



UNIVERSIDAD DE CUENCA

Facultad de Filosofía, Letras y Ciencias de la Educación

Carrera de Pedagogía de los Idiomas Nacionales y Extranjeros

“The Influence of Visualization Strategies on EFL learners’ Reading Comprehension”

Trabajo de titulación previo a la
obtención del título de Licenciada en
Pedagogía de los Idiomas Nacionales y
Extranjeros.

Autores:

Gabriela Belén Quisi Campoverde

CI: 0107257800

Correo electrónico: gabyquisi10@gmail.com

Tamara Estefanía Ruilova Figueroa

CI: 0106784895

Correo electrónico: tamararuilova@hotmail.com

Director: Ana María Calle Calle

CI:0102305562

Cuenca – Ecuador

12-enero-2022



Resumen

Esta síntesis de investigación exploró y analizó la influencia de las estrategias de visualización en la comprensión lectora de los estudiantes de inglés como lengua extranjera, así como la forma en que esta estrategia se implementa en el aula. Para ello, se seleccionaron veinte estudios empíricos de las bases de datos disponibles. Los resultados revelaron que la estrategia de visualización juega un papel importante en el desarrollo de las habilidades de comprensión lectora de los estudiantes de inglés como idioma extranjero. Además, fue evidente que la visualización es una parte importante de la comprensión lectora, debido a que los estudiantes necesitan poder visualizar el tema del texto que se está leyendo para comprenderlo mejor. Los resultados también señalaron que las estrategias de visualización pueden motivar a los estudiantes a leer, lo cual mejora sus habilidades de lectura y, por lo tanto, los ayuda a convertirse en lectores competentes. Los resultados de esta síntesis de investigación pueden generar conciencia acerca de los beneficios de aplicar estrategias de visualización para la comprensión lectora y promover más investigaciones sobre este tema.

Palabras clave: Estrategia de visualización. Comprensión lectora. Imágenes mentales. Ilustraciones. Visuales.



Abstract

This research synthesis explored and analyzed the influence of visualization strategies on EFL learners' reading comprehension as well as how this strategy is implemented in the classroom. For this purpose, twenty empirical studies were selected from available databases. Findings revealed that visualization strategy plays an important role in the development of EFL learners' reading comprehension skills. Furthermore, it was evident that visualization is an important part of reading comprehension, because students need to be able to visualize the topic of the text being read in order to understand it better. Additionally, the results pointed out that visualization strategies can motivate students to read, which improves their reading skills and thus helps them to become proficient readers. The outcomes of this research synthesis can increase awareness of the benefits of applying visualization strategies for reading comprehension and promote further research regarding this matter.

Keywords: Visualization strategy. Reading comprehension. Mental images. Illustrations. Visuals.



Table of Contents

Resumen	2
Abstract	3
Table of Contents	4
Dedication.....	11
Acknowledgements.....	12
Introduction.....	13
Chapter I	15
Description of the Research.....	15
1.1 Background.....	15
1.2 Problem Statement	16
1.3 Rationale	17
1.4 Research questions	17
1.5 Objectives	18
1.5.1 General Objective	18
1.5.2 Specific Objectives	18
Chapter II.....	19
2. Theoretical Framework.....	19
2.1 The Reading Skill.....	19



2.2 The importance of reading comprehension20

2.3 Reading Comprehension Strategies21

2.4 Using the visualization strategies to teach reading comprehension.....22

2.5 Effects of the visualization strategies on reading comprehension23

Chapter III26

3. Literature Review26

3.1 The use of strategies to improve reading comprehension26

3.2 The influence of visualization strategies on students’ reading comprehension.....27

3.3 Techniques used in visualization28

3.4 The use of illustrations in visualization.....30

Chapter IV.....32

Methodology32

Chapter V34

Results.....34

5.1 Analysis of the Results34

5.1.1 What is the influence of the visualization strategies on the development of students’ reading comprehension?34

5.1.1.1 Influence on the reading comprehension of teenagers and adults.....36

5.1.1.2 Influence on the reading comprehension of children38



5.1.1.3 Influence on other skills.....39

5.1.2 How do teachers implement the visualization strategies?.....41

5.1.2.1 Reading process in which visualization strategies were implemented.....43

5.1.2.2 Methods in which visualization strategies were implemented45

5.1.2.3 The use of pictures in the implementation of visualization48

Chapter VI.....51

Conclusions and Recommendations.....51

Conclusions51

Recommendations.....53

References.....55



Cláusula de licencia y autorización para publicación en el Repositorio Institucional

Gabriela Belén Quisi Campoverde, en calidad de autora y titular de los derechos morales y patrimoniales del trabajo de titulación "**The Influence of Visualization Strategies on EFL learners' Reading Comprehension**", de conformidad con el Art. 114 del CÓDIGO ORGÁNICO DE LA ECONOMÍA SOCIAL DE LOS CONOCIMIENTOS, CREATIVIDAD E INNOVACIÓN reconozco a favor de la Universidad de Cuenca una licencia gratuita, intransferible y no exclusiva para el uso no comercial de la obra, con fines estrictamente académicos.

Asimismo, autorizo a la Universidad de Cuenca para que realice la publicación de este trabajo de titulación en el repositorio institucional, de conformidad a lo dispuesto en el Art. 144 de la Ley Orgánica de Educación Superior.

Cuenca, 12 de enero del 2022

Gabriela Belén Quisi Campoverde
C.I.0107257800



Cláusula de licencia y autorización para publicación en el Repositorio Institucional

Tamara Estefanía Ruilova Figueroa, en calidad de autora y titular de los derechos morales y patrimoniales del trabajo de titulación "**The Influence of Visualization Strategies on EFL learners' Reading Comprehension**", de conformidad con el Art. 114 del CÓDIGO ORGÁNICO DE LA ECONOMÍA SOCIAL DE LOS CONOCIMIENTOS, CREATIVIDAD E INNOVACIÓN reconozco a favor de la Universidad de Cuenca una licencia gratuita, intransferible y no exclusiva para el uso no comercial de la obra, con fines estrictamente académicos.

Asimismo, autorizo a la Universidad de Cuenca para que realice la publicación de este trabajo de titulación en el repositorio institucional, de conformidad a lo dispuesto en el Art. 144 de la Ley Orgánica de Educación Superior.

Cuenca, 12 de enero del 2022

Tamara Estefanía Ruilova Figueroa

C.I. 0106784895



Cláusula de Propiedad Intelectual

Gabriela Belén Quisi Campoverde, autora del trabajo de titulación "**The Influence of Visualization Strategies on EFL learners' Reading Comprehension**", certifico que todas las ideas, opiniones y contenidos expuestos en la presente investigación son de exclusiva responsabilidad de su autora.

Cuenca, 12 de enero del 2022

Gabriela Belén Quisi Campoverde
C.I. 0107257800



Cláusula de Propiedad Intelectual

Tamara Estefanía Ruilova Figueroa, autora del trabajo de titulación "**The Influence of Visualization Strategies on EFL learners' Reading Comprehension**", certifico que todas las ideas, opiniones y contenidos expuestos en la presente investigación son de exclusiva responsabilidad de su autora.

Cuenca, 12 de enero del 2022

Tamara Estefanía Ruilova Figueroa

C.I. 0106784895



Dedication

I want to dedicate this research work to God since with its blessing I was able to get here. To my mother Monica who always supported me in the most difficult moments of my academic performance and gave the inspiration to continue with my studies.

Gabriela Quisi

I want to dedicate this research work to God for always guiding me and blessing me. To my family, especially my parents, who always supported me and believed in me. To my dog, Zoe, for her unconditional company and love.

Tamara Ruilova



Acknowledgements

Our sincere gratitude to our tutor Mgst. Ana María Calle Calle, since without her support and guidance we would not have been able to complete our research work.

Gabriela and Tamara



Introduction

The comprehension of a text is an important cognitive skill when understanding a language. Musdizal (2019) claims that reading is one of the most important skills to develop in any language since it is the way that people get information and acquire new vocabulary. According to Anggraeni (2014), for years researchers have investigated many strategies that can help the development of the ESL/EFL students' reading comprehension, such as predicting, skimming, scanning, and summarizing. Visualization is one the strategies that contributes to the development of the reading skill by focusing on the creation of images in the mind about what the students read in a text. Ghazanfari (2009) states that in the moment of implementing these strategies, readers tend to internalize the meaning of the words in a text since they take those words to imagine pictures about the situation described, and in that way they can remember what they read.

This research synthesis analyzes the influence of visualization strategies on students' reading comprehension and the way in which visualization is implemented within a class. In other words, it considers the phases (i.e. pre-reading, while reading, and post-reading) of the reading process in which the strategies are applied, and other methods used to carry out visualization.

This research synthesis consists of six chapters. In the first chapter, we present the description of the study including the background, problem statement, rationale, research questions, and objectives of the study. The second chapter contains the theoretical framework that details relevant theories and concepts about the different reading strategies necessary to understand the study. The third chapter encompasses the literature review, which presents the general content of the selected studies. The fourth chapter describes the methodology implemented to carry out the research synthesis. The fifth chapter covers the analysis of data of the selected studies in order to answer



the research questions stated in the first chapter. Finally, the sixth chapter establishes the conclusions, recommendations, and further research.



Chapter I

Description of the Research

1.1 Background

Reading is one of the macro skills that students should learn in order to be considered proficient users of English as a Foreign Language. Initially, teaching reading was based on using selected techniques for each text genre that would allow students to be good readers, but through time, many different methods or reading strategies have been implemented to teach this skill and to help students improve their reading comprehension. Reading strategies are key to help students comprehend any text, and they vary according to the challenges readers may face. A reading strategy that has been applied by many teachers is visualization, which is the ability that a reader has to create mental images while reading. Gambrell and Koskinen (1982) state that visualization strategies are used by learners to enhance their reading comprehension and improve their reading skills.

According to Okwilagwe and Aghotor (2018), the link between illustrations and students' reading comprehension has not been empirically investigated. For this reason, it is important to analyze the impact of visualization on students' reading comprehension. Moriyanti, Muna and Ismail (2019) mention that visualization helps students to understand the meaning of a text, which motivates them to read more and builds up their abilities in reading. As a result, many educators have implemented this strategy in order to help their students to improve their reading abilities and become proficient readers.

According to Grundvig (2012), some Norwegian institutions have implemented visualization strategies to enhance reading comprehension, especially with young learners. In fact,



Norway is one of the countries with significant improvement in the students' reading skills, thanks to the application of these strategies, especially when it came to reading comprehension.

1.2 Problem Statement

The reading skill is one of the four main abilities in English that students have to develop to acquire this foreign language. According to Anggraeni (2014), many teachers use traditional methods to teach reading; they usually ask students to read a passage in a textbook and look for the meaning of difficult words to be able to answer follow-up questions, without taking into account the visual impact. Visualization is the ability that a reader has to create mental images while reading. Gambrell and Koskinen (1982) state that visualization helps the reader organize text information, which increases reading comprehension and memory of information. They also report that visualization may represent a way for the reader to move from a novice to an expert reading level. Erfani, Iranmehr, and Davari (2011) claim that many teachers are not aware that students can get a deep understanding of what they read and show interest in the text by using the visualization strategies, so they continue using the same traditional method. “Visualizing strengthens reading comprehension skills as students gain a more thorough understanding of the text they are reading by consciously using the words to create mental images” (Anggraeni, 2014, p. 29). Additionally, “pictures provide readers a new source of information in addition to what they could get from reading the text itself” (Bernhardt; Gyselinck & Tardieu; Hibbing & Rankin-Erickson, as cited in Yu, 2015, p 5), which facilitates reading comprehension for them.

This research attempts to investigate how visualization strategies influence EFL students' reading comprehension. The majority of studies have focused on other strategies that enhance this skill, such as predicting, questioning, retelling, and many others. Sanati (2020) claims that the use of visualization strategies is considered a research gap, as its effect is not as well-known as others.



For this reason, it is important to analyze and report how visualization strategies can help students improve their reading comprehension.

1.3 Rationale

Amongst all English skills, reading is considered the most fundamental ability; therefore, it is important to investigate what reading strategies are effective for the students to become proficient readers (Moriyanti, Muna & Ismail, 2019). There are several research studies about different reading strategies and how they are used for reading comprehension (Anggraeni, 2014; Sanati, 2020). Sanati (2020) mentions that the effects of visualization on the reading skill have not been thoroughly investigated. It is likely that most teachers do not apply the visualization strategies because there is insufficient research to suggest it is effective for enhancing students' reading comprehension (Gambrell & Koskinen, 1982). Therefore, we believe it is important to collect information about how visualization strategies can influence students' reading comprehension.

According to Musdizal (2019), in most classrooms, teachers focus on using reading strategies that are common and usually used by numerous teachers around the world. Some studies have demonstrated that visualization, despite being one of the less popular reading strategies, helps to improve students' reading comprehension since it makes them focus on the text that they are reading, which results in a better understanding of it. Based on what was presented in this section, we will analyze how visualization strategies influence students' reading comprehension. In addition, we consider that this research may help find possible solutions to some issues that students may experience while learning to master the reading skill.

1.4 Research questions

1. What is the influence of the visualization strategies on the development of students' reading comprehension?



2. How do teachers implement the visualization strategies?

1.5 Objectives

1.5.1 General Objective

To explore the effects of visualization strategies on EFL students' reading comprehension.

1.5.2 Specific Objectives

- To identify the advantages of visualization strategies on EFL learners' reading comprehension.
- To identify the disadvantages of visualization strategies on EFL learners' reading comprehension.
- To describe how visualization strategies are applied in EFL classrooms.



Chapter II

2. Theoretical Framework

This chapter addresses concepts, theories and points of view that are crucial to comprehend visualization strategies, other reading strategies and the reading skill. It is divided into five main sections: the reading skill, the importance of reading comprehension, reading comprehension strategies, the use of visualization strategies to teach reading comprehension, and the effects of the visualization strategies on reading comprehension.

2.1 The Reading Skill

Reading is the ability to understand, to interpret, and to decode a written text. Anggraeni (2014) adds that reading is an activity that makes the reader connect his prior knowledge with the information that he is acquiring at that moment. Readers try to relate the new information to knowledge that they have already acquired; it can be words, sentences, or grammatical structure that they have seen before. McDonald (2001) explains that background knowledge plays an important role in reading learning because people tend to remember information when they can relate it to a previous experience, so they will be able to remember what they read and relate that information to future information.

According to Sanati (2020), the main objective of reading is the comprehension of the reader, based on his own interpretation; and the action of thinking of what is being read guides that comprehension. Rahman (2013) states that reading is a complex process that is not only focused on finding the meaning of unknown words in a text in order to understand it. It is necessary to create a bridge between every word and to put those words in context in order to get the complete significance of the text.



Okwilagwe and Aghotor (2018) claim that the reading skill is a process that implies a number of mental activities such as prediction, interpretation and evaluation of perspective that establish an internal relationship between the reader and the passage. In that way real comprehension is achieved. Reading comprehension makes the reader remember what he reads in his long-term memory because he internalizes the information in his mind in a correct way (Bell, as cited in Zimmerman, 2003).

2.2 The importance of reading comprehension

Reading comprehension is especially necessary for EFL students since, among other things, this ability allows a better understanding of the language through the acquisition of new vocabulary. The reading skill gives the students an opportunity to identify the context in which some words that they already know can be used (Dudley-Evans & St John, as cited in Erfani, Iranmehr, & Davari, 2011). Musdizal (2019) declares that reading comprehension is important to EFL students because it improves their spelling of some words, making them feel more confident about writing in English.

Some benefits of good reading comprehension are that it allows students to immerse themselves into new topics, to consider different issues of a language such as grammatical structures, and to talk about the knowledge that they acquired through reading (Richards & Renandya, as cited in Sanati, 2020). According to Rahman (2013), reading helps children to develop their cognitive skills; they become more creative, they have an improved memory, they develop increased reasoning skills, and they can have a greater attention capacity. All this is possible because of the mental activity generated by the brain when children read.

McDonald (2001) claims that reading comprehension learning is more important to young children in grade one than at any other stage. At that age, children feel more motivated and they



have the need to learn new things and share them with close people. Okwilagwe and Aghotor (2018) found that students that initially did not learn to read in the lower grades by following correct reading procedures had problems learning to read in the elementary school. Children without good preparation for reading at an early stage are known as “poor readers” because they do not have a real understanding of a written text.

2.3 Reading Comprehension Strategies

Reading strategies have been developed in order to teach students to acquire a complete comprehension of a piece of writing depending on their necessities, the type of text, and the environment of the teaching-learning process (Anggraeni, 2014). Rahman (2013) defines skimming as one reading strategy that consists of looking at the entire passage and focusing on the gist of it, without considering the details. Anggraeni (2014) claims that scanning is a reading strategy focused on finding specific information. It is related to skimming in rapid reading since first it is necessary to apply skimming so that the reader makes predictions and compares them with the information obtained after scanning is applied.

Another reading strategy is predicting or inferencing. McDonald (2001) mentions that this strategy uses pictures that can give the children an idea about the content of the text before reading and it is especially applied to young children. This strategy activates their prior knowledge, making them relate their predictions with previous experiences about the topic. According to Zimmerman (2003), the purpose of predicting is that readers are able to perform this action without conscious intention becoming automatic.

Mental activity is one of the issues to consider when enabling people to become good readers. The visualization reading strategies focus on improving the ability of the learner to instantly create mental images the moment he starts reading (Sanati, 2020). When a reader is able



to visualize what he reads independently, his concentration increases and his capacity to remember the acquired information is higher (Zimmerman 2003). In addition, there are some reading strategies which involve identifying the words used in the text, as is the case of analyzing the vocabulary strategy. It helps readers to learn the vocabulary of a text by determining the derivative properties of the analyzed words, such as their prefixes and suffixes (Anggraeni, 2014).

2.4 Using the visualization strategies to teach reading comprehension

The essential position of reading has turned this skill into the most important one for the learners' success (Erfani, Iranmehr, & Davari, 2011). Nevertheless, “the reading comprehension skill is not easy for English as Foreign Language students because they have to comprehend many aspects that are completely different from their native language” (Musdizal, 2019, p. 318). Therefore, the role of teachers during the reading learning process is extremely important. According to Niknejad and Rahbar (2015), there are some factors that can influence students' reading comprehension learning. One of them, and probably the most relevant, is applying an appropriate teaching strategy. Musdizal (2019) claims that “the method used is very important so that students can understand and learn better. In addition, the use of interesting teaching strategies can improve students' enthusiasm and motivation to learn to read” (p. 319). “Teaching students to visualize images as they read enhances their ability to understand, infer information, make predictions and remember what they have read” (Gambrell & Bales; Pressley, Borkowski & Johnson; Sadoski, as cited in McDonald, 2001).

When teaching students how to read, it is extremely important to enhance reading motivation. With an increase in the level of reading motivation, students may like to read both actively and continuously (Wang & Guthrie, as cited in Chang, 2016). When students encounter difficulties when they are reading materials, they can solve these problems with appropriate



strategies and subsequently, they can enjoy this process (Otis, Grouzet, & Pelletieras, as cited in Chang, 2016).

Roslina (2017) states that the use of pictures when teaching reading aims to make the learning process more effective and efficient. During this process, illustrations are a positive and useful method for comprehending the written language since they allow students to understand the text in a better way. On the other hand, “not all pictures are equally effective in enhancing comprehension; pictures that contribute to reading comprehension should not include too much information about the content of the text and should represent information from the beginning paragraphs of it or the most relevant parts” (Yu, 2015, p. 9). For that reason, it is important that teachers choose appropriate images that can help students to facilitate the reading process. Visualization can help students improve their reading comprehension, particularly when they need to comprehend content that seems less understandable in the text (Zimmerman, 2003). Therefore, it is suggested that English teachers use this methodology in their class, especially with students who may have some problems mastering reading skills.

2.5 Effects of the visualization strategies on reading comprehension

Amongst all English skills, “reading is considered an interactive skill in which meaning is constructed through interactions between the printed page and the reader” (Erfani, Iranmehr, & Davari, 2011, p. 270). Thus, visualization has been assumed to be one of the most efficient strategies in reading comprehension. Grundvig (2012) states that “Visualization is a reading strategy which makes use of illustrations that are created either by the reader or provided for the reader to make the content of the text clear and to organize information” (p. 19). According to Musdizal (2019), “Visualization strategies can make the students focus on the text and also develop their motivation and interest to read” (p. 319). Along that same line, Niknejad and Rahbar (2015)



claim that “Visualization increases the learners’ motivation to improve their reading comprehension as they experience different ways to learn reading” (p. 144).

Moriyanti, Muna and Ismail (2019) note that visualization can play an intense and compelling part in English language learning due to its positive effect on students’ reading skills and also that it helps students to understand the meaning of a text, encourages them to read more, and builds up their abilities in reading. The ability of visualizing is used by many students to strengthen reading comprehension since imagery seems to contribute to learning and memory and it may represent a way for the reader to improve reading skills (Gambrell & Koskinen, 2002).

Pictures aid a student’s understanding when reading and at the same time motivate pupils to read. “Illustrations make the task of reading more appealing and pleasant, and provide prompts or cues that facilitate comprehension when the readers’ abilities are poorly developed” (Rose, 2006, p. 542). Along the same line, several scholars affirm that “Pictures play a positive role in helping readers to comprehend a text and also provide them with a new source of information in addition to what they could get from reading the text itself” (Bernhardt; Gyselinck & Tardieu; Hibbing & Rankin-Erickson, as cited in Yu, 2015, p. 5). Through them, students can increase their knowledge considerably and have the chance to become engaged with the meaning of the text.

Visualization strengthens reading comprehension skills as students gain more understanding of the text they are reading by using the words to create mental images. “Students who visualize as they read not only have a richer reading experience but can recall what they have read for longer periods of time” (Harvey & Goudvis, as cited in Anggraeni, 2014). Visualization strategies help students to make a solid connection between what they read and what they actually see, which results in a deeper understanding of the text being read (Tomlinson, as cited in Sanati, 2020).





Chapter III

3. Literature Review

This chapter presents a review of twenty studies considered in this research synthesis. They address the implementation of reading strategies, especially the strategies that are focused on mental visualization and how they influence students' reading comprehension. To explain these issues, this chapter has been divided into four sections.

3.1 The use of strategies to improve reading comprehension

Many methods and strategies are used to teach reading to EFL learners. One of the most common is the traditional method, also known as the translation method, that consists of asking the students to translate the text word for word into their native language (Anggraeni, 2014). According to Rahman (2013), predicting, inferring, skimming, scanning, and summarizing are other strategies considered important in the reading learning process. Teachers apply them depending on the necessities of the students and the purpose of the text that they are reading.

Zimmerman (2003) claims that the goal of teaching reading strategies is that students be able to apply them automatically, without thinking about the process, in order to be able to understand and remember the text they read. Moriyanti, Muna, and Ismail (2019) state that the purpose of applying reading strategies is that students may identify the main ideas, details, and vocabulary in the text in order to draw their own conclusions according to their perspectives.

Erfani, Iranmehr, and Davari (2011) mention that for a long time, reading has been seen as a receptive skill, but recent research indicates that it is an interactive skill since it not only requires an interaction between the reader and the text, but also an interaction between the teacher and the students through learning reading strategies. Students need instructions from the teacher in order



to read and apply different strategies. Ghazanfari (2009) proposes that the reading skill should be considered interactive because of the relationship created between the readers and the written passage when correctly applying the reading strategies.

3.2 The influence of visualization strategies on students' reading comprehension

The importance of visualization strategies is a recurring point. Developing these strategies has benefits to the readers, especially for EFL students. The visualization strategy points out that an EFL learner has a clearer understanding of a text in a different language (Ghazanfari, 2009). McDonald (2001) found that visualization is a great technique to organize information because the students can order the imaginary images according to how they remember them, so it also helps them to retain the information in their long-term memory.

Erfani, Iranmehr, and Davari (2011) argue that prior knowledge plays an important role in the visualization strategies since, when students are able to relate the mental images to a previous experience; they are better able to retain that information in their memory. According to Anggraeni (2014), the visualization strategies allow students to create a personal bond between themselves and the author of the text. It occurs because they internalize the author's words and interpret them based on their own prior knowledge.

Rahman (2013) mentions that mental images are created from the students' own interpretation. They are related to imagination, so first graders can easily develop these strategies if they receive appropriate visualization instructions, due to their great ability to imagine the things that are described to them. Chang (2016) establishes that fourth grade children that have problems with their reading fluency or word identification in a text are the ones who have not had proper reading instructions since the first grade. Thus, it is important to give students visualization instructions at the beginning of the teaching-learning process.



Sanati (2020) states that an advantage of visualization is that these strategies not only seek that students understand the vocabulary of the text, but also understand the entire context. It is not limited to the student knowing the meaning of a word, but the student understanding the context in which that vocabulary is used.

These strategies demand great concentration on the part of the reader, especially when the reader creates mental images that are in motion (Shamla, as cited in Rahman 2013). “In visualization strategy, students have to make sense of the text by drawing in their mind. It can make the students focus on the text that they read” (MUSDIZAL, 2019, p. 319). Visualization increases the concentration of the students and as a result, their comprehension of the text.

Visualization is a great method to apply in the learning reading process, but these strategies can present problems in certain situations. One disadvantage is that if the students have not had good visualization instruction since the beginning of their learning process, imaginary images could create misunderstandings in the students’ reading comprehension. Therefore, visualization techniques that do not require real pictures are not recommended for them (Rieber and Kini, as cited in Niknejad & Rahbar 2015).

Zimmerman (2003) states that teachers that apply visualization strategies have to give students accurate instructions. Some teachers ask students to say aloud what they visualized in their minds and compare them with other perspectives. Even if the text has images, students should visualize the parts that are not captured in the images.

3.3 Techniques used in visualization

There are different techniques that are used in visualization. Some of them are (1) Visualizing with Wordless Pictures; (2) Visualizing from a Vivid Piece of Text; (3) Visualizing in



Reading, Showing not Telling; and (4) Creating Mental Images that go beyond Visualization. Those strategies promote the use of visualization in different ways. In the Visualizing with Wordless Picture Technique, the students use clues to predict the next part; they visualize their prediction and draw it. The second technique is Visualizing from a Vivid Piece of Text. To apply this strategy, the teacher reads the text aloud and stops at a certain point for the students to visualize the scene. In the Draw and Label Visualization Technique, the students draw their visualization after reading some parts of the passage, and then they share it in groups. The third technique is Visualizing in Reading, Sharing not Telling. In this one, the students read the text, and then the teacher reads the passage aloud while the students visualize the scene and are asked to give comments. In the last strategy, called Creating Mental Image that go beyond Visualization, the students visualize a character in the text, and then they write down their perceptions when they visualized the character (Nelson, as cited in Anggraeni, 2014).

Another technique used in visualization is the R.I.D.E.R Technique, which incorporates the use of visualization to support reading comprehension. There are some steps involved in R.I.D.E.R. strategy. They are “read first the sentence, paragraph or complete text; imagine a picture in your mind; think about what you already know to add it to your picture; describe your image; evaluate your image by checking against the text; repeat the process while you read” (McCusker & Oliver, as cited in Rahman, 2013, p. 54). Rahman (2013) suggests that The R.I.D.E.R. Technique requires students to use visualization in order to form mental pictures about the text. The R.I.D.E.R. strategy used in visualization aims to improve the students’ learning, storage and recall of texts. This helps them to develop comprehension and reading skills. All the different techniques used in visualization focus on facilitating the comprehension process in order to help students enjoy reading and become proficient readers.



3.4 The use of illustrations in visualization

Rahman (2013) states that illustrations are images which have a functional relationship to a text. Compared with the written language, illustrations are able to convey more information about a topic. They are always used as an example to make the text clearer in general (Luo & Lin, 2017). “Pictures are visual instruction materials that might be used to develop and sustain motivation in producing positive attitudes towards reading” (Sriyulianti, as cited in Rahman, 2013, p. 56). According to Zimmerman (2003), illustrations combined with the students' own visualizations optimize reading comprehension. Using illustrations along with visualization strategies may provide important support in pre-reading and reading tasks (Rose, 2006).

“Illustrations are graphic representations that explain all or part of the text; they are primarily used to explain texts for easier and better understanding of the readers” (Ojediran, as cited in Okwilagwe & Aghotor, 2018, p. 7). Moriyanti and Ismail (2019) mention that visualization through the use of illustrations does not just offer readers to get the essential meaning of the text. In addition, they get engaged through the visual guides and feel motivated to read more. Pictures in visualization mirror the significance of the reading content. They are an extra guide, which is extremely valuable for students. They persuade them to comprehend the entire substance of the text. Indeed, visuals are generally used to energize and build up the students' advantage and abilities in reading (Davis, as cited in Moriyanti & Ismail, 2019).

The employment of illustrations in visualization can improve learners' understanding as well as their memory, which facilitates students' learning ability in an effective way. Research conducted by Yi-Chun Pan and Yi-Ching Pan (2009) proposes that when the participants look at the illustrations before reading the text, their reading comprehension increases. Based on this finding, they conclude that the visuals might have facilitated reading comprehension because they offered



additional information to the students. In conclusion, the combination of text, illustrations and visualization techniques make the process of understanding a passage easier. “Illustrations not only offer additional information to facilitate comprehension; more importantly, they provide an additional route to reading comprehension” (Pan, Yi-Chun & Pan, Yi-Ching, 2009, p. 188).



Chapter IV

Methodology

This investigation presents a research synthesis regarding visualization in reading comprehension. According to Norris and Ortega (2006) "Research synthesis pursues systematic (i.e., exhaustive, trustworthy, and replicable) understandings of the state of knowledge that has accumulated about a given problem across primary research studies" (p. 12). In order to obtain the appropriate sources for the research synthesis about the influence of visualization strategies on EFL learners' reading comprehension, an entire search was conducted. The information was collected from online databases such as Google Scholar, Research Gate, and Semantic Scholar. The sources were obtained from these digital databases due to the difficulty in finding physical studies in the area within the context.

The criteria to select the articles was as follows. We considered empirical studies in order to have a better idea of the effect of the visualization strategies on the development of reading skills in students of any level. In addition, the articles had to be peer reviewed so that this research would be reliable. In addition, for this research synthesis, qualitative, quantitative, and mixed methods designs were considered when choosing the sources.

The key terms that were used to look for information included the following: (a) applying the visualization strategies to teach reading, (b) teaching techniques to create mental images, (c) illustrations, (d) visuals in EFL reading.

Twenty articles were selected for the present research synthesis. The articles were classified according to different criteria that emerged through the analysis. Finally, the findings



from this research included pedagogical implications and recommendations for the application of this approach in the EFL classroom.



Chapter V

Results

For the analysis of the twenty studies used in this exploratory bibliographic study, this chapter is divided into two main sections, which attempt to answer the following research questions: What is the influence of the visualization strategies on the development of students' reading comprehension? How do teachers implement the visualization strategies?

5.1 Analysis of the Results

In order to introduce the list of studies used in this exploratory bibliographic study in a more structured manner, a chart is shown below. It includes the author's name as well as the publication date of each article and three general categories with their subdivisions. This will provide a clear idea of the themes covered in each of the articles, making the analysis easier to interpret.

5.1.1 What is the influence of the visualization strategies on the development of students' reading comprehension?

Table 1

List of studies, the topics and subtopics related to the first research question

Author	Age		Effects		Skills	
	Teenagers Adults	Children	Negative	Positive	Reading	Vocabulary
Anggraeni (2014)	X			X	X	X



Chang (2016)		X		X	X	
Erfani, Iranmehr, & Davari (2011)	X			X	X	X
Gambrell & Koskinen (1982)		X		X	X	
Ghazanfari (2009)	X			X	X	
Grundvig (2012)		X		X	X	
Luo & Lin (2017)	X			X	X	
Majidi (2016)	X			X	X	
McDonald (2001)		X		X	X	X
Moriyanti, Muna, & Ismail (2019)		X		X	X	X
Musdizal (2019)		X		X	X	X
Niknejad & Rahbar (2015)	X			X	X	
Okwilagwe & Aghotor (2018)		X		X	X	X
Pan, Yi-Chun & Pan, Yi-Ching. (2009)	X			X	X	
Rahman (2013)		X		X	X	
Rose (2006)		X	X		X	
Roslina (2017)		X		X	X	X
Sanati (2020)	X			X	X	X
Yu (2015)	X			X	X	X



Zimmerman (2003)

X

X

X

Number of studies**9****11****1****19****20****9****N = 20**

In order to answer the first question of the research synthesis, tables 2, 3, and 4 contain the number of articles analyzed to determine the influence of visualization strategies on students' reading comprehension and other skills such as vocabulary, according to their ages. The total number of studies with children, teenagers and adults is 20. Out of these 20 articles, 19 showed positive results, and one article showed negative results.

5.1.1.1 Influence on the reading comprehension of teenagers and adults

Table 2

Influence on teenagers and adults

	Positive influence	Negative influence
Teenagers	9	0
and Adults		

N = 9

In this research synthesis, nine of the twenty studies had teenagers and adults as participants (Anggraeni, 2014; Erfani, Iranmehr, & Davari, 2011; Ghazanfari, 2009; Luo & Lin, 2017; Majidi, 2016; Niknejad & Rahbar, 2015; Pan, Yi-Chun & Pan, Yi-Ching, 2009; Sanati, 2020; Yu, 2015). Although each study used different methods to lead a visualization instruction, all of them obtained positive results in the development of the reading skill of their participants. Anggraeni (2014) conducted the study with participants of the eighth grade of school who could visualize the text by



associating their background knowledge with the new information. These teenagers were able to recognize some words in the text because they remembered seeing that kind of vocabulary in previous experiences. They associated their previous knowledge and the context in which those words were used with the context described in the text that they were reading. Anggraeni (2014) claims that the visualization strategies worked because teenagers understood most of the vocabulary presented in the text. They comprehended the words because they had enough vocabulary supported by their background knowledge. Thus, they were better able to create images in their minds. According to Sanati (2020), the visualization instruction of giving key words helped to create mental images. Thus, the students could predict the content. These visualization strategies can be applied with teenagers and adults because they have more vocabulary knowledge than children do. Ghazanfari (2009) and Erfani, Iranmehr, and Davari (2011) mention that associating prior knowledge with new information enables better results in visualization strategies if they are applied during the entire reading process; it means during the pre-reading, while reading and post-reading phases. This strategy helps not only reading comprehension acquisition, but also students' motivation when reading the text.

On the other hand, Niknejad and Rahbar (2015) state that concentration plays an important role at the time of applying visualization strategies. If the students lose their concentration on what they are reading, they are unable to visualize it anymore, and finally, they lose motivation, too. In this case, it is more convenient to apply these strategies to teenagers than to children, although teenagers also presented problems in that aspect. Yu (2015) used short stories for his study. He argued that because of the concentration issue, it is not advisable to have many illustrations in the text. They did not include a lot of information about the content of the story so that students could imagine the content by themselves, thus reinforcing their concentration.

**5.1.1.2 Influence on the reading comprehension of children**

Table 3

Influence on children

	Positive influence	Negative influence
Children	10	1

N = 11

In this research synthesis, eleven of the twenty studies that are analyzed used children as participants. Each study applied a different method to conduct a visualization instruction. Ten of these studies found that their participants' reading skills improved after applying visualization strategies (Chang, 2016; Gambrell & Koskinen, 1982; Grundvig, 2012; McDonald, 2001; Moriyanti, Muna, & Ismail 2019; Musdizal, 2019; Okwilagwe & Aghotor, 2018; Rahman, 2013; Roslina, 2017; Zimmerman, 2003).

Grundvig (2012) applied the visualization strategies to a group of 6th grade students by means of picture books. The results pointed out that children may find verbal texts complicated to understand, while reading picture books can lead to increase reading comprehension because the ability to visualize expands the readers' engagement with the text. Gambrell and Koskinen (1982) claim that "mental imagery instructions given prior to text reading facilitate the retention of literal comprehension of the text" (p. 13). Okwilagwe and Aghotor (2018) mention that children often enjoy reading with illustrations and they have higher comprehension with texts that contain pictures in the stories. Due to its positive impact on students' skills, visualization can play a crucial role in English language learning. Visualization helps children understand the meaning of a text, inspires them to read, and thus improves their reading skills (Moriyanti, Muna, & Ismail, 2019).



Conversely, one of the twenty articles (Rose, 2016) found negative results using these strategies for children's reading comprehension. According to the researcher, illustrations distract the reader's attention from the text itself, so the reader might focus on the illustration rather than on the text, (Samuels, as cited in Rose, 2006). The results of this study indicate that readers with learning disabilities may comprehend non-illustrated reading passages significantly better than illustrated reading passages. Therefore, we may conclude that the use of illustration may not be beneficial for children with learning disabilities.

5.1.1.3 Influence on other skills

Table 4

Skills influenced by visualization

Influence	Skills	Number of studies
Positive		19
	Reading	19
	Vocabulary	9
Negative		1
	Reading	1

N= 20

(Note: some of the studies addressed two skills at the same time)

After analyzing the scores of the post-test obtained by the students in the case of the articles that used experimental designs, all studies demonstrated that visualization strategies had a particular effect on the development of the reading skill. Nineteen studies showed positive effects by using these strategies in their investigation (Anggraeni 2014; Chang, 2016; Erfani, Iranmehr, & Davari, 2011; Gambrell & Koskinen, 1982; Ghazanfari, 2009; Grundvig, 2012; Luo & Lin,



2017; Majidi, 2016; McDonald, 2001; Moriyanti, Muna, & Ismail 2019; Musdizal, 2019; Okwilagwe & Aghotor; Pan, Yi-Chun & Pan, Yi-Ching, 2009, 2018; Rahman, 2013; Roslina, 2017; Zimmerman, 2003).

Sanati (2020) concludes that because students were able to create imaginary images about the information in the text, they retained the information in their minds and developed critical thinking skills regarding the contents of the text. Zimmerman (2003) argues that students could develop critical thinking during the study because they actively analyzed what they read by inferring, making predictions, and associating that content with a previous one. Gambrell and Koskinen (1982) conclude that students were able to retell the text that they had read with many details because they made a previous visualization by predicting the next part of the text at the time of reading. In that way, they were better able to retain the information that they had read.

As mentioned before, one study whose participants were children with learning disabilities had negative effects after using illustrations (Rose, 2006). Table 2 addressees the effect in reading comprehension to the important details, and as a result, students could not answer the comprehension questions about the illustrated texts.

Additionally, nine articles concluded that the visualization strategies have a positive effect in the improvement of vocabulary (Anggraeni, 2014; Erfani, Iranmehr, & Davari, 2011; McDonald, 2001; Moriyanti, Muna, & Ismail 2019; Musdizal, 2019; Okwilagwe & Aghotor, 2018; Roslina 2017; Sanati, 2020; Yu, 2015). The use of visualization helps students relate new vocabulary to previous knowledge (Harris & Sipay, as cited in Erfani, Iranmehr, & Davari, 2011). Anggraeni (2014) found that pupils' mastery of vocabulary improved as a result of the application of the Visualization technique. When the pupils did not know the meaning of difficult words, they had to guess by visualizing the situation in the text. Similarly, Moriyanti, Muna, and Ismail (2019)



mention that while reading, students are able to understand difficult words from the context, but when they use this technique along with the visualization strategies, they demonstrate a better understanding of the text. The use of illustrations in reading passages can develop students' motivation and interest in reading. In addition, when they associate what they visualize with what is written in the text, they may try to find new words to explain what they understood, which will increase the mastery of the students' vocabulary (Musdizal, 2009).

Roslina (2017) concludes that picture storybooks enrich the vocabulary of students because, while reading, they can associate the meaning of the words with the context but mainly with the images, which provides information about the most relevant parts of the story. Illustrations create a direct, sensory connection between readers and the text that results in new levels of interest and attention. Pictures have an important role in understanding the meaning of new words; they allow students to extract important information from them in order to associate it with the information they read in the text and thus discover its meaning (Yu, 2015).

5.1.2 How do teachers implement the visualization strategies?

Table 5

List of studies, the topics and subtopics related to the second research question

Author	Reading process				Methods		
	Pre-reading	While-reading	Post-reading	Predicting	Drawing	Pictures	Retelling
Anggraeni (2014)	X		X	X			
Chang (2016)		X				X	



Erfani, Iranmehr, & Davari (2011)	X	X	X	X		
Gambrell & Koskinen (1982)		X	X			X
Ghazanfari (2009)	X	X	X		X	
Grundvig (2012)	X	X		X		X
Luo & Lin (2017)		X				X
Majidi (2016)		X				X
McDonald (2001)	X	X	X		X	X
Moriyanti, Muna, & Ismail (2019)		X				X
Musdizal (2019)		X				X
Niknejad & Rahbar (2015)		X				X
Okwilagwe & Aghotor (2018)		X	X			X X
Pan, Yi-Chun & Pan, Yi-Ching. (2009)			X			X
Rahman (2013)		X				X
Rose (2006)		X				X
Roslina (2017)		X				X
Sanati (2020)	X	X	X	X		X
Yu (2015)		X				X
Zimmerman (2003)		X	X			X X



Total of subtopics	6	18	9	4	2	14	5
---------------------------	----------	-----------	----------	----------	----------	-----------	----------

N = 20

In order to answer the second question of the research synthesis, tables 6, 7, and 8 indicate the number of articles analyzed in order to determine how teachers apply visualization strategies in class. The analysis addresses the reading process stages in which the authors apply certain strategy and the methods to guide visualization instruction. The total number of studies is 20.

5.1.2.1 Reading process in which visualization strategies were implemented

Table 6

Visualization in the reading process

	Pre-reading	While reading	Post-reading	Whole reading process
Number of studies	6	18	9	4

N = 20

(Note: some of the studies addressed three reading stages at the same time)

Out of the twenty studies, six articles show that teachers used visualization strategies in the pre-reading phase (Anggraeni, 2014; Erfani, Iranmehr, & Davari, 2011; Ghazanfari, 2009; Grundvig, 2012; McDonald, 2001; Sanati, 2020). Eighteen studies show that they applied visualization strategies in the while-reading stage, and nine studies applied them in the post-reading phase. Four studies analyzed in this research synthesis show that teachers applied visualization strategies during all the reading processes.



According to Anggraeni (2014), students first learned what the visualization strategies consisted of. After explaining that issue, the teacher gave students the text to read and asked them to visualize while they brainstormed about their predictions of the content of the text. The teacher focused on implementing the visualization strategies in the pre-reading process in the first meetings, since students had just related to the strategies and she could monitor and give feedback as to how to visualize their predictions in brainstorming. In the next meetings, the teacher avoided mentioning visualization in brainstorming so that the visualization became more natural. Grundvig (2012) also applied the visualization strategies in pre-reading through predicting. This researcher worked with illustrated books. She asked students to give predictions of the content of the illustrated book by looking at the title of the book, the colors of the cover, and the illustrations of the book. Her intention was to motivate the students to read the book through the visualization of the mental images of its content.

Chang (2016) implemented the visualization strategies in the while-reading process with the help of pictures. Students had to read an article of four paragraphs. Each paragraph contained an image and the students had to read the paragraph and look at the image simultaneously. The image was an aid so that students visualized the rest of the content of the paragraph that could not be found in the image. In this way, students could understand the content of the article while they read it. Similarly, Rahman (2013) implemented visualization strategies during the reading process through interactive discussions. The researcher paused between each paragraph to ask the students to visualize what they had just read, and then they shared their concepts of their mental images with their partners. Therefore, the interaction between the teacher and students increased while they read.



Yi-Chun Pan and Yi-Ching Pan (2009) focused on applying visualization strategies in the post-reading phase. They used activities related to sequential pictures. These activities consisted of asking the students to visualize what they had read and look at the pictures to compare them with their mental images. Then they had to put the pictures in order according to what they remembered. Students not only applied visualization before doing the activity, but they also did it unconsciously in the moment of ordering the pictures. In this study, visualization strategies were used to verify the comprehension of the student. Other studies implemented visualization strategies not only in the post-reading stage, but also in the other phases. Zimmerman (2003) implemented visualization in while-reading and post-reading processes. The researcher asked some while-reading comprehension questions orally about the text during the reading to verify that students created mental images while they read. At the end of the reading, the students had to visualize the entire text and retell the story with their own words. In addition, they wrote in their journals about what they had read and made story maps to increase the use of visualization.

Some researchers such as Sanati (2020) and Erfani, Iranmehr, and Davari (2011) implemented visualization strategies in all the reading processes. They asked students to predict the text before reading it. Then, they asked them to visualize the text during the reading and focus especially on difficult words to understand them without the use of a dictionary. Finally, students had to visualize the text after reading it according to the comprehension questions.

5.1.2.2 Methods in which visualization strategies were implemented

Table 7

Methods applied in visualization strategies



	Predicting	Drawing	Retelling
Number of studies	4	2	5

N = 11

Based on the table above it can be seen that from the nine studies analyzed, four articles indicate that the researchers used prediction to apply the visualization strategies. Two studies used drawings and five indicate that the researchers used retelling to implement the visualization strategies.

Prediction is one of the most common reading comprehension strategies. Students can make predictions by looking at the title of the text before reading and as a result, they will be more engaged in the reading process (Anggraeni, 2014). According to Grundvig (2012), in reading, predictions emerge from the questions that the reader asks about the text, to anticipate what will happen. Checking that these predictions are correct supports learners' understanding of the text. Sanati (2020) applied the prediction technique by asking the students to close their eyes and make a mental image about the reading; then the teacher read the text aloud and asked the students if what they saw in their heads matched what the teacher had read. This technique helped the readers to relate previous knowledge with the text while keeping them interested and motivated to read more.

On the other hand, Ghazanfari (2009) applied the visualization strategies through the use of drawings. Students were asked to draw pictures of the story as they read it. Students generated a meaningful representation of the material being read when they created their own drawings related to it. Similarly, McDonald (2001) applied visualization strategies using drawings. In this research, the participant was asked to draw a diagram of the story before reading it. This facilitated



him to create a movie of the story in his head. The findings of this study reveal that drawing is effective in enhancing students' reading comprehension. It allows the students to comprehend the text, it engages their creativity, and it increases their motivation, participation, and confidence in the reading process.

Gambrell and Koskinen (1982) implemented the visualization strategies through the retelling technique. In this research, students were asked to read a passage silently and make pictures in their heads while reading. Then the participants were asked to tell the story again. They were asked to remember everything about the passage and to pretend they were going to tell a friend about what they had read. The results of this study show that giving mental imagery instructions before reading a text facilitates the retention of literal comprehension, which helps students to be able to retell the story after reading it.

Likewise, Aghotor (2018) applied visualization strategies using retelling to a group of children. The participants were asked to read a text; then they had to examine some illustrations and narrate the story in their own words. This helps in the development of pupils' speech abilities and encourages them to reconstruct the text and interrelate what they read with the images they observe. Zimmerman (2003) implemented this technique through a study that took place over a period of eight weeks. During the first weeks, the participants were given a book and after reading it the students were asked to retell the story in their own words to demonstrate their comprehension. Throughout the following six weeks, the students learned the value of visualizing a text by implementing its strategies in different types of texts. At the end, the researcher asked students to retell the story one more time in order to look for increased retelling scores. The findings of this study indicate that retelling can improve learners' reading comprehension, and that it should be encouraged in the classroom because of its effectiveness.



5.1.2.3 The use of pictures in the implementation of visualization

Table 8

The use of pictures in visualization strategy

	No pictures	Animated pictures	Printed pictures
Number of studies	6	2	12

N = 20

Based on the table above, it can be seen that from the twenty studies analyzed, authors of six studies did not use any picture to apply visualization strategy. Authors of two articles used animated pictures, and authors of twelve articles used printed pictures in the implementation of visualization.

Authors such as Ghazanfari (2009) and Erfani, Iranmehr, and Davari (2011) did not use pictures because they concluded that the visual images created in the students' minds from the written words were more important for their reading comprehension than the pictures they could find in the texts. Erfani, Iranmehr, and Davari (2011) focused on helping students create mental images while reading in the first place. The main objective for the researchers was that students internalize the printed words so that they could describe the characters of the text based on what they imagined without a visual aid. According to Ghazanfari (2009), students first had to learn to create mental images naturally while they read by using their imagination, and afterward, they could look at the pictures in the books as an aid. Students were able on their own to visualize the characters and location of the narrative and descriptive texts, thus achieving a better understanding of what they had read.



On the other hand, some authors considered the use of animated pictures when implementing a visualization strategy. Niknejad and Rahbar (2015) found that the students' motivation to read increased when they looked at animated pictures associated with the content that they were going to read. They argue that the use of illustrations is important to grab the reader's attention so that the reader can predict the content of the text and express interest in reading it. Therefore, animated pictures were a more striking way to engage the reader. The animations helped the students to understand better the text and to create mental images of the rest of the content that had not been animated. Along the same line, Sanati (2020) argues that animated pictures are a way to visualize a text vividly. Students were able to visualize the text in their minds as if it was a movie because they already were looking at pictures about the content with movement.

Conversely, twelve of the twenty studies used printed pictures to enhance reading comprehension through the visualization strategy. "Pictures are graphic presentations that may be attached to a text in order to explain it for easier and better understanding" (Okwilagwe & Aghotor, 2018, p. 7). According to Grundvig (2012), "Illustrations may help bring out what is key information and provide the reader with a new understandable version of the text" (p. 19). Furthermore, it is suggested that including visuals within a text results in deeper learning and a better understanding of it. Majidi (2016) implemented the use of pictures to enhance reading comprehension. In this study, the participants were given pictures related to the content of the text. The findings revealed that students' ability to visualize the content of the text through images expands their engagement with the text and significantly strengthens reading comprehension.

Moriyanti, Muna, and Ismail (2019) implemented the visualization strategy by using pictures with two groups of children. The first group was given a text without pictures in it, while the other group was given a passage including visuals. Later, both groups were given a test



containing questions based on the text previously read. Based on the analysis of the test results, it can be concluded that the group of students who were provided with pictures while reading the passage achieved a higher score than the students who were not. As a result of this study, it is suggested that the use of illustrations can help pupils to improve their reading comprehension skills.

Likewise, Roslina (2017) found that using pictures along with texts can stimulate students' imagination and creativity. Pictures also help to develop students' visualization and critical thinking skills. In addition, using illustrations for reading comprehension develops students' confidence and autonomy to read.



Chapter VI

Conclusions and Recommendations

Conclusions

This research synthesis had as its purpose to determine the effects of visualization strategies on the reading comprehension of EFL students. According to the data collected, the effects of the application of these strategies have been mostly positive on the reading comprehension of students of different ages, including children, teenagers, and adults. Authors like Anggraeni (2014) and Erfani, Iranmehr, and Davari (2011), who worked with teenagers and adults as the participants of their study, agree that visualization strategies are effective because those students have enough knowledge of the language to recognize the vocabulary of the text by relating it to their own background knowledge. The tested implementation of visualization strategies with teenagers and adults had better results than with children, since children still did not have enough experience with the language. Therefore, the experience and the previous knowledge about the English language are important aspects to consider regarding the effectiveness of the strategies. In addition, it has been found that visualization strategies not only have a positive influence on the reading skill, but also on vocabulary. Anggraeni (2014), McDonald (2001), Musdizal (2009), and Okwilagwe and Aghotor (2018) are some authors that mention positive effects connected to vocabulary. In tests, students were able to infer the meaning of unknown words because they created mental images about the context around those words. Visualization strategies develop the ability to create images in the mind with only some words known to the reader; in that way, it is used not only to improve the students' reading comprehension but also increase their vocabulary, which is one of the advantages of these strategies.



In addition, the different methods in which visualization strategies were implemented were also analyzed. The most common method used by teachers to apply these strategies for reading comprehension were pictures. Pictures are useful for students to fully understand a text, but they must be clear and relevant to the content of the text. The main objective in using illustrations for reading comprehension is to catch the readers' attention; if the students do not understand the pictures, they will not enjoy the reading and, thus, will not understand the content of the text.

However, it cannot be stated that visualization strategies can be effective only with the use of pictures. Rose (2006) showed negative effects on the students' reading comprehension after applying visualization strategies by using printed pictures. The participants were children with learning disabilities. The post-test results were no better than the pre-test since children were easily distracted by the pictures in the texts and were not able to recognize the important details. On the contrary, the group that did not work with pictures had positive results. Using pictures in visualization strategies will not always give the expected results; it depends on many variables, such as the age of the participants and their capacity to learn. These strategies can work without the use of pictures simply by conducting methods such as predicting or drawing, as was the case in other studies that did not use pictures.

Additionally, this research synthesis also analyzed the reading processes in which visualization strategies are applied. Among the processes that were studied, while-reading process was the most common one in which the teachers implemented visualization. Erfani, Iranmehr and Davari (2011), Grundvig (2012), and Musdizal (2019) state that applying visualization strategies while reading is one of the most efficient ways to enhance reading comprehension. As students read a text and create images in their heads by using prior knowledge and background experiences, they understand the text better. Moreover, during the while-reading stage students are more



focused on the text, which can facilitate the application of the visualization strategies, and therefore increase their comprehension of the passage.

Recommendations

Most of the articles showed that visualization strategies had a positive influence on students' reading comprehension, and according to these articles, it is recommended that they be applied within the classroom. However, there are some issues to take into account before implementing these strategies. Anggraeni (2014) mentions that implementing visualization strategies is a long process. The activities to apply visualization should be carefully planned, and the teacher has to be aware that they will take a lot of time. It is unlikely that these activities could be finished in just one class. A possible inconvenience is that students have never heard of the strategy, so the teacher should provide a clear explanation of this technique. Regarding the selection of the topics of the texts and the vocabulary present in those, it is necessary for the teacher to know his students well, since he must be aware that students should understand enough of the vocabulary to create mental images. In addition, the teacher has to select interesting reading topics for the students that can encourage their motivation, which is a factor that supports visualization strategies.

Another aspect to take into account when applying visualization strategies is the type of pictures to select. Grundvig (2012) mentions that one of the most important things to consider when selecting images is to include a text that is appropriate for the age of the students. When the students are children, it is recommended to choose images that not only help them to identify the characters in the story, but also that can help them to understand the plot. Conversely, when students are teenagers or adults, it is advisable to select images that include information about the



most relevant parts of the reading. These pictures should illustrate key concepts that are important for understanding the text; thus, they should facilitate the readers' comprehension.

On the other hand, all the studies analyzed in this research synthesis were conducted in different countries outside of Latin America, with participants of diverse cultural and academic backgrounds. Further research is recommended to determine how the visualization strategies could be applied to students from Latin American countries, particularly to Ecuadorian students.

Finally, most of the studies were focused on applying the visualization strategies while reading; only some of the researchers applied the strategies throughout the whole reading process. These authors found that applying the visualization strategies in the pre-reading, while-reading and post-reading stages was much more efficient for students' reading comprehension. Therefore, it is advisable to apply these strategies in all the stages in order to obtain more and deeper results in developing the learners' reading comprehension skills.



References

- Anggraeni, R. D. (2014). *Improving the Students' Reading Comprehension ability through Visualization of the Eighth grade students of smp negeri 1 pedan in the academic year of 2013/2014*. (Bachelor's thesis, English Education Department Faculty of Languages and Arts Yogyakarta State University). Retrieved from <http://eprints.uny.ac.id/19858/1/Ratna%20Dyah%20Anggraeni%2009202244023.pdf>
- Chang, Y. M. (2016). Efficacy of Supplementary Image Schemes on Reading Motivation and Comprehension. *Eurasia Journal of Mathematics, Science & Technology Education*, 12(5), 1153-1162. doi: 10.12973/eurasia.2016.1503a
- Erfani, S. M., Iranmehr, A., & Davari, H. (2011). Deepening ESP Reading Comprehension Through Visualization. *Journal of Language Teaching and Research*, 2(1), 270-273. doi: 10.4304/jltr.2.1.270-273
- Gambrell, L. B., & Koskinen, P. S. (1982). Mental Imagery and the Reading Comprehension of Below Average Readers: Situational Variables and Sex Differences. *University of Maryland*, 1-19. Retrieved from <https://files.eric.ed.gov/fulltext/ED217386.pdf>
- Ghazanfari, M. (2009). The Role of Visualization in EFL Learners' Reading Comprehension and Recall of Short Stories. *Sabzevar University of Teacher Education*, Iran, 1-23. Retrieved from https://ijals.usb.ac.ir/article_43_a86d7ed4ea03beafeaa3474eded2f77.pdf
- Grundvig, V. (2012). *Can picture books in the English classroom lead to increased reading comprehension?* (Master's thesis, University of Ostfold) Retrieved from <https://hiof.brage.unit.no/hiofxmlui/bitstream/handle/11250/147998/Grundvig2.pdf?sequ>



[ence=2&isAllowed=y#:~:text=The%20findings%20reveal%20that%20picture,written%20and%20the%20visual%20text.](#)

- Luo, Y. & Lin, Y. (2017). Effects of Illustration Types on the English Reading Performance of Senior High School Students with Different Cognitive Styles. *Canadian Center of Science and Education*, 10(9), 1-10. doi: 10.5539/elt.v10n9p1
- Majidi, N. (2016). The Effect of Contextual Visual Aids on High School Students' Reading Comprehension. *Nader Assadi Aydinlu Islamic Azad University, Ahar Branch, Iran*, 6(9), 1827-1835. doi: <http://dx.doi.org/10.17507/tpls.0609.15>
- McDonald, S. (2001). *Experiences and pictures: using visual imagery and background knowledge to improve reading comprehension*. (Master's thesis, University of Lethbridge Research Repository). Retrieved from https://opus.uleth.ca/bitstream/handle/10133/945/McDonald_Shannon.pdf
- Moriyanti., Muna, H., & Ismail, N. (2019). Visualization and Comprehension: Corroborating Children's Reading Ability. *Englisia*, 7(1), 26-40. doi: 10.22373/ej.v7i1.4508
- Musdzal. (2019). The influence of visualization strategy on Reading comprehension ability. *State Islamic Intitute of Kerinci*, 8 (2), 317-328. Retrieved from https://scholar.googleusercontent.com/scholar?q=cache:ImxwapFv7VYJ:scholar.google.com/+The+influence+of+visualization+strategy+on+Reading+comprehension+ability.&hl=es&as_sdt=0,5&as_vis=1
- Niknejad, S. & Rahbar, B. (2015). Comprehension through Visualization: The Case of Reading Comprehension. *International Journal of Educational Investigations*, 2(5), 144-151.



Retrieved from http://www.ijeionline.com/attachments/article/42/IJEI_Vol.2_No.5_2015-5-13.pdf

- Norris, J. & Ortega, L. (2006). *Synthesizing Research on Language Learning and Teaching*. Amsterdam: John Benjamins Publishing Company. doi: org/10.1075/llt.13
- Okwilagwe, O. A., & Aghotor, K. E. (2018). Illustrations Use as a Factor Influencing Reading Comprehension of Children's Stories among Pupils of Selected Primary Schools in Ibadan, Oyo State, Nigeria. *Library Philosophy and Practice*, 1-21. Retrieved from <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=5090&context=libphilprac>
- Pan, Yi-Chun; Pan, Yi-Ching. (2009). The effects of pictures on the reading comprehension of low-proficiency Taiwanese English foreign language college students: An action research study. *VNU Journal of Science, Foreign Languages*, 186-198. Retrieved from https://pdfs.semanticscholar.org/7961/04f03c95008d8e43987c4be751292998335f.pdf?_ga=2.193667880.420306199.1597896732-96482018.1585851071
- Rahman, M. A. (2013). *A Suggested Program Based on Picture Reading Strategy to Improve English Reading Comprehension Skills among Seventh Graders in Palestine*. (Master's thesis, Islamic University of Gaza). Retrieved from https://iugspace.iugaza.edu.ps/bitstream/handle/20.500.12358/17655/file_1.pdf?sequence=1&isAllowed=y
- Rose, T. L. (2006). Effects of illustrations on reading comprehension of learning disabled students. *Journal of learning disabilities*, 19(9), 542-544. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.840.2908&rep=rep1&type=pdf>



Roslina. (2017). The Effect of Picture Story Books on Students' Reading Comprehension.

University of Sembilanbelas, 8(2), 213-221. doi:

<http://dx.doi.org/10.7575/aiac.all.v.8n.2p.213>

Sanati, Z. (2020). The Effects of Visualization Training Techniques on Reading Comprehension

Ability of Iranian Intermediate EFL Learners. *Journal of Language Teaching and*

Research, 11(1), 73-85. doi: <http://dx.doi.org/10.17507/jltr.1101.09>

Yu, F. (2015). An analysis of pictures for improving reading comprehension: A Case Study of the

New Hanyu Shuiping Kaoshi. *The Nebraska Educator*, 2, 1-27. Retrieved from

<https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1031&context=nebeducator>

Zimmerman, T. (2003). *The Effects of Visualization Instruction on First Graders' Story Retelling*.

(Master's thesis, The College at Brockport: State University of New York). Retrieved from

https://digitalcommons.brockport.edu/cgi/viewcontent.cgi?article=1330&context=ehd_th

eses