexts: A Systematic Literature Review

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### ABSTRACT

*This article aims to identify (a) the incorporation of digital literacy in EFL classrooms that reinforce student engagement, language acquisition, and teaching practices, (b) the main challenges encountered by teachers and students in the implementation of digital literacy strategies and (c) their implications practices in English as a Foreign Language (EFL) teaching and learning contexts. This systematic literature review draws on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework for analyzing 20 out of 800 articles concerning digital literacy in the EFL context, published in indexed journals such as Google Scholar, Scopus, and Web of Science from 2020 to 2025. The results show the improvements in student engagement and language acquisition facilitated by digital tools, highlighting the advantages of technologies like digital media platforms, game-based learning, and online resources in promoting interactive and motivating learning experiences. The analysis identifies significant challenges, such as inadequate digital infrastructure, limited access to technology, and insufficient teacher training, which impede the effective implementation of digital literacy strategies in EFL instruction. This review enhances the understanding of digital literacy within EFL education, facilitating the development of more effective and inclusive teaching practices in the digital era.*

*Keywords: Digital literacy, EFL (English as a Foreign Language) teaching and learning, Student engagement, Digital tools, Language acquisition*

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## INTRODUCTION

Digital literacy is a crucial element in the teaching and learning of English as a Foreign Language (EFL), providing extensive opportunities for language acquisition outside traditional classroom settings. Traditional language learning paradigms have evolved to integrate digital tools, allowing students to participate in a variety of activities encompassing speaking, listening, reading, and writing, supported by digital platforms. Pratolo and Solikhati (2020) argue that the integration of digital literacy in EFL instruction transcends mere supplementary methods; it has the potential to enhance students' experiences by connecting classroom education with real-world communication. Hamidah (2021) describes how these activities enhance student motivation and engagement, fostering interactive learning environments. The incorporation of digital literacy into conventional language skills enhances the dynamism, interactivity, and accessibility of language teaching and learning.

The advancement of digital literacy in EFL contexts has attracted attention from teachers, students, and policymakers within the educational sector. The necessity for digital literacy arises from the requirement for teachers to improve their teaching strategies and more effectively attain educational objectives. Argawati and Suryani (2020) indicate that teachers recognize the potential of digital platforms but encounter specific challenges, including inadequate digital resources and insufficient training. Digital literacy is not merely an academic skill; it serves to equip students with essential competencies for success in a digitally dominated world. As educational institutions adjust to these changes, the role of EFL teachers is essential in navigating and implementing effective digital literacy strategies.

While digital literacy offers significant benefits in EFL education, there are notable challenges in the effective use of digital tools. Challenges include insufficient digital infrastructure, restricted internet access, and a lack of digital skills among teachers and students. Purmayanti (2022) highlights the challenges encountered in Indonesia, where these gaps frequently limit teachers' capacity to effectively utilize digital resources. Comprehending these barriers is essential, as it encourages stakeholders to pursue solutions that promote a conducive digital learning environment. The complexities of these challenges highlight the necessity of ensuring equitable access to digital tools, which is essential for effective EFL instruction.

A notable research gap exists regarding students' mastery of digital literacy skills and their practical application in EFL classrooms. Al Seghayer (2020) identifies a gap between students' perceived digital competencies and their actual search performance, highlighting the necessity for targeted research in this domain. Dashtestani and Hojatpanah (2022) note a significant gap in research concerning the digital literacy of junior high school students, especially in the context of computer-assisted language learning (CALL). Addressing these gaps is crucial for comprehending the ways in which digital literacy can effectively improve language learning and teaching outcomes.

Digital-based instruction presents both potential benefits and significant limitations. Argawati and Suryani (2020) assert that digital-based instruction enhances student engagement and fosters creativity in language learning. Nonetheless, it concurrently encounters considerable challenges, including the restricted access to digital devices and varying degrees of digital literacy among both students and teachers. The identified challenges indicate that successful digital-based instruction requires complementary strategies to mitigate these limitations, thereby facilitating effective implementation in EFL teaching contexts.

The significance of teacher identity and attitudes regarding digital literacy is essential in influencing their practices and the incorporation of digital tools in education. Burnett (2011) posits that the personal and professional identities of teachers play a crucial role in their interaction with digital technologies. The effectiveness of digital literacy initiatives in EFL teaching is contingent upon teachers' readiness to adapt

and incorporate these tools into their instruction. Incorporating teachers' perspectives can enhance the formulation of pedagogical strategies that meet the changing digital requirements of language education.

EFL teacher education must incorporate comprehensive digital literacy training to effectively address the teaching demands of the 21st century. Palacios-Hidalgo and Huertas-Abril (2025) emphasize that, although pre-service teachers exhibit favorable self-assessments of their digital skills, there remains a significant requirement for enhanced training, especially in digital assessments and instructional methodologies. In the absence of this enhancement in digital education, future teachers may be inadequately prepared to utilize digital tools effectively, thereby constraining the full potential of digitally enriched EFL environments.

The integration of digital game-based language learning (DGBLL) into English as a Foreign Language (EFL) education presents novel opportunities; however, its implementation is still restricted. Blume (2020) identifies that pre-service teachers generally possess favorable perceptions of DGBLL; however, their engagement is constrained by insufficient experience and the absence of implementation in formal contexts. This disconnect highlights the necessity for more integrated approaches in teacher training programs that prioritize both traditional language instruction and the examination of experiential and interactive digital mediums. In summary, despite existing challenges, the incorporation of digital literacy and innovative digital tools is essential for the advancement of EFL teaching and learning.

This study examines the integration of digital literacy in EFL teaching, focusing on the enhancement of student engagement and language acquisition through digital tools. It also investigates the primary challenges faced by teachers and explores institutional strategies to address these barriers and optimize learning outcomes. Consequently, three research questions emerge, as outlined below:

**RQ1:** In what ways does the incorporation of digital literacy in EFL classrooms reinforce student engagement, language acquisition, and teaching practices?

**RQ2:** What are the main challenges encountered by teachers and students in the implementation of digital literacy strategies in EFL teaching and learning?

**RQ3:** What are the implications of integrating digital literacy for theories, pedagogies, and practices in English as a Foreign Language (EFL) teaching and learning contexts?

## **METHOD**

### **Research Design**

This study utilizes a systematic literature review methodology based on the PRISMA framework to investigate the incorporation of digital literacy in EFL (English as a Foreign Language) settings. The PRISMA framework (Purssell & McCrae, 2020) facilitates a thorough and impartial examination of contemporary research regarding integrating digital literacy skills and their implications in EFL education. The objective is to identify opportunities and challenges that could improve language acquisition and literacy proficiency. This review examines 20 out of 800 articles published between 2020 and 2025, specifically chosen from journals indexed in Google Scholar, Scopus, and Web of Science, providing a comprehensive perspective on contemporary educational strategies.

### **Data Collection**

The data collection process began with a comprehensive search of three academic databases, namely Google Scholar, Scopus, and Web of Science. These platforms are selected based on their extensive

collections of peer-reviewed literature and established credibility in the academic community. The search yielded an initial collection of 1050 articles pertinent to the integration of digital literacy within EFL contexts. Each article was assessed for its contributions to the topic, emphasizing research published within the designated timeframe (Jesson et al., 2011).

### **Data Selection**

Strict inclusion and exclusion criteria were implemented to guarantee the incorporation of pertinent and high-quality studies (Bettany-Saltikov, 2012). The inclusion criteria required that articles were peer-reviewed, published in English, and released between 2020 and 2025, specifically focusing on the integration of digital literacy in EFL teaching. Exclusion criteria were defined to eliminate non-peer-reviewed works, studies not pertinent to digital literacy in EFL, and articles devoid of empirical evidence. A total of 20 articles were selected for detailed analysis following a stringent selection process. A PRISMA flow diagram (Huerta & Garza, 2019) was utilized to visually represent the selection stages, thereby improving the transparency and reproducibility of the research methodology.

### **Data Organization**

After establishing the final sample of 20 articles, a systematic organization strategy was used to enable comprehensive analysis (Moriña, 2021). Articles were classified according to essential attributes, including authorship, publication year, research methods utilized, primary findings, and their relevance to the research questions. This classification facilitated the identification of emerging patterns and inconsistencies, providing a foundation for thorough analysis.

### **Keyword Search**

A focused keyword search was performed to enhance the preliminary identification and data extraction process (Jesson et al., 2011; Purssell & McCrae, 2020). Terms including "digital literacy," "EFL teaching," "technology in education," "language acquisition," and "digital tools" were integrated to identify relevant studies. This keyword strategy ensured the inclusion of all relevant research from the database search to support a thorough analysis.

### **Data Analysis**

The analysis of data utilized a qualitative method to synthesize insights from the chosen studies. Qualitative analysis concentrated on identifying prevalent themes and trends associated with methodologies for integrating digital literacy and enhancements in language acquisition. Thematic analysis was guided by fundamental concepts such as the efficacy of digital tools, interactive learning models, and technology-enhanced pedagogy. Qualitative coding techniques were utilized to classify findings and evaluate their relevance to the research questions (Huerta & Garza, 2019).

### **Data Interpretation and Presentation**

The interpretation of data required the synthesis of information (Jesson et al., 2011; Purssell & McCrae, 2020) to derive significant conclusions regarding the emerging trends in digital literacy integration and its effects on EFL teaching. The analysis revealed substantial themes, facilitating a detailed discussion on the educational implications of the findings. The results were systematically organized and accompanied

by tables to emphasize key findings and contrasts among studies. A narrative synthesis was utilized to contextualize qualitative data and clarify complex themes for enhanced understanding.

This systematic literature review, adhering to the PRISMA methodology, offers a comprehensive analysis of research on the integration of digital literacy in EFL contexts. The systematic selection and analytical methods provide important insights into contemporary pedagogical trends, equipping teachers and researchers with evidence-based recommendations to improve digital literacy and language proficiency. The findings enhance the comprehension of digital tool utilization in language instruction, establishing a foundation for subsequent research and practical applications in EFL education.

## **RESULTS AND DISCUSSION**

### **The Integration of Digital Literacy in EFL Classrooms to Reinforce Student Engagement, Language Acquisition, and Teaching Practices**

The incorporation of digital literacy in EFL classrooms significantly improves student engagement and language acquisition. Zheng et al. (2025) demonstrated that increased digital literacy in undergraduates is associated with enhanced online learning capabilities, with perceived teacher support serving as a mediating factor. This support promotes active participation of students in digitally enriched learning environments, enhancing engagement. Afrilyasanti et al. (2025) demonstrated that critical media literacy activities in Indonesian EFL classrooms enhance creativity and critical thinking. The findings of the study emphasize the necessity of integrating digital literacy to develop interactive and intellectually stimulating educational experiences. Evidence indicates that digital literacy significantly enhances student engagement, thereby rendering the learning process more dynamic.

Further analysis indicates that digital literacy significantly influences teaching practices, as observed by teachers across diverse contexts. Pratolo and Solikhati (2020) noted that EFL teachers utilize smartphones and computers to augment their instructional methods, thereby improving their teaching effectiveness. The integration of digital tools enables teachers to provide varied learning resources and engage students through interactive and multimedia assignments, thereby enhancing the educational experience. Jiang (2025) asserts that the development of digital literacy among teaching teams necessitates external institutional support and intrinsic motivation from teachers. This combination is crucial for effective educational transformation, highlighting the importance of digital literacy in shaping contemporary teaching strategies.

The integration of digital literacy practices with conventional teaching methods facilitates the development of essential language skills engagingly. Alkilani and Zhang (2025) examined the effects of dramatic storytelling sessions on kindergarten student's classroom engagement and language development in the home environment. The use of digital resources allowed young students to engage with English instruction in innovative and stimulating formats. Preis and Geyer (2023) found that Austrian EFL students exhibited favorable attitudes toward e-learning, linking their engagement to the development of digital skills. This evidence highlights the essential role of digital literacy in engaging students and enhancing their language learning experience.

Efficient utilization of digital literacy tools and resources in EFL classrooms presents challenges that may impede optimal student engagement and language acquisition. Dashtestani and Hojatpanah (2022) identified notable discrepancies between perceived student digital literacy levels and actual competencies in Iranian schools. Zhang (2023) identified limitations in teachers' digital literacy that are influenced by



contextual factors, which impact their capacity to utilize technology effectively. Mudra (2020) identified barriers including inadequate internet connectivity and expensive digital tools that hinder effective integration. The findings underscore the need to tackle infrastructural challenges and deficiencies in digital proficiency to improve teaching practices and outcomes.

Despite challenges, substantial evidence indicates that critical digital literacy offers transformative advantages for students and teachers alike. Silvhiany et al. (2021) noted that students frequently face challenges in critically assessing online information, highlighting the necessity for intentional incorporation of critical digital literacy within educational curricula. Rini and Nabhan (2023) examined the integration of critical literacy by university teachers, promoting strategic educational methods that effectively utilize technology. The effective incorporation of critical digital literacy enables students to identify, synthesize, and analyze information, thereby equipping them for practical applications in real-world contexts. The discussion highlights the capacity of digital literacy to enhance cognitive engagement and facilitate informed decision-making in students.

The incorporation of digital resources in EFL instruction improves research activities for teachers and fosters effective teaching methodologies. Wang et al. (2023) indicate that while Chinese EFL teachers utilized digital resources to a moderate extent, their intention to increase usage was notably high. Enhancing teachers' digital literacy competencies can strengthen research capabilities and refine instructional methods. Pertiwi and Siti (2022) identified that Indonesian university students acknowledge the significance of digital literacy as an essential skill for the 21st century. Evidence indicates that digital literacy plays a crucial role in promoting growth and development for both teachers and students, highlighting the need for its integration within academic environments.

Assessment literacy in digital contexts is an area that necessitates enhancement among EFL teachers. Al-Bahlani and Ecke (2023) found that although teachers in Oman regarded themselves as competent in assessment, their confidence in digital assessment strategies was comparatively lower. The research underscores the necessity for extensive training initiatives that assist teachers in cultivating effective digital assessment methodologies. Nabhan & Habók (2025) demonstrated the reliability of the Digital Literacy Academic Writing Scale, highlighting the significance of evaluating digital literacy in pre-service teachers. Enhancing assessment literacy enables teachers to create meaningful evaluations that facilitate student progress in digital environments.

Digital literacy in EFL education influences teaching methodologies and is essential for equipping students for a digitally interconnected global society. The incorporation of digital resources in language education creates a setting conducive to the development of essential skills for global communication and collaboration. Burnett (2011) observes that integrating digital literacies in formal education with those outside the classroom can enhance the overall learning experience. This integration enables EFL students to enhance their language skills while also becoming acquainted with digital platforms crucial for future academic and professional endeavors. Embedding digital literacy into the curriculum enables educational systems to cultivate students who are proficient in English and adept at navigating and utilizing technology effectively.

The changing dynamics of EFL education require ongoing adaptation and innovation from teachers, highlighting the significance of professional development in digital literacy. Teachers must stay informed about developments in educational technology to effectively utilize these tools in their instructional practices. Pratolo and Solikhati (2020) highlight the necessity of programs designed to enhance teachers' digital competencies, enabling them to effectively implement technology-enhanced learning strategies. A

thematic table systematically organizes findings from multiple studies, highlighting consistent themes or insights related to the incorporation of digital literacy in English as a Foreign Language (EFL) teaching and learning environments, as outlined in the table below.

**Table 1. The thematic table that synthesizes findings from recent studies concerning the integration of digital literacy in EFL teaching and learning, published between 2020 and 2025**

No	Author(s) and Year	Key Themes	Findings
1	Zheng et al., 2025	Digital Literacy Impact	Digital literacy improves online learning effectiveness via perceived teacher support. The support of teachers is essential in digital learning environments
2	Alkilani & Zhang, 2025	Intervention Models	The use of dramatic storytelling enhances engagement and learning outcomes in English as a Foreign Language (EFL) among kindergarten students. Digital tools that enhance storytelling can support the learning process.
3	Al-Bahlani & Ecke, 2023	Assessment Literacy	Pre-service training in digital assessment is essential for teachers, as current competency in digital assessment literacy is insufficient
4	Jiang, 2025	Digital Literacy Aspects	The enhancement of digital literacy necessitates a collaborative approach involving national, institutional, team, and individual contributions
5	Pratolo & Solikhati, 2020	Teacher Attitudes	EFL teachers demonstrate favorable attitudes toward digital literacy, notwithstanding challenges such as access to technology. They depend significantly on computers and smartphones.
6	Ahmed & Akyıldız, 2022	Teacher Perceptions	EFL teachers perceive digital literacy positively, enhancing teaching through innovative tools, yet encounter barriers that necessitate training.
7	Zhang, 2023	Teacher Characteristics	Contextual factors do not significantly influence digital literacy; rather, attitudes and access to technology are more critical.
8	Mudra, 2020	Young Learner Benefits	Digital literacy aids young learners in skill development, although challenges such as internet access persist.
9	Su, 2023	TPACK Framework	Teacher identity and digital literacy, as informed by the TPACK framework, affect EFL teaching practices.
10	Afrilyasanti et al., 2025	Media Literacy	The integration of critical media literacy in English Language Teaching (ELT) fosters creativity and critical thinking, aligning with educational policy objectives.
11	Al Seghayer, 2020	Learner Competence	English as a Foreign Language (EFL) learners exhibit deficiencies in digital literacy skills, necessitating improved guidance for efficient online searches.
12	Wu (2020)	Digital Collaboration	Through collaboration, EFL writers modify digital practices across various contexts, emphasizing the significance of ecological perspectives.
13	Dashtestani & Hojatpanah, 2022	Curriculum Renewal	The digital literacy of CALL and junior students necessitates curriculum revisions; there is a lack of consensus among policymakers regarding digital literacy objectives.

14	Silvhiany et al., 2021	Critical Digital Literacy	Students struggle with critical digital literacy, emphasizing the need for instruction on evaluating online information.
15	Indah et al., 2022	Skills Correlation	There's a significant correlation between research competence and digital literacy, but not always critical thinking.
16	Preis & Geyer, 2023	e-Learning Perspectives	Austrian students link positive attitudes toward e-Learning with digital skills, suggesting grade-level differences.
17	Pertiwi & Siti, 2022	University Students' Digital Literacy	EFL university students prioritize digital literacy to keep pace with digital technology demands in learning.
18	Wang et al., 2023	Resource Usage	Chinese EFL teachers frequently use data analysis software but have low literature resource management skills.
19	Nabhan & Habók, 2025	Academic Writing	A valid and reliable digital literacy scale is developed for assessing pre-service teachers' writing skills, focusing on key literacy areas.
20	Rini & Nabhan, 2023	Critical Literacy Practices	University EFL teachers recognize and practice critical digital literacy, providing comprehensive digital material analysis.

Table 1 shows thematic explorations concerning the integration of digital literacy in EFL educational contexts, focusing on student engagement, language acquisition, and teaching practices. The investigation of digital literacy's impacts on learning experiences in EFL contexts yields important findings across various studies. Digital literacy significantly enhances student engagement and learning outcomes. Research by Zheng et al. (2025) highlights the significance of teacher support in the effective use of digital resources to enhance students' online learning capabilities. With the growing adoption of digital tools and methodologies by teachers, digital literacy has become essential for creating interactive and engaging learning environments. This underscores the need to provide teachers with the necessary skills and support for the effective integration of digital literacy into their instructional practices.

The collaborative endeavor spanning national, institutional, team, and individual levels constitutes a significant theme in the research. Jiang (2025) emphasizes the necessity of collaboration among diverse stakeholders to effectively utilize digital tools in EFL contexts. The research conducted by Al-Bahlani & Ecke (2023) and Su (2023) underscores the essential importance of teacher training, competence, and identity in the effective integration of digital literacy. Creating an environment that fosters teacher development and integrates digital resources is essential for enhancing digital literacy in educational contexts. The studies highlight the advantages and difficulties of digital literacy in English as a Foreign Language (EFL) learning among younger students. Research conducted by Mudra (2020) and Preis & Geyer (2023) illustrates the benefits of digital tools in skill development, encompassing writing, reading, listening, and speaking. They also identify barriers such as access to technology and the complexity of tools. The findings highlight the necessity of ensuring sufficient and accessible digital resources, coupled with training for effective use, to enhance language acquisition in young students.

It is crucial to address these technical and pedagogical needs to optimize the advantages of digital literacy. Teacher attitudes regarding digital literacy and technology constitute a significant theme in the research. Research conducted by Pratolo and Solikhati (2020) and Ahmed and Akyıldız (2022) illustrates a favorable attitude towards the incorporation of digital literacy in educational methodologies, notwithstanding obstacles such as restricted technological access and inadequate training. This perspective



underscores the importance of digital literacy as a crucial component in the modernization of EFL teaching methods, thereby improving teachers' capacity to provide innovative and effective lessons. Natural challenges indicate a need for organized support and resources to address barriers and effectively implement digital literacy in educational settings.

The integration of critical media literacy into English as a Foreign Language (EFL) teaching is a significant focus (Afrilyasanti et al., 2025; Silvhianny et al., 2021). The studies emphasize the necessity of integrating critical literacy skills into curricula to assist students in assessing information critically and effectively navigating the digital environment. The development of these skills is essential for addressing misinformation and improving comprehensive critical thinking capabilities. Teachers should implement proactive strategies to assist students in developing these skills, ensuring that educational objectives correspond with the challenges of the digital era. Some studies examine specific technological tools and resource utilization among teachers, albeit with less prominence. Wang et al. (2023) and Nabhan & Habók (2025) provide insights into the practical dimensions of digital literacy, including resource management and the validation of assessment scales in academic writing. These findings underscore the necessity for specialized training programs designed to enhance resource utilization and literacy assessment skills. These initiatives create a comprehensive literacy environment that benefits both teachers and students in the increasingly digital educational landscape.

### **The Challenges in the Implementation of Digital Literacy in English as a Foreign Language (EFL) Teaching and Learning Contexts**

A significant challenge for EFL teachers is the gap between perceived digital literacy and actual implementation capabilities in teaching contexts. Numerous studies indicate a discrepancy between teachers' self-assessed digital literacy skills and their actual implementation in classroom settings. Al-Bahlani and Ecke (2023) observed that EFL teachers in Oman regard themselves as proficient in language assessments; however, their confidence does not similarly apply to digital assessment. This indicates a requirement for specialized training modules aimed at reconciling self-perception with the effective implementation of digital literacy strategies. Addressing this gap is essential for the effective integration of digital tools in educational settings, which in turn improves language learning experiences.

Resource constraints significantly impede the effective implementation of digital literacy in EFL settings. Restricted access to digital devices and inadequate technological infrastructure hinder teachers from effectively integrating digital literacy into their teaching methodologies. Pratolo and Solikhati (2020) highlight that teachers frequently face difficulties stemming from insufficient technology and constrained financial resources. These constraints hinder the provision of comprehensive digital literacy programs, which are crucial for contemporary educational requirements. Addressing resource constraints necessitates a coordinated effort from educational institutions and policymakers to guarantee equitable access to digital resources across various regions.

Resource constraints, along with varying levels of digital literacy among students, constitute a significant challenge. Dashtestani and Hojatpanah (2022) identified notable discrepancies between the perceptions of teachers and students regarding digital literacy levels, indicating that students frequently utilize technology for purposes unrelated to education. This indicates that students do not possess the requisite skills to effectively utilize digital tools in educational settings. Teachers should integrate digital literacy training that emphasizes both fundamental skills and educational applications, ensuring that

students' digital literacy competencies align with academic standards. Improving student competencies in this domain is essential for promoting a more cohesive educational framework.

A further challenge exists in the diversity of digital literacy practices across various educational contexts and the differing adaptability of individuals to these practices. Jiang (2025) emphasizes that improving digital literacy in teachers necessitates a blend of external and individual factors. The incorporation of digital literacy should consider the diverse backgrounds and experiences of teachers, promoting an inclusive strategy that supports various pedagogical approaches. Collaboration among stakeholders, such as universities and teaching teams, is essential for fostering individualized and adaptive digital literacy development.

The attitudes and beliefs of teachers regarding digital literacy significantly influence its implementation and effectiveness in EFL classrooms. Ahmed and Akyıldız (2022) observe that secondary and high school teachers recognize the advantages of digital literacy, yet encounter difficulties in its definition and practical implementation. This indicates that teachers need to enhance their comprehension of digital literacy and its practical applications. The complexities of critical digital literacy contribute to the challenges encountered by teachers. Mudra (2020) underscores the challenges faced by young students in engaging with complex digital materials, highlighting the necessity for simplified and age-appropriate resources. Concerns exist regarding the technological infrastructure necessary for the implementation of digital literacy in EFL education. Su (2023) highlights that technological pedagogical content knowledge (TPACK) serves as a framework for the integration of technology in EFL teaching; however, numerous teachers continue to face challenges regarding access to essential tools and platforms. Enhancing infrastructure through the provision of sufficient technological resources and support can mitigate these challenges, enabling teachers to concentrate on formulating pedagogical strategies that effectively utilize digital tools. Collaboration between educational authorities and technology providers is crucial for fostering an environment conducive to the development of digital literacy.

International contexts also reveal a disparity in digital literacy competencies. Preis and Geyer (2023) identified variations in students' digital competencies and perceptions of e-learning across different grade levels in Austria. The findings indicate that digital literacy initiatives should be customized to meet the distinct needs of various student groups, ensuring they receive suitable training and support according to their proficiency levels. The incorporation of digital literacy skills into EFL education is obstructed by the inherent complexities of digital tools and platforms. Indah et al. (2022) demonstrated that digital literacy contributes to research competence; however, it does not inherently improve critical thinking skills. This suggests that digital literacy and critical thinking should be taught as interrelated skills, necessitating specific instructional strategies, as highlighted in the following table.

**Table 2. The Challenges in Implementing Digital Literacy in English as a Foreign Language (EFL) Teaching and Learning Contexts**

No	Author(s) and Year	Main Challenges Identified
1	Zheng et al., 2025	The lack of teacher support requires reinforcement of teacher technology acceptance and beliefs.
2	Alkilani & Zhang, 2025	An urgent need for effective curriculum models and a lack of digital literacy materials for EFL in kindergartens.
3	Al-Bahlani & Ecke, 2023	Insufficient digital assessment training; need for integration of digital assessment competencies in training programs.

4	Jiang, 2025	External support is critical; lack of a synergistic interaction between institutional and individual motivations for digital literacy enhancement.
5	Pratolo & Solikhati, 2020	Technological resource limitations, students' socioeconomic backgrounds, and limited time and budget for digital literacy initiatives.
6	Ahmed & Akyıldız, 2022	Identified inconsistency in the understanding of digital literacy; emphasized the necessity for clearly defined digital literacy skills and structured training programs for teachers.
7	Zhang, 2023	Contextual factors do not influence digital literacy; however, attitudes and technical skills are of considerable significance.
8	Mudra, 2020	The disparity in digital literacy levels among young students highlights obstacles such as inadequate internet access and the high costs associated with digital tools.
9	Su, 2023	A lack of alignment between digital literacy, professional identity, and pedagogical content knowledge (TPACK); gaps in teacher training support structures.
10	Afrilyasanti et al., 2025	An essential need for more practice in critical thinking and judgment in media literacy tasks.
11	Al Seghayer, 2020	EFL students have limited digital literacy and methodological gaps in self-assessment competencies.
12	Wu, 2020	A lack of practice in adaptive digital literacy skills and contextual application in telecollaboration environments.
13	Dashtestani & Hojatpanah, 2022	Deficiencies in digital literacy among junior high school students; need for a comprehensive digital literacy curriculum and teacher training.
14	Silvhiany et al., 2021	Students' inability to critically evaluate online claims, and the necessity for integrating critical digital literacy in classrooms
15	Indah et al. (2022)	An insufficient correlation between digital literacy and critical thinking highlights the need for improved integration within higher education curricula
16	Preis and Geyer (2023)	The necessity for a deeper comprehension of students' attitudes toward digital learning across various grade levels
17	Pertiwi & Siti, 2022	The significant demand for digital literacy in higher education, along with challenges such as disparities in digital competence and the availability of resources
18	Wang et al., 2023	Chinese EFL teachers exhibit intermediate-low utilization of digital resources for research, attributed to perceived challenges and insufficient support.
19	Nabhan & Habók, 2025	The absence of comprehensive tools for assessing digital literacy in EFL academic writing and teaching methodologies
20	Rini & Nabhan, 2023	Insufficient practices and comprehension of critical digital literacy in higher education advocate for instructional strategies to improve digital engagement and critical thinking.

Table 2 indicates that the synthesized findings from 20 studies provide a thorough overview of the challenges associated with implementing digital literacy in EFL teaching and learning contexts. A prevalent theme identified across various studies is the necessity for reinforcement and comprehension in teacher training and support. Studies by Zheng et al. (2025) and Al-Bahlani & Ecke (2023) demonstrate that

inadequate training, especially in digital assessment, significantly impairs teachers' capacity to effectively integrate digital literacy into their instruction. This highlights a systemic problem in which teachers lack sufficient preparation to utilize digital tools effectively, underscoring the need for more organized and comprehensive training in digital literacy skills. Incorporating these skills into teacher training programs can enhance teachers' proficiency in utilizing digital resources, thereby improving the overall educational experience for students.

A significant finding is the disparity in resources and technology, identified as a major challenge in the studies by Pratolo & Solikhati (2020) and Mudra (2020). The absence of essential technological tools, along with socioeconomic obstacles and budget constraints, considerably impedes the capacity of teachers and students to engage effectively with digital literacy. These studies highlight the importance of educational institutions investing in technological infrastructure and ensuring equitable access to digital tools, particularly in underprivileged settings. Addressing infrastructure challenges and ensuring sufficient technological provisions are critical for bridging the gap between existing digital capabilities and intended educational outcomes.

A less dominant but notable issue is the varying understanding and perception of digital literacy among students and teachers, as illustrated in studies by Ahmed & Akyıldız (2022) and Dashtestani & Hojatpanah (2022). Digital literacy is recognized as advantageous; however, its interpretation and implementation vary across educational levels and contexts. This inconsistency may result in varied educational experiences and outcomes. Defining digital literacy clearly, coupled with structured training, would assist students and teachers in effectively utilizing digital tools, thereby promoting a more thorough integration of technology in language education.

The studies indicate a significant emphasis on integrating critical thinking skills into digital literacy frameworks, as discussed in the research by Afrilyasanti et al. (2025) and Silvhiyany et al. (2021). The studies advocate for a comprehensive approach that includes both the technical dimensions of digital literacy and the development of critical thinking skills. This indicates an increasing acknowledgment that students need to be prepared to critically and responsibly engage with digital information. Teachers should implement instructional practices that enhance students' critical digital literacy, equipping them to discern, evaluate, and effectively utilize digital content.

Studies by Su (2023) and Indah et al. (2022) highlight the significance of aligning digital literacy with professional identity and teaching practices. The integration of frameworks such as Technological Pedagogical Content Knowledge (TPACK) indicates the necessity for a comprehensive approach in which digital tools augment pedagogical strategies and improve content delivery. This alignment is essential for creating teaching syllabi that promote academic success. Examining the integration of digital literacy within established pedagogical frameworks can enhance teaching strategies that utilize technology to improve educational outcomes.

Furthermore, research by Preis & Geyer (2023) and Rini & Nabhan (2023) highlights the necessity for ongoing investigation and advancement in digital literacy. The evolving digital landscape necessitates continuous research to tackle emerging challenges and opportunities in digital literacy. These studies emphasize the need for focused exploration of various dimensions and innovative practices to effectively address the needs of 21st-century students. Further research may yield practical insights and facilitate the adaptation of educational strategies to evolving technological contexts.

## **The Implications of Integrating Digital Literacy for Theories, Pedagogies, and Practices in English as a Foreign Language (EFL) Teaching and Learning Contexts**

The integration of digital literacy into English as a Foreign Language (EFL) instruction exemplifies contemporary theoretical frameworks in language acquisition. Digital literacy includes technical proficiency as well as cognitive and analytical skills essential for navigating digital environments, thus transforming conventional language learning theories. Al Seghayer (2020) asserts that the effective utilization of digital tools, evaluation of online content, and synthesis of information are crucial in EFL contexts, providing increased exposure to authentic language use. Theories of constructivism and experiential learning are pertinent, as digital environments offer platforms for students to interact, construct knowledge, and engage in practical language applications. Theoretical shifts necessitate that teachers reevaluate and redefine the language acquisition process, acknowledging digital literacy as a fundamental component rather than an ancillary skill.

Digital literacy-focused pedagogies require innovative strategies in EFL classrooms to maximize their effectiveness. The integration of digital literacy into teaching methodologies facilitates differentiated instruction, addressing varied language learning requirements through tailored digital experiences. Burnett (2011) highlights the importance of teachers employing digital resources that correspond with students' identities and experiences, thereby promoting a more inclusive and engaging educational setting. Interactive tools, including digital games, multimedia tasks, and online discussion platforms, enhance motivation and offer diverse language exposure, accommodating various learning styles and preferences. This pedagogical shift necessitates that teachers possess proficiency in digital tools and strategies, thereby rendering professional development and ongoing digital literacy training crucial for effective teaching practices.

Integrating digital literacy in EFL teaching presents opportunities and challenges that need to be addressed to enhance learning outcomes. Argawati and Suryani (2020) indicate that digital tools can enhance creativity and engagement; however, challenges remain, including restricted access to technology and differing levels of digital skills among students. Addressing these challenges necessitates strategic planning and resource allocation to guarantee equitable access to digital tools and comprehensive support systems for teachers and students. Practical implications involve the necessity for curriculum revisions, the integration of comprehensive digital literacy components, and the promotion of collaborations between educational institutions and technology providers. By addressing these practical issues, teachers can utilize digital literacy to enhance language learning beyond conventional classroom settings.

The integration of digital literacy has significant implications for teacher identity and professional development, highlighting the necessity for alignment between personal and professional digital experiences. According to Pratolo and Solikhati (2020), teachers should adopt digital literacy, understanding their responsibilities as facilitators who assist students in navigating digital and linguistic environments. This involves creating a coherent narrative of digital competence that aligns with educational objectives, thereby increasing teacher autonomy in the adoption of pertinent digital tools. Training programs should focus on both technical skills and the development of adaptive strategies for the seamless integration of digital literacy into teaching practices. The transformation of teachers into digitally literate practitioners can enhance EFL pedagogy and promote effective student-centered learning environments.

The incorporation of digital literacy into EFL instruction has important implications for policy-making and curriculum development, prompting stakeholders to emphasize digital competencies as an essential component of educational frameworks. Palacios-Hidalgo and Huertas-Abril (2025) argue that curricula should adapt to digital advancements, aligning with contemporary educational needs and



equipping students for future challenges. Collaboration between policymakers and teachers is essential for establishing standards that guide the implementation of digital literacy across educational levels, taking into account access, inclusivity, and relevance. Incorporating digital literacy into educational policy will enhance language learning initiatives and enable both students and teachers to engage with digital transformation effectively.

Integrating digital literacy into EFL teaching requires a comprehensive understanding of various digital tools and their relevance in classroom environments. Teachers must possess a deep understanding of digital literacy that transcends basic technical skills; it requires the implementation of strategic pedagogical methods to integrate digital resources into language instruction effectively. Burnett (2011) posits that teachers must assess the influence of their identities and personal experiences with technology on their instructional approaches. A nuanced understanding of the application of digital literacy is essential for ensuring that tools are integral to enhancing pedagogical efficacy rather than merely supplementary. This understanding requires ongoing development to adapt to the changing landscape of digital language learning.

Moreover, addressing the challenges associated with digital literacy integration necessitates a collaborative approach involving teachers, policymakers, and institutions. According to Purmayanti (2022) and Dashtestani and Hojatpanah (2022), it is essential to address infrastructure inadequacies, digital skill shortages, and disparities in resource access for effective implementation. Efforts should concentrate on developing supportive policies that ensure equitable access to technology, investing in professional development initiatives for teachers, and cultivating a culture of innovation in educational institutions. These initiatives are crucial for addressing barriers and allowing teachers to fully utilize digital literacy. Proactive measures to address these challenges can enhance inclusivity and effectiveness in EFL learning environments, benefiting both teachers and students.

## CONCLUSION

The incorporation of digital literacy in English as a Foreign Language (EFL) instruction presents significant opportunities to improve student learning experiences and outcomes. Utilizing digital tools enables teachers to establish interactive and dynamic classroom environments that enhance student engagement and motivation. Digital platforms facilitate the practice of speaking, listening, reading, and writing, thereby linking classroom learning to real-world communication contexts. Furthermore, these technologies facilitate differentiated instruction, allowing teachers to customize lessons to address varied learning needs, thereby offering students personalized learning experiences. Integrating digital literacy in EFL enhances curriculum delivery and equips students with essential skills for navigating a digitally-driven world.

The integration of digital literacy in EFL teaching, while promising, presents several challenges that institutions must address to enhance its effectiveness. Teachers frequently face obstacles including inadequate digital infrastructure, restricted access to digital tools, and a lack of training in digital literacy skills. In areas with constrained technological resources, these challenges may obstruct the comprehensive implementation of digital-based instruction and reduce its potential effectiveness. Teachers encounter the challenge of aligning digital practices with instructional objectives and evaluating the effectiveness of digital tools in improving learning outcomes. Overcoming these barriers necessitates coordinated actions from educational institutions and policymakers to ensure sufficient resources, professional development,

and support systems for teachers. Such measures can mitigate challenges, rendering digital literacy a viable and significant aspect of EFL education.

Moreover, comprehending teacher identity and perspectives on digital literacy is essential for the effective incorporation of digital tools in EFL instruction. Teachers' interactions with digital technologies frequently mirror their personal and professional experiences, which may affect their readiness to integrate digital practices in the classroom. Connecting teachers' personal digital experiences with their professional teaching practices can improve their capacity to implement digital literacy strategies effectively. Facilitating platforms for teachers to share and reflect on their digital experiences can enhance the development of cohesive pedagogical strategies that incorporate digital tools. Recognizing the significance of teacher identity in digital literacy enables educational institutions to enhance support for teachers as they navigate the changing digital landscape, ultimately promoting a more inclusive and effective learning environment.

In this sense, despite existing challenges, the incorporation of digital literacy into EFL instruction presents considerable potential for enhancing language education. Addressing barriers and supporting teachers in developing digital competencies enables institutions to maximize the potential of digital literacy tools, thereby fostering enriching learning experiences for students. Fostering collaboration among teachers, institutions, and policymakers is crucial for developing an education system that adapts to technological advancements and prepares students for the digital era. Harnessing digital literacy can enhance EFL education by fostering innovation, interactivity, and effectiveness, thereby empowering students to succeed in a globalized, digital environment.

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