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Cognitive strategies for developing students' reading comprehension skills using short stories

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ABSTRACT

This paper highlights the importance of implementing cognitive strategies to improve reading comprehension skills in a second language. The study was carried out at Capellania public school located in Cajica, Cundinamarca, Colombia. An initial needs analysis indicated that participants did not enjoy reading due to a lack of knowledge on reading strategies. Therefore, the aim of this study was to determine how five cognitive reading strategies (CRSs) could improve the reading comprehension of forty ninth-grade students using short stories. The five cognitive strategies selected were *predicting, asking questions before reading, visualizing while reading, summarizing the story by using graphic organizers, and answering reading comprehension questions after reading.* A student blog, two questionnaires and class artifacts collected in a portfolio constituted the data collection methods. Data analysis included participants' insights into the usefulness of the strategies. The findings revealed that the use of cognitive strategies facilitated comprehension of a text; giving readers the opportunity to activate their schemata, to understand the main ideas and to understand new vocabulary. Moreover, participants were able to construct meaning from the text, identify a purpose for reading and, therefore; increase their motivation to read. Additionally, the results of this study might provide ideas for other English or foreign language teachers interested in improving their students' reading comprehension skills.

Keywords: Comprehension; cognitive processes; short stories; reading; skills.

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Estrategias cognitivas para desarrollar las habilidades de comprensión lectora utilizando cuentos cortos

RESUMEN

Este artículo destaca la importancia de implementar estrategias cognitivas para mejorar las habilidades de comprensión lectora en un segundo idioma. El estudio se realizó en una escuela pública ubicada en Cajicá, Cundinamarca. Un análisis inicial de necesidades indicó que los participantes no disfrutaban la lectura debido a su falta de conocimiento sobre las estrategias de lectura. Por lo tanto, el objetivo de este estudio fue determinar cómo cinco estrategias cognitivas de lectura podrían facilitar la comprensión lectora de cuarenta estudiantes de noveno grado utilizando cuentos cortos. Se seleccionaron cinco estrategias cognitivas: *predecir, hacer preguntas antes de leer, visualizar durante la lectura, resumir utilizando un organizador gráfico y contestar preguntas de comprensión lectora después de leer*. Los métodos de recolección de datos fueron un blog, dos cuestionarios, y los artefactos de clase recopilados por cada estudiante a través de un portafolio. El análisis de datos incluyó las percepciones de los participantes sobre la utilidad de las estrategias. Los hallazgos mostraron que el uso de estrategias cognitivas facilita la comprensión de un texto, brindando a los lectores la oportunidad de activar sus conocimientos previos, facilitar la comprensión de las ideas principales y la comprensión de nuevo vocabulario. Además, construyeron significado a partir del texto, identificaron un propósito para la lectura y por lo tanto aumentaron su motivación hacia la lectura. Adicionalmente, los resultados de este estudio podrían proporcionar ideas para que otros docentes puedan mejorar las habilidades de comprensión lectora de sus estudiantes en un segundo idioma.

Palabras clave: Comprensión; procesos cognitivos; cuentos; lectura; habilidades.

1. Introducción

Reading is one of the most significant skills for school and life since it allows readers to expand knowledge of language, especially grammar and vocabulary, and of the world around them. However, due to the need for processing and understanding information, reading is a complex process that requires active participation the reader. Therefore, reading should be considered a key skill in the teaching process. For many decades, the different teaching methods of reading comprehension tended to emphasize the *products* of comprehension and neglected its *process*. Reading comprehension was considered a passive skill in which the student read a text and answered questions. This method tackled reading comprehension as a product (interpretation) rather than as a process (constructing meaning) and did not instruct students what to do when they had difficulties.

Many recent researchers have agreed that reading is an active process that cannot be taught as such. However, depending principally on the learner's ability to learn, it might be facilitated by helping the learners acquire particular strategies that aid their efforts to understand the texts. As Azizifar, Roshani, Gowhary and Jamalinesari (2015) point out, "the teaching of reading requires the application of various types of strategies, such as tapping previous knowledge, questions, and making predictions, constructing gist, monitoring, revi-

sing meaning, reflecting and relating" (p. 95). This supports the argument that, to become a good reader, the student needs to understand and practice strategies to interact and become involved with the text.

1.1 Problem Statement

Bearing in mind the context in which this study was applied, the following observations regarding the reading skills and habits of students were made: (i) students were discouraged form reading aloud in English, often demonstrating anxiety and self-consciousness, and required constant teacher support; and (ii) during English lessons, students showed difficulties when analyzing, comprehending, remembering or summarizing in any depth the text they had just read. In certain cases, students found reading to be monotonous because most of them did not understand the main ideas of the text and, in some cases, they could not answer reading comprehension questions due to difficulties in grasping the main ideas of the text.

According to the National Basic Standards of Competence in the Foreign Language endorsed by the Ministry of Education (Mineducación, 2006), ninth grade EFL students should be able to demonstrate understanding by identifying main ideas, extracting general and specific information and inferring meaning from short texts. Although these standards were included in the school's English Curriculum, it was reported during faculty meetings that most students did not meet these requirements. English teachers also confirmed that, even though EFL students were provided with opportunities to read, they were not taught the use of reading strategies. This lack of interest and absence of strategies when training students may explain why these problems existed. In an attempt to confirm this, students answered a questionnaire about their reading habits. The following results were obtained:

- First, regarding the question "*How often do you read an English text?*"72% percent of students considered themselves to be occasional readers, affirming that they read twice a week in their first language and that they did not read in English outside of the classroom because they did not understand and found the exercise to be a waste of time. Approximately, one-fifth of the students reported that they were poor readers because they did not read outside the classroom; they considered reading to be a boring activity. Although they read in some classes and did different activities from the texts, they were not motivated to read in general.

- To the question "*What kind of material do you prefer reading?*" 78% of the students answered they preferred to read short stories, and 40% preferred magazines and texts taken from the Internet. They also stated their favorite readings were comedy, horror and science fiction literary selections.

- When asked, "*What suggestions do you have to make reading a pleasurable activity?*" students stated that they needed to learn reading techniques, adding that they did not know how to comprehend readings and that they would like to explore the use of reading techniques as a tool for learning English. Moreover, some students commented that it bored them to look up and translate new words.

- Additionally, students' responses also indicated that they came to value the texts for their plot and ease of language presented within, only completing a book if they had selected the text, unfortunately, the majority of students did not complete any book. Consequently, it was found that students only read when they could comprehend the content, when they discovered its value and when they had a purpose for reading.

In response to these findings, the researcher sought to investigate whether students could improve their reading comprehension of short stories through the use of cognitive reading strategies (CRSs). In this sense, this study benefits the Colombian English Language Teaching (ELT) field as it provides information on how the effective use of CRSs can help students improve their reading and language skills. Equally, this study may benefit language teachers too, considering that appropriate instruction in the use of these reading strategies may build knowledge, language awareness and establish a purpose for reading in the target language. Moreover, this study may benefit EFL students; by learning how to use the CRSs, they could learn to read efficiently, gain self-confidence and improve their natural ability to handle and comprehend written English. As successful reading leads to a better comprehension of the written word and accelerated learning, it stands to reason that students will be motivated by a noticeable improvement in their second language, not to mention the natural improvement in the learner's first language that these CRSs would bring.

2. Literature review

2.1 Reading Comprehension

Good readers use background knowledge and life experiences to interact with the text, allowing the integration of additional knowledge, new vocabulary, and nuances of language into their schemata. For instance, Schultz (2011) and Muijselaar et al. (2017) believe that, since reading is considered as a phase of written communication, successful comprehension of a text requires the reader to employ different cognitive strategies because comprehension of a text requires the reader to use background knowledge and information to predict what the text may be about. Similarly, Ramos (2018) states that "reading must be considered as an important part of people's daily life because it allows them to acquire and interpret knowledge and the necessary information to understand their context" (p. 24). Using prior knowledge during the reading process facilitates active engagement with the text as the reader is able to understand the information contained in it. Furthermore, in this interactive process, the reader can make predictions or inferences to confirm a possible hypothesis, learn new vocabulary or learn how to decode a foreign language. For these reasons, successful readers learn techniques on how to read and, therefore, comprehend English text.

2.2 Cognitive Reading Strategies

Students can benefit greatly and become strategic readers from direct instruction on how to interact with a text to solve problems by themselves. By using cognitive strategies, they should be able to process information in the texts more effectively and understand the author's message. As such, readers can obtain, store, and later use information obtained from reading through the use of CRSs. Moreover, if a reader makes use of such cognitive reading strategies as making predictions, questioning, summarizing, making inferences or visualizations and answering questions, he or she will grasp the text more easily. These strategies also involve interaction with and manipulation of the material, or the application of specific techniques to solve a given task. As Soto et al. (2019) confirm, "reading comprehension is the set of skills that the subjects invoke to generate a mental representation of the text" (p. 2).

The CRSs facilitate the reader's understanding of the information presented in different ways. A study conducted by Suyitno (2017) describes the use of cognitive strategies designed to aid the comprehension of Indonesian texts, reporting that a cognitive strategy has a positive or negative effect depending on the strategy the reader applies during the reading process. In this sense, reading comprehension involves understanding vocabulary, identifying relationships among words and concepts, organizing ideas, recognizing the author's purpose, evaluating the context and making judgments.

Several authors have addressed the concept of cognitive reading strategies, for instance, Marzuki, Alim and Wekke (2018) solved reading comprehension problems in the EFL classroom through cognitive strategies; 83.3 % of students obtained a score over 75% in their results. This study concluded that students demonstrated improved comprehension as they had used titles to predict content and key words to predict meaning and were able to correctly answer questions on the text. As McNamara (2009) points out, reading strategies are essential to successful comprehension because readers can overcome reading problems in order to become better readers. In other words, cognitive strategies facilitate the reader's understanding of the information because good readers try to determine the meaning of unfamiliar words and concepts in the text before and while reading in order to begin interpreting information in a text more successfully.

Bearing in mind how international studies have explored the effectiveness of CRSs on reading comprehension of secondary students; the use of these strategies as a pedagogical tool has had a major effect on the development of reading comprehension skills, as demonstrated in the studies by Cassata, (2016); Marzuki et al. (2018); Joseph, Alber-Morgan, Cullen and Rouse (2016); Vargas, Vásquez, Zúñiga and Coudin (2018); Raslie, Mikeng and Ting (2015); and Yuan et al. (2020).These studies have demonstrated that comprehension is a required skill that helps readers understand ideas, learn and build knowledge. Thus, reading comprehension requires the reader to interact with the text to develop perception, memory, reasoning and thinking.

In the same way, a local study carried out by Ospina (2019) found that "in an EFL reading class, readers may have several learning strategies to choose from when dealing with unfamiliar vocabulary in a text" (p. 10). Moreover, Battigelli (2015) and Pérez (2015) both consider it necessary for readers to be instructed how to use strategies that help them understand what they read. CRSs are an important tool which makes reading comprehension easier and guides the reader, presenting a wide variety of possible strategies that best suit the reading task.

In the development of this study, the five CRSs detailed in the table below were employed by the participants before, during or after reading.

Table 1

Description of the selected cognitive reading strategies.

Cognitive Strategy	Description
Making predictions before Reading.	The reader thinks about what is going to happen in the text and then makes predictions based on what they know using titles, subtitles or images.
Asking questions before reading.	The reader asks himself or herself questions about the text based on titles and images to create a purpose for reading.
Visualizing while reading.	The reader is encouraged to create mental images of the events or processes described in the text.
Summarizing by using graphic organizers.	The reader sorts through the information presented in the text to extract and paraphrase the essential ideas.
Answering comprehension questions after reading.	The reader answers questions to check or verify whether he or she has understood the general and specific ideas in the text.

Although there have been many studies into the effects of CRSs on reading comprehension, the results of the aforementioned strategies posed significance to the present action research project because learners were instructed to use similar CRSs during the pre, while and post-reading stages and demonstrated the need for students to improve their reading comprehension skills as well as their motivation. Another important point is that learners need to know meaningful ways for setting themselves reading goals. Unfortunately, not all the CRSs used in this study had been used in prior studies, so not all strategies employed have been written about. Therefore, this project benefits students at Capellania School and brings the same meaningful benefits to other learners too.

2.3 Short stories as meaningful reading material

Short stories in English are considered a meaningful and powerful teacher resource to encourage EFL students to use existing vocabulary and to learn new vocabulary. The short (and often simplified) text associated with short stories motivates students with a basic knowledge of English because it is easier for them to form associations, infer meanings and notice an improvement in reading comprehension. Furthermore, teachers can choose stories according to the student's interests, level and age. As Pathan and Al-Dersi (2013) affirm, short stories are considered useful in the EFL classroom because they contain linguistic input and provide authentic contexts with examples of grammatical structures and vocabulary related to social and cultural aspects. Also, short stories are an excellent tool that helps readers to comprehend the function of language and maintain motivation as they are easy to read, provide examples of writing styles and contribute to personal growth. Additionally, short stories are a meaningful resource that enhances critical thinking, reflection and comprehension of new words and expressions in a second language. Ceylan (2016) affirms that short stories have several advantages in the EFL classroom due to the fact that a story has a plot, describes characters and is a good example of how language is used. Short stories allow students to think about lifestyles and increase motivation towards reading because students can make comparisons to their own culture and teachers can select stories according to students' age and linguistic needs.

Raslie et al. (2015) found that, when short stories were used, some of the 14 struggling readers in Malaysia were unable to recall all the details from the texts. Researchers of this study suggest that teachers should monitor reading comprehension by applying a variety of strategies, such as questioning, clarifying, summarizing and predicting to allow readers to have better comprehension. Another important benefit of using short stories in ELT of secondary students is that teachers may design activities that motivate interaction with the text and allow readers to use their background knowledge, language and vocabulary to explore the text. It is essential to show students that they may retrieve a great deal of information from a given sentence, even if they do not fully understand every word.

To conclude, it can be stated that the theory and studies presented in this theoretical framework have provided useful insights as to the reasons underlying the use of CRSs and short stories to facilitate reading comprehension.

3. Method

In consequence with the above, the study intended to guide learners to explore five CRSs: *predicting, asking questions, visualizing, summarizing through the use of graphic organizers, and answering questions*. With these strategies in mind, the research question addressed was: How can five cognitive reading strategies (CRSs) facilitate forty-ninth grade students' reading comprehension of short stories?

This study was an action research project. According to Restrepo Gómez (2006), this builds meaningful knowledge in the pedagogical field. This is possible when researchers can reflect on daily practices; the main purpose is to ensure that the research teacher understands his or her pedagogical practice and transforms it, thereby becoming the subject and object of the investigation. Moreover, Hernández-Sampieri, Fernandez Collado and Baptista Lucio (2013) say that qualitative action research can be used at any time to clarify new concerns or to answer research questions that arise from the interpretation process. This means that the teacher becomes a researcher and reflects upon his or her practices to generate specific changes and improvements. This is a form of investigation used by teachers in problem-solving and subsequent improvement of professional classroom practices. It involves systematic observations and data collection, which can be used by the practitioner-researcher in reflection, decision making and development of more effective classroom strategies.

In accordance with the above, this research project was built under the approaches of Restrepo (2006), regarding the phases of action research in which teachers continually observe students, collecting data and changing practices to improve student learning and the classroom and school environment. In this vein, action research supports and guides teachers toward a better understanding of why, when and how students become better learners. The purpose of this action research project was to reflect on the use of cognitive strategies to develop students' reading comprehension of short stories.

The participants of this project were forty ninth-grade students aged between 13 and 16 from a public school in Cajica, Cundinamarca, Colombia. In terms of reading comprehension, the participants showed problems understanding the main ideas of the texts they read in English lessons. With respect to reading comprehension of English texts, participants found it difficult to identify main ideas from, summarize or recall the texts they had read; interestingly, however, the students enjoyed reading short texts, especially when accompanied by related images. These factors guided the way the study was designed and how learners were helped to overcome difficulties in reading comprehension. Also, the researcher's roles were participant-researcher, teacher and observer. As a participant, the researcher designed useful material for the pre, while and post-reading stages, as well as lesson planning, data collection and analysis. As a teacher, the researcher had the opportunity to guide her students in the use of CRSs, with material and lesson objectives in mind. Finally, as an observer, the researcher discerned students' behavior, attitude and specific actions during the implementation of the CRSs.

To determine how much students had improved their reading comprehension skill by applying the CRSs and short stories, a mixture of data collection instruments was used: two questionnaires, a portfolio of artifacts personal to the student and a student blog were employed.

Questionnaires: two questionnaires with open-ended questions were issued to gather usable information covering opinions, insights and comments on the use of the cognitive reading strategies during the pre, while and post-reading stages. The questionnaires were designed to be completed at the end of the first and fifth cycles.

Portfolios: The portfolio proved to be an invaluable tool to evaluate and corroborate individual progress in reading comprehension. Working together, both the student and teacher monitored the student's progress in meeting specific objectives. Students used their portfolios in every lesson and collected artifacts to evidence the use of the five cognitive reading strategies and how these strategies helped them to improve their reading comprehension. To analyze this information, a checklist was designed to guide students on the use of the strategies and to verify reading comprehension. The students' portfolios were reviewed at the

end of each of the five cycles by the researcher who made comments and suggestions to each student regarding outcomes.

Students' Blog: A Blogger website was used to design and manage the student blog, which was used at the end of each of the five cycles to encourage students to comment on the activities done during the study, in particular, comments related to the short stories and CRSs. The electronic format of the blog allowed for automatic collection and storage of the qualitative data and eased communication among students as they were able to express their opinion without fear of censorship.

The data collection procedures followed for this study were divided into three stages: pre-intervention, while-intervention and post-intervention: First, during the *pre-intervention stage*, the researcher reflected on different factors affecting the reading comprehension of ninth-grade students. The first questionnaire identified why students lacked effective reading skills. To determine the most predominant learning styles of the participants, a learning styles inventory was applied so that meaningful materials to support the learners' needs could be designed. Second, the *while-intervention stage* was divided into five cycles. During the five cycles, students were instructed on the use of cognitive reading strategies, and they collected five artifacts, namely students' predictions, drawings, answers or other work produced to record the effects of the CRSs, for their portfolios. At the end of each cycle, the portfolios were collected, and student progress was analyzed. To this end, a checklist was designed to register comments on the use of the different cognitive strategies during the reading process. Finally, the *post-intervention stage* allowed deeper analysis of the students' insights on the use of the cognitive reading strategies. At this point, the same questionnaire dispensed during the while-intervention stage was administered, and comparisons were made among the data obtained in both stages. Some students revisited topics previously covered on the student blog, and their additional posts were used to analyze the general perception of the effectiveness of the CRSs when applied to short stories.

Validity and Triangulation

The data were triangulated and validated using the information collected from the questionnaires, the student blog and students' portfolios. To validate the data collection instruments, the action research professor revised them, and some adjustments were made considering suggestions and the main characteristics of the population, such as age and language level. The questionnaire and the portfolio were then piloted with a group of students with similar characteristics, and further adjustments were made based on student feedback and their level of English. Based on these comments, the questionnaire was written in Spanish since most students found it difficult to answer the questions in English; they were better able to answer when they could give their opinions in their native language.

Marshall and Rossman (1999) confirm that triangulation is an important concept of data analysis due to the relationship between reliability and accuracy of the gathered data. In this project, reliability was ensured by deriving data from different research instruments; the use of more than one data source was important to acquire more than one perspective on the topic. The data revealed similar findings that corroborated and indicated the accuracy of the outcomes. Additionally, to determine reliability, credibility of the findings was established against key elements: the number of participants, the piloting process of the research instruments, the use of different research instruments and the design of an action plan timeline so that possible, observable changes to the study could be made.

4. Results

The adopted approach to data analysis was grounded theory as it consists of a set of steps whose careful execution is thought to guarantee a new theory as the outcome. The primary objective of the *grounded theory* approach is to discover meanings from the data gathered, through the clear and rigorous manner in which data is collected, refined and systematically categorized (Corbin and Strauss, 2012). Consequently, grounded theory requires a comparative analysis to be established by grouping information and conceptualizing the data to discover the theory implied by the data. In line with this basic idea, a relationship among the qualitative data gathered was established by implementing the following stages: data collection, open coding, axial and selective coding, naming categories and subcategories, and theory development.

Open Coding

During the *open coding* procedure, data was circled or highlighted into selected codes or labels. This required data analysis on a line-by-line basis to identify coded words and key phrases. Color coding was used to classify and organize the comments relating to the effects of each of the CRSs. Based on initial findings, it was possible to establish the preliminary categories, taking into consideration the research question and the research objective. The main elements found during open coding were as follows:

Table 2

First concepts from data collected.

Research Question	**Key ideas from students' insights on the use of cognitive reading strategies**
How can five cognitive reading strategies (CRSs): making *predictions, questioning, visualizing, summarizing by using a graphic organizer and answering comprehension questions* facilitate 40 ninth-grade students' reading comprehension of short stories?	- Understanding important information. - Identifying main ideas and details. - Activating previous knowledge. - Recalling information. - Establishing a purpose for reading. - Discovering the meaning of unknown words. - Extracting meaning from the text. - Constructing meaning. - Increasing motivation. - Making connections with the text. - Discovering the meaning from the text.

Source: Own elaboration.

Axial coding

After open coding was done, *axial coding* was conducted by collating the data in new ways, making connections between categories and sub-categories (Corbin and Strauss, 2012). By grouping relevant data into established general categories and subcategories, a path could be determined to answer the research question. Therefore, a diagram was used to make comparisons and logical connections, to visualize the gathered information and the existing groupings determined through open coding and to group the concepts into subcategories. Using open and axial coding, the main categories and subcategories for this study were established, with all data being re-read and cross-referenced to ensure appropriate triangulation. The table below displays the preliminary and subcategories that emerged from the research and their connection to the research question.

Table 3

Chart to show preliminary categories and subcategories.

Research question	Categories	Subcategories
How can five cognitive reading strategies (CRSs): making *predictions, questioning, visualizing, summarizing by using a graphic organizer and answering comprehension questions* facilitate 40 ninth-grade students' reading comprehension of short stories?	Facilitating the understanding of the text	- Constructing meaning by understanding main ideas and details. - Establishing a purpose for reading - Activating prior knowledge - Making connections. - Improving reading performance.

Source: Own elaboration.

Selective Coding

Lastly, *selective coding* allowed the core category to be identified and subsequently linked to the other categories. In this last part of the analysis, the categories and sub-categories were refined through reading and re-reading the information presented in the previous axial coding table, from which emerged a final display of categories and subcategories. This analysis led to the confirmation of the positive effects CRSs had on participants' reading comprehension of short stories. "The process of identifying and choosing the core category, systematically connecting it to other categories to validate those similarities and filling in categories that need further refinement and development" (Corbin and Strauss, 2012, p. 116).

In summary, the selective coding process allowed the creation of a single final storyline and the construction of a theory in which everything was displayed. As a result of the axial, open and selective coding processes and analysis, the following Core Category (and consequent Subcategories), illustrated in Table 4 below, emerged.

Table 4

Core category and Subcategories.

Research Question	Core Category	Subcategories
How can five cognitive reading strategies (CRSs): making *predictions, questioning, visualizing, summarizing by using a graphic organizer and answering comprehension questions* facilitate 40 ninth-grade students' reading comprehension of short stories?	Becoming an efficient reader through the use of cognitive reading strategies.	Activating previous knowledge through the prediction and questioning strategies.
		Creating mental images and constructing meaning from the text through the visualization strategy.
		Recalling information, details, main ideas and vocabulary through the use of graphic organizers.
		Increasing motivation through the answering questions strategy.

Source: Own elaboration.

5. Discussion

The previous categories and subcategories show the positive effects of CRSs on students' reading comprehension of short stories. In this way, the core category: *Becoming an efficient reader through the use of cognitive strategies* answers the research question: How can five cognitive reading strategies (CRSs) facilitate 40 ninth-grade students' reading comprehension of short stories? Active engagement, that is using strategies to interact with the text, clearly facilitated understanding. Additionally, through this study, the following subcategories emerged:

A. Activating schemata in the process of reading comprehension through the prediction and questioning strategies.

B. Creating mental images and constructing meaning from the text through the visualization strategy.

C. Recalling general ideas, specific facts and vocabulary from a text and answering questions through the use of graphic organizers.

D. Increasing motivation to read

5.1 Activating schemata and previous knowledge in the reading comprehension process through predicting and questioning

McNamara (2009) states that successful readers often make predictions on what is to come because this helps readers set up goals that guide the comprehension process. First, predicting helps readers to become familiar with the text and to develop ideas on what to expect next in the text. Second, prediction may make the reading experience easier and therefore more enjoyable since more meaningful connections to prior knowledge through different visual aids can be made; successful readers use contextual clues or their own experiences to infer what the text may be about. As González (2017) states, making predictions during the while reading provides a valuable interaction between the students and with the text as well as and reinforcing interest since the learner reader maintains focus on the topic.

Making predictions helped readers access new knowledge or concepts, which, in turn, improved their motivation and supported their anticipation of the main episodes of the stories. Likewise, this strategy determined a purpose for reading as the reader integrated existing knowledge while he or she read. Predicting content through titles and images proved to be useful because students activated their schemata and had a general idea of the story's content prior to reading. The excerpts in Figures 1 and 2 below evidence how predicting allowed learners to activate their background knowledge and anticipate information in the text.

Figure 1

Excerpts from questionnaire Nª1.

Student 11 affirmed "*I used my knowledge about the world to predict the content of the stories*" and S14 attested "*I could predict what the story would be about using my previous knowledge*"

Figure 2

Excerpt from analysis of student portfolios, Cycle 3.

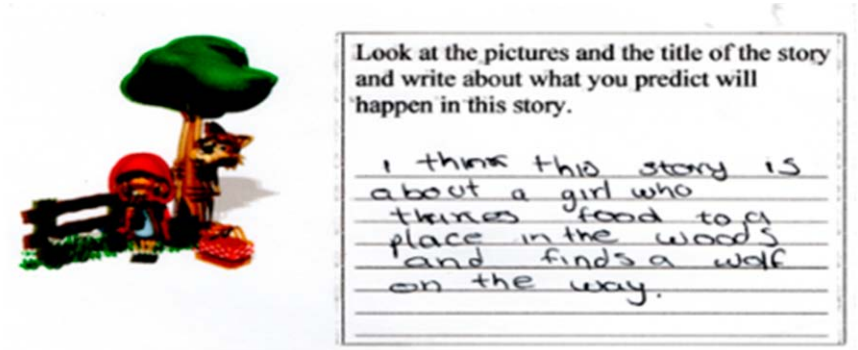
S1, S4 and S7 made predictions that were different to the content of the text, while S3, S5 and S11 made predictions based on the story title and accompanying images. Their descriptions were creative, and they used their imagination to contextualize the story.

The gathered data undoubtedly support the argument that this strategy helped learners to activate their background knowledge before reading, to make further predictions, to prepare their minds for reading and, thus, to construct more meaning, making the text more enjoyable. Readers, therefore, need to use their previous knowledge and experiences when reading and concentrate on the connection among the text, their lives and the world in order to enhance their reading comprehension. Soto et al. (2019) confirm that effective reading comprehension requires the reader to interact with the text so that he or she may elaborate on the meaning of that interaction through the decoding skills of analysis and organization of the text.

The following excerpt (figure 3) clearly demonstrates how the student interacted with the text when he or she used his or her background knowledge to predict content before reading and to expand his or her understanding.

Figure 3

Excerpt from S4's portfolio, Cycle 1, August 22nd.



Students might be asked to skim the selection, make predictions based on key words in the title or the introduction of the selection. As Cassata (2016) reported in the study on how specific strategies could help fourth graders increase reading comprehension, only 85% of students stated that they had used the prediction strategy, and that 71% found it to be successful. In summary, the prediction strategy is as it activates schemata to help the reader guess what the text will be about, improves motivation and engages the reader with the reading process as he or she reads to confirm or disprove his or her predictions.

Having made initial predictions based on prior knowledge and visual clues, students then used the strategy of asking questions before reading. Good readers are acknowledge that asking questions helps them to understand what they will read more deeply, and students themselves claimed that questioning before reading helped them to further their comprehension of the text. Asking questions before reading is a meaningful cognitive strategy because it helps learners to make connections to the text they will read using their background and experiences, Asking questions before reading allows readers to prepare themselves for reading through speculating on the content and establishes a purpose for reading as readers may expect to find the answers to their questions in the text, thereby clarifying meaning. Similarly, Joseph et al. (2016) found that self-questioning helped readers to improve reading comprehension because they could monitor their ability to learn independently.

This study revealed clear evidence on how learners were able to bring their own knowledge of the world to generate questions before reading. For example, S7 wrote, "*The drawing (of a giant) helped me to imagine the main events of the story. In this manner, I could write my questions before reading. I also compared it with a movie I had watched before*". It was

evidence of how a student had used the story title and pictures in the pre-reading stage to generate three questions: "Who was the main character?" "What do you predict will happen in the story?" and "Where does he or she live?" Resultantly, the student was expected to find answers to the questions and check if his or her predictions were correct or not. In this sense, students became active readers because they interacted with the text and monitored their own comprehension as they read.

The argument for the use of the pre-reading strategies (predicting and asking questions) is therefore conclusive; the research results clearly demonstrate that students benefited from the employment of these two strategies as they had a purpose to read and became active readers with a deeper comprehension of the meaning behind the texts. Additionally, these strategies helped students to better prepare for the while-reading stage.

5.2 Creating mental images and constructing meaning from the text through the visualization strategy

Visualization helps readers create mental images while and after they read. Readers need to use all five senses as well as their emotions to construct images that allow interpretations to be made based on the reader's background knowledge. Additionally, the visualization strategy allows readers to imagine what is happening in the text. Ghazanfari (2009) identifies that comprehending a reading passage means understanding and recalling the key information, which, in order to grasp and retain the main ideas, entails the use of feelings, images and the creation of mental images on the part of the reader. Will (2018) confirms this and explains that the visualization strategy allows readers to create mental images in the form of a movie or a photo while they read. Gormley and McDermott (2015) affirm that visualizing the text creates a mental display of images, lending to improved interpretation and memory of the passage. This means that the reader is better able to grasp and recall the ideas contained within, thereby enhancing his or her reading comprehension. This technique allowed students envisage important scenes whilst reading and allowed them to relate their schemata to the story, creating a connection between the two. Moreover, the visualizing strategy allowed the participants to build a positive attitude towards reading as they stimulated imaginative thinking. The use of this cognitive strategy improved reading comprehension as students were able to picture the characters and settings and, therefore, the main actions in the plot. Students also became active readers as they thought about what they had read.

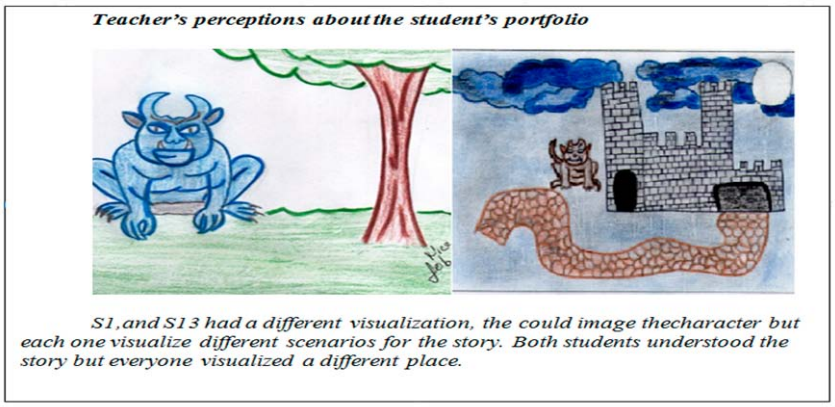
Figure 4

Excerpts from questionnaire Nª 2.

For instance, S1 reported that *"When I visualized it, I could remember specific details from the story,"* and S 5 said, *"I could comprehend the main episodes in the story that took place, as well as make a drawing about my visualization."*

Figure 5

Sample of visualization strategy from S1 and S13s portfolio, Cycle 2.



Visualizations allowed learners to become more engaged while they were reading because they used their imagination to make drawings about the readings. Furthermore, learners were able to interpret the information and to recall key information and details from the text. These results were similar to a study developed by Dahle (2017), which found that high school students increased their reading comprehension when they made use of the visualization strategy and began to think more critically and became more confident when reading. Besides, it was possible to demonstrate that, when students made use of the visualization strategy, they found a purpose for reading and achieved better results in their reading comprehension tests.

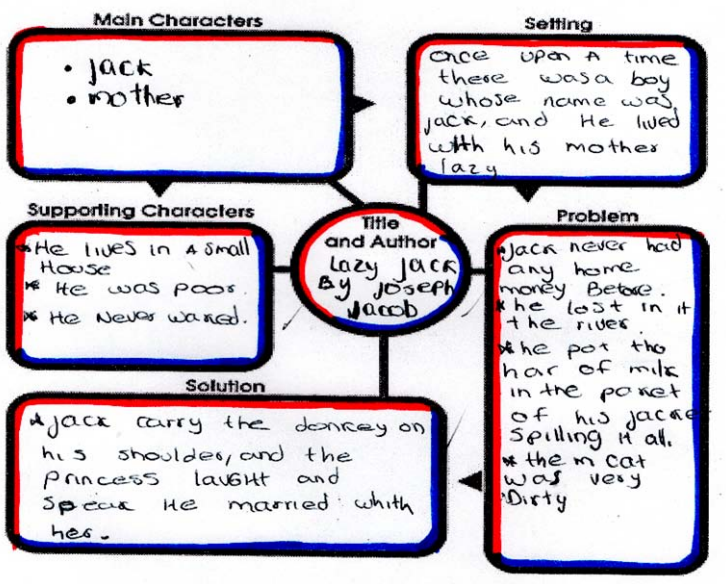
5.3 Recalling general ideas, specific facts and vocabulary from a text and answering questions through the use of graphic organizers

In the post-reading stage, students used graphic organizers to summarize the short stories and answered reading comprehension questions. These strategies helped students significantly to become active readers because they were able to confirmed whether they had understood the main idea or not. Vargas et al. (2018) report that the implementation of graphic organizers has a positive impact on reading comprehension; students read more strategically because they can summarize texts and identify main ideas and supporting details. Additionally, implementing this strategy had a noticeable impact on how students dealt with reading comprehension questions. Students were required to create a summary of the actions, the settings and the conclusion of the story. Most students wrote meaningful ideas, recalling the specific details and episodes of each story. As a result, the data indicated that learners were able to identify the main ideas and condense the most important aspects of the stories.

On the other hand, generating questions helps the reader to prepare his or her mind for reading and to pay closer attention to the content. The collected data evidence how learners could recall information and understand the main ideas by summarizing the short story to their essence, demonstrating that readers had understood what they had read since they were able to recall and retain information. For instance, S14 posted on the student blog: "*When I summarized the stories using the graphic organizer, I could identify main ideas and remember the specific settings, characters, and problems presented in each one of the stories*". Additionally, S12 demonstrated that the graphic organizer was a meaningful tool to identify the main details of the story, Lazy Jack.

Figure 6

Sample of visualization strategy from S12's portfolio, Cycle 3.

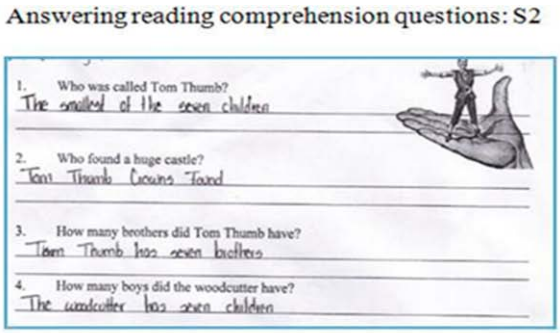


Participants also considered that answering reading comprehension questions stimulated their working memory as they needed to confirm and understand the content, which, in turn, facilitated their overall comprehension of the text. According to Grabe (2009), main ideas assist comprehension processing because good readers need to recall information to answer specific reading questions. Questionnaire data also revealed that students' reading comprehension had improved because they could clarify doubts, think about specific details of the story and prove or disprove their initial predictions. When students respond to literature, they connect with the text and check their understanding of specific and general information.

To conclude, the use of the summarizing using graphic organizers strategy helped improve reading comprehension because students understood how the ideas were related. As Yuan et al. (2020) state, answering questions on a given text automatically evaluates whether readers have comprehended a text or not because doing so motivates the reader to review the text to achieve comprehension. Gardner, Berant, Hajishirzi, Talmor and Min (2019) support this argument, reporting that students enjoy answering questions when they can identify important information and check what they have learned from the readings. This means that readers require deep understanding to answer questions on the reading passage. This is supported by additional evidence from the student blog. On the use of the graphic organizer, S2 wrote, "*I answered the reading comprehension questions because I understood the main ideas and remembered the main episodes and settings of the story*". As observed in this study, using the graphic organizer to summarize the text was a meaningful tool in assisting participants with their reading comprehension. It is also appropriate to acknowledge the roles graphic organizers and questionnaires played in the process; not only did they facilitate understanding of information, but they also allowed for the most accurate form of data collection as they verified how much the students had understood.

Figure 7

Excerpt from students' portfolio, September 6th.



The use of CRSs not only enhanced effective comprehension, but also helped students increase their lexical resources. Even though building lexical resource was not the primary purpose of this study, students affirmed that they were able to improve their reading comprehension when they discovered the meaning of unknown vocabulary; it was evident that the selected cognitive strategies were useful in helping learners increase vocabulary by making inferences, word repetition and guessing meaning from the context. For example, S3 reported, "*I could understand the text better when I used the images to discover the meaning of new words." S9 added, "some words presented in the stories were similar to Spanish, and I could infer the meaning of these words and understand the text better*".

Vocabulary learning plays an important role in learning a second language and can be increased through repetition. As Graves (2016) states, "one way to build students' vocabularies is to immerse them in a rich array of language experiences so that they learn words through listening, speaking, reading, and writing" (p. 5). Therefore, learning vocabulary is not only significant to communication, but also key to improving language skills. Subsequently, it stands to reason that a wider range of words facilitates reading comprehension. Israel (2014) states in the article titled "Vocabulary and Reading Comprehension: The Nexus of Meaning," that analysis of research literature reveals that vocabulary and word repetition is favorable to vocabulary learning, and that readers can increase their reading comprehension when they repeatedly encounter a word in a text. There is a direct correlation between learning new words and improving reading comprehension since reading, more than the other three language skills, allows language learners to understand new vocabulary and to explore the use of words in an appropriate context. For this reason, the cognitive reading strategies allow students to interact with vocabulary through word repetition, word knowledge and predicting meaning of words through reading. For instance, S8 wrote on the student blog that, "*The application of the reading strategies helped me to understand the meaning of new words because they were in context. For example, I understood the meaning of new words by looking at some drawings about the reading*". When students saw the same word in the text, they started to identify and comprehend its meaning from context.

Figure 8

Excerpt from a student's' portfolio, September 17th.

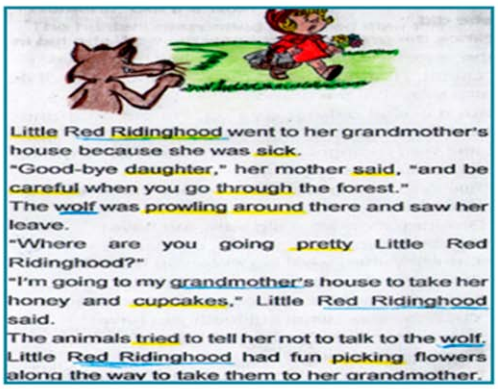


Figure 8 (above) shows how S7 underlined the words that he or she found in the text, and how he or she identified and highlighted repeated words in the story Little Red Riding Hood. Through this noticing strategy, students were able to identify, learn and use new words in the correct context to answer reading comprehension questions and to summarize the stories in their portfolios. Students expressed that they could recall new words after repetition and predict the meaning of some words when they applied the reading strategies. For example, to the question, "What advantages did you find using the reading strategies?" S11 answered in the first questionnaire, "*I could discover the meaning of some words when I made predictions, and when I tried to imagine what was happening in the story because many words were related to the pictures and the problem presented in each story*".

The previous excerpt manifests that students were able to identify the meaning of unknown words accompanied by visual aids. Similarly, S7 answered, in the second questionnaire, "*I could discover the meaning of the following words by looking at some images presented in the story Lazy Jack: one penny, lazy and scratched. These words helped me to understand what the problem was for the main character of the story*". However, it is still necessary to continue exploring the impact of CRSs on learning and on long-term retention of new vocabulary. This means that teachers and researchers are free to choose the CRSs they believe will help students to attain better reading comprehension and increased vocabulary.

CRSs not only help readers to become more active in the reading process, but also are useful for improving motivation to read. Upon commencement of this study, students were unmotivated and did not know any reading strategies that could motivate them to read; nonetheless, the following subcategory emerged because students' motivation to read was improved through the selected cognitive reading strategies.

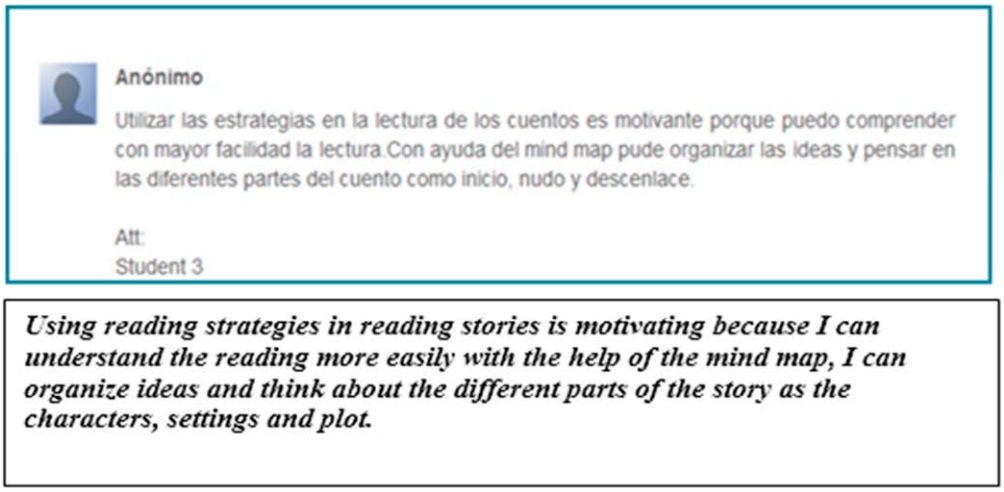
5.4 Increasing motivation to read

The final subcategory shows how motivation was increased because of the selected CRSs. As Fayazi-Nasab (2016) states, the selection of reading tasks and reading materials, which go with a wide range of intelligences, could be of help in increasing intrinsic motivation. All of the activities caught the students' attention, and, as a result, students were active participants in every lesson. On the student blog, S4 wrote, "*I was really motivated to use the reading strategies because now I have a better idea about how to read in order to understand and comprehend the main details of a text*". Most students mentioned in the questionnaires that they were more motivated to read because they understood how to use the CRSs to be better

readers and to understand a text. Figure 9 shows how S3 expressed her opinion on the use of the cognitive strategies; she wrote on the blog, "*Using the reading strategies motivated me because I could understand the reading more easily. For example, using the story map I could think what happened at the beginning, in the middle and at the end of the story*".

Figure 9

S3's post on the student blog, October 19th.



6. Conclusions

Reading is a long process that implies time and attention, so it is necessary to work with CRSs for a longer time in order to obtain better results and to ensure students learn how to use said strategies. Even though a detailed explanation of the reading strategies was given, and students were familiarized with them, it was important for students to be given sufficient practice. For this reason, the research question was: How could five cognitive reading strategies (CRSs) facilitate forty ninth-grade students' reading comprehension of short stories? As stated, students were able to effectively apply the selected CRSs: *making predictions, questioning prior to reading, visualizing while reading, summarizing through the use of graphic organizers and answering reading comprehension questions.*

The results of this study led to four central conclusions. First, readers activate previous knowledge through the prediction and questioning strategy. Second, readers create mental images and construct meaning from the text via the visualizing strategy. Third, readers recall information, details, main ideas, and vocabulary through graphic organizers. And finally, students' motivation increases as they may see a noticeable improvement in their reading comprehension and, thus, in their overall language abilities. All in all, this study concluded that the participants became more efficient readers through the use of cognitive reading strategies. Each of these strategies will now be concluded individually.

Making predictions: The first of the pre-reading strategies is designed to make the student access his or her prior knowledge so that he or she begins to think about what the content of the text will be, thereby setting a purpose for reading. It was observed that making predictions prior to reading increased participants' motivation to read as they wanted to confirm whether their predictions were correct.

Questioning before reading: The second of the pre-reading strategies is employed with the agenda of furthering the reading process and is reliant upon the student having made initial

predictions. By asking questions, students not only access more of their schemata, but also strengthen their purpose for reading. It was found that students were able to confirm their predictions while reading and that they were able to find answers to the questions asked, thereby checking the extent to which they had understood the stories. This strategy also improved motivation to read as the students wanted to continue the text to ascertain whether their questions were accurate and relevant to the story.

Visualizing while reading: By relating background knowledge and experience, visualization allows readers to make sense of the text and to construct meaning while reading. The students were asked to create mental images of the subject matter. Learners improved their reading comprehension because, with a picture either in their mind or drawn on paper, students could verify their understanding more easily and accurately.

Summarizing through graphic organizers: Implemented during the Post-reading stage, summarizing through graphic organizers' allowed learners to identify the main ideas with more ease and accuracy, to recall the principal details of the story and to use keywords or phrases to support their understanding, making this an effective, meaningful strategy.

Answering reading comprehension questions: When answering reading comprehension questions, students could think about and recall specific details from the text, and, therefore, they could check their understanding as well as improve their motivation.

Although not the main objective, the application of the selected CRSs brought about two interesting but no less important by-products: (i) improved vocabulary and (ii) increased motivation. Students learned to predict or guess the meaning of some words from their context and increased their lexical resource through repetition and recognition of words. Moreover, prior to the study, students were unaware of how to read actively and effectively and were, therefore, reluctant to read in English, but, as they learned to use the CRSs, they became more animated readers as they began to see improvements in their reading comprehension abilities. By then end of the study, the participants had begun to enjoy employing the CRSs and had started to use them voluntarily in the pre-, while- and post-reading stages.

With that in mind, the results of this study have identified certain fields that deserve special attention, especially in terms of how the use of CRSs may help students to increase vocabulary and motivation to read. For this reason, it is suggested that investigators undertake further exploration of how to use CRSs to help readers to acquire vocabulary learning skills. It is also advisable for the educational community to assume research to identify the effectiveness of CRSs to motivate learners to read different kind of texts. For example, the use of different types of the CRSs also could contribute to more dynamic and participative classes. The use of CRSs may not be limited to the ELT arena since they could have a beneficial impact on other subjects, such as mathematics, social studies or philosophy, for instance.

Finally, considering that enhancing reading skills among students must remain a priority for researchers and teachers, certain directions for reading research that might enhance the reading achievement of different students in different contexts and levels have been made in this research project. Because high reading achievement is a critical prerequisite for successful future academic performance, it is necessary that teachers view the reading process from the perspective of both a "product" and a "process," in which different CRSs can be used by students to help them overcome possible difficulties when reading.

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