

## CHAPTER I

### INTRODUCTION

This research informs the research that deals with the research background, identification of the issues, the focus of the study, research question, aims of the research, significance of the research, theoretical foundation, previous study, frame of thought, and research method.

#### 1.1 Background of the Research

Reading is one of the most fundamental skills in learning a foreign language because it enables learners to access knowledge, expand vocabulary, and improve comprehension and writing performance (Pustika & Wiedarti, 2019; Metruk & Kováčová, 2025). In the context of English as a Foreign Language (EFL), reading instruction serves as the foundation for developing other language competencies such as speaking and writing (Anderson, 2003; Pardede, 2022). However, the rapid development of technology and the increasing use of digital platforms have significantly transformed how students read and how teachers deliver instruction. Reading is no longer limited to printed texts but has expanded into digital environments through websites, online journals, and learning management systems (Bui & Macalister, 2021; Lien, 2025). This shift demands both teachers and students to adapt to new forms of literacy that require digital and metacognitive skills.

The growing importance of technology in education has led to the emergence of web-based instruction, which allows learners to access materials anytime and anywhere (Rinantanti et al., 2024). Web-based reading instruction, specifically, offers opportunities for EFL learners to engage with authentic materials, develop autonomy, and apply various reading strategies using digital tools. Studies have shown that students perceive online learning as flexible, convenient, and engaging (Lien, 2025; Sun & Chen, 2023). Nevertheless, despite these advantages, many learners still struggle to manage motivation, comprehend

digital texts, and maintain focus due to technical and environmental distractions (Bao, 2020; Rinantanti et al., 2024). Therefore, while web-based reading has opened new possibilities for EFL instruction, it also presents distinct pedagogical challenges that require further exploration.

In the Indonesian higher education context, the implementation of web-based reading instruction became more prominent after the COVID-19 pandemic. Many universities integrated digital platforms such as Google Classroom, Zoom, and WhatsApp to support remote reading activities. Although this innovation improved access to resources, it also revealed various issues such as unstable internet connections, limited digital literacy, and decreased student engagement. Both lecturers and students experienced difficulties in maintaining interactive communication and ensuring comprehension through online media (Pardede, 2022; Bui & Macalister, 2021). These obstacles demonstrate that the success of web-based reading instruction does not rely solely on technology but also on human factors such as motivation, strategy use, and institutional support.

The same situation can be observed in UIN Siber Syekh Nurjati Cirebon, which became the first fully online Islamic university in Indonesia and a pioneer in digital higher education. The university implemented web-based learning as the main instructional model across all departments, including the English Language Education Department. However, preliminary findings from interviews and questionnaires in the Web-Based Reading Instruction course revealed several contextual problems. More than half of the students (56.5%) reported experiencing unstable internet connections, and 30.4% strongly agreed that these issues frequently disrupted their learning process. Furthermore, 43.5% of students admitted having low motivation and difficulty concentrating during online reading sessions due to distractions from notifications and multitasking. One student stated, "Sometimes the Wi-Fi is unstable, or the internet suddenly disconnects," while another shared, "My motivation goes up and down; sometimes I just leave it and fall asleep."

From the lecturer's perspective, the core problem lies in students' limited digital and information literacy skills. The lecturer commented, "The most challenging part is their information literacy and their ability to choose effective keywords." Many students were still unfamiliar with evaluating online sources, paraphrasing, or identifying credible information. This weakness affects not only their comprehension but also their ability to conduct academic inquiry and complete web-based reading tasks effectively. Moreover, although 65.2% of students agreed that the online platform provided flexibility and accessibility, some still felt isolated due to limited interaction and communication between lecturers and peers. These findings indicate that while UIN Siber Syekh Nurjati Cirebon has achieved significant progress in digitalization, the implementation of web-based instruction continues to face challenges in technical, motivational, and pedagogical aspects.

Conceptually, this issue reflects a mismatch between the institution's digital learning goals and the learners' readiness. As a university designed to operate entirely online, UIN Siber Syekh Nurjati Cirebon assumes that its students possess sufficient digital literacy, self-regulation, and adaptability to online learning environments. However, empirical evidence suggests otherwise: a considerable number of students still rely on traditional, face-to-face learning habits and struggle with independent, self-paced learning. This discrepancy demonstrates a conceptual gap between institutional expectations and actual student competence—highlighting the need for more structured guidance, training, and evaluation systems to support digital learning success.

Additionally, institutional infrastructure remains an ongoing concern. Although the university provides free Wi-Fi and digital learning platforms, the quality of access is inconsistent. Some students who live in rural areas around Cirebon reported slow connections or limited data, reducing their ability to join synchronous sessions effectively. The lecturer also faced challenges in assessing participation and ensuring fairness in group work due to the lack of real-time supervision. These problems confirm that effective web-based instruction requires

not only adequate technological infrastructure but also a strong pedagogical framework and human-centered design to maintain motivation and interaction in virtual environments.

Previous studies on web-based reading instruction have mostly focused on its impact on reading comprehension and motivation (Alsofyani, 2019; Putri & Damayanti, 2025; Rinantanti et al., 2024). Many findings highlight the potential of digital reading environments to improve students' critical thinking and self-regulated learning (Öztürk, 2018; Lai, 2019). However, several researchers also noted that the effectiveness of online reading strategies remains inconclusive and may depend on students' proficiency levels, digital skills, and instructional design (Pardede, 2022; Li, 2020b). Moreover, there is limited research that integrates both students' and lecturers' perspectives—particularly in Indonesian EFL contexts such as UIN Siber Syekh Nurjati Cirebon, where infrastructural and motivational factors strongly influence learning outcomes.

Understanding both perceptions and challenges in web-based reading instruction is therefore essential to improve its implementation. Perception studies help educators identify how students and lecturers view online learning in terms of effectiveness, accessibility, and engagement (Lien, 2025; Dewi, 2022). Meanwhile, examining obstacles and proposed solutions provides insight into the practical difficulties faced by both groups, such as poor connectivity, fluctuating motivation, or limited digital competence (Anthonysamy, 2021). Finally, exploring the impact of web-based learning on students' skills and learning outcomes offers a holistic understanding of how technology-based reading influences their academic growth and future readiness (Godwin-Jones, 2022). A comprehensive synthesis of these aspects can contribute to designing more effective, inclusive, and sustainable online reading programs.

In addition, web-based instruction not only changes the mode of learning but also transforms students' reading habits and metacognitive awareness. Studies have revealed that learners become more autonomous and adaptable through

digital reading because they can reread materials, search for sources independently, and reflect on their learning process (Little, 2020; Lee & Huang, 2018). However, this autonomy also requires strong self-regulation and critical literacy, which not all students possess (Zimmerman & Schunk, 2021). Therefore, the role of the lecturer remains crucial in guiding students through structured inquiry, providing feedback, and fostering motivation in the web-based environment (Pustika & Wiedarti, 2019; Rinantanti et al., 2024). The balance between independence and guided instruction is thus central to the success of web-based reading programs.

Considering the opportunities and challenges discussed above, it becomes clear that investigating web-based reading instruction requires a multidimensional approach. A conceptual synthesis allows the researcher to connect previous theoretical frameworks and findings, while field data from students and lecturers at UIN Siber Syekh Nurjati Cirebon provide real-world perspectives. Combining these approaches can reveal how web-based reading is practiced in actual classroom contexts and how perceptions, barriers, and outcomes interact in shaping the effectiveness of online learning. Such an integrated understanding is particularly relevant for EFL contexts in Indonesia, where the transition toward digital education is still developing.

Based on these considerations, this study entitled “Web-Based Reading Instruction for EFL Learners: Conceptual and Field Synthesis” aims to explore three major aspects: to analyze students’ and lecturers’ perceptions of the implementation of web-based learning, to identify the obstacles faced by both lecturers and students in web-based learning and the possible solutions to overcome them, to examine the impact of web-based learning on students’ experiences, skills, and learning outcomes.

This study employs a qualitative descriptive approach to provide an in-depth understanding of the perceptions, challenges, and impacts of web-based reading instruction at UIN Siber Syekh Nurjati Cirebon. Data were collected through

interviews and questionnaires involving seven students and one lecturer in the Web-Based Reading Instruction course, supported by responses from twenty-three participants. The findings are expected to provide valuable insights for improving the design and practice of web-based reading instruction in EFL classrooms, supporting both educators and learners in adapting to the demands of digital literacy.

## **1.2 Identification of the Issues**

Based on the background of the study, several issues emerge regarding the implementation of web-based reading instruction for EFL learners. Although the integration of technology in education has brought many advantages, such as flexibility, accessibility, and learner autonomy, not all students and lecturers experience these benefits equally. Many learners still struggle with unstable internet connections, distractions, and fluctuating motivation, while lecturers find it difficult to ensure students' active participation and comprehension in online settings. These challenges suggest that the effectiveness of web-based learning is influenced not only by the availability of technology but also by human factors such as perception, engagement, and readiness to adapt to digital learning environments.

Another issue lies in the limited understanding of how both students and lecturers perceive web-based reading instruction in practice. Previous research often focused on students' attitudes alone, overlooking how lecturers design, facilitate, and evaluate online reading activities. Understanding both perspectives is crucial because effective implementation depends on how well teachers and learners share goals, manage digital tools, and respond to challenges during instruction. Without a clear picture of these perceptions, it becomes difficult to identify the strengths and weaknesses of web-based learning in real classroom contexts.

In addition to perception-related challenges, both lecturers and students face various obstacles that hinder the success of online instruction. Technical barriers

such as poor connectivity and device limitations, as well as motivational and cognitive difficulties like low self-regulation and digital fatigue, can reduce learning quality. These issues require not only institutional support but also practical solutions that can be implemented at the classroom level. Exploring these obstacles and their possible solutions is essential to help educators design more sustainable and inclusive web-based learning environments.

Finally, although several studies have acknowledged the potential benefits of online learning for language development, little is known about how web-based reading instruction specifically affects students' experiences, skills, and learning outcomes in EFL contexts. Understanding this impact can provide valuable insight into how digital reading practices shape academic literacy, motivation, and learner autonomy. Therefore, this study focuses on three main questions: (1) how students and lecturers perceive the implementation of web-based learning, (2) what obstacles they face and what solutions can be applied, and (3) how web-based learning influences students' experiences, skills, and learning outcomes.

### **1.3 Delimitation and Focus of the Study**

This study is delimited to examining the implementation of web-based reading instruction within the English Language Education Department at UIN Siber Syekh Nurjati Cirebon during the 2025 academic year. The research focuses on both students and lecturers who have direct experience participating in web-based reading activities as part of their EFL courses. Specifically, the student participants are third-semester undergraduates, as they are in a developmental stage where digital literacy and academic reading skills are actively being shaped. The lecturer participant represents the instructional perspective, offering insight into pedagogical strategies, challenges, and observed student responses. This specific scope was chosen to ensure the study remains contextually relevant and deeply focused on real teaching–learning dynamics within a single institution.

In terms of methodology, the study employs a qualitative descriptive approach using interviews and questionnaires as the main instruments. The combination of these two methods allows for triangulation, ensuring that both

subjective experiences and quantifiable trends are captured comprehensively. The interviews aim to explore students' and lecturers' detailed perceptions, encountered obstacles, and adaptive strategies, while the questionnaires provide supportive numerical data reflecting broader tendencies among participants. These designs strengthen the reliability and validity of the findings in addressing the research questions.

The focus of this study is therefore centered on three main aspects: (1) analyzing the perceptions of students and lecturers regarding the implementation of web-based learning, (2) identifying the obstacles and possible solutions encountered during the online reading process, and (3) examining the impact of web-based learning on students' experiences, skills, and learning outcomes. The study does not extend to other courses or general online learning outside reading instruction, nor does it attempt to measure long-term academic achievement beyond the observed semester. By limiting the scope in this way, the research ensures depth and contextual precision in understanding how web-based reading instruction functions and influences EFL learners in a real institutional setting.

#### **1.4 Research question**

- 1) What are students' and lecturers' perceptions of the implementation of web-based learning?
- 2) What are the obstacles faced by lecturers and students in web-based learning, and what solutions can be implemented to overcome them?
- 3) How does web-based learning impact student experiences, skills, and learning outcomes?

#### **1.5 Aims of the study**

- 1) Analyzing the perceptions of students and lecturers regarding the implementation of web-based learning.
- 2) Identifying the obstacles and possible solutions encountered during the online reading process.

- 3) Examining the impact of web-based learning on students' experiences, skills, and learning outcomes.

### **1.6 Significance of the Study**

This study is expected to provide both theoretical and practical contributions to the field of English language education, particularly in the area of web-based reading instruction. Theoretically, the findings can enrich existing literature on EFL digital learning by presenting an integrated view that combines conceptual understanding with real classroom practices. Previous studies often focused on either students' perceptions or instructional design in isolation; therefore, this research bridges that gap by analyzing both students' and teachers' experiences simultaneously. Through this synthesis, the study aims to deepen the understanding of how web-based learning shapes reading comprehension, motivation, and literacy development among EFL learners.

Practically, the study offers valuable insights for lecturers, students, and educational institutions in improving the implementation of web-based reading instruction. For lecturers, the findings can serve as a reflection to enhance teaching strategies, select suitable digital materials, and apply effective guidance to support student engagement and comprehension. For students, the study highlights the importance of self-regulated learning, digital literacy, and active participation as key factors in succeeding within web-based environments. Institutions such as UIN Siber Syekh Nurjati Cirebon may also benefit from this research by identifying infrastructural or pedagogical improvements needed to optimize online reading instruction.

Furthermore, this study can be a reference for future researchers who wish to explore similar topics in different educational contexts or at various proficiency levels. By documenting the perceptions, obstacles, and impacts of web-based learning, this research contributes to the growing discourse on technology-enhanced language learning in Indonesia. It is expected that the insights gained will encourage continuous innovation in teaching methodologies, promote more

equitable access to digital education, and ultimately improve the overall quality of EFL reading instruction in higher education.

## **1.7 Theoretical Foundation**

In this chapter, the review of the theoretical foundation is presented. The points discussed are web-based learning, web-based reading instruction, reading comprehension, EFL learners, perception in web-based learning, obstacle in web-based learning, learning outcomes in web-based learning, impact in web-based learning, and digital literacy.

### **1.7.1 Web-Based Learning**

Web-based learning refers to the use of internet technologies to deliver educational content and facilitate interaction between teachers and learners. It allows students to access materials, participate in discussions, and complete tasks through digital platforms rather than relying solely on face-to-face instruction. According to Khan (2005), web-based learning is a systematic approach that combines pedagogical, technological, and institutional dimensions to support effective online education. It offers flexibility in terms of time and location, enabling students to learn anytime and anywhere, which makes it particularly beneficial for higher education environments.

The foundation of web-based learning is rooted in the principles of constructivism, which emphasize active participation and learner-centered instruction (Vygotsky, 1978; Piaget, 1970). In web-based environments, students are encouraged to take responsibility for their learning by exploring digital resources, engaging in discussions, and constructing meaning through online collaboration. This aligns with the idea that learning is not a passive process of receiving knowledge but an active process of discovery and interaction. Therefore, web-based learning transforms the teacher's role from a knowledge provider to a facilitator

who guides students in navigating online materials and developing critical thinking skills.

One of the main advantages of web-based learning is flexibility. Students can study at their own pace and review materials multiple times, which accommodates different learning styles and paces (Sun & Chen, 2023). It also allows lecturers to use multimedia resources—such as videos, hyperlinks, and interactive exercises—to make lessons more engaging and accessible. For example, in web-based reading instruction, teachers can provide hyperlinks to authentic English texts, online dictionaries, or comprehension quizzes that help students develop reading strategies in a real-world context. Such tools enhance learner autonomy and motivation, leading to deeper comprehension and skill improvement.

Despite its benefits, web-based learning also presents several challenges. Students may experience difficulties such as poor internet connections, lack of digital literacy, and decreased motivation due to minimal face-to-face interaction (Bao, 2020; Rinantanti et al., 2024). Moreover, the abundance of online information can overwhelm learners who lack the skills to filter credible sources from unreliable ones. Lecturers, on the other hand, face challenges in monitoring student participation, assessing engagement, and maintaining consistent communication. These challenges indicate that the effectiveness of web-based learning depends not only on technology but also on the readiness and adaptability of both teachers and students.

To address these challenges, educators must integrate appropriate pedagogical strategies into web-based learning environments. According to Khan's (2005) framework, successful online learning requires a balance of pedagogical design, technical support, and institutional management. Teachers should design activities that promote interaction, provide clear instructions, and ensure feedback mechanisms are in place. In web-based

reading instruction, for instance, lecturers can use discussion forums, online annotations, and reflective journals to encourage active participation and comprehension monitoring. Proper instructional design ensures that students do not feel isolated and that learning remains interactive and meaningful.

Web-based learning also supports the development of digital literacy, a crucial competence in modern education. Gilster (1997) defines digital literacy as the ability to access, evaluate, and use information effectively in digital contexts. In an EFL setting, web-based learning enhances students' exposure to authentic English materials, helping them build not only linguistic competence but also information literacy. Learners are trained to evaluate online sources, navigate websites, and synthesize information across different platforms—all of which contribute to academic success and employability in a technology-driven world.

Another essential aspect of web-based learning is learner autonomy. According to Little (2020), autonomy involves learners taking control of their learning goals, strategies, and evaluations. In web-based environments, students are often required to manage their own time, monitor their progress, and seek help independently. This self-regulated behavior aligns with Zimmerman's (2000) Self-Regulated Learning Theory, which explains how motivation and goal setting play a critical role in successful online education. By fostering autonomy, web-based learning prepares students to become lifelong learners capable of adapting to rapidly changing technological and academic demands.

In conclusion, web-based learning represents a transformative approach to education that combines technology, pedagogy, and learner-centered principles. While it offers flexibility, accessibility, and opportunities for innovation, its success depends on the digital readiness and motivation of both students and teachers. For EFL learners, web-based

reading instruction serves as a valuable platform to develop language and literacy skills in authentic and interactive contexts. Thus, understanding web-based learning as both a concept and a practice is essential for analyzing how perceptions, obstacles, and learning outcomes emerge in digital reading instruction. This theoretical foundation justifies the exploration of web-based learning in this study, particularly within the context of higher education in Indonesia.

### **1.7.2 Web-Based Reading Instruction**

Web-based reading instruction refers to the integration of digital and internet-based technologies into the teaching and learning of reading skills. It provides learners with access to online texts, interactive materials, and digital reading tasks that support comprehension and engagement. According to Anderson (2003), reading in a second or foreign language is an interactive process that involves both bottom-up and top-down processing. When transferred to a web-based environment, this process becomes even more dynamic because students must also navigate multimedia elements, hyperlinks, and non-linear texts. Thus, web-based reading instruction combines traditional reading pedagogy with digital literacy skills to help students understand and interpret online content effectively.

The shift from traditional reading instruction to web-based formats reflects the increasing role of technology in education. As stated by Bui and Macalister (2021), web-based reading enables learners to access authentic materials, such as online articles, blogs, and digital newspapers, which promote exposure to real-world language use. These materials not only enhance vocabulary and grammar knowledge but also increase cultural awareness and contextual understanding. In EFL contexts like Indonesia, where exposure to English is often limited, web-based reading instruction serves as a bridge between classroom learning and global

communication. It allows learners to interact with genuine texts and apply comprehension strategies in authentic contexts.

One of the key advantages of web-based reading instruction is its interactivity and flexibility. Online reading platforms often include tools such as hyperlinked glossaries, discussion forums, and comprehension quizzes that help students build deeper understanding (Lien, 2025). Interactive features encourage learners to reflect, respond, and collaborate with peers, fostering a more participatory learning environment. Lecturers, meanwhile, can track student progress through digital assessments, provide timely feedback, and adapt materials to suit different learning levels. This interactivity transforms reading from a solitary task into a collaborative, technology-supported process.

However, web-based reading instruction also presents unique challenges for both teachers and students. According to Rinantanti et al. (2024), students often struggle with digital distractions, fragmented attention, and difficulties in evaluating the credibility of online texts. Moreover, not all learners possess sufficient digital literacy skills to navigate online reading efficiently. Lecturers face the challenge of designing materials that are engaging yet manageable, ensuring that multimedia elements support rather than overwhelm students' comprehension. These difficulties highlight the need for strategic instructional planning and the development of digital competencies to ensure that technology truly enhances, rather than hinders, learning.

From a pedagogical perspective, effective web-based reading instruction relies heavily on metacognitive strategy training. Flavell (1979) introduced the concept of metacognition as the awareness and control of one's own learning process. In online reading contexts, students must plan how to approach digital texts, monitor their understanding, and evaluate their comprehension. Studies by Öztürk (2018) and Li (2020) found that

metacognitive awareness significantly improves reading comprehension in digital environments. Therefore, web-based reading instruction should not only focus on content delivery but also emphasize the teaching of strategies that empower learners to become autonomous and reflective readers.

In addition, the role of the teacher remains essential in web-based reading instruction. While technology facilitates access to materials and provides interactivity, the teacher functions as a guide who structures learning experiences, scaffolds comprehension, and motivates students (Pardede, 2022). Vygotsky's (1978) concept of the Zone of Proximal Development (ZPD) explains that learners achieve higher levels of understanding through guided support. In the online setting, this guidance can take the form of feedback on reading responses, online discussions, or digital annotations. By combining technological tools with human interaction, teachers can maintain the balance between autonomy and support that is crucial for effective online learning.

Furthermore, web-based reading instruction promotes critical and digital literacy. According to Leu et al. (2013), reading online requires skills beyond decoding words—it involves evaluating sources, understanding multimodal content, and integrating information from various hyperlinks. This aligns with the growing need for 21st-century literacy, where students must be able to think critically and responsibly in digital environments. For EFL learners, these skills are vital not only for academic success but also for participating in global communication and lifelong learning.

In conclusion, web-based reading instruction combines the principles of traditional reading pedagogy with the opportunities provided by digital technology. It encourages active engagement, collaboration, and autonomy while simultaneously developing students' digital literacy and

critical thinking skills. Nevertheless, its success depends on how well students and lecturers adapt to online learning environments, overcome obstacles, and apply appropriate strategies. In this research, web-based reading instruction serves as the central focus for analyzing perceptions, identifying challenges, and evaluating its impact on students' learning experiences and outcomes. Thus, it forms the conceptual and practical core of this study on EFL learning in the digital era.

### **1.7.3 Reading Comprehension**

Reading comprehension is one of the most essential components in English as a Foreign Language (EFL) learning because it enables students to understand written texts, acquire new information, and develop higher-order thinking skills. According to Grabe and Stoller (2002), reading comprehension is an interactive process between the reader and the text in which meaning is constructed through the integration of prior knowledge, linguistic competence, and reading strategies. In other words, comprehension is not simply about recognizing words, but about making sense of them in context. For EFL learners, developing reading comprehension is often challenging because it requires a combination of vocabulary knowledge, grammar understanding, and cultural awareness—all of which take time and practice to build.

The process of reading comprehension involves both bottom-up and top-down processing. Bottom-up processing refers to decoding words and sentences to understand meaning, while top-down processing relies on the reader's background knowledge and expectations (Anderson, 2003). Skilled readers use both processes simultaneously to construct meaning efficiently. In the context of web-based reading instruction, these processes become more complex as students are exposed to digital texts containing hyperlinks, images, and multimedia features. Therefore, web-

based reading not only tests linguistic ability but also digital navigation and interpretive skills.

Several theories support the understanding of reading comprehension, one of which is the Schema Theory proposed by Rumelhart (1980). This theory emphasizes that readers use existing mental frameworks or “schemas” to interpret new information. When reading online texts, learners activate their schemas to predict meanings, make connections, and infer unstated ideas. For example, when encountering unfamiliar vocabulary in a digital article, students use contextual clues and prior experiences to infer meaning. Schema Theory thus supports the idea that reading comprehension depends not only on linguistic decoding but also on cognitive and experiential factors—both of which are important in web-based reading environments.

Another influential model is the Interactive Compensatory Model by Stanovich (1980), which explains that readers compensate for weaknesses in one area of reading (e.g., vocabulary) by using strengths in another (e.g., contextual guessing). In EFL settings, this model helps explain how students with limited vocabulary still achieve comprehension by relying on background knowledge and inference skills. In web-based reading, where learners have access to instant online dictionaries or translation tools, compensatory processes become even more evident. The model highlights the importance of providing online tools that support struggling readers while still encouraging independent strategy use.

In addition, metacognition plays a vital role in reading comprehension. As introduced by Flavell (1979), metacognition involves the reader’s awareness and regulation of their cognitive processes—planning how to read, monitoring understanding, and evaluating comprehension. Effective readers are metacognitively aware; they know when they do not understand and take action to clarify meaning. In web-

based reading instruction, metacognitive skills are even more essential because students must manage distractions, assess the reliability of sources, and navigate non-linear texts. Studies by Ahmadian and Pasand (2017) and Öztürk (2018) have shown that explicit training in metacognitive strategies enhances reading comprehension, particularly in digital contexts.

Furthermore, reading comprehension is closely linked to motivation and engagement. According to Guthrie and Wigfield (2000), students who are intrinsically motivated to read are more likely to use strategies, persist in comprehension tasks, and achieve better outcomes. Web-based instruction can increase motivation by incorporating multimedia, interactive exercises, and authentic materials. However, it can also decrease motivation if students feel isolated or overwhelmed by technological complexity (Bao, 2020). Thus, maintaining engagement through interactive and well-designed online reading activities is crucial to support comprehension development in EFL learners.

In web-based reading instruction, comprehension is also affected by digital literacy—the ability to locate, evaluate, and integrate online information effectively (Leu et al., 2013). Unlike traditional printed texts, online reading often requires learners to navigate hyperlinks, interpret multimodal content, and verify the credibility of sources. Without adequate digital literacy, students may struggle to identify relevant information or become distracted by non-academic content. Therefore, teachers must include digital literacy components in reading instruction to ensure students can comprehend and evaluate online materials critically.

In conclusion, reading comprehension is a multidimensional process that involves linguistic, cognitive, and metacognitive abilities. In EFL contexts, these processes become even more complex when reading occurs online, as students must balance comprehension strategies with

digital navigation skills. The theories and models discussed—such as Schema Theory, the Interactive Compensatory Model, and Metacognitive Theory—serve as the foundation for understanding how students construct meaning from digital texts. Within this research, reading comprehension represents one of the main outcomes of web-based instruction, reflecting how digital tools, perceptions, and instructional design influence learners’ understanding, engagement, and overall academic success.

#### **1.7.4 EFL Learners**

EFL learners, or English as a Foreign Language learners, are individuals who study English in contexts where it is not the dominant language of daily communication. Unlike ESL (English as a Second Language) learners who are immersed in English-speaking environments, EFL learners typically learn English through formal instruction in schools or universities. According to Harmer (2015), EFL learning involves developing all four language skills—listening, speaking, reading, and writing—while also gaining grammatical, lexical, and cultural knowledge. However, because exposure to English outside the classroom is often limited, EFL learners must rely heavily on structured instruction and teacher guidance to achieve proficiency.

In the Indonesian context, English is taught as a compulsory subject from secondary school to higher education, but opportunities for authentic practice remain limited (Pardede, 2022). As a result, many EFL learners struggle with fluency, vocabulary acquisition, and reading comprehension, particularly when dealing with academic texts. This issue makes web-based learning an appealing alternative because it provides access to authentic English materials from around the world. Through the internet, students can read online articles, watch videos, and participate in global discussions—all of which promote exposure and language use beyond the classroom environment.

The characteristics of EFL learners also influence how they adapt to web-based reading instruction. Many students possess varying levels of digital literacy, motivation, and self-regulation, which affect their success in online learning environments (Anthonysamy, 2021). For instance, students who are comfortable using technology may find online reading more engaging, while others who struggle with navigation or technical problems may experience frustration and disengagement. Therefore, understanding learner differences is essential for designing effective web-based instruction. Lecturers must consider factors such as students' learning styles, language proficiency, and access to digital tools when implementing online activities.

From a cognitive perspective, EFL learners face additional challenges in reading comprehension because they must process both linguistic decoding and meaning construction simultaneously. According to Grabe and Stoller (2002), EFL readers expend significant cognitive effort on vocabulary recognition and sentence interpretation, leaving fewer resources for higher-level comprehension skills such as inference and critical analysis. Web-based reading, with its interactive and multimedia features, can either alleviate or intensify these difficulties. For example, hyperlinks and online dictionaries can aid comprehension, but excessive visual stimuli may cause cognitive overload. This duality shows that the success of web-based instruction depends on instructional balance and student adaptability.

Another important factor influencing EFL learners' success is motivation. Deci and Ryan's (2000) Self-Determination Theory explains that learners are more likely to succeed when they are intrinsically motivated—when they learn out of interest and personal satisfaction rather than external pressure. In web-based reading instruction, motivation can be strengthened through engaging materials, interactive tasks, and immediate feedback. However, lack of teacher presence or peer interaction may

reduce motivation over time. Therefore, educators must create an online learning environment that promotes autonomy while maintaining a sense of community and support.

EFL learners also benefit greatly from autonomous learning opportunities that web-based instruction provides. According to Little (2020), autonomy involves learners taking responsibility for their own learning decisions, including what, how, and when to study. The internet enables EFL learners to access materials that suit their interests and learning needs, which can enhance engagement and retention. For instance, a student interested in environmental issues can read online English articles about climate change, combining language practice with personal curiosity. However, autonomy must be supported with proper guidance so that learners remain focused and develop effective learning habits.

In addition, web-based instruction can improve EFL learners' intercultural competence—the ability to understand and communicate effectively with people from different cultural backgrounds. Byram (1997) emphasizes that language learning is inseparable from cultural learning. Through online platforms, EFL learners are exposed to diverse perspectives, accents, and cultural references that expand their worldview. This exposure not only strengthens linguistic competence but also promotes empathy, tolerance, and global awareness—qualities that are increasingly valuable in today's interconnected world.

In conclusion, EFL learners represent a diverse group with varying backgrounds, motivations, and proficiencies. Their learning success in web-based reading instruction depends on multiple factors such as digital literacy, motivation, autonomy, and cultural awareness. Theories related to learner autonomy, motivation, and cognitive processing all help explain how EFL learners interact with digital texts and online platforms. In this

study, understanding the characteristics and needs of EFL learners is crucial for interpreting how they perceive web-based instruction, what challenges they face, and how these experiences influence their reading comprehension and learning outcomes.

### **1.7.5 Perception in Web-Based Learning**

Perception plays a crucial role in determining how students and lecturers experience and respond to web-based learning environments. In educational psychology, perception is defined as the process through which individuals interpret and give meaning to their experiences (Rahimi & Katal, 2020). It reflects not only what learners or teachers observe but also how they feel and think about those experiences. In the context of web-based instruction, perception influences attitudes toward technology, motivation to participate, and willingness to adapt to online learning modes. Thus, understanding perception is fundamental to evaluating the effectiveness of web-based reading instruction among EFL learners and their instructors.

According to Ajzen's Theory of Planned Behavior (1991), an individual's behavior is guided by three factors: attitude, subjective norms, and perceived behavioral control. Applied to web-based learning, this theory suggests that students' and lecturers' attitudes toward technology, social expectations, and perceived ability to use digital platforms shape their actual engagement. For instance, if students believe that online learning is useful and manageable, they are more likely to participate actively. Conversely, if they view it as difficult or ineffective, motivation and performance may decline. This theoretical framework explains why perception serves as a strong predictor of technology acceptance in educational settings.

Research has shown that positive perceptions of web-based learning often correlate with higher motivation, engagement, and

satisfaction. Lien (2025) and Sun and Chen (2023) found that students who view online learning as flexible and interactive tend to participate more and perform better. They appreciate the autonomy and accessibility that web-based instruction provides. Lecturers who perceive technology as supportive rather than burdensome are also more likely to integrate digital tools creatively into their teaching. These positive perceptions help create a more dynamic and student-centered learning environment, fostering both cognitive and emotional engagement.

However, not all perceptions are positive. Some learners and educators view web-based learning as challenging or impersonal. Bao (2020) and Rinantanti et al. (2024) reported that technical difficulties, lack of face-to-face communication, and distractions often lead to negative perceptions of online learning. Students may feel isolated, while lecturers may struggle to gauge participation or provide timely feedback. Such perceptions can lower engagement and reduce the perceived effectiveness of web-based instruction. These findings highlight the importance of understanding both positive and negative perceptions to design balanced and realistic digital learning strategies.

Perception is also influenced by technological competence and experience. According to Davis's Technology Acceptance Model (1989), perceived usefulness and perceived ease of use are the two main determinants of user acceptance of technology. When learners feel confident using online tools, they tend to view web-based instruction as efficient and convenient. In contrast, limited digital literacy or previous negative experiences with technology can lead to resistance or anxiety. This aligns with the findings of Anthonysamy (2021), who emphasized that digital readiness significantly affects learners' attitudes and overall satisfaction with online education.

In addition, perception in web-based learning is shaped by pedagogical and social factors. Students' views are influenced by the quality of instructional design, interaction with lecturers, and sense of community within online platforms. As Vygotsky (1978) proposed in the Sociocultural Theory, learning is a socially mediated process. When learners feel connected and supported, their perception of online learning becomes more positive. Conversely, the absence of interaction can make learning feel isolating and disengaging. Thus, building social presence and communication between students and lecturers is key to fostering favorable perceptions.

From the lecturers' perspective, perception determines how they plan, deliver, and assess web-based reading activities. Teachers who view online instruction as a valuable pedagogical tool are more likely to explore innovative strategies, such as interactive reading discussions, digital annotations, and collaborative tasks. Meanwhile, those who perceive it as a burden may rely on minimal engagement or traditional, one-directional methods that limit student participation. Therefore, teachers' perceptions not only reflect personal attitudes but also influence the learning environment and students' experiences.

In summary, perception is a multidimensional construct encompassing cognitive, emotional, and behavioral aspects that shape how learners and educators engage with web-based instruction. Theories such as the Technology Acceptance Model (Davis, 1989) and the Theory of Planned Behavior (Ajzen, 1991) provide valuable insights into how perceptions affect technology adoption and learning outcomes. In this study, analyzing both students' and lecturers' perceptions helps reveal their acceptance, satisfaction, and challenges in implementing web-based reading instruction. Understanding these perceptions is vital for improving instructional design, enhancing motivation, and ensuring that technology-based education truly supports meaningful learning in EFL contexts.

### 1.7.6 Obstacles in Web-Based Learning

While web-based learning offers numerous advantages such as flexibility, accessibility, and increased learner autonomy, it also brings a variety of obstacles that can hinder its effective implementation. According to Bao (2020), these obstacles are not only technical in nature but also psychological, pedagogical, and environmental. For many EFL learners, shifting from face-to-face learning to an online platform requires adaptation to new learning habits, digital skills, and communication methods. Similarly, lecturers must adjust their instructional strategies to maintain engagement and ensure comprehension. Understanding these obstacles is essential to improving the quality and sustainability of web-based reading instruction.

One of the most common challenges in web-based learning is technical difficulty. Unstable internet connections, limited bandwidth, and lack of proper devices are frequent issues faced by both students and lecturers, especially in developing countries such as Indonesia (Rinantanti et al., 2024). These problems often disrupt learning activities, reduce concentration, and delay assignments. For example, students who experience connectivity issues may miss parts of online lectures or fail to submit tasks on time. Lecturers, on the other hand, may find it difficult to deliver materials effectively when platforms freeze or crash. Thus, technological infrastructure plays a fundamental role in determining the success of online education.

Another significant obstacle concerns digital literacy. Gilster (1997) defines digital literacy as the ability to use technology to access, evaluate, and create information. However, not all students possess the same level of competence in using digital tools or navigating online platforms. Many EFL learners struggle with basic operations such as uploading assignments, joining video conferences, or finding credible

online sources. Lecturers may also face difficulties designing engaging digital materials or using interactive learning management systems. These limitations lead to inefficient learning processes and lower satisfaction among participants.

Apart from technical and literacy-related barriers, motivational challenges are also prevalent in web-based learning. Without the physical presence of teachers and peers, some students experience decreased motivation, procrastination, and feelings of isolation (Bao, 2020; Anthonyamy, 2021). According to Deci and Ryan's Self-Determination Theory (2000), learners need to feel autonomy, competence, and relatedness to stay motivated. In online environments, the lack of social interaction often reduces the sense of relatedness, leading to disengagement. This issue is particularly critical in web-based reading, where sustained attention and effort are required for comprehension.

The cognitive barriers in online reading also deserve attention. Digital texts differ from printed ones because they are often nonlinear, hyperlinked, and multimodal. According to Mayer's Cognitive Theory of Multimedia Learning (2001), excessive multimedia elements can cause cognitive overload, making it harder for learners to process information effectively. EFL learners may become distracted by hyperlinks, advertisements, or visual content, which interferes with their comprehension and focus. Therefore, teachers must carefully design online reading materials that balance multimedia support with cognitive manageability.

Lecturers face their own obstacles when conducting web-based instruction. Many teachers struggle with time management, assessment, and student monitoring (Pardede, 2022). Preparing online materials and evaluating digital assignments can be time-consuming. Moreover, it is often difficult to ensure academic honesty and assess participation levels

accurately in virtual settings. Lecturers also report challenges in maintaining interaction, providing personalized feedback, and ensuring that all students stay engaged. These pedagogical obstacles highlight the need for ongoing training and institutional support to strengthen teachers' digital teaching skills.

Institutional and environmental factors also contribute to the obstacles in web-based learning. Lack of administrative support, inadequate training programs, and limited access to reliable online platforms can negatively affect implementation (Khan, 2005). Furthermore, not all students have a conducive learning environment at home—some face distractions, noise, or family responsibilities that disrupt their concentration. These external factors show that web-based learning requires more than individual effort; it demands coordinated institutional and infrastructural readiness.

Addressing these obstacles requires a combination of technical solutions, pedagogical strategies, and emotional support. Providing reliable internet access, offering digital literacy training, and designing engaging online activities can help reduce frustration and improve learning outcomes. Encouraging peer collaboration and maintaining frequent communication between students and lecturers can also mitigate feelings of isolation. When learners and teachers feel supported, they are more likely to view web-based instruction positively and achieve better results.

In conclusion, obstacles in web-based learning are multidimensional, encompassing technical, cognitive, motivational, and institutional challenges. Understanding these barriers is crucial for improving instructional design and ensuring effective online education. In the context of this research, identifying the specific challenges faced by students and lecturers in web-based reading instruction helps reveal the root causes of learning difficulties and informs practical solutions.

Overcoming these obstacles is not only necessary for successful implementation but also for fostering equitable and sustainable digital learning environments in EFL education.

### **1.7.7 Learning Outcomes in Web-Based Learning**

Learning outcomes represent the measurable results or achievements that students gain after participating in a learning process. They describe what learners are expected to know, understand, or be able to do as a result of instruction (Bloom, 1956). In traditional classroom settings, learning outcomes are often assessed through exams, presentations, or written assignments. However, in web-based learning, outcomes extend beyond cognitive knowledge to include digital skills, self-regulation, collaboration, and adaptability. These broader outcomes reflect the multidimensional nature of online learning, where students engage not only with content but also with technology and virtual interaction.

Bloom's Taxonomy of Educational Objectives (1956) remains one of the most influential frameworks for categorizing learning outcomes. It classifies learning into three domains: cognitive (knowledge-based), affective (attitude-based), and psychomotor (skill-based). In web-based learning, all three domains are integrated. For instance, EFL learners develop cognitive skills by understanding English texts, affective outcomes by cultivating motivation and confidence in online learning, and psychomotor skills through typing, navigating platforms, and using digital tools. This framework helps educators design web-based reading instruction that targets not only comprehension but also broader literacy and digital competence.

In the context of EFL education, learning outcomes are closely linked to reading comprehension, vocabulary development, and critical thinking. According to Grabe and Stoller (2002), effective reading

instruction improves students' ability to interpret texts, infer meanings, and evaluate information. In web-based environments, these skills are further enhanced by exposure to authentic online materials. Students who regularly engage with English texts on websites or digital journals often experience improvements in vocabulary breadth, contextual understanding, and reading speed. Thus, web-based reading instruction has the potential to yield strong linguistic and cognitive learning outcomes when implemented effectively.

However, web-based learning also promotes digital and metacognitive learning outcomes that go beyond language proficiency. Learners develop digital literacy by learning to search, evaluate, and synthesize online information (Leu et al., 2013). They also enhance metacognitive awareness by monitoring their comprehension and reflecting on their reading strategies (Flavell, 1979). These outcomes are critical in preparing students for lifelong learning, as they teach learners how to navigate complex digital environments independently. In this sense, web-based reading instruction contributes not only to immediate academic success but also to long-term personal and professional growth.

Several studies have shown that web-based instruction positively affects students' motivation and engagement, which are important affective learning outcomes. Sun and Chen (2023) found that students who perceive online learning as interactive and flexible demonstrate higher satisfaction and stronger commitment to their studies. Similarly, Lien (2025) reported that EFL students who participated in web-based reading programs displayed greater enthusiasm for learning English compared to those in traditional classes. These findings suggest that well-designed online environments can foster intrinsic motivation, which in turn improves cognitive and performance outcomes.

Nevertheless, the effectiveness of web-based learning in achieving intended outcomes depends heavily on instructional design and learner readiness. Mayer's (2001) Cognitive Theory of Multimedia Learning highlights that multimedia features should be used strategically to enhance understanding, not to overload learners. Poorly organized digital materials, unclear instructions, or lack of interaction may lead to superficial learning. Moreover, students with low self-regulation skills may struggle to stay focused, affecting both comprehension and achievement. Therefore, achieving positive learning outcomes in web-based instruction requires a balance between engaging content, clear structure, and adequate learner support.

From the lecturers' perspective, learning outcomes also reflect the success of teaching methods and technology integration. Teachers must design assessments that capture not only what students know but also how they apply their skills in online contexts. For example, comprehension quizzes, online discussions, and reflective journals can provide insights into students' reading strategies and critical thinking abilities. According to Khan (2005), continuous feedback and formative assessment are essential in web-based instruction because they help both students and teachers monitor progress and adjust strategies in real time.

In conclusion, learning outcomes in web-based learning encompass more than academic achievement; they represent a combination of linguistic, cognitive, digital, and affective growth. For EFL learners, these outcomes include improvements in reading comprehension, digital literacy, motivation, and autonomy. Theories from Bloom (1956), Flavell (1979), Mayer (2001), and others provide a comprehensive foundation for understanding how web-based instruction shapes learning results. Within this study, analyzing learning outcomes allows the researcher to evaluate the broader impact of web-based reading instruction on students' skills, attitudes, and readiness for the digital era.

### **1.7.8 Impact of Web-Based Learning on Students' Experiences, Skills, and Performance**

The impact of web-based learning on students has become one of the most widely discussed topics in educational research, especially since technology has reshaped how learning occurs. Web-based learning affects not only students' academic performance but also their motivation, engagement, and overall learning experience. According to Sun and Chen (2023), web-based learning creates a more flexible and student-centered environment that encourages self-paced learning and independent exploration. For EFL learners, this means increased exposure to authentic English materials, opportunities to practice comprehension skills, and more varied ways to engage with texts and tasks.

One of the most significant impacts of web-based learning is its ability to enhance learner autonomy and self-regulation. Zimmerman (2000) explains that self-regulated learners can plan, monitor, and evaluate their learning effectively. Online environments, by nature, require these skills since students must manage their time, stay motivated, and complete tasks with limited supervision. Studies by Lai (2019) and Rinantanti et al. (2024) show that students who actively engage in web-based reading develop stronger autonomy and become more responsible for their learning progress. This independence not only improves academic achievement but also prepares students for lifelong learning in the digital age.

Another key impact lies in language proficiency and reading comprehension. Web-based reading exposes students to a wide range of authentic English texts such as news articles, blogs, and academic journals. Grabe and Stoller (2002) argue that extensive reading with meaningful input contributes significantly to vocabulary growth and syntactic awareness. When students read online, they encounter diverse genres and

registers that expand their linguistic repertoire. Moreover, multimedia features—such as hyperlinks, embedded videos, and glossaries—support comprehension and make reading more interactive. However, as Mayer (2001) cautions, excessive multimedia may cause cognitive overload, emphasizing the importance of careful instructional design.

Web-based learning also positively influences students' digital competence and critical literacy. Leu et al. (2013) highlight that online learning fosters the ability to locate, evaluate, and integrate digital information—a key skill for success in academic and professional contexts. Through continuous engagement with online platforms, students become more confident in navigating websites, evaluating information credibility, and synthesizing multiple sources. These digital literacy gains contribute to students' broader academic readiness, particularly in higher education environments that rely heavily on online resources.

Beyond cognitive skills, web-based learning enhances students' motivation, engagement, and learning satisfaction. According to Lien (2025), students often perceive online learning as more engaging because it provides interactive tools, visual resources, and flexibility. The ability to learn at one's own pace increases motivation and reduces anxiety, particularly for EFL learners who might feel pressured in traditional classrooms. Similarly, Godwin-Jones (2022) observes that digital environments promote learner agency—students feel empowered when they can control their learning process, choose resources, and monitor their progress independently. These positive emotional outcomes contribute to higher persistence and deeper learning.

However, the impact of web-based learning is not universally positive. Bao (2020) and Pardede (2022) note that some students experience fatigue, distraction, and social isolation when learning online. The absence of direct peer and teacher interaction may reduce motivation

and engagement over time. Additionally, technical problems or poor instructional design can create frustration and limit comprehension. Therefore, the quality of students' experiences in web-based learning depends heavily on the level of interaction, support, and instructional clarity provided by educators. When these elements are lacking, even technologically advanced learning environments may fail to produce meaningful results.

Lecturers' roles also significantly affect the overall impact of web-based learning. Teachers who integrate technology creatively can enhance students' engagement and comprehension through interactive reading tasks, collaborative projects, and timely feedback (Pustika & Wiedarti, 2019). Conversely, lecturers who lack digital training or confidence may struggle to utilize web-based tools effectively. As Vygotsky's (1978) Sociocultural Theory suggests, meaningful learning occurs within the Zone of Proximal Development (ZPD) through guided support. Hence, the lecturer's scaffolding in online environments remains a critical determinant of student success.

In conclusion, the impact of web-based learning on students' experiences, skills, and performance is multifaceted, encompassing cognitive, digital, and affective dimensions. It can significantly enhance language proficiency, autonomy, motivation, and critical literacy when implemented effectively. However, its success depends on various factors such as learners' digital literacy, instructional design, and teacher support. In this study, examining the impact of web-based learning allows for a comprehensive understanding of how online reading instruction shapes EFL students' academic development and personal growth. The findings are expected to provide valuable insights for improving the design, delivery, and outcomes of technology-enhanced language learning in higher education.

### 1.7.9 Digital Literacy

Digital literacy is one of the most essential competencies in modern education, especially in the era of web-based learning. It refers to the ability to locate, evaluate, use, and create information through digital technologies effectively and responsibly (Gilster, 1997). Unlike basic computer skills, digital literacy encompasses a broader range of cognitive and social abilities, including critical thinking, problem-solving, and ethical engagement with online information. In EFL contexts, digital literacy enables learners to interact with authentic English materials, navigate online resources, and participate in global communication—skills that are indispensable in academic and professional environments.

According to Leu et al. (2013), digital literacy goes beyond technical proficiency; it involves understanding how to interpret multimodal content, assess credibility, and integrate information from various digital sources. In web-based reading instruction, this means students must not only comprehend written texts but also evaluate hyperlinks, images, videos, and other multimedia features that accompany digital materials. For example, when reading an online article, learners must judge whether the source is reliable, identify the author's purpose, and interpret visual data such as graphs or infographics. These tasks demand both linguistic and digital competence, making digital literacy a vital foundation for web-based EFL learning.

The development of digital literacy is closely connected to the constructivist learning approach, which views learners as active participants who construct knowledge through interaction and exploration (Vygotsky, 1978). In web-based environments, students engage with digital texts, collaborate in online discussions, and use technology to research and synthesize information. This process encourages autonomy and creativity while fostering metacognitive skills. As students learn to

manage digital information independently, they also become more self-regulated and responsible learners—key characteristics of effective EFL readers in online settings.

However, digital literacy is not evenly distributed among learners. Studies have shown that many EFL students face difficulties when navigating online platforms, distinguishing credible sources, or managing technological tools (Pardede, 2022; Rinantanti et al., 2024). These gaps often stem from unequal access to technology, lack of prior training, or limited exposure to digital environments. As a result, students with lower digital literacy may feel overwhelmed, disengaged, or dependent on automated translation tools. This problem highlights the need for teachers to integrate digital literacy instruction explicitly into their reading curriculum, helping students build confidence and competence in using technology for learning.

From an instructional perspective, teachers play a vital role in modeling and promoting digital literacy. According to Eshet-Alkalai (2004), digital literacy includes multiple dimensions such as photo-visual, reproduction, information, and socio-emotional literacies. Teachers must therefore guide students not only in navigating digital interfaces but also in understanding how to interpret online content critically and ethically. For instance, during web-based reading activities, lecturers can encourage students to compare multiple sources, identify bias, and verify information. By doing so, they foster analytical thinking and responsible use of digital resources—skills that align with 21st-century educational goals.

The integration of digital literacy into EFL instruction also supports critical literacy development, which emphasizes evaluating and questioning texts rather than accepting them at face value (Luke & Freebody, 1999). Online materials often reflect diverse perspectives and ideologies, making critical reading an essential skill for learners. When

students analyze digital texts critically, they not only improve comprehension but also develop awareness of cultural, social, and linguistic contexts. This ability is particularly important for EFL learners, who must navigate between local and global perspectives while reading English materials on the internet.

Furthermore, digital literacy contributes to students' autonomy and lifelong learning. Little (2020) asserts that learners who possess strong digital literacy can independently select, evaluate, and utilize resources to achieve their learning goals. In web-based environments, this autonomy translates into the ability to manage one's learning path, explore topics of personal interest, and adapt to new technological tools. For EFL learners, autonomy supported by digital literacy leads to more meaningful engagement with English reading materials and sustained motivation to continue learning beyond formal education settings.

In conclusion, digital literacy serves as the foundation of effective web-based learning, connecting technological skills with cognitive and critical abilities. It enables learners to navigate, evaluate, and apply information in digital spaces while fostering autonomy and global competence. However, unequal digital skills among students and teachers remain a challenge that must be addressed through targeted instruction and institutional support. In this study, digital literacy is seen as both a prerequisite and an outcome of web-based reading instruction—it shapes how EFL learners perceive, engage with, and benefit from online learning environments. Strengthening digital literacy, therefore, is essential for maximizing the impact of technology-enhanced education in developing language and literacy skills.

## **1.8 Previous Studies**

A study conducted by Rinantanti et al. (2024) investigated how EFL learners use online reading strategies and what attitudes they hold toward web-

based reading instruction. Employing a mixed-methods approach through surveys and interviews, the researchers found that students were generally enthusiastic about web-based reading and used diverse strategies such as scanning, skimming, and evaluating hyperlinks. However, they also noted that effectiveness varied depending on learners' digital competence and motivation. This finding is relevant to the present study because it highlights the importance of examining both perceptions and individual differences among learners when implementing web-based reading instruction in EFL contexts. Unlike Rinantanti et al. (2024), the current study not only explores students' strategies and attitudes but also incorporates lecturers' perceptions and field-based contextual factors within UIN Siber Syekh Nurjati Cirebon, providing a broader institutional perspective.

Similarly, Lien (2025) explored the implementation of LMS-based reading logs to evaluate their influence on student engagement and reading habits. Using a quasi-experimental design combined with questionnaires, Lien found that students developed stronger reading discipline and higher motivation when they regularly recorded reflections and reading progress on digital platforms. The study also showed that online reading logs helped lecturers provide ongoing formative feedback. This research supports the current study's focus on analyzing students' and lecturers' perceptions (RQ1) and understanding how digital tools influence learning outcomes (RQ3) in online reading instruction. However, while Lien's research focused on the experimental use of digital reading logs, the present study adopts a qualitative descriptive design emphasizing real classroom practices, institutional challenges, and the interplay between perception, obstacles, and learning outcomes.

Another relevant study by Pardede (2022) analyzed the differences between online and offline reading comprehension and explored the types of strategies learners use in digital environments. The study employed a descriptive and analytical approach by synthesizing various empirical findings and questionnaires from EFL learners. Results showed that online reading requires specific strategies such as navigating links and evaluating web information, which differ from

traditional printed-text strategies. However, the effectiveness of these strategies remained inconclusive across different proficiency levels. This research informs the present study by emphasizing the need to identify both cognitive and technical obstacles (RQ2) that affect web-based reading comprehension. Different from Pardede's theoretical synthesis, the current study integrates conceptual and field data, focusing on practical issues experienced by students and lecturers in an authentic online classroom context at UIN Siber Syekh Nurjati Cirebon.

Bui and Macalister (2021) implemented an online extensive reading program to examine its effects on students' reading fluency and engagement. Through pre- and post-tests combined with learner reflections, they found that students not only improved their reading speed by approximately 20% but also expressed greater enjoyment when reading authentic online materials of their own choice. The flexibility of digital reading encouraged learners to explore a variety of genres beyond classroom texts. This study provides a strong empirical foundation for the present research in exploring how web-based reading impacts student engagement and comprehension, particularly in tertiary EFL settings. However, unlike their experimental intervention, the present study employs a qualitative descriptive approach to analyze natural classroom conditions, students' lived experiences, and lecturers' feedback in a fully web-based institutional environment.

A study by Alsofyani (2019) investigated how multimedia e-books and explicit metacognitive strategy instruction influence students' reading comprehension in EFL classrooms. The researcher employed an experimental design supported by qualitative observations. Findings revealed that multimedia features such as interactive glossaries and embedded videos, when combined with metacognitive training, significantly improved comprehension and student attention. This aligns with the current research focus, as it demonstrates how well-structured digital instruction can overcome cognitive obstacles (RQ2) and improve student outcomes (RQ3). Nevertheless, the present study differs by not manipulating instructional variables; instead, it descriptively explores the natural

challenges and adaptive behaviors of both lecturers and learners within a real web-based reading environment.

In another study, Putri and Damayanti (2025) examined the use of Digital Extensive Reading (DER) for young EFL learners in Indonesia. Using a qualitative case study approach, they observed students' experiences with online reading platforms over several weeks. The results indicated that DER programs promoted reading for pleasure and improved vocabulary retention. However, challenges such as screen fatigue, limited digital resources, and inconsistent access hindered full implementation. This study is closely related to the present research as it reveals common practical challenges in digital reading environments and supports the examination of obstacles (RQ2) among university-level learners. Yet, the present study extends beyond elementary or young learner contexts by focusing on tertiary-level EFL learners and including the lecturers' pedagogical perspectives in an institutionalized digital university setting.

Metruk and Kováčová (2025) conducted an experimental study to assess the effect of digital reading instruction on reading comprehension and writing performance among EFL learners. Their findings showed moderate but consistent improvements in reading proficiency—around a 9% increase after the intervention—and noted that students valued interactive reading tasks and immediate feedback. The researchers concluded that teacher preparation and continuous support were essential for maximizing learning gains. This study underpins the present research by confirming that lecturer competence and attitudes (RQ1) directly influence student success in web-based learning contexts. In contrast, the present study explores lecturer competence and attitudes through qualitative field data rather than controlled experiments, thus offering a more interpretive understanding of teacher–student dynamics in digital learning.

Li (2020) developed and validated an instrument known as the Second Language Online Reading Strategies Inventory (SLORSI) to measure how students approach reading in digital contexts. The study utilized large-scale

surveys among university learners and identified distinct categories of online reading strategies, including problem-solving, global, and support strategies. Li's findings revealed that proficient learners tend to use metacognitive and evaluative strategies more frequently. This research is valuable for the current study, as it offers conceptual and methodological insights for designing questionnaires and interpreting strategy-related obstacles and outcomes (RQ2 and RQ3). However, Li's study is quantitative and psychometric in nature, whereas the present qualitative descriptive research combines both questionnaire and interview data to capture a more holistic and context-specific understanding of learners' and lecturers' experiences.

Additionally, Öztürk (2018) examined the relationship between metacognitive online reading strategies and reading comprehension performance among Turkish EFL students. Using a correlational design, the study found a strong positive correlation between metacognitive awareness and comprehension outcomes. Students who regularly planned, monitored, and evaluated their reading achieved better understanding of online texts. This research supports the present study's emphasis on the link between learner strategies and outcomes, reinforcing the importance of metacognitive awareness as both an obstacle and a driver of success in web-based reading. Unlike Öztürk's correlational focus on student variables only, the present study also explores the lecturer's pedagogical role, infrastructural support, and contextual barriers unique to UIN Siber Syekh Nurjati Cirebon.

Taken together, these previous studies demonstrate that web-based instruction has the potential to improve EFL learners' reading comprehension, motivation, and digital literacy when implemented effectively. However, the majority of these studies focused mainly on students' perspectives, strategy use, or experimental outcomes, with limited attention to lecturers' views and the specific contextual challenges faced in Indonesian higher education. Few studies have combined both conceptual and field-based analyses to explore how perceptions, obstacles, and learning impacts interact within one coherent

framework. Therefore, this current study differs by integrating both students' and lecturers' perspectives through a qualitative descriptive approach, situating the analysis within the institutional context of UIN Siber Syekh Nurjati Cirebon, and focusing on real-world implementation obstacles and their implications for EFL web-based reading instruction.

### **1.9 Frame of Thought**

The conceptual framework of this study is developed from the integration of theoretical foundations and findings from previous research on web-based learning, reading comprehension, and EFL instruction. This study focuses on three interconnected aspects: (1) perceptions of web-based learning, (2) obstacles and possible solutions, and (3) the impacts of web-based instruction on students' experiences, skills, and learning outcomes. These three aspects are viewed as sequential and interrelated processes that influence the overall success of web-based reading instruction in higher education.

The first component, perception, plays a fundamental role because it determines how both students and lecturers respond to web-based learning environments. Guided by Ajzen's Theory of Planned Behavior (1991) and Davis's Technology Acceptance Model (1989), this study assumes that individuals' attitudes toward technology—shaped by perceived usefulness, ease of use, and motivation—affect their participation and engagement in online reading activities. Positive perceptions are expected to enhance enthusiasm, active participation, and satisfaction, while negative perceptions, such as frustration or anxiety, may hinder learning effectiveness. Therefore, perception acts as the starting point that shapes how learners and educators experience web-based instruction.

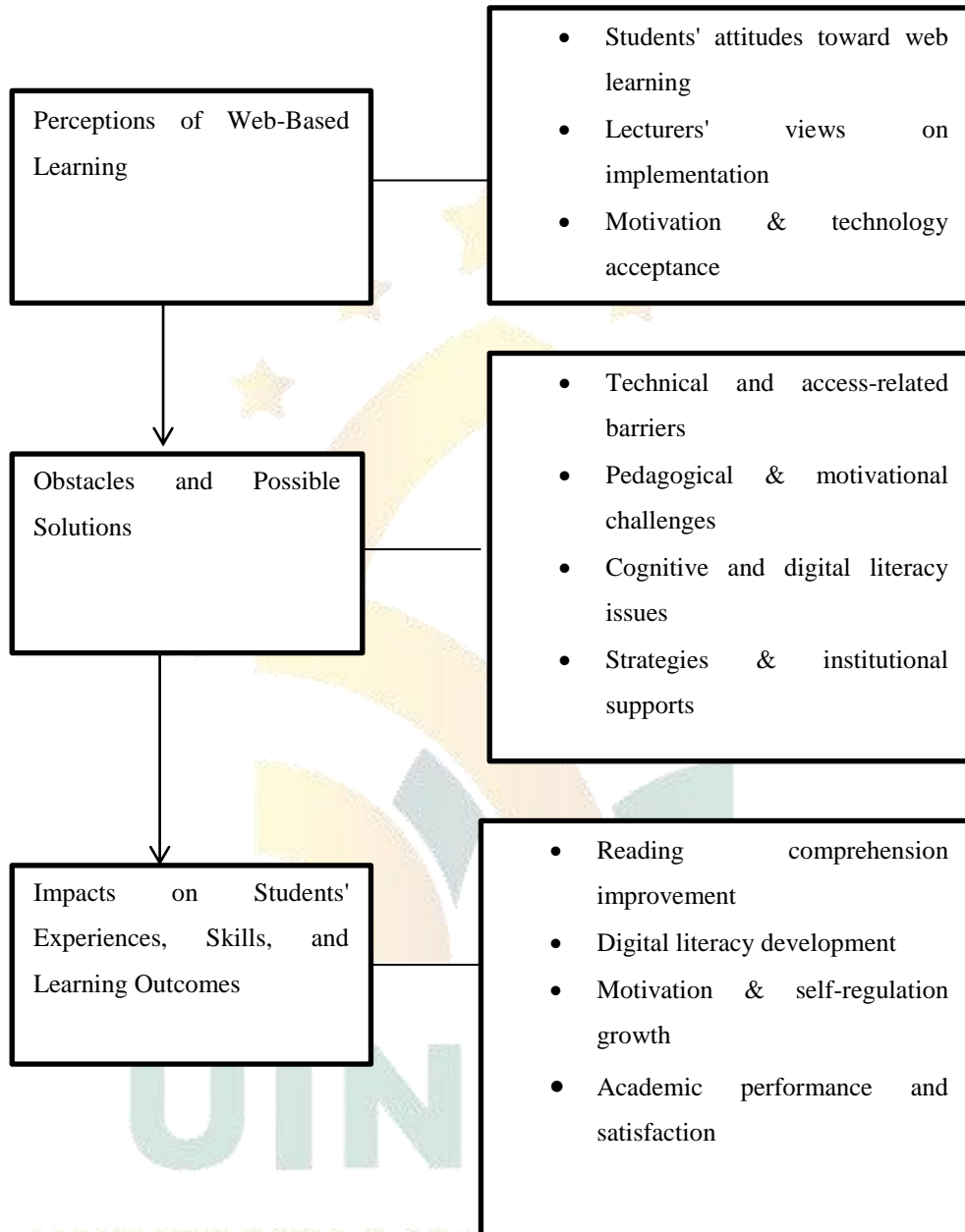
The second component focuses on obstacles and possible solutions. Drawing on Khan's (2005) Web-Based Learning Framework and Bao's (2020) classification of online learning challenges, this study identifies that barriers can be technological, pedagogical, motivational, and cognitive in nature. Technical issues such as unstable internet connections and limited devices can obstruct

participation, while low digital literacy and self-regulation problems may reduce comprehension and engagement. On the lecturer's side, difficulties in material preparation, time management, and monitoring student progress are often encountered. However, these obstacles can be mitigated through proper instructional design, interactive learning strategies, and institutional support. Thus, examining both obstacles and solutions provides a deeper understanding of how web-based reading instruction can be optimized.

The third component examines the impact of web-based learning on students' experiences, skills, and learning outcomes. Supported by Bloom's Taxonomy of Learning Objectives (1956) and Mayer's Cognitive Theory of Multimedia Learning (2001), this study views learning outcomes not only in terms of cognitive achievement but also affective and digital competencies. Positive impacts include improved reading comprehension, enhanced digital literacy, increased motivation, and greater learner autonomy. Conversely, when obstacles are not addressed, web-based learning may lead to cognitive overload, disengagement, or surface-level comprehension. Therefore, analyzing impacts allows the researcher to assess how effective web-based instruction is in fostering both language and digital literacy among EFL learners.

These three variables—perception, obstacles, and impact—are interconnected. Perceptions shape how learners and lecturers approach web-based instruction; their experiences and attitudes influence how they face and interpret obstacles. In turn, the presence or resolution of these obstacles directly affects learning outcomes and overall satisfaction. When perceptions are positive and obstacles are effectively managed, web-based instruction is likely to produce meaningful learning outcomes. Conversely, negative perceptions or unresolved barriers can reduce engagement and limit educational impact. This cause-and-effect chain forms the logical flow of the present research.

The relationship among these variables can be visualized as follows:



Perceptions of Web-Based Learning → influence → Obstacles and Solutions in Implementation → determine → Impacts on Students' Experiences, Skills, and Learning Outcomes

In this conceptual flow, perception functions as the input variable, obstacles and solutions as the process variable, and learning outcomes or impacts as the output variable. This framework is also supported by constructivist and socio-cultural perspectives (Vygotsky, 1978), which emphasize that learning occurs through interaction, reflection, and collaboration—factors that remain crucial in digital environments. Lecturers' guidance (scaffolding) and institutional support act as mediating factors that strengthen the relationships among these variables.

Thus, the frame of thought for this study integrates theoretical, empirical, and contextual perspectives into one cohesive structure. By synthesizing insights from previous studies and field data, this framework guides the investigation of how web-based reading instruction operates in practice—how students and lecturers perceive it, what obstacles they face, and how it affects learners' skills and outcomes. The framework serves as the conceptual backbone of the research, ensuring that both the conceptual synthesis (theory-based) and the field synthesis (data-based) components align to provide a comprehensive understanding of web-based reading instruction in the EFL context of UIN Siber Syekh Nurjati Cirebon.

The above diagram illustrates the logical flow of this study's conceptual framework. It begins with the perceptions of web-based learning, which shape how both students and lecturers approach online reading instruction. Their attitudes, motivation, and readiness toward technology determine the effectiveness of engagement during the learning process. These perceptions directly influence the obstacles and solutions encountered during implementation, including technological, pedagogical, motivational, and cognitive challenges.

Once these obstacles are identified and addressed through appropriate strategies, they affect the impact of web-based learning on students' reading comprehension, digital literacy, self-regulation, and overall learning outcomes. Hence, perception functions as the input, obstacles and solutions as the process, and impacts as the output. The relationship between these three variables is dynamic and cyclical—positive perceptions and effective solutions lead to better outcomes, while unresolved barriers or negative perceptions can diminish learning quality.

This conceptual framework serves as the foundation for the research design and data analysis in this study. It connects the theoretical and field-based synthesis by examining how perceptions, obstacles, and impacts interact within the real teaching–learning context of UIN Siber Syekh Nurjati Cirebon. The framework thus provides a clear map for interpreting findings and understanding the effectiveness of web-based reading instruction for EFL learners.

## **1.10 Research Method**

### **1.10.1 Research Design**

This study employed a qualitative descriptive design that combined both conceptual and field synthesis approaches. The qualitative descriptive approach is often used to provide a comprehensive summary of an event or phenomenon in the everyday terms of those involved (Sandelowski, 2000; Lambert & Lambert, 2012). It emphasizes description and interpretation rather than hypothesis testing, making it suitable for educational research that seeks to understand participants' experiences and perceptions (Creswell & Poth, 2018; Merriam & Tisdell, 2016).

The conceptual synthesis focused on integrating relevant theories and previous studies concerning web-based learning, digital literacy, and EFL reading instruction. This stage aimed to construct a theoretical understanding of how web-based platforms contribute to language learning

processes, including perceptions, obstacles, and learning outcomes. Conceptual synthesis allows the researcher to bridge theoretical frameworks and empirical findings to generate a comprehensive understanding of the topic (Cooper, 2017; Torraco, 2005).

The field synthesis, on the other hand, involved collecting and analyzing empirical data obtained directly from students and lecturers to identify their perceptions, encountered obstacles, and the observed impacts of web-based reading instruction. This approach was chosen because it enables the researcher to explore the phenomenon as it naturally occurs, providing rich, contextualized insights into the real experiences of EFL learners and lecturers (Miles, Huberman, & Saldaña, 2014; Denzin & Lincoln, 2018). Through this process, the study highlights authentic classroom practices and the human factors that influence the success of web-based learning.

The qualitative descriptive method was deemed appropriate because the purpose of this research was not to test hypotheses but to describe and interpret participants' perspectives and experiences. As stated by Sandelowski (2000), qualitative descriptive studies seek to present "a comprehensive summary of events in the everyday terms of those events," making it ideal for educational inquiry where participants' voices are central. Although questionnaires were distributed to gather initial information and identify general patterns, their main purpose was to provide an overview of participants' attitudes before conducting in-depth interviews. Thus, the emphasis of this study remains on qualitative interpretation and synthesis of both conceptual and field data.

This design aligns with the nature of the research title, "Web-Based Reading Instruction for EFL Learners: Conceptual and Field Synthesis," which integrates theoretical exploration and empirical evidence. The combination of these two approaches allows the researcher to develop a

more comprehensive and contextual understanding of the implementation, obstacles, and impacts of web-based learning in the EFL classroom context (Creswell & Poth, 2018; Merriam & Tisdell, 2016).

### **1.10.2 Source and Types of the Data**

This study used both primary and secondary data sources to obtain comprehensive information regarding web-based reading instruction for EFL learners.

#### **1.10.2.1 Primary Data**

The primary data were obtained directly from the field through questionnaires and interviews. The questionnaire was distributed to third-semester EFL students at UIN Siber Syekh Nurjati Cirebon who had experienced web-based reading instruction. The questionnaire contained short, close-ended statements using a simple “Agree–Disagree” scale. Its purpose was to identify students’ general perceptions and initial responses before conducting in-depth interviews.

The interviews were conducted with both students and lecturers involved in web-based reading instruction. The interviews explored their detailed opinions, challenges faced, and suggested solutions to improve the learning process. This provided a richer understanding of how web-based learning affects learners’ reading experiences, digital literacy, and learning outcomes.

The data collection was carried out during the 2025 academic year, ensuring relevance to the current implementation of online and blended learning modes at the university.

### **1.10.2.2 Secondary Data**

The secondary data were obtained from books, academic journals, and previous studies related to web-based instruction, reading comprehension, EFL pedagogy, and digital literacy. These sources helped form the conceptual foundation of the study and guided the interpretation of field findings. Theoretical works such as Davis's (1989) Technology Acceptance Model, Vygotsky's (1978) Sociocultural Theory, and Mayer's (2001) Multimedia Learning Theory were used to interpret participants' experiences. Empirical studies such as Bao (2020), Pardede (2022), Rinantanti et al. (2024), and Klimova (2021) were also reviewed to compare the study's findings with recent research trends.

### **1.10.2.3 Types of Data**

This research primarily used qualitative data, consisting of descriptive statements, perceptions, and reflections from participants. The questionnaire data were treated descriptively to identify general tendencies rather than statistical measures. The interview data were analyzed thematically to reveal deeper patterns and insights related to the three research questions: perceptions, obstacles and solutions, and impacts of web-based learning.

By combining conceptual and empirical sources, this study aimed to produce a synthesized understanding that connects theoretical frameworks with real-world teaching and learning experiences.

### 1.10.3 Data Collection Instruments

In this study, the researcher acts as the main research instrument. The researcher was responsible for planning, collecting interpreting, analyzing the data. The researcher's knowledge, analytical ability, and sensitivity in interpreting participants' experiences determined the accuracy and depth of the research findings.

During the process, the researcher also utilized several Artificial Intelligence (AI) tools ethically and responsibly to support the research processes. These included ChatGPT, Grammarly, and Google Translate, which were used only for assisting technical and linguistic task, such as:

- Finding and exploring relevant academic references more efficiently,
- Checking grammar and sentence structure,
- Translating or clarifying participants' responses when needed,
- And paraphrasing for clarity and coherence.

All references and information obtained through AI were rechecked and validated manually using official academic databases and journal sources to ensure accuracy and credibility. AI tools were not used to generate or alter data, but solely to assist the researcher in language improvement, reference search efficiency, and data organization.

### 1.10.4 Research Technique

The techniques used for data collection in this study were questionnaire and semi-structured interviews.

## **1. Questionnaire**

The questionnaire was adapted from previous validate instruments (Li, 2020; Rinantani et al., 2024; Lien, 2025) and adjusted to suit the research context at UIN Siber Syekh Nurjati Cirebon. It consisted of several close-ended statements designed using a four-point Likert scale (strongly agree, agree, disagree, strongly disagree). Although the items were quantitative in form, the data were analyzed qualitatively, focusing on describing the general patterns and tendencies of participants' responses rather than using statistical analysis. The questionnaire thus functioned as supporting data to complement and strengthen the interviews findings.

## **2. Interview Guide**

The semi-structured interviews were conducted with selected student participants and one lecturer to gain deeper insight into their experiences, perceived challenges, strategies, and reflections on the effectiveness of web-based reading instruction. The interviews were conducted either in Indonesian or English, depending on the participants' comfort level. All interviews were recorded with consent, transcribed, and analyzed thematically.

### **1.10.5 Data Collection Procedures**

The data collection process consisted of several steps. First, the researcher sought permission from the university and lecturers to conduct the study. After approval, the researcher distributed online questionnaires to the selected students through Google Forms. Once the qualitative data were collected, the researcher

selected several participants (students and a lecturer) for in-depth interviews.

The interviews were conducted in a semi-structured manner to allow participants to express their ideas freely while still following the main themes related to the research questions. The interviews lasted around 20–30 minutes and were conducted in Indonesian or English depending on participants' comfort. All responses were recorded, transcribed, and translated into English for analysis.

#### **1.10.6 Data Analysis Techniques**

Data analysis in this research was conducted through a qualitative descriptive approach, focusing on the interpretation and synthesis of conceptual and field data. The analysis aimed to describe participants' perceptions, obstacles, and experiences regarding web-based reading instruction for EFL learners, and to connect these findings with existing theories and previous studies.

The data obtained from both instruments — questionnaires and interviews — were analyzed using thematic analysis as proposed by Braun and Clarke (2006). This method was chosen because it allows the researcher to identify, analyze, and interpret patterns (themes) that emerge from qualitative data. The analysis involved several systematic steps as follows:

- **Data Familiarization**

The researcher first read and reread all collected data from the questionnaire summaries and interview transcripts to gain a full understanding of the content. During this stage, preliminary notes and reflections were made to highlight important ideas related to the three research questions.

- **Generating Initial Codes**

Relevant phrases, sentences, or expressions were coded based on their meaning or relation to the study focus. For example, codes such as “flexibility in learning,” “internet access problems,” or “improved motivation” were used to represent participants’ responses.

- **Searching for Themes**

The generated codes were grouped into broader categories or potential themes. For instance, codes about convenience and flexibility were categorized under positive perceptions, while codes about lack of guidance or limited facilities were grouped under obstacles.

- **Reviewing and Refining Themes**

The researcher reviewed all themes to ensure that each was consistent with the coded data and research objectives. Overlapping or unclear themes were refined and merged for clarity.

- **Defining and Naming Themes**

Each theme was defined clearly and labeled appropriately. Examples include “Motivational and Cognitive Barriers,” “Technical Challenges,” “Improved Reading Confidence,” and “Enhanced Digital Literacy.”

- **Interpreting and Synthesizing Findings**

The final step involved interpreting the themes in relation to the theoretical and conceptual framework. The researcher compared field findings with existing studies and

relevant theories such as the Technology Acceptance Model (Davis, 1989), Sociocultural Theory (Vygotsky, 1978), and Multimedia Learning Theory (Mayer, 2001). This process resulted in a synthesis that linked conceptual insights and empirical data, aligning with the study's title, "Web-Based Reading Instruction for EFL Learners: Conceptual and Field Synthesis."

#### **1.10.7 Trustworthiness and Validity**

In qualitative research, ensuring the trustworthiness of data is essential to guarantee that the findings are accurate, consistent, and reflective of the participants' real experiences. According to Lincoln and Guba (1985), the trustworthiness of qualitative data can be established through four main criteria: credibility, transferability, dependability, and confirmability. These principles were carefully applied throughout this study to ensure that the data collected from both conceptual and field sources were valid and reliable.

