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"Enhancing Online Reading Comprehension in a Blended Learning Context"

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Resumen

El propósito de esta síntesis de investigación es explorar los efectos del aprendizaje híbrido en la comprensión lectora de los estudiantes de inglés como lengua extranjera. Dieciocho estudios de diferentes bases de datos fueron seleccionados para el análisis. Los criterios de inclusión y exclusión del estudio incluyeron a) estudios llevados a cabo en aulas EFL, ESL o ESP donde el inglés fuera la lengua meta, b) estudios publicados desde 2013 hasta 2020. Los hallazgos revelaron que el aprendizaje híbrido puede ser considerado práctico para mejorar la comprensión lectora de textos digitales. El estudio también reveló que las estrategias de lectura en línea son cruciales para mejorar la comprensión de textos. Sin embargo, se recomienda a los docentes incluir e integrar plataformas de aprendizaje digital diseñadas específicamente para reforzar las habilidades de lectura y la comprensión en los estudiantes. Finalmente, debido a la falta de estudios del aprendizaje híbrido en Latinoamérica, se sugiere más investigación de los efectos de este enfoque educativo en la comprensión lectora.

Palabras Claves: Aprendizaje híbrido. Lectura. Comprensión lectora. Lectura digital. Estrategias de lectura digital. Textos digitales.

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Abstract

This research synthesis aims to explore the effects of Blended Learning on students´ online reading comprehension of English texts. Eighteen studies from different databases were selected for the analysis. The inclusion and exclusion criteria of the study included a) studies carried out in EFL, ESL, or ESP classrooms where English was the target language, b) studies published from 2013 to 2020. Findings exposed that Blended Learning could be considered practical to improve reading comprehension of digital texts. This study also revealed that online reading strategies are crucial to improving the comprehension of digital texts. However, it is recommended for teachers to include and integrate online learning platforms specifically designed to reinforce students' reading abilities and comprehension. Finally, due to the lack of studies of Blended Learning in Latin America, further research on the effects of this educational approach on reading comprehension is suggested.

Key Words: Blended learning (BL). Reading. Reading comprehension. Online reading. Online reading strategies. Digital texts.

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Domenica

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Dedication

It is with genuine gratitude and warm regard that I dedicate this work to almighty

God, and to my beloved parents Carlos and Rosemary. To my best friends, Karen, Alicia,

Jenny and Esteban. You guys have changed my life, love you forever.

Domenica

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Introduction

As the world is continually changing and innovating, technology has become one of the best ways to get access to a vast volume of information. Annand (2015) asserts that the Internet is an open educational resource that allows educators to share and adapt the available knowledge for educational purposes and plays a significant role in all societies' developmental challenges in the 21st century. According to Cheng (2016), "The online world provides an unparalleled opportunity for foreign language learners to experiment with a transformative learning experience beyond the four walls of a classroom" (p. 2). In consequence, Blended Learning has emerged as an innovative approach.

Sriwichai (2020) considers Blended Learning as a combination of a face-to-face classroom instruction and a virtual classroom, which means using the internet and technology as a basis for teaching. According to O'Connell there are seven types of BL designs: blended face-to-face class, blended online class, the flipped classrooms, the rotation classrooms, the rotation model, the self-blend model, the blended Massive Open Online Course (MOOC), and flexible-mode courses (as cited in Cleveland & Wilton, 2018). The Blended Learning approach is used to develop the four macro-skills of communication; however, this research synthesis focuses on reading comprehension. Moreover, Arnold (2009) declared that helping students capture literacy skills and strategies to cope with the challenges presented in the online reading environment becomes an increasingly urgent and prominent goal for teachers.

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Finally, concerning reading comprehension, Pardede (2019) establishes it as an interactive process that combines characteristics of the reader with texts and tasks. As a result, students are aimed to read and analyze a text and its purpose, to later on perform activities to ensure their comprehension. Thus, this research synthesis aims to analyze online strategies to enhance students´ reading comprehension in a Blended Learning context.

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CHAPTER I: Description of the Research

1.1.Background

According to the Cambridge dictionary, Blended Learning is defined as "a way of learning that combines traditional classroom lessons with lessons that use computer technology and may be given over the Internet." In the 1800s, the first distance education course was launched when Sir Isaac Pitman created a system known as Shorthand Pitman Training which allowed apprentices to send postcards as part of the educational process, having a notion about distance learning for the first time (Nicholson, 2019). Moreover, as the Internet is linked to the Blended Learning approach as part of the distance education process, it is worth remarking that learning through the Internet can be traced back to 1989 when online programs focusing on education were developed in the University of Phoenix (The University of Phoenix, n. d.)

According to Kheirzadeh and Birgani (2018), Blended Learning (hereafter BL) has significantly improved reading comprehension ability by combining face-to-face instruction and virtual interactions through an online reading platform. In addition, by integrating technology and online materials, Behjat, Yamini, and Bagheri (2012) assert that BL enhances autonomy and independence when students read outside the classroom. Therefore, it could be feasible to state that BL can improve reading comprehension of digital text by using different online reading strategies, materials, and platforms.

Regarding online reading strategies, Huang, Chern, and Lin (2009) established global, problem-solving, socio-affective, and support strategies to enable the reader to comprehend and interpret the content of a digital text.

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1.2 Statement of the Problem

Nowadays, with the COVID-19 pandemic situation, the educational system has been experiencing new challenges since teaching and learning have to be conducted through online environments. According to Garcia (2021) there is a concern related to the efficacy of this way of learning. Many people believe that students will not be able to acquire knowledge and develop skills in a virtual modality. However, the author also mentions that Blended Learning aims to integrate and enrich features of both face-to-face and online learning. Due to its flexibility, it is said that this approach can adjust to the new pandemic reality providing students and facilitators with material and resources to continue with the education process. The focus of this paper, however, is placed on reading and the effects Blended Learning has on it.

Reading is one of the most vital skills every English as a foreign language (EFL) learner must master due to several reasons. One of the most relevant ones is that "EFL learners study English in an environment where English is not the primary language" (Pardede, 2019). As a result, reading skills development could represent a difficulty since it follows internal and more in-depth mental procedures (Meniado, 2016) and when it comes to reading from online sources, Zakon (2005) asserts that digital texts are part of a complex open-ended information system that changes daily in structure, form, and content (as cited in Coiro & Dobler, 2007). For this reason, online readers tend to scan too much and not understand a text fully or, on the contrary, read too deeply and not quickly enough, reading in this manner disrupts the natural flow and logic (Brun-Mercer, 2019).

Therefore, a discussion on the role of Blended Learning for enhancing students' online reading comprehension becomes essential.

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1.3 Rationale

Technology is a valuable tool and a great source of information and data. It is an alternative way to interact and learn virtually. In the case of the EFL learning process, several macro skills and subskills should be developed. Reading, writing, speaking, and listening are some of them.

Waugh (2018) explained that:

Reading comprehension is a fundamental skill that all individuals should have. A foundation of reading set in children's early years is integral to proper growth and development. Teachers should construct language arts programs, utilizing forms of technology, which promote reading and decoding forms of text. (p. 24)

Plenty of research has been conducted about reading strategies. However, those strategies have not been applied in a Blended Learning context for online reading comprehension. For instance, Cheng (2016) found that language learners when engaged in online foreign language reading did employ some strategies significantly more than others.

Furthermore, Yang (2012) stressed "the online reading activities in Blended Learning course enabled students to extensively practice what they had learned in the onsite instruction without the limitations of time and location" (p. 393).

For this reason, it is necessary to incorporate online reading strategies that lead students to be engaged and comprehend a text since "a reader does not simply depend on words and sentences but also depends on the memories, experiences, knowledge, and voices that the learner is reminded of from the presented text" (Sheikh, Soomro & Hussain, 2019, p.128).

1.4 Research Questions

The following research questions will be addressed in this research synthesis.

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1.   What are the effects of the Blended Learning Approach on students' online reading comprehension skills?

2.   What online reading-comprehension strategies are effective in a Blended Learning context?

3.   What are the perceptions of students and teachers towards Blended Learning and reading comprehension performance?

1.5 Objectives

1.5.1 General objective

To identify the effects of Blended Learning on students´ online reading comprehension strategies.

1.5.2 Specific objectives

●   To determine effective online reading comprehension strategies and their application in an EFL Blended-learning context.

●   To analyze the perception of students and teachers towards the Blended Learning approach and reading comprehension practice.

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CHAPTER II: Theoretical Framework

2.1 What is Blended Learning?

In 1840, Isaac Pitman, launched the first distance education course. Sir Pitman sent

shorthand texts to his apprentices via mailed postcards when physical interaction was impossible.

Although computers and technological devices were not involved at that time, constructive

feedback and formative assessment were a vital part of the teaching-learning process (Pappas,

2015). To establish a difference between traditional face-to-face learning and distance learning,

Osguthorpe and Graham (2003) claimed that traditional formal learning generally occurs in a

live synchronous environment with person-to-person interaction whilst distance learning

comprises self-paced learning and learning materials interactions that typically occur in an

asynchronous environment.

Nowadays, the expansion of the Internet has increased the popularity of distance

education and created new terminologies such as online learning, e-learning, and Blended

Learning (henceforth BL) (Güzer & Caner, 2014). Many authors and researchers had been

looking for a concept to define BL accurately. Cleveland and Wilton (2018), for instance, stated

that Blended Learning is referred to as hybrid or mixed-mode learning in which learners are not

aimed to be physically present in a classroom but may interact digitally through online

communities. According to Staker and Horn (2012), BL is defined as:

> …a formal education program in which a student learns at least in part through online
>
> learning with some element of student control over time, place, path, and/or pace and at
>
> least in part at a supervised brick-and-mortar location away from home. The modalities
>
> along each student's learning path within a course or subject are connected to provide an
>
> integrated learning experience. (p.3)

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Besides the previous claim, Neumeier (2005) defined Blended Learning as a combination of face-to-face (FtF) and computer-assisted learning (CAL) but also recognized that one crucial aim of Blended Learning is "to find the most effective and efficient combination of the two modes for the individual learning subject, contexts and objectives" (p. 164). Finally, Lalima and Dangwal (2017) indicate that BL is an innovative concept that incorporates advantages of traditional teaching and ICT (Information and Communications Technology) supported learning. Online learning provides a platform for all individuals to learn and share in their own time and place (Staker & Horn, 2012).

To sum up, Blended Learning is an educational approach that combines two types of modalities: face-to-face interaction and online instruction. In this way, students can perform group activities and projects and interact digitally through online communities. As with other educational approaches, Blended Learning has models, sub-models, and categories that will be explained further in this paper.

2.1.1 Blended Learning Models and Categories

Since Blended Learning was introduced to the EFL context, it has been used in many different ways in this field. As Volchenkova (2016) explains, this approach has the advantage of being flexible to accommodate different learning styles. Therefore, several models or variations of this approach have emerged according to the classroom needs.

Horn and Staker (2011) considered Blended Learning as a bimodal delivery approach brick-and-mortar, and online learning were the pillars from which BL based its features. These authors conducted a study named "The rise of K–12 blended learning: Profiles of emerging models" in which six BL models were described. Nevertheless, as a preliminary categorization of this approach, Staker and Horn (2012) decided to condense the six BL models into four,

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developing a new BL taxonomy. Furthermore, these authors describe subcategories for each model.

Rotation model. In this model, students rotate between various learning modalities. Online learning is one of them. Moreover, learners perform group activities, written assignments, and full-class instruction.

1. **Station-Rotation Model.** Students rotate on a fixed schedule or at the teacher's discretion among classroom-based learning modalities. Learners perform group projects and written assignments and alternate among activities.

2. **Lab-rotation model.** Students rotate to a computer lab for the online learning station.

3. **Flipped classroom model.** Students rotate between guided face-to-face practice and online instruction from a remote location. Learners decide where they receive the digital content.

4. **Individual rotation model.** The rotation process occurs on an individualized fixed schedule. Students rotate on different learning modalities and an algorithm or teacher(s) sets individual student schedules.

Flex model. Online activities and discussions enhance the learning process while students move through a flex course according to their needs. Face-to-face help is also available in this model.

Self-blend model. Students need to select asynchronous courses, which are entirely online to compensate for traditional classes.

Enriched-virtual model. Students attend a brick-and-mortar school and learn by using online delivery content.

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Cleveland and Wilton (2018) described three main models of blended learning in a more general sense. The first model is blended presentation and interaction. Out-of-class online exercises and classes for group learning are the basis for this model. The blended block is the second model. It is characterized by activities or "blocks" that incorporate both face-to-face and virtual interactions. Finally, the third model is developed fully online yet comprises synchronous (online classes) and asynchronous activities.

On the other hand, according to the purpose of teaching, Graham (2006) presented three categories of blending learning. These are enabling blends, enhancing blends, and transforming blends. Each of them can be adapted to different educational contexts and necessities.

Enabling Blends. Provide flexibility and opportunities to the learner in different contexts and modalities.

Enhancing Blends. Allow to make changes to the traditional pedagogy without modifying how the teaching and learning process occurs.

Transforming Blends. Allow a total change of the pedagogy. For instance, having a model in which the learner actively constructs knowledge through dynamic interactions and the use of technological devices.

2.1.2 Blended Learning in an English Learning context

According to Grgurović (2011), some authors believe that our [educational] future is connected to BL. In line with this, Blended Learning has been considered an ideal learning approach due to its double component and accommodation in terms of instruction. That is the combination of face-to-face interaction and technology-based instruction (Lalima & Dangwal, 2017; Ochoa & Roberto, 2011).

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In terms of language learning and teaching, Neumeier (2005) asserts that six parameters are required for designing a well-structured BL environment. These parameters are mode, a model of integration, distribution of learning content and objectives, language teaching methods, the involvement of learning subjects, and location (classroom, home, or institutional settings). In addition to the previous claim. Furthermore, in various contexts, Blended Learning has been used as an approach to improve learners' language skills (Albiladi & Alshareef, 2019). For instance, Kurucova, Medová, and Tirpakova (2018) stated that BL significantly influences ESP learners' English mastery, including reading, speaking, listening, and vocabulary since virtual interaction simulated authentic work conditions that allowed learners to enhance these skills. Likewise, Blended Learning has been recognized as a practical learning approach due to its flexibilit y, which enables students to learn and understand the language independently while increasing their levels of motivation and curiosity (Mulyadi, Arifani, Wijayantingsih & Budiastuti, 2020).

Undoubtedly, the BL approach has shown positive effects for improving language skills acquisition by providing students with opportunities to learn English while developing new abilities to use the language (Albiladi & Alshareef, 2019). This paper will analyze the influence of this approach in the development of reading skills.

2.2. Reading Comprehension and Blended Learning

Yazdanpanah (2007) conceptualizes reading comprehension in a general sense as "a complex cognitive skill in which the reader should construct meaning by using all the available resources from both the text and previous knowledge" (p. 64). According to Snow (2002), the reading comprehension process involves three features that assure its effectiveness. First, a reader must have cognitive capacities such as attention, memory, inferencing, and critical analytic ability. Second, motivation and purpose are necessary to carry out the reading process.

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Third, linguistic and vocabulary knowledge are important factors to grasp the main ideas of a text.

Since new information and technologies emerge through the Internet, students' abilities to read and comprehend a text should be enhanced (Coiro & Dobler, 2007). Nevertheless, traditional reading comprehension and online reading comprehension are quite different. Leu et al. (2009) define "online reading comprehension as a process of problem-based inquiry involving the new skills, strategies, dispositions, and social practices that take place as we use the Internet. It is grounded in several different theoretical perspectives: sociocultural theory, cognitive theory, reading comprehension theory, and information theory" (p.266).

In short, traditional reading comprehension and online reading comprehension differ on the use of strategies that readers need to apply and on the development of particular skills to perform better reading comprehension. Cognitive capacities such as memory, critical analytic ability, and attention are involved in the comprehension process. Furthermore, it is worth noticing the difference between two reading modes, linear and non-linear reading.

2.2.1 Linear vs. Non-linear Reading

Gementiza (2018) describes that linear reading is commonly conducted in traditional printed text reading. In this mode, readers need to read from the beginning to the end since this type of texts include word arrangement in a grammatical and stylistic way. Short stories, novels, and educational texts are examples of linear texts. According to Zenotz (2012), features of the online text such as hypertext and hypermedia condition the online reading process, which, due to the presence of links, demands both linear and non-linear reading. In non-linear texts, readers do not follow a sequential path, but it is for the readers to grasp the main idea and sense of a text. Concept maps, diagrams, and line graphs are included in this type of text.

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Moreover, texts of the non-linear type require extensive navigation time since they include pieces of information in random positions that disturb a linear and straight reading pattern. In this way, Spiro and Cheng (1990) emphasized that in online texts, readers need to revise, rearrange, and explore the reading material placed in different situations to acquire knowledge. For this reason, they proposed the cognitive flexibility theory to explain how previous knowledge reassembles to adapt to new environments.

2.2.2 Cognitive Flexibility Theory

Many text-based reading strategies have been proved in common classroom settings in previous studies related to reading comprehension. However, online reading is another type of reading that has increased and become a worldwide practice without the time and location limits (Zenotz, 2012). In this context, students need to apply pre-existential knowledge in what is new for them. According to Kanselaar (2002) a theory that encompasses this assertion is the one proposed by Jean Piaget (1896-1980) called "cognitive constructivism". This theory explains that human intellect development is an adaptation and organization process, where adaptation implies assimilation and accommodation of the new knowledge and the organization process in which schemes are mentally developed (Kanselaar, 2002). In the same line, Spiro and Jehng (1990) proposed the cognitive flexibility theory, which establishes "the ability to restructure one's knowledge, in many ways spontaneously, an adaptive response to radically changing situational demands…" (p.165). In agreement with this claim, Just and Carpenter (1980) consider previous knowledge essential in the reading process, encompassing processing and encoding words.

In short, in line with the cognitive constructivism theory, the cognitive flexibility theory establishes previous knowledge and experiences as the basis for understanding and gaining domain of new content by following processes of adaptation, organization, and accommodation.

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Finally, according to Spiro, readers in online contexts are aimed to use and reconstruct in a flexible way the existing knowledge they have with the new knowledge and apply it in different reading situations (as cited in Coiro & Dobler, 2007).

2.3 Online Reading Strategies

As Huang (2013) explains, reading is an essential skill for the language learning process. Nevertheless, it is essential to provide EFL learners with reading strategies to conduct online reading in a blended learning approach. Several authors have been analyzing what online reading strategies EFL learners use (Taki & Soleimani, 2012) and the influence those reading strategies have upon reading comprehension in EFL learners (Huang, Chern, & Lin, 2009). These researchers have identified four types of reading strategies applied in an online context according to their function.

Global Strategies. These strategies enable the readers to infer and predict the text's content (Huang et al., 2009; Huang, 2013). Moreover, Taki and Soleimani (2012) declared, "Setting a purpose for reading, activating prior knowledge, and verifying whether the content fits the purpose are examples of global reading strategies" (p.174).

Problem-Solving Strategies. When reading online, a reader may struggle with losing concentration, interpreting the meaning of unknown words, and understanding the text's content. However, problem-solving strategies help students face these difficulties by allowing them to re-read a text, regulating reading speed, selecting shortened versions of the text and reading aloud when it is necessary (Huang, 2013; Taki & Soleimani, 2012; Huang et al., 2009; Chen, 2015).

Socio-affective Strategies. According to Huang et al. (2009), these strategies include discussion boards, chat rooms, and music boxes. This type of element enhances online interaction and communication while reading.

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Support Strategies. Dictionaries, translation, paraphrasing, taking notes, and highlighting are examples of support reading strategies. They help increase reading comprehension and retention (Huang, 2013; Taki & Soleimani, 2012; Huang et al., 2009).

In summary, one of the components of the Blended Learning approach is virtual instruction and interaction. Digital reading should follow a process in which EFL learners successfully apply any of the four types of strategies to comprehend and understand the text. Global strategies allow prediction and inference, while problem-solving strategies allow interpreting the meaning and regulating reading speed. Socio-affective strategies boost discussion boards and chat rooms. Finally, support strategies enhance reading comprehension by letting the student highlight, paraphrase, or translate parts of the text.

2.4 Online Reading Tools and Programs used in Blended Learning

According to Altun (2015), "Using technology in foreign language learning and teaching is useful for both teachers and students. There is a great tendency among teachers to use technological tools in language learning classrooms" (p. 22). Regarding computer programs and different types of software, Lewis (1998) asserts that they help students improve their reading skills. For instance, CD-ROM, multimedia, and talking books offer students a wide range of auditory information that produces better text comprehension (Lewis, 1998). Likewise, ICTs represent a mechanism to make learning more accessible and practical by using new and innovative elements and methods (Kurt & Bensen, 2017). Even though there are plenty of different tools that can be used for reading in a BL context, e-books, audiobooks, and ICT tools will be explained further in this paper.

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2.4.1 E-books, Audiobooks and ICT's

Currently, people have access to electronic or digital books, such as PDFs, InDesign, Quark and Word, etc. (Hardy, 2016). Among the characteristics of eBooks, Wahl (2018) assures that eBooks are reflowable, which means that they must fit any device's screen and keep the same format in terms of chapters, images, and lines. Moreover, eBooks save money and space since readers could have several books on the same device by downloading them virtually for less than five dollars. In the educational context, Embong, Noor, Hashim, Ali, and Shaari (2012) establish that features such as highlighting, drawings, and the use of interactive dictionaries, remark the importance of e-books for improving students' reading comprehension and learning process in general. Due to the previous characteristics, E-books are claimed to be the best option for learners to enhance their digital reading comprehension because of their portability and convenience in terms of time, money, and space.

On the other hand, audiobooks aim to help students interpret and understand the content of a book (Melani, 2018). In fact, it represents a supportive tool for learners to overcome problems when learning a foreign language (Khairul, Endang, & Maya, 2016). By making a comparison between audiobooks and printed books, Pedersen and Have (2012) claimed "the audiobook experience can take place in approximately the same settings as the printed book experience, but it involves one central difference: body and sight are free to move around during the process of reading" (p. 89). In connection to the previous claim, Moyer (2011) described that listening to an audiobook is 'real' reading and that listeners can engage with it in much the same way as they can engage with printed or digital texts.

According to Leu, Kinzer, Coiro, and Cammack (2004), current communication and technological development influence different personal and professional aspects. New literacy

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lets people use the Internet and ICTs to locate, critically evaluate, and synthesize the information's usefulness.

Moreover, Leu et al. (2004) argue that several nations are trying to incorporate ICTs into the curriculum to raise literacy levels since three social forces are present. Those are 1) global economic competition that aims to use information and communication effectively, 2) the Internet as a powerful technology for information and communication, and 3) governments' desire to ensure higher levels of literacy achievement. Moreover, ICTs can improve English acquisition by offering helpful features such as instant feedback, adaptability, easy use, and interactivity (Çakici, 2016).

2.4.2 Programs and Platforms

According to Dewi (2014), "if teachers appropriately employed ICTs, such as choosing the right website, making use of a social network, using web-based applications, etc., they can benefit the learners by promoting their self-regulated learning in a number of ways" (p. 2). Studies have acknowledged the importance of using a learning platform or program in a Blended Learning context to foster abilities and skills in learners. Edmodo and Moodle are learning platforms that some researchers have used in BL environments for enhancing the teaching and learning process (Dewi, 2014; Costa, Alvelos, & Teixeira, 2012).

Furthermore, this paper will present reading programs as ReadTheory, Headsprout Early Reading, and ICANREAD, which have been used to analyze their effect on learners' reading comprehension development.

Edmodo is a social learning platform where learners can interact, conduct several activities online, and provide feedback among their peers. Besides, Edmodo includes features that enable students to share their ideas and comments without time limitations. In this way,

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"students can independently construct their knowledge and improve their language fluency" (Dewi, 2014, p. 9).

Moreover, according to Costa, Alvelos, and Teixeira (2012), in the Moodle platform, teachers can create and design a course website to transfer information. This learning platform also includes features as chats and discussion forums to promote interaction among instructors and learners. As assessment tools, teachers can create online tests, quizzes, and surveys. Furthermore, the authors indicate two classes of functionalities in Moodle, resources and modules. The author defined these two elements as follows:

Resources represent instructional materials that are usually created in digital formats and then uploaded to the platform. Web pages, PowerPoint files, word documents, flash animations, video, and audio files represent some examples of these resources. Modules are components created via Moodle to provide interaction among students and teachers towards manipulation and content transformation. (p. 336)

In terms of reading programs, ReadTheory is an online tool that fosters students' reading motivation by showing texts and illustrative literary passages. At the end of each reading, learners are asked to respond to several comprehension questions. Additionally, instructors can track student's progress through graphics and scores (ReadTheory, 2014)

Headsprout Early Reading is another Internet-based program designed to develop phonic skills and reading comprehension abilities in children. This program "represents a fundamental example of a technology transfer process that combines the scientific study of reading and the experimental analysis of behavior, with lessons learned from instructional systems design, the applied analysis of behavior, and practical classroom teaching" (Layng, Twyman, & Stikeleather, 2003, p.11). Finally, ICANREAD is an online e-book guided reading program that

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includes interactive features and reading passages. Sounds, talking voices, text effects, narrator's voice, and the read-aloud feature are some of the characteristics this program uses. Moreover, the ICANREAD program incorporates inferential, evaluative, and literal embedded comprehension questions that support critical reading and engagement with the text (Ciampa, 2012).

CHAPTER III: Literature Review

In the EFL context, reading proficiency represents one of the essential tools for acquiring language input; therefore, language teachers should look for options and ways to enhance reading skills' development in learners through different contexts: inside and outside the classroom (Ghazizadeh & Fatemipour, 2017). Henceforth Blended Learning can facilitate foreign language acquisition and the development of reading abilities by combining face-to-face and online instruction (Ja'ashan, 2015; Albiladi, & Alshareef, 2019).

This chapter will describe aspects such as the influence of BL on the development of language skills, the effects of BL on learners' reading comprehension skills, online reading comprehension strategies, and teachers' and students' perceptions towards BL.

3.1 Blended Learning in the EFL context

Blended Learning has played an important role for years in the English as a Foreign Language (EFL) learning area (Altay & Altay, 2019) since this approach integrates technology for accomplishing an active language learning process. In effect, some authors argued that BL helps to foster the English learning process, the development of language skills and the retention of grammar knowledge. All of these processes are obtained by learning the language in an authentic and flexible way (Azamat, Gönen & Aydoğan, 2018; QINDAH, 2018; Sriwichai, 2020; Al Bataineh, Banikalef & Albashtawi, 2019).

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For instance, QINDAH (2018) and Al Bataineh et al. (2019) conducted a mixed-methods study to prove the effectiveness of the BL approach in students' performance and development of grammar knowledge. Both the control and experimental group were exposed to the same content but in a different way. The experimental group had access to online resources, which vary among quizzes, videos, English Grammar websites, and Moodle online platforms. The use of online resources reported beneficial contributions on the following aspects. Retention of grammatical knowledge, immediate feedback improves grammar tests' results. Online resources also boosted active participation and interaction, which resulted in a better understanding of grammatical rules. Additionally, the use of Moodle as an online learning platform made learners feel "engaged in a dynamic, simultaneous, free, joint, and significant learning experience" (Al Bataineh et al., 2019, p.332).

This goes in accordance with the results of a study conducted by Azamat, Gönen, and Aydoğan (2018), which showed that a great majority of EFL learners were highly motivated to work in a Blended Learning context since they were able to use technological devices as learning tools which at the same time increase autonomy and responsibility. In addition, English proficiency levels and students' preferences were in good balance as the researchers established, "the higher level of English proficiency, the greater preference for blended learning to learn English as a foreign language" (Azamat et al., 2018, p. 66). In this way, the study concluded by considering BL as a practical English learning approach for enhancing the educational process.

On the other hand, the studies conducted by Sriwichai (2020) and Al Zumor, Al Refaai, Bader Eddin, & Aziz Al-Rahman (2013) explored students' readiness and problems for learning English through a BL environment, as well as some limitations that this approach has shown. In Sriwichai's (2020) study, a part of the sample considered that an online environment represented

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a difficulty to learn English due to some factors, such as the lack of skills and materials to work in online learning platforms. The researcher suggested teachers' training as a necessary aspect for handling different challenges and problems that students might face in a Blended Learning context. Likewise, Al Zumor et al. (2013) studied EFL learners' views regarding the advantages and limitations of Blended Learning. Although some students recognized the positive effects BL produced on their reading abilities while making their vocabulary wider, they pointed out some limitations such as internet connection issues, social isolation, and teachers' lack of training in the use of online resources.

In summary, the previous studies show that BL can be used to foster the English learning process, develop abilities and increase motivation and autonomy in EFL learners. Furthermore, when students learned in a blended environment, participation and interaction enabled them to retain knowledge and information in a practical way. Nevertheless, teachers and students can also face some limitations and challenges in an online setting.

3.2 EFL reading development in Blended Learning

Many researchers have studied the influence of a Blended Learning context in enhancing reading skills (Kara, 2018; Kheirzadeh & Birgani, 2018; Ghazizadeh & Fatemipour, 2017; Syakur, Fanani, & Ahmadi, 2020; Al-Jarf, 2007; Rombot, Boeriswati & Suparman, 2020).

For instance, Al-Jarf (2007), Kheirzadeh and Birgani (2018), and Ghazizadeh and Fatemipour (2017) conducted three different research studies to investigate the influence and effects of the blended learning approach on reading skills development. The methodological procedure of the studies was similar since research studies used pre-tests and post-tests to collect the data. Students performed several online reading activities, which varied among online group discussions and reading comprehension questions and the role of teachers was to provide

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students with appropriate feedback. The authors found out that because of this combination of online and traditional in-class instruction, the experimental groups in the three studies outperformed their reading abilities in English since they felt motivated and confident to use reading skills studied in class anytime. Also, students in the BL context felt responsible for their performance, making them aware of posting, commenting, or arguing online after their classes.

To examine whether BL enhances students' reading ability and comprehension through learning platforms based on website media, Kara (2018) and Syakur et al. (2020) carried out different research studies. In Kara's (2018) study, a part of the participants had access to Edmodo as a virtual educational platform. The study found that working via Edmodo motivated students to complete their reading assignments while interacting and sharing information. Likewise, Syakur et al. (2020) concluded that students responded positively towards English reading based on a learning platform. Participants' scores and motivation to use new and innovative forms to read in English increased. Therefore, the authors confirmed the effectiveness of the BL approach to foster reading skills development and comprehension in English. Rombot, Boeriswati and Suparman (2020) also agreed with these results. They demonstrated that BL gave learners the opportunity to re-read a text without time restriction while enjoying interesting interactive digital content.

In general, as with any approach or method, BL has its advantages and disadvantages if seen from different perspectives. However, the empirical research on this area suggests that this approach positively influences the EFL learning context. Moreover, these studies confirmed that BL helps foster reading skills development by using interactive and innovative online resources. Students reported their satisfaction with this approach since it increased their confidence to interact, receive feedback and learn the language authentically with no time limits.

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3.3 Online Reading Comprehension Strategies

According to Pardede (2019), a proficient reader of printed texts may struggle while reading online since he has developed neither proper skills nor good techniques and strategies. Several researchers have applied and proved the efficacy of different methods to analyze online reading comprehension in Blended Learning contexts in terms of online reading comprehension. They identify strategies like inferring (Park and Kim, 2017; Azmuddin, Mohd Nor & Hamat, 2020), focusing on the purpose of the text, checking sources credibility (Park and Kim, 2017; Chen, 2015; Brun-Mercer, 2019), predicting, questioning, in-text annotation (Tseng and Yeh, 2017; Chen, 2015), skimming and scanning, paraphrasing, re-reading, translation, texts evaluation (Chen, 2015) and meaning construction (Azmuddin, Mohd Nor & Hamat, 2020).

These strategies can interact among themselves with other digital features. As an example of the previous claim, the annotation strategy has been applied in some studies to measure reading comprehension levels (Tseng and Yeh, 2017; Azmuddin, Mohd Nor & Hamat, 2020). In Tseng and Yeh's (2017), the authors introduced annotation as a feature of Google Docs to analyze the usefulness of four online reading strategies 1) clarifying, 2) predicting, 3) questioning and 4) summarizing. All of these strategies were used to obtain data regarding reading comprehension. Clarification was the least useful strategy because students needed to work with a dictionary to understand unknown words, yet they had a wide range of definitions. Summarizing was placed in the third position since the annotations students made while reading helped them write summaries afterward by revising their notes on main ideas and relevant information. Finally, in the second and first place, two strategies were ranked. Those are predicting and questioning. The authors explain this finding as a consequence of interaction and collaborative reading; that is, learners communicate with each other by posing questions and

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counterarguments online. Also, while reading, students annotated their predictions about the text by skimming and reading at the title; hence, learners were able to monitor their comprehension of the reading.

Likewise, Azmuddin, Mohd Nor, and Hamat (2020) studied the types of annotation tools learners used to facilitate reading comprehension in a blended course. Students were exposed to an online reading system called iREAD in which two features of annotation were available: highlighting and note-taking section. Along with the texts, students were asked to use colors to highlight relevant ideas and topic sentences and recognize paragraph structures. At the end of the study, the authors discovered the benefits of annotation and highlighting as reading comprehension tools since students paraphrased, contextualized, and synthesized main ideas more easily.

On the other hand, the study conducted by Park and Kim (2017) does focus on some factors that influenced students' reading and the use of online reading strategies in a blended context. Thus, the authors analyzed strategies, such as adjusting to reading patterns, making inferences and connections, monitoring comprehension, previewing, and focusing on the purpose of the text. Most of the data were collected by observation. It was shown that identifying the purpose of a passage played a vital role since students adjusted reading patterns (speed and reading thoroughness) based on it. In addition, the making of connections between prior knowledge of texts and new online reading knowledge constituted another reading strategy. As the next strategy, students previewed the texts before getting interested in them. At home, learners chose texts that looked interactive, funny, and familiar. Finally, instructors monitored reading comprehension more than parents did because they knew the purpose of each text and the abilities that students might develop.

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In another study, Chen (2015) analyzed patterns in online reading strategies used in EFL learners with high and low proficiency levels. Strategies were divided into global reading strategies, problem-solving strategies, and support reading strategies. An Online Survey of Reading Strategies (OSORS) was applied to measure and range the used reading strategies. The survey's top ten showed that global reading strategies were the most frequently used, representing half of the ranked ten items. Such strategies involve 1) skimming and scanning, 2) using context clues to get a general idea of a text, 3) getting back to previous knowledge and associating it to the new content, 4) using figures and pictures to increase understanding.

Additionally, problem-solving strategies represented three out of ten selected items. Those are, guessing meanings of unknown words, getting back to the text when losing concentration, and re-reading to understand the text adequately. Support strategies such as using online dictionaries, paraphrasing and translating, and note-taking strategy were the last used. The author concludes by stating that learners with higher proficiency levels applied more global and problem-solving strategies when reading online. However, both groups used support strategies with similar frequency since these types of strategies incorporate first language features.

As for the results, the findings of the reported studies cited in this section were positive in terms of reading comprehension. Digital platforms such as Google Docs and iREAD were used since they include features and tools that enable students to highlight, annotate, infer, present arguments, and pose questions along with the text. Even though only one study analyzed three categories in which online reading strategies were divided, in general, the empirical evidence on this area affirms that several online reading strategies can be applied to enhance reading comprehension in a BL context.

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3.4 Perceptions of teachers and learners towards Blended Learning

Several research studies have been conducted to analyze learners' and teachers' perceptions and experiences towards Blended Learning. Therefore, research on this dimension has been primarily quantitative (Bouilheres, Le, McDonald, Nkhoma, and Jandung-Montera, 2020; Tseng & Walsh, 2016; Radia, 2019; Kofar, 2016) except for Ja'ashan (2015) and Hoang (2015) whose research studies were qualitative. The instruments used to analyze the data varied among surveys (Bouilheres, Le, McDonald, Nkhoma, and Jandung-Montera, 2020; Ja'ashan, 2015; Tseng & Walsh, 2016; Radia, 2019), questionnaires (Bouilheres, Le, McDonald, Nkhoma, and Jandung-Montera, 2020; Ja'ashan, 2015; Radia, 2019; Kofar, 2016), scales (Tseng & Walsh, 2016), interviews and observation (Hoang, 2015). The majority of these studies recruited English learners (Radia, 2019; Tseng & Walsh, 2016; Ja'ashan, 2015) and EFL teachers as participants (Kofar, 2016; Hoang, 2015). Nevertheless, the study conducted by Bouilheres et al. (2020) analyzed the results of other majors' students.

This study's findings are consistent with other studies in the same context in which learners perceive BL positively (Ja'ashan, 2015; Tseng & Walsh, 2016; Radia, 2019). For instance, Tseng and Walsh (2016) analyzed motivation levels, learning outcomes, and preferences among traditional course learners and learners in a blended learning course. Motivation, confidence, and satisfaction levels among students enrolled in the blended learning course were higher. Likewise, Ja'ashan (2015) and Radia (2019) analyzed views and perceptions of BL. In both studies. As key findings, the authors explained the satisfaction learners feel when learning English through a BL approach. According to the participants' responses in the questionnaires, this approach made the learning process more interesting, collaborative, and

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interactive (Ja'ashan, 2015). Also, students seemed more responsible and autonomous when reading online (Radia, 2019).

Even though past studies were related to EFL students' perceptions, according to Bouilheres et al. (2020), participants who were not English learners had a positive experience in other learning aspects. Students, for instance, gained confidence and increased their participation in class based on interaction with the lecturers and classmates, using online materials, and performing activities digitally. Then the authors found that BL affects performance differently depending on specific aspects such as self-confidence, flexibility, and engagement.

On the other hand, Hoang (2015) conducted a study that analyzes teachers' perspectives and perceptions on Blended Learning. The author emphasized the necessity of instructors' enhancement of technological pedagogical content knowledge to apply BL successfully. However, teachers assured that this approach provided students with a flexible learning time and a wide range of learning resources to interact and communicate actively during the EFL learning process. Similarly, Kofar (2016) affirms that most of the participants consider BL as an opportunity to enhance learners' autonomous learning. Still, both studies describe some of the challenges that the adoption of this approach might have according to the participants' experience. Such challenges had to do with the adaptability of Blended Learning to students' learning styles, accessibility to the Internet, and lack of technological support for instructors and learners.

Likewise, Rahim (2019) ascertained that being in a BL context produced autonomy and independence in EFL learners regarding their own learning process that influenced their language proficiency. However, in the same study Rahim (2019) pointed out that "the adoption

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of a blended learning approach needs time and commitment to replace the traditional methods of

education with…technological-integrated approaches" (p. 1167).

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CHAPTER IV: Research Methodology

This study aimed to identify the effects of Blended Learning on EFL students´ online reading comprehension strategies through the development of a research synthesis, which may be defined as "the systematic secondary review of accumulated primary research studies" (Norris and Ortega, 2006, p.4). Therefore, a thorough analysis of 18 studies was carried out for this bibliographical research study.

The information about Blended Learning and online reading strategies was taken from online articles published in databases such as the Education Resources Information Center (ERIC), ProQuest, Taylor & Francis, ResearchGate, and Google Scholar. Additionally, relevant articles for this study were found in several journals in the field such as *Education and Information Technologies, English Language Teaching, The Eurasia Proceedings of Educational & Social Sciences, Asian Journal of Education and Training, Jurnal Sosial Humaniorah, Budapest International Research and Critics in Linguistics and Education (BirLE) Journal, Journal of Language Teaching and Research, Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi, Journal of Applied Linguistics and Language Research, AL IBTIDA: Jurnal Pendidikan Guru Mi, Modern Journal of Language Teaching Methods (MJLTM), Procedia - Social and Behavioral Sciences, International Journal of English Linguistics, International Journal of Foreign Language Teaching & Research, Educational Technology Research and Development, Eurasian Journal of Applied Linguistics, Computer Assisted Language Learning, English Language Teaching (ELT)*

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The key terms included combinations of the following: (a) Blended learning, (b) online, (c) reading, (d) EFL, (e) strategies, (f) skills, (g) comprehension, and (h) technology.

The studies selected for this research synthesis aimed to meet the following criteria to assure relevance and credibility.

a. Studies were published between 2013 and 2020. This time frame was selected because it represents a significant period of time in which evidence about Blended Learning began to appear and evolved across the years.

b. Primary research papers, which applied different approaches such as quantitative, qualitative, or mixed methods, were accepted. Nevertheless, the study research method of each study was taken into account. It had to be experimental, quasi-experimental, or action research to assure the credibility of the treatment's efficacy.

c. Studies about the effects of the Blended Learning approach on students' reading comprehension performance.

d. Studies that present a variety of reading strategies apply in online environments.

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CHAPTER V: Data Analysis

The 18 analyzed studies used in this synthesis were coded according to the following

categories: Year of publication, research location, level of participants, online reading strategies,

linguistic and nonlinguistic effects, perceptions of teachers and learners, and Blended Learning

limitations. Such categories aim to meet the objectives and answer the research questions.

Table 1

Publication Year of the Studies

Year of Publication	Number of Studies	Author	Percentages
2012-2015	4	Behjat, Yamini, & Bagheri (2012); Al Zumor, Al Refaai, Bader Eddin, & Aziz Al-Rahman (2013); Zahedi & Tabatabaei (2015); Ja'ashan (2015)	22,22%
2016-2019	9	Koſar, (2016); Tseng & Walsh (2016); Ghazizadeh & Fatemipour (2017); Kazakoff, Macaruso, & Hook (2017); QINDAH (2018); Kara (2018); Kheirzadeh & Birgani (2018); Lamri & Hamzaoui (2018); Radia (2019)	50%
2020	5	Rombot, Boeriswati & Suparman (2020); Bouilheres, Le, McDonald, Nkhoma, and Jandung-Montera (2020); Sriwichai (2020); Syakur, Fanani, & Ahmadi (2020); Azmuddin, Mohd Nor & Hamat (2020)	27,77%

Note. N= 18

Table 1 shows the year of publication of each study. Four out (22.22%) of the 18 primary

studies examined in this research were published from 2012 to 2015. It can be inferred that

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during these years, Blended Learning started to gain relevance in the educational field because of

the technological breakthroughs and the positive influence of the Internet in learning processes

(Behjat, Yamini, & Bagheri, 2012). Nine of the primary studies (50%) were published in a

period of three years, from 2016 to 2019, which indicates a gradual increase in the use of

Blended Learning as an innovative way for the teaching and learning process (Tseng & Walsh,

2016; Radia, 2019). Finally, five (27, 77%) studies were published recently, since the pandemic

crisis started. It can be argued that Blended Learning arose as an alternative to creating a flexible

and interactive learning environment in a virtual modality (Ferlazzo, 2020).

Table 2

Research Location

Location	Number of Studies	Author	Percentages
Asia	14	Behjat, Yamini, & Bagheri (2012); Al Zumor, Al Refaai, Bader Eddin, & Aziz Al-Rahman (2013); Zahedi & Tabatabaei (2015); Ja'ashan (2015); Koſar, (2016); Ghazizadeh & Fatemipour (2017); QINDAH (2018); Kara (2018); Kheirzadeh & Birgani (2018); Rombot, Boeriswati & Suparman (2020); Bouilheres, Le, McDonald, Nkhoma, and Jandung-Montera (2020); Sriwichai (2020); Syakur, Fanani, & Ahmadi (2020); Azmuddin, Mohd Nor & Hamat (2020)	77,77%
Africa	2	Radia (2019); Lamri & Hamzaoui (2018)	11,11%
North America	2	Kazakoff, Macaruso, & Hook (2017); Tseng & Walsh (2016)	11,11%

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Latin America	0	-	-

Note. N=18

Table 2 presents the classification of studies according to the research location. The great

majority (77, 77%) of the examined studies were conducted in Asia, which clearly shows the

availability of research on Blended Learning in this continent. Additionally, table 2 shows that

both in Africa and North America, only two studies were found, which might indicate that more

research on BL as an educational approach is needed in these continents. Finally, studies in Latin

America were not found. However, it would be necessary to revise this information in some

months since probably due to the pandemic, the method could be implemented in many more

places.

Table 3

Level of education of the participants in primary studies

Level of education	Number of Studies	Author	Percentages
Kindergarten	1	Kazakoff, Macaruso, & Hook (2017)	5,55%
Elementary School	2	Kazakoff, Macaruso, & Hook (2017); Rombot, Boeriswati & Suparman (2020)	11,11%
Secondary School	1	QINDAH (2018)	5,55%
Higher Institutions (University-undergraduate students)	14	Ja'ashan (2015); Ghazizadeh & Fatemipour (2017); Sriwichai (2020); Syakur, Fanani, & Ahmadi (2020); Azmuddin, Mohd Nor & Hamat (2020); Al Zumor, Al Refaai, Bader Eddin, & Aziz Al-Rahman (2013); Kara (2018); Kheirzadeh & Birgani (2018); Bouilheres, Le, McDonald, Nkhoma, and Jandung-Montera (2020); Radia (2019); Zahedi & Tabatabaei	77,77%

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		(2015); Tseng & Walsh (2016); Lamri & Hamzaoui (2018); Behjat, Yamini, & Bagheri (2012)	
Instructors	1	Koſar, (2016)	5,55%

Note. N=18 *Studies are counted in more than one category

Table 3 illustrates the educational level of the people who participated in the different studies. It can be seen that two (11, 11%) studies took kindergarten and elementary school students as a sample. Only one study (5, 55%) out of the 18 had participants from a secondary school level. However, the table shows that the great majority of the population in primary studies were university students. Some of them were enrolled in English departments or ESP courses. This fact suggests that Blended Learning has been applied mostly in higher educational contexts, where students showed better language proficiency levels. The last row of table 3 includes one study in which 32 EFL instructors exposed their perceptions and experiences towards Blended Learning as an educational approach. This study was included because, as Koſar (2016) pointed out, "Teachers' perceptions do play an important role in any kind of initiative which will be embarked to promote student learning [...]" (p.743).

Table 4

Strategies used in online reading

Reading Strategies	Number of Studies	Author	Percentages
Summarization	5	Behjat, Yamini, & Bagheri (2012); Ghazizadeh & Fatemipour (2017); Radia (2019); Zahedi & Tabatabaei (2015); Yang (2012)	55,55%
Annotating and Highlighting	1	Azmuddin, Mohd Nor & Hamat (2020)	11,11%

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Skimming and Scanning	3	Kara (2018);); Zahedi & Tabatabaei (2015); Lamri & Hamzaoui (2018)	33,33%
Generating and Answering questions	4	Ghazizadeh & Fatemipour (2017); Rombot, Boeriswati & Suparman (2020); Zahedi & Tabatabaei (2015); Yang (2012)	44,44%
Predicting and Guessing meaning	5	Ghazizadeh & Fatemipour (2017); Zahedi & Tabatabaei (2015); Lamri & Hamzaoui (2018); Rombot, Boeriswati & Suparman (2020); Yang (2012)	55,55%
Clarification	1	Yang (2012)	11,11%

Note. N= 9 *Studies are counted in more than one category

Table 4 shows reading strategies employed to perform different reading activities proposed by the researchers. Nine out of the eighteen primary studies were analyzed to create Table 4 since they all focus on reading in a BL context. Although, as seen above, summarization was the most common reading strategy among primary studies, according to Zahedi and Tabatabaei (2015), this reading comprehension strategy enables readers to use their own words to rephrase the main ideas of the text. Furthermore, annotation and highlighting strategies were applied in an online context where Azmuddin et al. (2020) examined how an online reading program (iREAD) facilitates participants' reading processes. As a result, the authors declared that these strategies created interactive reading while enabling students to interpret and synthesize ideas. Next in the table, skimming and scanning strategies are listed. Before readers go into a text, they skim the text to get an overview and assure its relevance (Zahedi & Tabatabaei, 2015). Oppositely, the scanning strategy aims to look for detailed information throughout the text's paragraphs (Zahedi & Tabatabaei, 2015). For instance, in Kara's (2018) study, these two strategies were part of a survey that assessed participants' reading behaviors in a

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Blended Learning context. The results showed that students preferred to be more attentive with the texts and read them thoroughly. It means they chose to scan rather than skim a reading.

Generating and answering questions are reading strategies that authors like Ghazizadeh and Fatemipour (2017), Rombot et al. (2020), and Zahedi and Tabatabaei (2015) employed in their studies to measure in some way participants' reading comprehension. Students were able to generate their own questions and, at the same time, answer text-related questions. Representing the 33,33% on table 4, guessing and predicting the meaning of words are two strategies that the researchers included in their studies. By applying these strategies, participants guided themselves to understand the meanings of unknown words based on the context (Zahedi & Tabatabaei, 2015). The last row of table 4 includes one study, which consists of the clarification reading strategy. Doolittle, Hicks, Triplett, Dee Nichols, and Young (2006) assured that:

> Clarifying involves the identification and clarification of unclear, difficult, or unfamiliar aspects of a text. Clarifying provides the motivation to remediate confusion through re-reading, check comprehension by restating the information and ideas in the text, and the use of external resources (e.g., dictionary or thesaurus) (p. 107).

Table 5

Linguistic effects of reading development in BL

Linguist Effects	Number of Studies	Studies	Percentages
Reading Comprehension Proficiency	11	Ghazizadeh & Fatemipour (2017); Al Zumor, Al Refaai, Bader Eddin, & Aziz Al-Rahman (2013); Kara (2018); Kheirzadeh & Birgani (2018); Behjat, Yamini, & Bagheri (2012); Syakur, Fanani, & Ahmadi (2020); Azmuddin, Mohd Nor & Hamat (2020); Rombot, Boeriswati & Suparman (2020);	78,57%

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		Yang (2012); Lamri & Hamzaoui (2018); Behjat, Yamini, & Bagheri (2012)	
Vocabulary	4	Ghazizadeh & Fatemipour (2017); Al Zumor, Al Refaai, Bader Eddin, & Aziz Al-Rahman (2013); Rombot, Boeriswati & Suparman (2020); Kazakoff, Macaruso, & Hook (2017)	28,57%
Grammar	3	Yang (2012); Al Zumor, Al Refaai, Bader Eddin, & Aziz Al-Rahman (2013); QINDAH (2018)	21,42%

Note. N= 14 *Studies are counted in more than one category

Table 5 shows studies that are counted in more than one category. Thirteen out of the eighteen papers selected for this research were taken into account. All of these studies analyzed several linguistic effects Blended Learning had on participants' reading proficiency. As presented in Table 5, such linguistic effects influenced reading comprehension and the acquisition of vocabulary and grammar knowledge.

The obtained results from Table 5, with the 78,57% of the studies, suggest that the majority of the researchers investigated Blended Learning and its influence on students' reading comprehension proficiency. For instance, Ghazizadeh and Fatemipour (2017) conducted a study to determine the impact of BL on EFL learners' reading proficiency and they concluded "Blended learning, […] can maximize the learning opportunities by happening at the place and time of the learner's choice" (p. 612). It means that this approach enhances the reading process by offering facilities in terms of time and location.

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Moreover, by applying certain online reading strategies as annotation, highlighting, and summarizing, it was proved that learners are able to use linguistic knowledge, their personal background to relate information and consequently achieve comprehension of what was read (Azmuddin et al., 2020). Likewise, Yang (2012) explained that an online environment significantly influenced participants' comprehension of texts, since by means of interaction in chat rooms, use of online dictionaries, and highlighting of excerpts, learners were capable of performing better at the final comprehension test.

On the other hand, Table 5 shows the linguistic effect of BL in vocabulary acquisition. For instance, Ghazizadeh and Fatemipour (2017) help learners build and increase their vocabulary by filling in the blanks exercises and providing students with a word list and definitions to help them realize the meanings of such words. Likewise, it was proved that BL allows participants to be exposed to various kinds of texts (argumentative, social), which expose students to new and useful vocabulary (Al Zumor et al., 2013). Participants had access to vocabulary words regarding synonyms, antonyms, similes, adjectives, idioms, etc. (Kazakoff et al., 2017). Finally, Table 5 shows that three studies examined the acquisition and enhancement of grammar knowledge.

Table 6

Non-linguistic effects of BL

Non-linguistic Effects	Number of Studies	Studies	Percentages
Motivation	7	Kara (2018); Zahedi (2015); Lamri & Hamzaoui (2018); Rombot, Boeriswati & Suparman (2020); Radia (2019); Sriwichai (2020); Ghazizadeh & Fatemipour (2017)	46,66%

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Collaborative work	4	Ja'ashan (2015); Kara (2018); Yang (2012); Azmuddin, Mohd Nor & Hamat (2020);	26,66%
Support (feedback)	4	Al Zumor, Al Refaai, Bader Eddin, & Aziz Al-Rahman (2013); Zahedi (2015); Yang (2012); Radia (2019);	26,66%
Autonomy and Responsibility	7	Kheirzadeh & Birgani (2018); Syakur, Fanani, & Ahmadi (2020); Zahedi (2015); Ghazizadeh & Fatemipour (2017); Radia (2019); QINDAH (2018); Behjat, Yamini, & Bagheri (2012)	46,66%

Note. N=15 *Studies are counted in more than one category

Table 6 describes non-linguistic effects that Blended learning produced and were analyzed on the different primary papers. Such effects relate to motivation, collaborative work, feedback as a supportive tool, and the autonomy and responsibility feeling that participants develop in the studies. As seen above, seven articles pointed out motivation as the main non-linguistic effect that BL produced on the participants. Lamri and Hamzaoui (2018) stated that by using an online learning platform (Moodle), learners felt motivated to use technology as a means to learn and read. Moreover, reading comprehension represents a complex interaction process between the learner and the text. Consequently, motivation, involvement, and enthusiasm are essential parts of efficient reading and better learning outcomes (Rombot et al., 2020). However, in Sriwichai's (2020) study, motivation levels decrease when learning in a Blended environment since participants found it challenging to learn inside and outside the classroom. Furthermore, it was stated by the authors that this situation happened because of students' weaknesses. Lack of English knowledge, vocabulary, and grammar structures were some of the challenges that affected motivation in learners.

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On the other hand, with the same number of studies, autonomy and responsibility were two non-linguistic effects that researchers remarked. Traditional teacher-centered classes can be transformed into a more student-centered approach through Blended learning. In this sense, the responsibility to learn outside the classroom lies upon the learner (Ghazizadeh & Fatemipour, 2017). Likewise, Behjat et al. (2012) assure that "online reading encourages learner's autonomy to read more materials independent of what is presented in the classroom" (p. 609). In addition, Blended Learning helps foster capabilities to perform independently after face-to-face instruction.

> Blended learning confirmed to have a more detailed point of view over acquiring new capabilities and was effective in realizing the exact area of ability for each person, it also created chances for learner development due to its monistic view toward pedagogy and assessment and in addition offered a comprehensive direction of development due to its great potentiality in use of virtual world. (Kheirzadeh & Birgani, 2018, p.118)

Finally, the two last are collaborative work and feedback as a supportive tool. Interaction and collaboration among the community are essential for reading in a BL context since it promotes motivation and interest in learning English (Kara, 2018). In line with this, immediate feedback in virtual contexts is given not only by the teacher or instructor but also by peers and classmates. That is, the whole classroom community is involved in overcoming difficulties developing in this way, social interaction that results in better reading comprehension levels (Yang, 2012).

Table 7

Perceptions of teachers and learners towards BL

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Subjects Involved	Perceptions	Number of Studies	Studies	Percentages
Learners	Positive	5	Ja'ashan (2015); Bouilheres, Le, McDonald, Nkhoma, and Jandung-Montera (2020); Radia (2019); QINDAH (2018); Kara (2018)	62,5%
	Negative	0	-	0%
	Not mentioned	2	Sriwichai (2020); Al Zumor, Al Refaai, Bader Eddin, & Aziz Al-Rahman (2013)	25%
Teachers	Positive	1	Kofar, (2016)	12,5%
	Negative	0	-	0%
	Not mentioned	0	-	0%

Note. N= 8

Table 7 highlights the perceptions teachers and learners have towards the Blended

Learning approach after using it. As seen above, more than half of the studies (62,5%) present

students' positive perceptions. In general, BL as an educational approach was well perceived by

learners who participated in online interactions, reinforcing their autonomy and responsibility to

perform online learning platforms. Moreover, this educational approach helped develop several

skills and abilities, as reported in Radia's (2019) study. However, two (25%) studies do not

present positive nor negative perceptions towards BL, but they describe some challenges learners

and teachers faced during, inside and outside, class time. Accessibility to an internet connection,

technical problems, lack of experience, and lack of skills to perform in virtual environments are

part of the reported issues; nonetheless, cheating and plagiarism was also a concern among

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researchers (Sriwichai, 2020; Al Zumor et al., 2013; Ja'ashan, 2015). Since students reported that BL facilitates cheating, it can be considered as an unethical behavior that relies mainly on the person's principles, yet it might affect teachers' experience when integrating BL.

Regarding teachers' perceptions, one study (12,5%) revealed that English teachers aimed to develop autonomy in their students; for this reason, they consider BL as an alternative to accomplishing this purpose by integrating flexibility to learn in different contexts.

Table 8

Blended Learning limitations

Limitations	Number of Studies	Studies	Percentages
No computer Access	1	QINDAH (2018)	25%
Connectivity Problems	4	QINDAH (2018); Ja'ashan (2015); Al Zumor, Al Refaai, Bader Eddin, & Aziz Al-Rahman (2013); Radia (2019)	100%
Lack of instruction in Blended Learning	1	Sriwichai (2020)	25%

Note. N=4 *Studies are counted in more than one category

Table 8 is quite revealing in different ways as it deals with some BL limitations. Since this approach involves using technological devices for online learning time, computer accessibility represents a limitation for students since they need to get the material and log into platforms that are part of the BL syllabus design QINDAH (2018). As a second BL limitation, slow Internet connectivity or no connectivity represented a major problem for participants who were not capable of following the online process successfully (Radia, 2019). The last row in

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Table 7 illustrates that both teachers' and learners' lack of experience and instruction represents a limitation. About this, Sriwichai (2020) declared the following

> Prior to implementing blended learning, the teachers should be trained about the concept of this method together with how to incorporate online learning mode to face-to-face classroom. Also, they should be trained to handle with the large class size. Similarly, students should be trained how to learn online, and manage their time for both learning modes, provided supports when they face problems in learning. (p.33)

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Chapter VI: Conclusions and Recommendations

6.1.   Conclusions

This research synthesis focused on analyzing the effects of the Blended Learning approach on EFL students' online reading comprehension skills, the variety of online reading strategies applied in BL context, and finally, on the perceptions of students and teachers towards this educational approach. As a result of the analysis, various conclusions can be described in this section to answer the research questions previously stated.

First, positive effects were found regarding the impact of Blended Learning on EFL students' online reading comprehension skills. Several studies emphasized the positive linguistic effects of Blended Learning and the use of online learning platforms on the acquisition of language skills. For instance, platforms such as Edmodo, Moodle, and iREAD were demonstrated to help students develop their comprehension by using and applying tools these systems included. Learners were able to summarize, highlight, annotate, and make comments while they were reading, which allowed them to synthesize and contextualize ideas. In consequence, students improved their comprehension of digital texts.

As non-linguistic effects, Blended Learning enhances and boosts autonomy, responsibility, and motivation in students; these aspects were relevant findings that assure BL benefits students' performance while learning a language (Ghazizadeh & Fatemipour, 2017). Collaborative learning in this context was also an essential aspect that studies remarked since Blended Learning involves face-to-face interaction and online instruction. Group discussions and learning in a collaborative context proved to enhance motivation and positively affect students' comprehension (Kara, 2018).

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Second, the reading comprehension strategies that were analyzed demonstrated effectiveness when applied in online modalities. Among the analyzed ones were summarization, predicting, guessing the meaning of words, skimming, scanning, comprehension questions, annotation, and highlighting.

As a result, studies indicated that summarization is the most frequently used strategy for reading. After learners read a text, they extract main ideas from it and use their own words to condense relevant information. Likewise, predicting and guessing the meaning of words were two reading strategies that students applied to increase their text comprehension depending mainly on the context. Furthermore, as in traditional reading, skimming and scanning are strategies that give readers a better understanding and a general overview of the text content. These strategies proved to be effective and fruitful when reading in digital formats.

Moreover, it was found that exercises related to the text content are vital for comprehension. For instance, answering questions about the reading passage allowed students to remember important information. In addition to this, annotation and highlighting were also part of the analyzed online reading strategies, which enable learners to use different colors to accomplish different reading purposes, such as highlighting main ideas with a specific color and details to perform further tasks. It is worth noting that some studies used specialized online reading platforms, which include annotation tools. Such tools allow students to write relevant ideas, key terms, and unknown words next to each paragraph.

It was shown that comprehension in reading improved significantly in students who had access to these previously mentioned online reading strategies. In line with this, Carrell (1998) stated that "reading strategies are of interest not only for what they reveal about the ways readers

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manage interactions with written text but also for how the use of strategies is related to effective comprehension" (p. 97).

Regarding the third and last research question, students and teachers' perceptions towards BL were reviewed. Based on the analysis of chapter 5, it can be concluded that from the 18 studies, students revealed more insights towards BL than teachers did. Learners showed that being in a BL learning context allows them to feel more responsible for their performance, making them aware of posting, commenting, or arguing online after their classes. Moreover, learners reported their satisfaction with this approach since it increased their confidence to interact virtually, receive feedback from their peers and teachers, and learn the language authentically with no time limits. In Ja'ashan's study, participants expressed that this approach made the learning process more enjoyable, collaborative, and interactive (2015).

About teachers' perceptions, they assured that this approach provided students with a flexible learning time and a wide range of learning resources to interact and communicate actively during the EFL learning process. Most of the participants consider BL as an opportunity to enhance students' autonomous learning (Koßar, 2016).

Finally, it is worth considering some elements that make it possible to be part of a Blended Learning environment. First, to participate in BL education, at least one device such as a computer, tablet, or cell phone with Internet access is needed. Besides, the application of this approach demands facilitators and learners' training for effective results when using online material such as E-books or audiobooks.

6.2. Recommendations

Based on the findings of this research synthesis, there are specific recommendations for future research studies. First, it is recommended that instructors consider including online

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platforms specifically designed to teach and reinforce reading. These online learning platforms increase motivation to learn the language and perform reading comprehension activities, which results in the acquisition and improvement of reading comprehension skills.

Second, as it was shown in previous studies, the majority of the participants were university students who demonstrated an intermediate level of proficiency in EFL. Therefore, the reading activities were designed based on this feature. However, it is recommended for further research to cover BL as an approach to enhance reading comprehension in learners with lower proficiency levels.

Furthermore, most of the studies in this research synthesis were conducted in Eastern countries; therefore, it is suggested to conduct future studies in local contexts, such as Latin American countries, to equip teachers with knowledge based on local experiences with the Blended Learning approach.

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Appendix 1

List of Primary Studies for Analysis

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