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**The Effect of the K.W.L Strategy Chart in Enhancing
Students' Reading Comprehension Skills**

Dissertation submitted in partial fulfillments of the requirements for the degree of Master
in didactics of foreign languages

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Declaration

I hereby declare that the dissertation entitled “**The Effect of the K.W.L Strategy Chart in Enhancing Students' Reading Comprehension Skills**” is my own work and all the sources I have used have been acknowledged by means of references. I also certify that I have not copied or plagiarized the work of other students or researchers partially or fully. In case any material is not documented, I shall be responsible for the consequences.

Signature

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Date

11/07/2022

Dedications

I started with ambition and ended up with graduation

I dedicate this humble work to the ones that their existence shaped my life and gave it meaning, my dearest parents who always supported me to succeed:

To my father BEKKOUCHE Nour-eddine & my mother BAZINE Cherifa

To my shelter, to my go to person:

BEKKOUCHE Aladdin

To my older brother and my sister-in-law:

Khair-eddine, Amina

To my best friends whom i have overcame difficulties with:

Manel YELLAS, Abir AIMOR, Nahda AOUADJA, Ahlem BOULEMRAK

To the precious one who never let me down my "toub toub"

To everyone who helped me to accomplish this work

Thank you all

Finally, i trust the next chapter because i know the author

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Abstract

This study investigated the effect of the K.W.L strategy in enhancing pupils' reading comprehension skills. More specifically, the essence of this study is twofold: examining the influence of using the K.W.L strategy in reading comprehension tasks and gauging teachers' views on the major difficulties they find their students repeatedly facing in reading comprehension and the strategies they employ to attempt to eliminate them. Thus, it is hypothesized that the use of K.W.L strategy may reflect positively on pupils' reading comprehension skills. Also, besides the K.W.L method, teachers may employ a variety of other techniques. To achieve the aims of the study, the data were collected by means of a self-constructed questionnaire that has been designed and administered to 5 teachers of English and a true-experiment that was conducted on two groups (24 pupils in each group) of second-year middle-school pupils at Zighoud Youcef middle-school in El Harrouch, Skikda. First, the questionnaire aimed to explore teachers' opinions on the major difficulties pupils encounter in achieving reading comprehension and their practices in targeting those difficulties. The true-experiment practically tested the possible effectiveness of employing the K.W.L reading strategy on the selected sample groups' reading comprehension abilities. The results of both data collection tools were descriptively and statistically analyzed then interpreted. The findings obtained validated the hypothesis that the K.W.L strategy had a positive effect on pupils' reading comprehension abilities. In fact, the results arrived at were through rejecting the null hypothesis and accepting the alternative. Additionally, the findings illustrated the main difficulties faced by the pupils' and that the teachers used a variety of other techniques other than the K.W.L strategy to tackle those difficulties. Based on the results obtained, some recommendations for further research and for pedagogical practices were suggested.

Keywords: English Foreign Language pupils, K.W.L strategy, reading comprehension, true-experiment.

List of Abbreviations, Acronyms, and Symbols

→: Therefore.

%: Percent.

α : Alpha decision level.

Df: Degree of Freedom.

EFL: English Foreign Language.

H0: Null Hypothesis.

H1: Alternative Hypothesis.

i.e.: That is.

KWL: Know, Want to know, Learnt.

L1: First Language.

L2: Second Language.

N: Number of Participants

NICHHD: National Institute of Child Health and Human Development.

SPSS: Statistical Package for the Social Sciences.

Std.: Standard.

t: The sample value of the t-test statistics.

t_{obtained}: The obtained t value from the test.

t_{critical}: The critical t value according to the T-Distribution table of critical values.

UNESCO: United Nations Educational, Scientific and Cultural Organization.

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GENERAL INTRODUCTION

Introduction

Presently, English has become the dominating language in communication, sciences and politics worldwide. It helps remove many barriers from our life such as finding a new job or traveling around the world. As a result, more and more countries started including it in their school syllabuses to ensure their youth acquire this language from an early age. Even on a personal level, people are increasingly enrolling in private schools to be proficient in it. In the language learning process, two basic sets of skills need to be developed: receptive skills to receive and understand information, and productive skills to impart and express information. Although these sets of skills are interconnected, receptive skills have primacy over the productive as it is virtually impossible to enhance the latter without the former. That is why reading, being one of the fundamental receptive skills, has been the subject of numerous studies, in which, reading comprehension occupies a pivotal role and many strategies have been devised to improve it.

1. Background of the Study

Whether it is a story, a historical article or a scientific review, reading has always been of considerable significance for every knowledge seeking person. That is why students are regularly encouraged to read in order to help them learn a new language or new information. Since, it is essential to understand any reading material, numerous strategies have been proposed and modified to arrive at reading comprehension including the Know-Want to know-Learnt strategy. There are various studies that point out the benefits of this strategy in improving reading comprehensions skills among students.

As aforementioned, many studies have been conducted on the use of the KWL strategy in improving reading comprehension in various academic levels. Samaikomsun (2012) conducted a study on the effects of the KWL strategy on grade-nine Thai pupils of Wat Ratcha-o-ros School, Bangkok, Thailand. She reported a positive impact on pupils'

reading ability alongside positive personal satisfaction among them. She concluded that the KWL Strategy is beneficial regarding students reading comprehension and personal perspective (p. 60). In other words, the KWL strategy was beneficial on both academic and personal levels.

Additionally, Shelly et al. (1997) conducted a study over an eight weeks period where the KWL strategy was used by elementary, middle-school and junior high-school teachers in multiple subjects in South Carolina, USA. They reported more benefits than drawbacks from implementing the strategy across the three levels. They concluded that the KWL strategy “should be taught and should be taught thoroughly” (p. 241). Due to the positive results they obtained from implementing the K.W.L strategy on the reading comprehension on their sample, they sought to encourage its use.

Moreover, Sinambela et al. (2015) studied the effectiveness of the KWL strategy on fifth-semester students of English department at Nommensen University, Medan, Indonesia. They found that students who applied the KWL strategy had better scores compared to the one who did not. They concluded after their analysis that the KWL strategy should be implemented at college level in order to improve students reading comprehension (p. 28).

2. Statement of the Problem

As the English language maintains its dominance worldwide, the need to learn this language remains imperative. Since, reading is an essential receptive skill in language learning, it commands constant attention from practitioners and researchers alike. Evidently comprehension is part and parcel of the reading process. It facilitates the exploitation of the information given. The KWL strategy is one example among a number of other strategies that try to effectively achieve reading comprehension. Although the aforementioned studies explored the use of the KWL strategy on different level students in different areas, the same strategy was not adequately applied in Algerian academic context to examine its effects on

student's reading comprehension. This study is carried out to investigate the effectiveness of the KWL Strategy in the Algerian middle school context among second-year students.

3. Research Questions

In light of the above, the present study intends to answer the following questions:

- 1:** The use of the KWL strategy improve second-year middle-school students' reading comprehension skills?
- 2:** To what extent may the KWL chart assist EFL students in improving their reading comprehensions skills?
- 3:** What are the reading comprehension strategies that teachers instruct their students to use?
- 4:** Do teachers use graphic organizers in their teaching reading process?

4. Research Hypotheses

In view of the aforementioned questions, the study at hand hypothesizes that:

- 1:** Integrating the KWL reading strategy chart in reading assignments by Algerian middle-school teachers would not improve their pupils' reading comprehension.
- 2:** The effect of the KWL strategy use is positively reflected in the pupils scores on reading comprehension tasks.

5. Significance of the Study

The essence of this study is to investigate the effect of the KWL strategy on middle-school learners' reading comprehension abilities and determine the challenges they face using it. It also seeks to explore whether there is some form of structured reading applied by middle-school teachers in EFL classes. Additionally, it aims to draw attention to the

obstacles that second-year middle-school pupils face when reading and familiarize teachers with the KWL strategy chart.

6. Research Methodology

In order to test the research hypotheses and achieve the proposed aims, two research tools were used; a true-experiment and a teachers' questionnaire. The true-experiment carried out on second-year middle-school pupils, and, the questionnaire was administered to teachers of English at Zighoud Youcef middle-school, El Harrouch, Skikda. Due to the nature of the research subject, a mixed-method approach was applied as it is the most suitable method to verify the hypotheses, answer the research questions and arrive at the main objectives behind the study; analyzing the use of the KWL strategy in improving students' reading comprehension skills.

7. Organization of the Dissertation

This study consists of two main parts: a theoretical and a practical part. The theoretical part is a literature review of the concepts covered in the dissertation. Whereas the practical part involves the fieldwork where descriptions, discussions and analyses of the tools implemented appears.

The first chapter i.e., the theoretical part, is divided into three main sections. The first section presents an overview on reading, including its definition, purposes, process, models and difficulties as well as its product and assessment. It also highlights reading in second-language contexts and how it differs from first-language contexts.

The second section presents a definition of reading comprehension and its importance alongside many principles in teaching this concept. It also sheds light on its major problems and the strategies constructed to face them.

Finally, the third section provides a definition of graphic organizers, their main types in connection to reading, and the advantages of using them. It focuses mainly on the KWL strategy, providing its definition, advantages and possible problems/ difficulties of application. Finally, a step-by-step explanation of the procedure of implementing this strategy is given.

The second chapter i.e., the practical part, is dedicated throughout its two sections to the fieldwork and the analysis of the data collected from the experiment and the teachers' questionnaire. It starts though with a description of the research approach, design and methodology, and sheds light on the study's population, sample, instruments and tools.

The first section of this chapter is devoted to the true-experiment conducted on the study's sample where its definition and its detailed procedure are provided. The second section is about the teachers' questionnaire and its results. The findings and results are then analyzed and discussed, suggesting recommendations to the teachers, learners and future researchers.

**CHAPTER ONE: READING,
COMPREHENSION and THE KWL
STRATEGY**

Introduction

In this chapter, a review of related literature is presented. A number of scholars' work has been used where reading is defined both in L1 and L2 contexts alongside its general purposes, process, its models and the difficulties readers face. Next, an in-depth discussion of reading comprehension is provided as it is the main reading difficulty tackled by this study. This includes its definition, importance and suggested strategies for improvement. Finally, the KWL strategy chart is explored as one method to improve reading comprehension. Different aspects of the KWL strategy chart are presented including its definition, implementations and procedures via the use of graphic organizers.

Section One: Reading

1. Definition of Reading

Reading is an essential skill that allows learners to acquire information and knowledge. It is the ability to look at words or symbols and understand what they mean, as the Cambridge Dictionary stated (p. 778). In other words, reading is a receptive skill that goes through two major phases: the reception of words and the understanding of their meaning. The Online Merriam Webster Dictionary also defined reading as “receiving or taking in the sense of (letters, symbols, etc.) especially by sight or touch” which emphasizes the importance of decoding the meaning behind the written symbols over reading fluency. This is also applicable when it comes to text reading. Koda (2007) expressed this same idea by describing reading as constructing text meaning based on visually encoded information. She also explained that, since readers read to understand the meaning intended by the author who wrote the message, then when reading, readers have to make a link between the language and its writing system (Volume 57, Issue s1, p. 1). In other words, the reader bridges the visual representation of the words with their meaning.

Grabe and Stoller (2002) agreed that there is a possibility of defining reading in a single statement as it is mentioned in both dictionaries and in Koda's definition. However, they explained that it is insufficient, as realistically, the reading process involves a combination of concepts and skills such as comprehension, fluency, decoding...etc. that are essential to understand the true nature of reading. Grabe and Stoller presented a simple definition of reading as being the ability to draw meaning from the printed page and interpret this information appropriately (p. 3). However, they questioned this simple definition's sufficiency in clarifying the true nature of the reading process. To justify their claim, they stated five main reasons that support the inadequacy of this single-sentence definition. According to them, definition of reading:

- First, "does not convey the idea that there are a number of ways to engage in reading". A reader has many objectives for reading, and each objective requires a different set of skills and techniques.

- Second, "does not emphasize the many criteria that define the nature of fluent reading abilities"; It conceals the several talents, methods, and knowledge bases that work together and frequently concurrently to produce the total reading comprehension capabilities that we typically think of as reading.

- Third, "does not explain how reading is carried out as a cognitive process that operates under intense time constraints"; However, in order to comprehend how reading comprehension functions for the fluent reader, it is crucial to appreciate these extremely quick time-processing restrictions.

- Fourth, "does not highlight how the ability to draw and then interpret meaning from a text varies with the second language proficiency of the reader". As the more proficient the reader is the more capable he is of understanding what it truly meant in the text.

- Fifth, “does not address the social context in which reading takes place nor the reasons why texts will be interpreted and used in differing ways”. As social situations may affect the readers perception of the ideas presented in the text (pp. 3-4).

2. Purposes of Reading

Evidently any person who reads have certain end set in mind behind the act of reading. Indeed, in their book “Teaching and Researching Reading”, Grabe and Stoller (2002) explained that we almost unconsciously have to make a number of initial decisions prior to engaging in the act of reading. These decisions vary according to the reading purposes. They illustrated this with the example of reading a newspaper where usually the reader skims the front page looking for specific headlines of interest to him. He will then turn into the page of that article, read some paragraphs and decide at some point that he had enough information. However, in other settings, typically academic ones, one may sometimes gather information from multiple reading sources, from different parts of a long and complex text not missing a single word in order to obtain the information in its entirety (p.5). Based on their plausible views, the reading process is indeed governed by an aim which Grabe and Stoller took the pains to then classify:

2.1. Reading to Search for Simple Information and Reading to Skim

Grabe and Stoller (2002) claimed that these two purposes are the most common ones. They explained that reading to search for simple information is basically scanning the text for particular words or sentences that appeal to interest. They illustrated this with the example of reading a telephone book looking for an address or a phone number. Likewise, reading to skim only targets the most important elements for the reader. They further explained that it consists of “sampling segments of the text for a general understanding” (p. 7) in other words the reader only takes small parts from the text to form general ideas about it. Furthermore, Grabe and Stoller (2002) considered this as a useful skill on its own as it

involves using a combination of guessing strategies about where important information might be located in a text then applying basic reading comprehension on the selected portions to form a general idea.

2.2. Reading to Learn from Texts

This purpose is primarily linked to academic and professional fields where the need is to gather a sufficient amount of information from a text. Grabe and Stoller (2002) explained that reading to learn requires abilities to “remember main ideas as well as a number of details that elaborate the main and supporting ideas in the text, recognize and build rhetorical frames that organize the information in the text and link the text to the reader’s knowledge base” (p. 7). That is to say, when the reader is engaged to obtain knowledge, the process increases in complexity. Grabe and Stoller (2002) also pointed out that this purpose usually carries a reading rate that is slower due to re-reading and using techniques to remember information.

2.3. Reading to Integrate Information, Write and Critique Texts

These three purposes are generally common in academic contexts. They all share the process of carefully selecting information then applying critical evaluation to decide what parts are valuable for using (Grabe and Stoller, 2002, p. 7).

2.4. Reading for General Comprehension

This is considered the most basic purpose of reading however, it is more complex than it appears as it requires a unique set of skills of rapid word processing and forming general meaning of main ideas. Although, these skills are usually used automatically by fluent readers who take this purpose for granted. Yet, it is far more difficult for second language learners since it requires a quick coordination of multiple skills in word processing and identifying main ideas in a short time frame (Grabe and Stoller, 2002, p. 8).

3. Process of Reading

Based on the aforementioned definitions of reading, it is rendered a process; it involves complex orchestrations of multiple procedures which Dechant (1991) worked on defining as “the process of putting the reader in contact and in communication with the ideas of the writer which are cued by the written or printed symbols” (p. 6). Burchiellaro (2013) words fit to simplify what Dechant said. He claimed that the process starts with the perception of printed symbols that constitute a word which would then trigger a reader’s association of both a meaning and a pronunciation, a sequence of this leads the reader to form ideas about what is being read in order to achieve comprehension of the entire reading material (p. 7). Simply put, the visual representation of a word is linked to a vocal representation and then to a meaning. So, when the reader perceives a word, he accesses its pronunciation and meaning which he previously stored and a continuation of this process leads the readers to obtain meaning of the whole passage. Additionally, Dechant divided this process into two major phases: a word identification phase and a decoding phase.

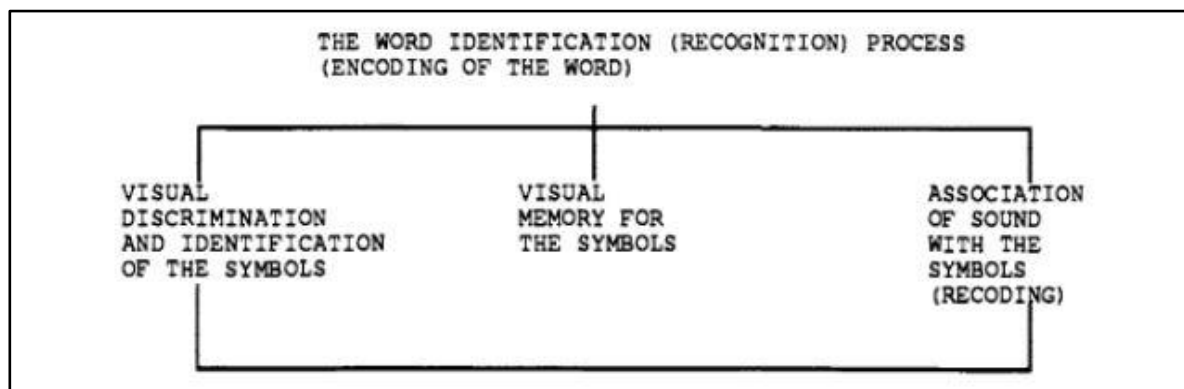
3.1. Word Identification

According to Dechant (1991), reading begins as a sensory process, where the reader tends to use one of his senses; predominantly sight, to fulfill the need to identify and recognize the words. He separated the goal of reading from that of communication then broke them down into essential elements to enable each purpose to be fulfilled as follows: “the purpose of all communication is the sharing of meanings; the purpose of all reading is the comprehension of meanings. But it is the symbols or the words that must carry the burden of meaning between the communicators” (p. 7). Dechant pointed out that rapid and accurate word recognition plays a huge role for better reading fluency. He also divided word identification phase into three basic processes: visual discrimination and identification of the

symbols, visual memory of the symbols and association of sound with the symbols (see Figure 01).

Dechant (1991) stated that readers have to visually discriminate one symbol from another as they have to identify those graphic symbols and distinguish the difference between two letters or two words, then through their memory, link a sound (previously learned) to those graphic symbols (p. 8). That is to say, in reading, distinguishing two visual representations and linking each visual representation to its vocal one, which happens in multiple phases, is faster among fluent readers.

Figure 01: Word Identification Process (Encoding of the Word), Dechant (1991, p. 8).



3.2. Decoding

Dechant (1991) asserted that the ability to identify words is insufficient on its own while engaging in the process of reading. Instead, an intricate reconstruction of the message intended by the writer so that meaning of a message is in coherence with what the writer meant (2009, p. 9). In other words, the reader has to understand exactly what the author meant when writing the message and not just recognizing the words in front of him.

4. Product of Reading

According to Burchiellaro (2013) “comprehension, meaning, understanding and knowledge are all synonyms for the final result of the reading process, its product” (p. 13).

Indeed, the outcome of reading is a composition of multiple attained benefits. She further illustrated that this product “varies as well depending on what happens between text and reader ... as the reader’s purpose and motivation in reading a text affect the outcome of the process itself” (p. 17). Indeed, the reader does not engage into reading as a blank slate. Alderson (2006) stated that printed words have only a potential to be transformed into meaningful ideas and it is the reader’s responsibility to shape that potential and give it a valid interpretation. Consequently, there are multiple interpretations by different readers of the same text, even more by one single reader who might change his attitude towards the same text (p. 6). Moreover, Gray (1960) distinguished different levels of understanding in reading comprehension: “reading ‘the lines’, reading ‘between the lines’ and reading ‘beyond the lines. The first level corresponds to the literal meaning of the text, the second to inferred meanings and the last one to readers’ critical evaluation of text” (p. 13). To put it differently, the reader deciphers the symbols into actual words, constructs the surface/apparent meaning (immediate and arguably easiest way), the implicit meaning (inferred), and finally brings in his own previous knowledge and experience to import more meaning that was/is not necessarily intended by the writer.

5. Models of Reading

Reading is essential in learning, that is why many researchers have attempted to discover an understanding of what really happens during the act of reading by using different methods. These methods, Grabe and Stoller (2002) explained, called models, help in providing a useful metaphorical interpretation of the process involved in reading. They stated that these models, particularly linked with second language learning contexts, are classified into three major categories: bottom-up, top-down and interactive model (p. 25). Additionally, “a new model known as the new literacy approach has emerged” (Hudson,

2007, p. 55). However, the new literacy approach model is beyond the scope of the present study.

5.1. Bottom-Up Model

“Metaphorically, bottom-up models suggest that all reading follows a mechanical pattern in which the reader creates a piece-by-piece mental translation of the information in the text, with little interference from the reader’s own background knowledge.” (Grabe and Stoller, 2002, p. 25). They clarify further that in an extreme view, the reader goes letter-by-letter in each word, word-by-word in each sentence and sentence-by-sentence until finishing the whole text in order to process it piece by piece so the meaning can be obtained.

However, this model has been criticized by Rumelhart (1977, p. 720). He argued its utility due to the exclusion of the possibility of interference from the reader background knowledge and the absence of interaction within the model itself as the processing at any level can only affect the level directly above it. In other words, understanding a text in the bottom-up system is obtained by small increments (understanding letters, then words, then sentences ...etc.) without being influenced by the reader’s background knowledge which can be considered detached.

5.2. Top-Down Model

Goodman (1967) claimed that “while the bottom-up model starts with the smallest units in sentences, the top-down model is based on an opposite concept. The reader relies on syntactic and semantic knowledge that was known prior to the reading”. (As cited in Khaokaew, 2012, p. 24), which means that, contrary to the previous model, reader’s background knowledge is a prominent element in the top-down model.

Grabe and Stoller (2002) also indicated that reading should be directed by the reader’s goals and expectations (p. 25). This puts more emphasis on the active role of the

reader in the process of reading. Therefore, the top-down model emphasizes background knowledge and active contribution from the reader in order to reach reading comprehension of any new information being read.

5.3. Interactive Model

This model can be considered as a mixture of the two previous models. In Rumelhart's view point (1977) reading is neither a bottom-up nor a top-down process. It is instead a process in which both models are involved either simultaneously or alternately. He additionally reckoned that "in the interactive model of reading comprehension, the meaning is not bound to the text alone; rather, it is the outcome of construction of the information within the text and the readers' interpretation" (pp. 732-733), meaning that in the interactive model, the reader's word recognition and his background knowledge are essential and employed to obtain the true meaning of a text.

Grabe and Stoller (2002) also explained that the simple idea behind this model was to group the good sides of both the rapid and accurate word recognition of bottom-up model and the major contribution of the background knowledge of the top-down model. However, they argued that its logic leads to a self-contradictory model. They pointed out that:

efficiently coordinated automatic processing in working memory such as automatic word recognition, are incompatible with strong top-down controls on reading comprehension. The automatic processing aspects of comprehension, by definition, need to be able to operate without a lot of interference from the moment-to-moment information gained from background knowledge or massive amounts of inferencing (p. 26).

In other words, the interactive model is the product of combining the bottom-up and top-down models. However, combining them also leads to importing both of their down sides, and since they have opposite down sides, the interactive model might prove self-contradictory.

6. Difficulties of Reading

Although reading is considered as a basic academic task, a lot of pupils face a number of difficulties while performing it. They can be classified into:

6.1. Decoding

Bannatyne (1973) noted that the visual symbols, called graphemes, represent sounds, called phonemes, not concepts or meanings. And the printed words on a page are a code of the sounds of that language (As cited in Dechant, 1991, p. 8). Hudson (2007) stated that difficulties in decoding is due to the poor phoneme-grapheme connection, as there is a need to transform the orthographic symbols into language when reading. That is to say, the brain stores sounds and links them to visual representations. Decoding difficulties happen when the brain receives a visual representation and fails to link it to the proper sound.

6.2. Fluency

Reading fluency, explained Guillot (1999), refers to the connection between reading comprehension and word recognition, manifesting itself through reading speed and accuracy (p. 11). According to Hudson (2007) fluency is lost when the reader fails to read large sequences of a text without interruptions. He explained that “these interruptions often occur because a reader has to spell difficult words or because he does not understand certain words or parts of text and reads it over again. These interruptions lead to slow and fragmented reading.” (As the second was cited in Bakke, 2010, p. 18).

6.3. Critical Reading

Critical reading is the ability to “analyze, synthesize and evaluate what is read” (Hudson, 2007, p. 80). It is often linked to academic and professional contexts. Hudson attributed the difficulty to read critically to the lack of recognizing arguments, discussing pros and cons, establishing cause-and-effect relationships etc. (p. 80).

6.4. Comprehension

According to Hudson (2007), comprehension is achieved when the reader activates his background knowledge and connects it with what he is reading in order to get a better understanding. The next section provides an in-depth discussion on reading comprehension as it is the main difficulty addressed in the present study.

7. Reading in L2

L1 reading has a big impact on L2 reading. Grabe and Stoller (2002) detailed that the reader's first language reading knowledge that he developed can either be beneficial as it helps transferring reading skills to the second language reading or be a hindrance as it becomes a source of interference (p. 34). In other words, the reader might benefit from his first language reading skills in terms of word recognition and fluency but he can also face problems adapting to the new language structure, vocabulary and phonetics.

8. Difference Between L1 and L2 Reading

Although first language reading admittedly has a huge influence on second language reading, according to Hudson (2007, p. 60), there are important differences between L1 and L2 reading. Grabe and Stoller (2002,) also elaborated on those differences by explaining that "while learning to read, [L2 learners] must broaden their linguistic knowledge at the same time". They also have to transfer their L1 reading skills to L2 and learn to use bilingual dictionaries and glosses all of which were not required in learning to read in their L1. Grabe and Stoller added that one of the main differences is that L2 readers learn to read "with a two-language processing system (L1 and L2 together)" rather than just L2 alone as the L1 system never completely shuts off (p. 35).

9. Assessment of Reading

According to Grabe (2009) "reading assessments are meant to provide feedback on the skills, processes, and knowledge resources that represent reading abilities" (p. 353) which

means that teachers must evaluate their pupils' improvements and developments. Tuner (1988) stated four aspects of assessing reading comprehension progress which could be done by the teachers: evaluating pupils' pronunciation, evaluating whether they can interpret the main ideas using their own words, assessing if they can transfer the information to the listeners and checking if they have found and extracted the right information as stated in the reading material. (p. 161). In other words, teachers must apply multiple methods to evaluate the reading progress and comprehension of their pupils as it allows them to keep track of any improvement or difficulty.

Section Two: Reading Comprehension

1. Definition of Reading Comprehension

The previous section explored the process of reading in details. It was fairly shown to be a complex procedure that involves different yet simultaneous steps so as to unveil the meaning of symbols, words and sentences. Reading comprehension, however, while understood to be naturally the result of reading; full grasp of the meaning of a written text, deserves a lengthy discussion on its own.

To begin with, Woolley (2011) acknowledged that "reading comprehension is one of the most important components of reading to master. It requires students to move beyond decoding individual vocabulary and statements to constructing a solid understanding of the entire passage" (As cited in Almutairi, 2018, p. 18). Thus, reading comprehension focuses more on the meaning of a text as a whole rather than on isolated words or sentences. Evidently, reading for comprehension is one such purpose for reading, yet it poses as a difficulty at the same time. Aside from being a skill to be perfected, Hudson (2007) added that the need of connecting the reader's background knowledge with the reading material is imperative in order for the reader to achieve a better understanding (p.143). Surely, the reader does not deal with any material separately from whatever knowledge he/she already have

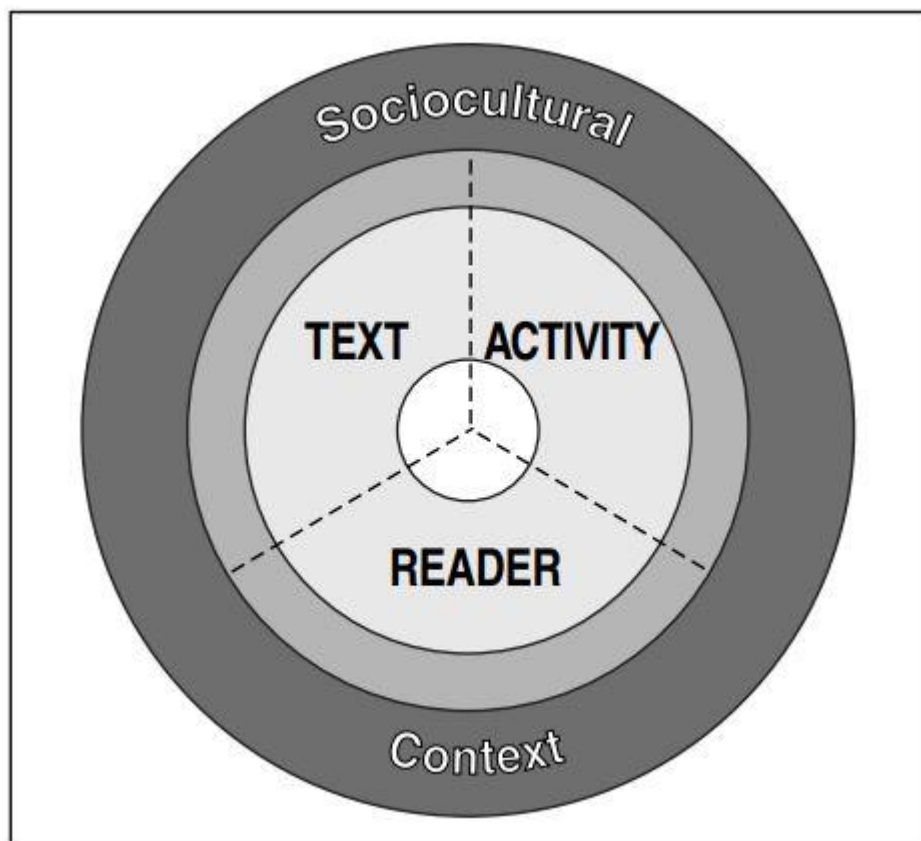
acquired. The convergence of new read material with prior knowledge only solidifies the information grasped from any read text.

Additionally, Fountas and Pinnell (2001) explained the importance of a good composition of the reader's background knowledge, the purpose of reading, and the vocabulary and language used by the author to better understand any reading material (As cited in Almutairi, 2018, p. 19). Meaning that there are complex and intertwined elements that should be actively employed when reading to reach comprehension.

Furthermore, Snow (2002) defined reading comprehension as “the process of simultaneously extracting and constructing meaning through interaction and involvement with written language” (p. 11). He also delineated that the concept of reading comprehension “entails three elements: the reader who is doing the comprehending, the text that is to be comprehended and the activity in which comprehension is a part.” (p. 180). In other words, interaction with written language (texts) complements the reader's building of meanings and comprehension.

These three elements have an impact on reading comprehension. Fletcher et al. (2013) and Woolley (2011) also provided a more inclusive definition of reading comprehension as being a complex process involving a combination of skills. “These skills involve fluently decoding words, understanding the language syntax, making inferences, using background knowledge, and managing working memory as needed” (As cited both in Almutairi, 2018, p. 19). In other words, reading comprehension is a critical and difficult process that requires a variety of abilities going from graphic symbols recognition to pre-existing knowledge to obtain a clear understanding of the reading material.

Figure 02: A Heuristic for Thinking About Reading Comprehension (Snow, 2002, p. 12).



2. Importance of Reading Comprehension

Reading comprehension skills are crucial for pupils on both academic and personal levels. Almutairi (2018) stated that “Academic success also requires students to be able to understand, analyze, and apply the information they gathered through reading” (p. 20). By extension, reading comprehension increases in importance as pupils advance through grades. Almutairi also pointed out that pupils have to understand their reading material to carry out their assignments, and that educational expectations often require pupils to read and search through multiple sources hence, it is necessary for them to understand each source to be able to locate pertinent information and exclude everything that is irrelevant (p. 20). This

furthermore emphasizes the importance of reading comprehension in fulfilling the different academic tasks pupils are required to execute.

On the personal level, the importance of reading comprehension is represented in the need to understand basic text notification as bills, contracts and applications. Its significance increases as well in more serious contexts like understanding medical procedures, medicine dosages or safety warnings on containers of dangerous chemicals (Almutairi, 2018, p. 20). He also ascertained that not being able to read properly makes finding a job more difficult or even to be socially excluded in some cases compared to skilled readers. “Even though they might find a job, the pay rate will be much less when compared to proficient readers” (p. 20). In other words, the importance of reading comprehension on the personal level consists of understanding basic daily life instructions, guidelines on the news, and various textual documents.

3. Problems of Reading Comprehension

Although reading comprehension is a crucial aspect of the reading process, many challenges can arise and prevent the reader, as a result, from achieving it.

3.1. Use of Prior Knowledge

Prior knowledge, also known as background knowledge, refers to “the sum of what a person knows about the content of a text” (Brandao and Oakhill, 2005, p. 688). In other words, prior knowledge is all the information a reader has accumulated about a given topic. McNamara and Kintsch (1996) mentioned that reading comprehension relies on establishing a connection between the reading material and the reader’s background knowledge and personal experience on the subject. This connection helps facilitate the reading comprehension. That is to say, linking the information a reader already has about a given topic with what he is reading helps him to fully grasp the material. Johnston (1984) and Taft and Leslie (1985) also backed that up by stating that readers with a greater background

knowledge are able to better comprehend a piece of written content than the ones with less background knowledge. Additionally, Brandao and Oakhill (2005) explained that pupils benefit greatly from prior knowledge when it comes to understanding implicit information (As cited in Almutairi, 2018, p. 28). So, it is not just about understanding the explicit meaning of a text, there could be an underlying meaning that an author expects only few readers with background knowledge on it to be able to unveil.

3.2. Vocabulary Knowledge

According to Baumann and Kameenui (1991) and Gersten et al. (2001), “there is a powerful and unequivocal relationship between vocabulary knowledge and reading comprehension” (As cited in Almutairi, 2018, p. 29). Hence, the relationship between vocabulary knowledge and reading comprehension is correlational, meaning that the greater vocabulary knowledge a reader possessed the easier it is for him/her to understand the meaning intended behind any given reading material. To put it simply, Stanovich (1986) explained that pupils’ reading comprehension improves when they have a better command of vocabulary (p. 389).

3.3. Lack of Reading Fluency

In reading, fluency refers to the capacity of a reader to read quickly, correctly, and with appropriate expression a piece of written material according (NICHD, 2000, pp. 3-5). According to LaBerge and Samuels (1974), fluency enables readers to quickly process vocabulary units and connect words and sentences which help them better understand what they are reading (pp. 293-323). Although fluency qualifies the reader to effectively read and comprehend a text, it is improved through constant reading and cannot be an innate skill a reader possesses. It is a developed skill.

3.4. Limited Knowledge of Common Text Structures

As Almutairi (2018) elucidated, text structures such as problem/solution, cause/effect, compare/contrast and so on, are the way the author arranges the information in the text to deliver it to the reader. He contended that having a knowledge about these structures help the reader locate important ideas and differentiate them from less important ones (p. 36). For instance, reading a story where the plot twist, character details and solution are not structured the same way as in a report where generally direct key sentences are given about the findings or causes will create an obstacle for the reader. So, knowing the structure of the text helps the reader better understand it.

3.5. Difficulty Making Inferences

Making inferences refers to the reader's ability to draw his own conclusions about the text without the author's direct remarks. It involves the ability to read between the lines; the implicit meaning (Almutairi, 2018, p. 38). This entails that the reader not only puts into practice his reading skills, but has to invest whatever information he obtained in relation to the topic he is reading about. Woolley (2011) explained the latter point as an imperative need to make connections between the different parts of the reading material and connect the latter with the reader's prior knowledge in order to obtain the meaning (p. 16).

4. Reading Comprehension Strategies

In an attempt to solve the various reading comprehension problems stated above, different scholars such as Ogle (1986) and McKnight (2010) devised a number of strategies to be implemented in hopes of overcoming them.

4.1. Graphic Organizers

Dye (2000), Kim et al. (2004) and Darch and Eaves (1986) explained that a graphic organizer is a visual model, generally involving the use of lines, arrows and spatial arrangements, to classify the information of a text and display it simply for a clear and better

understanding. This strategy is the main focus of the present study and it will be further explained and examined in the next sections.

4.2. Collaborative Strategic Reading

Klingner and Vaughn (1999) illustrated that this strategy relies on pupil collaborative group work. They also explained that it consists generally of four phases where the pupils first brainstorm what they know about a given subject, write down the familiar and unfamiliar statements as they are reading then use the familiar ones of each other to gain the meaning of the unfamiliar ones, analyze and restate the main ideas, and finally generate questions about the subject. (p. 285). In other words, pupils work together and use each other's skills and knowledge to understand reading material.

4.3. Peer-Assisted Learning Strategy

This strategy consists of pairing a skilled reader with an unskilled one in order to generate cooperative work in different reading activities seeking an improvement in reading comprehension (Almutairi, 2018, p. 50).

4.4. Story-Mapping

According to Boulineau et al (2004), this technique consists of pupils filling out a pre-structured card with grammatical components of a story as title, characters, main events, timings, problem, solution...etc. in order to clarify it and gain a better understating of it (p. 106). Which means that this strategy involves the use of graphic chart to organize information.

4.5. Self-Questioning

Mahdavi and Tensfeldt (2013) pointed out that this strategy involves the reader to regularly stop mid-reading and ask himself questions about the text to monitor his own comprehension (p. 83).

5. Teaching Reading Comprehension

According to Harmer (1998, pp. 70-71), there are various principles in teaching reading:

- Principle one: “Reading is not a passive skill”: on the contrary, reading is an active skill as the reader has to understand the words and what they are aiming for, understand the arguments and decide whether to agree or disagree with them.
- Principle two: “Students need to be engaged with what they are reading”: specifically, the teacher should encourage the pupils and let them choose what they read as this entertains them and enables general language improvement.
- Principle three: “Students should be encouraged to respond to the content of a reading text, not just to the language”: as it supports their comprehension in actually understanding the meaning of the ideas rather than understanding each word on its own.
- Principle four: “Prediction is a major factor in reading”: through drawing their own conclusions and making inferences help better understand the text.
- Principle five: “Match the task to the topic”: meaning that the teacher should choose reading materials that are relevant to what’s being discussed in the class.
- Principle six: “Good teachers exploit reading texts to the fullest”: in other words, teachers should integrate reading into multiple class tasks as it helps the pupils improve their language.

Section Three: KWL Strategy

1. Definition of Graphic Organizers

Graphic organizers, as aforementioned, is one of the strategies designed to improve reading comprehension. According to Sam and Rajan (2013), the best way to describe

graphic organizers is “a picture is worth a thousand words” (p. 155). This highlights the efficacy of visual elements in learning. Bromley, Irwin and Modlo (1999) defined them as a structured visual representation of the information present in the text that highlight the relationships between the main ideas and concepts. They also explained that although graphic organizers may take different forms such as maps, flowcharts, diagrams, story mapping...etc. the main goal remains to visually clarify the textual information with the aim of ensuring a better understanding (p. 6).

Sam and Rajan (2013) discussed the purpose of using graphic organizers. They contended that graphic organizers help pupils activate their prior knowledge when reading and organize their thinking. This helps avoid any contradictions by clarifying the relationships between the ideas and concepts. consequently, pupils will be able to make inferences and predictions, remember the important information, and thus, better understand the text (p. 156). Based on what is stated above, it is clear that graphic organizers attain to the skills required to achieve reading comprehension as discussed in the previous section.

2. Using Graphic Organizers in Teaching Reading

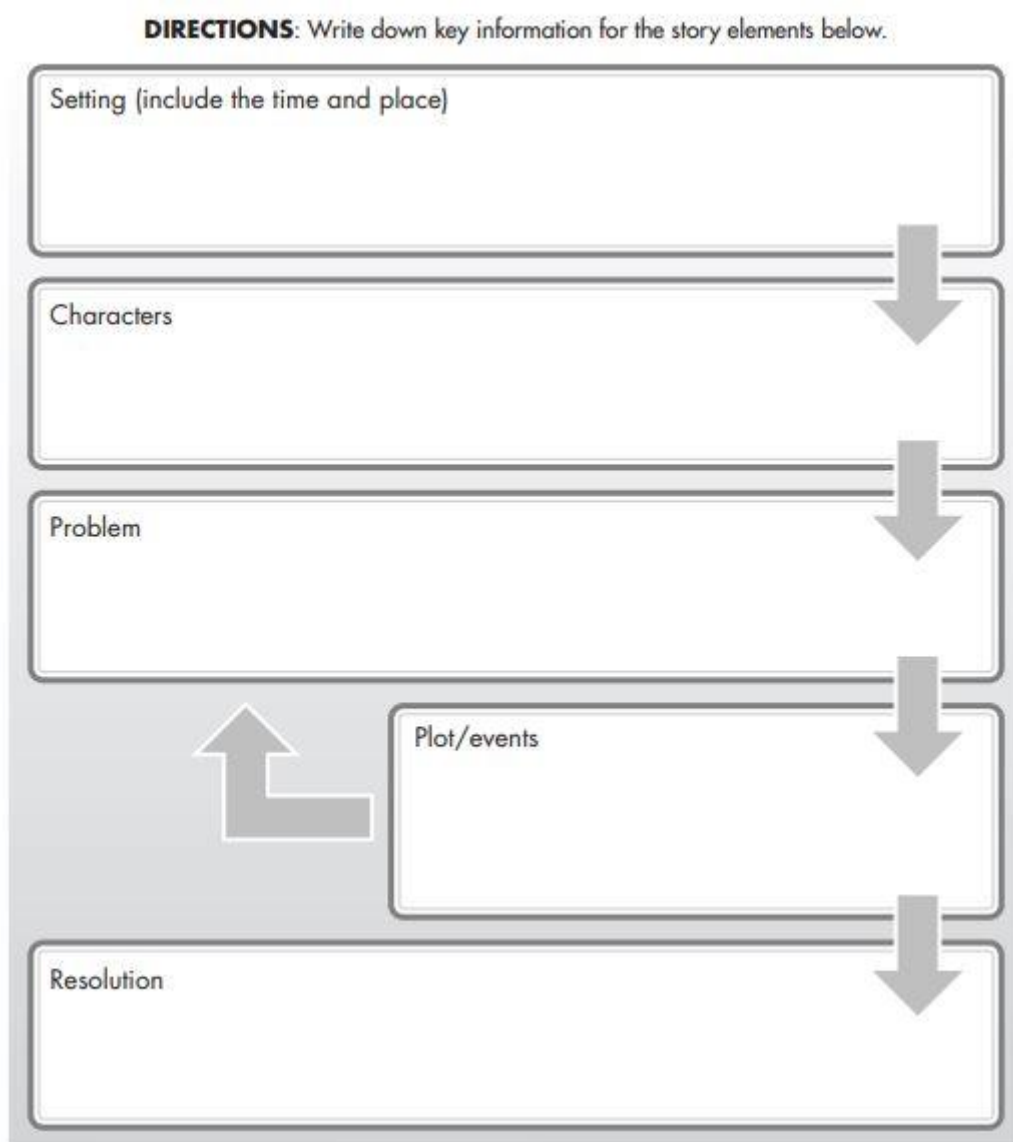
In reading sessions, pupils are often taught how to read words rather than understand the meaning of texts (Dechant, 1991, p. 26). This is where the objective of graphic organizers comes into play in teaching reading comprehension because they exploit the positive effect of visual learning for pupils. Additionally, Cleveland (2005) stated that graphic organizers serve multiple purposes in the classroom. They offer the opportunity to pupils to have a straightforward visual representation of a large quantity of information which helps them get a clear view, take precise notes, identify main ideas and details, and better retain information. Cleveland also explained the importance of graphic organizers in allowing pupils to see patterns and relationships between ideas and concepts such as cause and effect, comparing and contrasting, chronological order, and enabling their critical thinking skills (p. 1).

3. Reading Graphic Organizers

3.1. Story Maps

Story maps, as Stowe (2015) elaborated, are visual descriptions that allow a classification of the main elements in a fiction story such as characters, setting, main events, problem and solution in pre-structured labeled spaces as displayed in Figure 03. Stowe also explained that these pre-structured spaces may be labeled with one word in primary grades in order to simplify them, and they increase in complexity as pupils advance in grades. So, more events, secondary characters and multiple story solutions would be added to the map (p. 9).

Figure 03: Story Map Chart. McKnight (2010, p. 181).



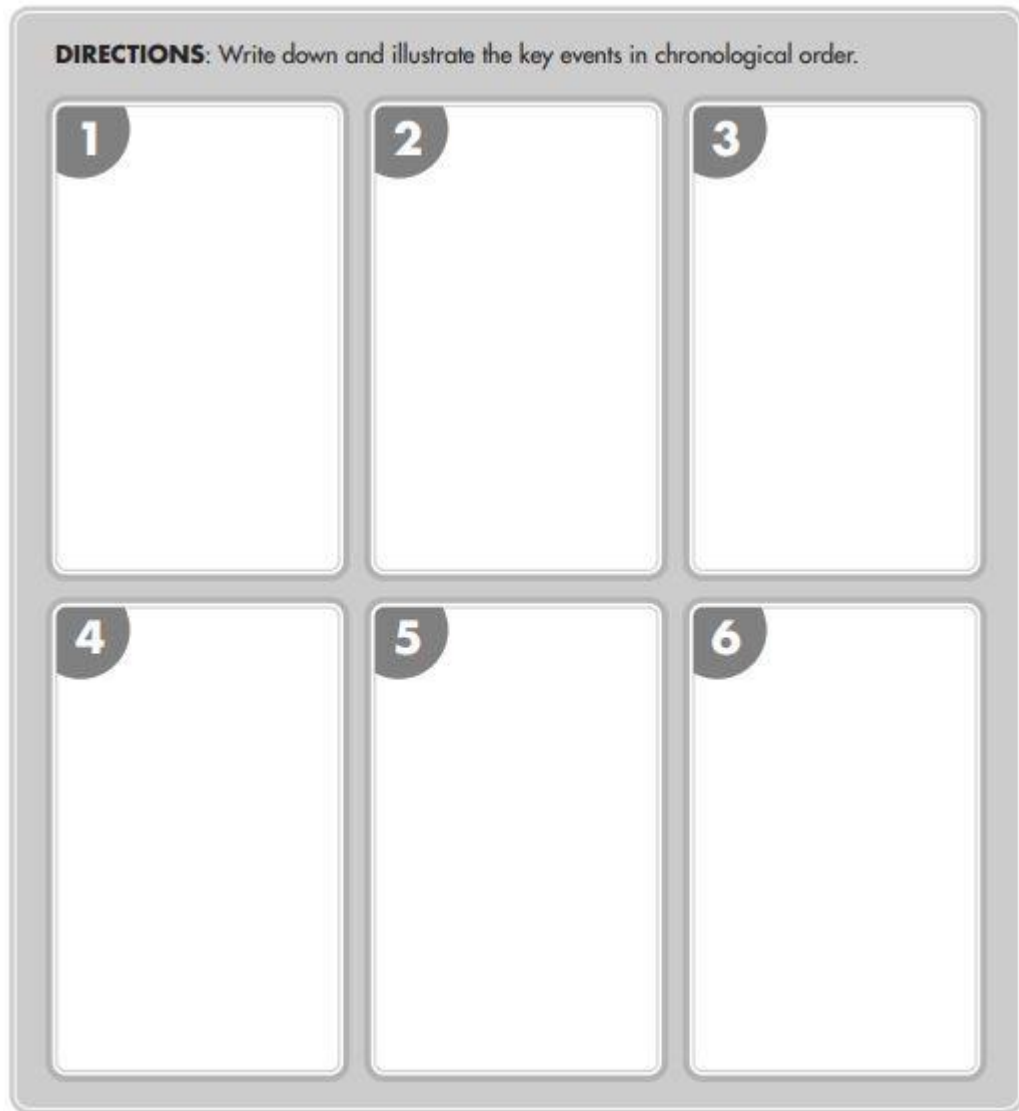
3.2. Story Trails and History Trails

This type of graphic organizer, according to McKnight (2010), allows pupils to chronologically organize phases from a story or a historical event into a defined structure (see Figure 04). McKnight explained that this structure stimulates pupils to determine the relationship between the events whether it is a cause-and-effect relationship, problem-solution or just a simple beginning-middle-end story, which prompt them to obtain a better understanding (p. 136).

Figure 04: Story Trails and History Trails Chart McKnight (2010, p. 137).

DIRECTIONS: Write down and illustrate the key events in chronological order.

1	2	3
4	5	6



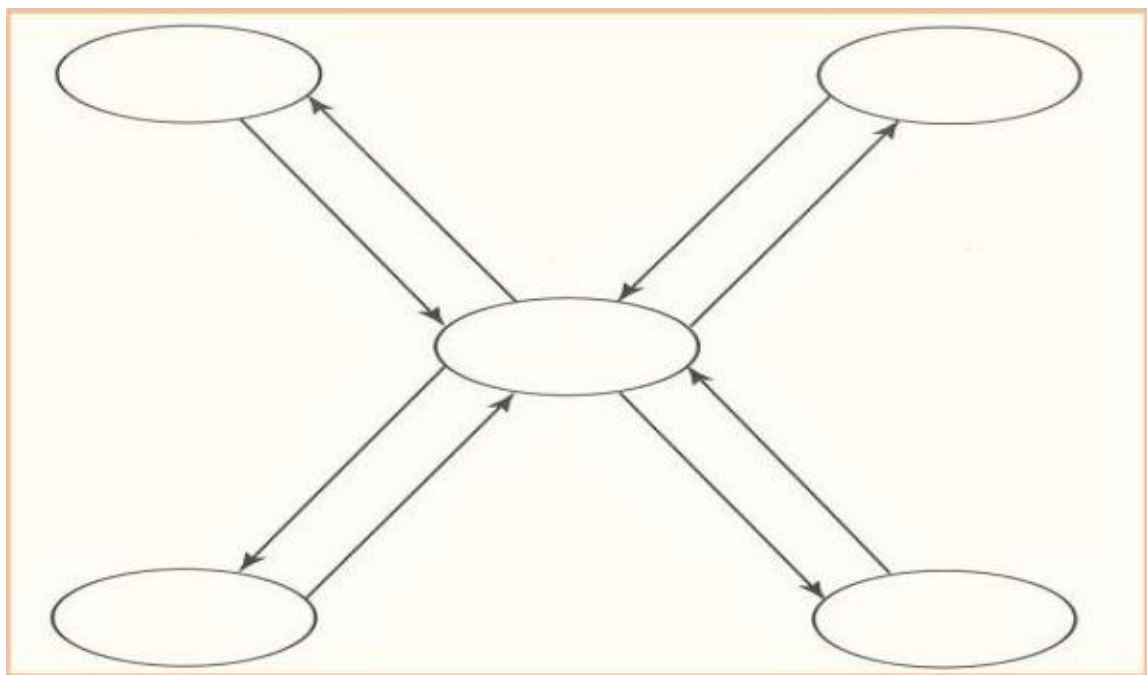
3.3. Character Relationship Map

As claimed by Bromley et al., (1999), this type of graphic organizers allows pupils to take a deeper look at the characters in a story and their relationships by identifying and analyzing their actions, emotions and interactions. Bromley et al., (1999) also illustrated the process of using this type of graphic organizer in the classroom. Pupils are first asked to identify the main character and put it in a centered circle, then proceed to identify secondary characters and put them all around the main circle as shown in Figure 05. Next step requires

pupils to deduce how the main character feels about each secondary character by extracting statements and ideas that support their deductions (p. 24).

Bromley et al., (1999) highlighted that that the benefit of this type of graphic organizer may be clearly seen in reading about characters in historical fiction since the story takes place in a much different time and the characters generally use a much different vocabulary (p. 25).

Figure 05: Character Relationship Map Chart. Bromley et al. (1999, p. 25).



4. Definition of the KWL Strategy

The KWL strategy was first developed by Ogle (1986) as a diagnostic and initial assessment technique to identify learners' prior knowledge (p. 564). UNESCO (2005) also described it as the right method to assess the prior knowledge of learners (p.22). Additionally, Fitzpatrick and Doucet (2013) characterized it as a valuable method for activating background knowledge and encouraging learners to develop their own reading intentions (p. 153).

Moreover, McKnight (2010) pointed out that the KWL Strategy “is one of the most widely recognized graphic organizers and instructional strategies” (p. 16). This entails its popularity and supports its usefulness and effectiveness. She further elaborated that this strategy is basically a chart with three columns covering the before, during and after phases of reading (see Figure 06). She explained that first there is the K column, which stands for (what I Know). It contains the information that readers already have on the given topic. This column is to be filled before the reading process and it triggers the readers’ prior knowledge. Second, the W column stands for (what I Want to know) and it contains the information that the readers want to know about the given topic. In this phase, which happens before reading as well, the readers ask themselves questions that will support their comprehension. Having those questions in mind during the reading process will help them focus even more to find the answers. Finally, the L column stands for (what I Learned), and it contains what the readers acquired about the topic after reading the text. This column involves readers reflecting and analyzing what they just read which will, in turn, help them synchronize the newly acquired information with their prior knowledge. McKnight also added that this strategy can be used with large groups of learners as well as small ones or even individuals (p. 16).

Figure 06: KWL Chart. McKnight (2010, p. 17).

The image shows a KWL Chart template. At the top, there is a dark grey header with the word "Topic" in white, followed by a white rectangular box for writing the topic. Below the header, the chart is divided into three vertical columns. Each column has a small tab at the top with a letter: "K" for the first column, "W" for the second, and "L" for the third. The first column is labeled "What I know.", the second "What I want to know.", and the third "What I learned.". Each column is a large, empty white rectangle with a thin grey border, intended for students to write their responses.

5. Advantages of the KWL Strategy

There is significant evidence regarding the effectiveness and benefits of the KWL Strategy in teaching reading.

Farell (1991) describes the use of the K-W-L in her classroom and applauds its effectiveness particularly when combined with mapping and summary writing. Van Sledright (1992) found the K-W-L helpful in teaching social studies to fifth graders. Piper (1992) reports using K-W-L as one of five metacognitive strategies which successfully enhanced the reading comprehension of sixth graders in the area of social studies. (As cited in Shelly, Bridwell, Hyder, Ledford and Patterson, 1997, p.234).

In other words, multiple researchers and scholars have backed up the effectiveness and usefulness of the KWL strategy in various contexts.

Shelly et al. (1997) pointed out many advantages of the KWL Strategy chart. they claimed that it is suitable for all educational levels and all activities especially reading. They asserted that it also stimulates more engagement from pupils and helps them better retain information. Additionally, they stated that using the KWL strategy helps pupils develop their vocabulary and articulation of thoughts (pp. 237-241).

6. Problems of the KWL Strategy

In contrast to the advantages, Shelly et al. (1997) mentioned the difficulties faced when using the KWL strategy. They stated that new topics, for instance, may be too difficult for the pupils as they might have limited-to-no background knowledge about them. Also, the lack of active thinking among pupils can affect their ability to properly ask the right questions about a given topic even if they have some prior knowledge. Additionally, pupils might lack motivation if the topics were not interesting or relevant to them. Also, repeated everyday use of the strategy may result in the pupils getting bored and give up the process very quickly (pp. 237-241).

7. Procedure of the KWL Strategy

Based on the discussions above, the KWL strategy chart is an effective technique to improve reading comprehension among learners whether separately or in group. Yet attention must also be drawn to the subject of reading or the topic. Rahmasari and Amumpuni (2014) explained that topic selection is the most important part to be considered by the teacher as it should attend to pupils' level (p. 3). That is to say, the teacher should be careful when choosing a topic not to pick something irrelevant or one that only a handful of pupils have access to in terms of prior knowledge.

Ogle (1986) explained what comes after the topic selection: First, the teacher creates a KWL chart on the blackboard as pupils simultaneously create their own charts. The teacher then proceeds to ask pupils to brainstorm information or ideas that they associate with the topic and record them in the K column to serve as a hook to be attached to the new information. If the topic is brand new, the teacher might give examples to help them generate broader similar ideas. Afterwards, the second phase starts by asking pupils what they want to know about the topic. If they come up with statements, then the teacher turns them into questions. All of the questions are to be written down in the W column. In some cases, the teacher may prepare several questions to focus on certain targeted ideas on the text when s/he feels that pupils' questions are not enough to emphasize them. However, pupils' questions must be more than the teacher's questions. Finally, after the reading process, pupils fill out their L column, then the teacher initiates a discussion about what pupils have discovered making them check the questions in the W column that they answered and mark the main and major ideas to be retained. At the end, the teacher encourages pupils to research the remaining not answered questions in other sources as homework to have a continuous process that allows for a better retention of information (p. 565).

Conclusion

Reading is deemed the foundation of successful language learning. Reading comprehension is a fundamental reading skill which impacts many other skills such as spelling, vocabulary and writing. Therefore, mastering reading comprehension skills allow learners to better progress in their language learning journey. However, this journey does not come without complications as the majority of learners encounter many reading comprehension difficulties. That is why various strategies, including the KWL strategy, have been elaborated to tackle those difficulties and enable learners to achieve reading comprehension. This chapter explored the importance of reading and reading comprehension

emphasizing the KWL strategy as an effective technique to enhance reading comprehension skills.

**CHAPTER TWO: DATA ANALYSIS
AND INTERPRETATION OF THE
CASE STUDY**

Introduction

The present chapter is an investigation on the effect of employing the KWL reading strategy on second-year middle-school pupils reading comprehension. In this research, the aim is to identify, analyze, and describe pupils' developments throughout the experiment. Furthermore, it explores teachers' opinions on the usefulness or lack thereof of using the KWL strategy, as well as their practices on what concerns promoting reading comprehension in general and this strategy in particular. In addition to that, it seeks to propose possible reasons behind lack of implementation; on part of the teachers, and engagement; on part of the learners with the strategy and the standard model devised for in-class use. Also, it seeks to propose possible solutions to encourage pupils to engage in using this strategy to improve their reading comprehension. This chapter will also shed light on the method used to tackle the subject, define the population, the sample and the analytical procedures to be followed. The results gathered by means of both tools are presented and discussed thoroughly. Finally, the chapter includes some pedagogical recommendations as well as the limitations encountered in conducting the study.

1. Research Design and Methodology

The research at hand follows a mixed-method approach. Also, in order to meet the goal of this research, a specific research design must be followed. The objective of this research is to examine the effectiveness of using the KWL strategy in improving second-year middle-school pupils' reading comprehension; therefore, a true-experiment is applied on the research sample to obtain representative data.

2. Population and Sample

The present study is conducted on second-year pupils of Zighoud Youcef middle-school, Skikda. Out of 78 second year pupils, 48 pupils were chosen randomly. Random sampling is chosen because it is considered as one of the most reliable methods to obtain a

representative sample, hence enabling generalizations on the whole population and also because it is required in our true-experimental design. The reason behind choosing second-year pupils is due to the fact that they have been exposed to English for six years already which means they have developed a base in the language during this long period. Also, their main specialty is foreign languages so they are regularly presented with numerous reading material. In addition to that, due to their specialty, English occupies an important element of their education. This entails their commitment to the subject; the language.

3. Research Instruments and Tools

Two data collection instruments are adopted: an experiment and a teachers' questionnaire. The experiment is directed according to the true-experimental design. It is divided into three sections: a pre-test phase, a treatment phase and a post-test phase. In addition, the teachers' questionnaire is composed of 13 questions mainly inspecting teachers' opinions about reading comprehension and its importance in learners' learning reading process as well as their views about the KWL reading strategy and its usefulness.

3.1. The True-experimental Design

Also referred to as the classical experiment design is the most conventional type of experiments in natural and social sciences. It includes three key elements: pre-testing and post-testing, independent and dependent variables, and experimental and control groups (Babbie, 2010, p. 232). Keeping the aim of this study in mind, it is sensible to use this design to facilitate tracing any changes in pupils' reading comprehension by the end of the experiment.

The true-experimental design involves “the observation of an experimental group to which a stimulus has been administered and also the observation of a control group, which does not receive the experimental stimulus” (p. 233). In other words, the treatment's

effectiveness is tested by comparing the achievements of the experimental group, which is exposed to the intervention, with the control group which receives no treatment.

Additionally, Babbie pointed out that the experiment examines the impact of an independent variable, which takes the form of an experimental stimulation, on a dependent variable (2010, p. 232). Meaning that the goal is to evaluate the impact of our intervention i.e., employing the KWL strategy, on the post-test scores of the pupils and to see whether they improved in the post-test compared to the ones of the control group.

Furthermore, the participants in a true-experiment need to be assigned randomly as it helps ensure the comparability between the two groups (p. 233). Meaning that random sampling and assignment are required to be sure that any differences between the experimental and control groups are due to random chance. This will foreground the difference our intervention can make on the scores of the pupils.

3.1.1. The Procedure

In the following section, the three phases of the true-experiment: the pre-test phase (for both groups), the treatment phase (for the experimental group), and the post-test phase are described. This three-stage procedure was carried out for a month where it has been explained at the start for the pupils of both groups.

A. The Pre-test Phase

This test was given on the first session of the experiment to (N=24) pupils of the experimental group and (N=24) pupils of the control group. This pre-test lasted an hour for each group and it helped determine the pupils' level concerning reading comprehension. Additionally, its results serve as a reference to be compared to the post-test results in order to draw conclusions about the efficacy of the treatment.

Certainly, the test was a reading comprehension test where the choice of text was at the level of the pupils in terms of structure and vocabulary, and about a topic that is interesting to them. The design and choice of text was also revised and validated by the group's teacher and aimed to give an idea about the level of the pupils to better organize the treatment phase.

Furthermore, the twenty multiple-choice test questions were designed to vary in difficulty. The questions altered from easy to medium to hard using simple and familiar words and question-structure. These questions were direct to procure maximum pupil engagement. The test period lasted an hour for each group where the use of smartphones, books, pupil communication or any sort of help was prohibited to ensure their scores purely reflect their individual level. Finally, the test papers were gathered at the end of the session to be corrected and analyzed.

B. The Treatment Phase

This phase is only concerned with the experimental group as the control group continued receiving their regular instructions/lessons. It started on the second session after correcting the pre-test and acquiring an idea on the pupils' level. In each treatment session, a text was chosen from the pupils' curriculum after a discussion on which topic they would prefer to read. This is done to secure more engagement and interaction from pupils reading about their favorite topics.

At the start of every treatment session, a printed KWL chart was given to the pupils alongside a verbal explanation of its general structure and use. The chart had large spaces to give the pupils the ability to express their thoughts freely. It also included spaces to write their name and text topic.

At first, the pupils were asked to fill the K column (what I Know) with any information or idea they already have about the chosen topic. This stage involves brainstorming the ideas and information pupils already have about the topic and thus activating their background knowledge. Learners were asked to freely write down any information related to the topic as the researcher tried to help them properly formulate what they want to say. After that, they were asked to fill out the W column (what I Want to learn) as they ask themselves questions about what they want to know about the given topic where the researcher helped the pupils with any difficulty they encountered while filling this column.

After both the K and W columns were filled, it was time for the pupils to read the text silently and carefully several times. When the reading was done the researcher helped explain any difficult words the pupils did not understand. They were then asked to fill out the L column (what I Learned) with the information and ideas they have learned from reading the text comparing them to the questions they have asked in the previous column in order to answer them.

Finally, this procedure was repeated throughout the remainder of the treatment sessions where a different topic was chosen each time and the pupils were continuously encouraged to participate by the researcher and the group's teacher.

C. The Post-test Phase

The post-test was given on the last session of the procedure to the pupils of both groups. It consisted of a text and fifteen multiple-choice questions that are similar in design and duration to the pre-test. The experimental group's pupils were asked to utilize the KWL strategy chart during the test and then answer the questions whereas the control group's pupils maintained the same method of answering as the pre-test. The objective of this test

was to evaluate whether the use of the KWL strategy chart has improved the experimental group's pupils' reading comprehension of the text.

3.1.2. Analysis and Interpretation of the Score Results

After the post-test phase, the pupils' scores were gathered, interpreted and statistically analyzed according to the widely used measures in research reports: the frequency, the mean, the standard deviation, T-test and hypothesis testing explained Calder and Sapsfords (2006, p. 214) (As cited in Meddour ,2014, p.156). The scores of the experimental group's pre-test and post-test are to be analyzed and compared to each other and to the ones from the control group.

3.1.2.1. Statistical Consideration

In order to precisely evaluate the results of the tests in both groups, we have to calculate multiple statistical measures such as the mean, standard deviation and variance. This will allow us to further calculate the t-test and establish the experiment's statistical significance. The SPSS software package was used for computing all the calculations in order to have as minimum human error as possible.

A. Pupils' Scores

Table 01

Pupils' Pre-test and Post-test Scores

Experimental group			Control group		
Pupils	Pre-test score	Post-test score	Pupil	Pre-test score	Post-test score
1	7	9	25	9	10
2	11	13	26	7	7
3	8	7	27	16	12
4	14	16	28	10	9
5	10	13	29	9	11
6	9	10	30	9	8
7	11	14	31	16	13
8	10	13	32	11	10
9	8	10	33	5	9
10	12	12	34	4	4

11	7	9	35	7	9
12	5	9	36	15	14
13	11	11	37	9	11
14	15	17	38	8	7
15	9	13	39	6	7
16	8	11	40	6	8
17	11	12	41	7	9
18	7	11	42	13	14
19	6	9	43	12	13
20	8	10	44	4	6
21	13	15	45	7	9
22	7	9	46	13	10
23	6	7	47	13	11
24	16	18	48	14	16
Total	229	278	Total	230	237

As shown by the table above, the pre-test score sums of both the experimental and control groups (229 vs 230) are more or less equal which may indicate a somewhat equal level of pupils at the beginning of the experiment. However, the experimental group's post-test score sum has increased by 49 points, which is a significant improvement, not only compared to the same group's pre-test (278 vs 229), but also to the control group's post-test score sum (278 vs 237) even though the latter had a slight progress of 7 points.

B. Pupils Scores' Frequencies

Table 02

Pupils Scores' Frequencies

Group type	Pre-test score	Frequency	Post-test score	Frequency
Experimental Group	5	1	7	2
	6	2	9	5
	7	4	10	3
	8	4	11	3
	9	2	12	2
	10	2	13	4
	11	4	14	1
	12	1	15	1
	13	1	16	1
	14	1	17	1
	15	1	18	1
	16	1		

	Total	24	Total	24
Control Group	4	2	4	1
	5	1	6	1
	6	2	7	3
	7	4	8	2
	8	1	9	5
	9	4	10	3
	10	1	11	3
	11	1	12	1
	12	1	13	2
	13	3	14	2
	14	1		
	15	1	16	1
	16	2		
Total	24	Total	24	

Table 02 above shows the differences in frequencies of both groups' scores. In regards to the experimental group, the pre-test scores range from 5 to 16, having 13 pupils scored below the average (10). This improves in the post-test scores, as the scores range from 7 to 19 with only 7 pupils below the average. Whereas the control group's scores, we do not notice any change in the range (4 to 16) in both the pre-test and post-test results, although, a slight progress was made as in the pre-test 14 pupils scored below the average whereas 12 pupils scored below the average in the post-test. Based on this, the improvement made in the experimental group's range and number of pupils below the average, compared to the control group, may indicate that the pupils who were exposed to the KWL Strategy experienced an improvement in their reading comprehension skills.

C. The Mean, Standard Deviation and Variance

As aforementioned, the mean, standard deviation and variance are widely used statistical measures in research reports. The mean symbolizes the average of scores. The standard deviation is used to determine how spread-out numbers are in a data set, while the variance gives an actual value to how much the numbers in a data set vary from the mean. In this study, these statistical measures have been computed below using the SPSS software.

Table 03

Pupils Scores' Mean, std Deviation and Variance

Group type		Mean	Std. Deviation	Variance
Experimental Group	Post-test	11.58	2.94	8.688
	Pre-test	9.54	2.94	8.694
Control Group	Post-test	9.88	2.83	8.027
	Pre-test	9.58	3.69	13.645

Table 03 above shows the pupils both tests scores' mean, std deviation, variance and their differences concerning both groups. It is clear from the values of the table that there is a considerable difference in the pupils average scores within the experimental group compared to the control group. As the table also demonstrates, the average score of the experimental group pupils went up by $(11.58 - 9.54 =) 2.04$ points whereas the control group pupils' score witnessed only a slight $(9.88 - 9.58 =) 0.3$ points difference. This may be considered as another indicator of the experimental group pupils' improvement due to exposure to the KWL strategy.

In order to further analyze the data collected and whether to confirm or reject these indications, one needs to obtain extra descriptive statistics through calculating the t-test.

D. T-test Calculation

The t-test, explained Hole (2009), is a statistic test used to determine if there is a significant difference in the means of two data sets, and calculate the probability of the difference happening due to a certain condition or merely by chance. Hole further stated that there are two types of t-tests: the paired t-test and the independent t-test (p. 1).

The paired t-test is applied in cases where one group of subjects participated in both the before and after conditions of an experiment (p. 1). This type of t-test is used in this study

to compare pupils' pair of pre-test and post-test results of each pupil group on its own, as each group has a pair of tests of the before and after. The second type, the independent t-test, is used in cases with two different groups of subjects, one group performing the experiment condition (in our study: being exposed to the KWL strategy) while the other group performs another condition (in our study: not being exposed to the KWL strategy) (p.1). This type is used in this study to compare the post-tests of the experimental group with the ones of the control group.

Additionally, the t-test allows two hypotheses that are in coherence with the research hypotheses: the null hypothesis; there is no statistically significant difference in the means of the pre-test and post-test scores (p.2). That is, the experimental manipulation has had no effect on the subjects and it is high probable that the changes on the test scores happened by chance. The alternative hypothesis; there is a statistically significant difference in the means of the pre-test and post-test scores (p.2). In other words, there is a high probability that the changes in the scores were due to the experiment manipulation.

Finally, there is few statistical measures used in the t-test to be accounted (pp. 5-18):

- The degree of freedom (**df**): which is the number of subjects minus 1. ($df = 23$) in the tests of each group and ($df \times 2 = 46$) in the test of both groups.
- Alpha decision level (**α**): refers to the confidence interval percentage. ($\alpha = 0.05$) in our case, so it means that there is only 5% probability the change has happened by chance.
- T-Distribution table of critical values: needed to compare the resulted "t" with its critical value on the table. If $t_{obtained} > t_{critical}$ then we can reject the null and accept the alternative hypothesis. In our study ($df = 26, \alpha = 0.05 \rightarrow t_{critical} = 2.07$) for paired t-test, and ($df = 46, \alpha = 0.05 \rightarrow t_{critical} = 2.013$) for the independent t-test.

Paired T-test Calculation in the Experimental Group

The calculation results below were all computed by the SPSS software:

Figure 07: Experimental Group's Paired T-test Results.

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Post test scores - Pre test scores	2.042	1.268	.259	1.506	2.577	7.890	23	.000

As we see in Figure 07 above, with (df = 23) and 95% of confidence interval percentage ($\alpha = 0.05$) we obtained $t_{\text{obtained}} = 7.890$. and since $t_{\text{obtained}} > t_{\text{critical}}$ ($7.890 > 2.07$), then the results indicate: there is 95% probability that the changes in the pupils score means happened due to the intervention and only 5% probability of happening by chance. Therefore, the null hypothesis is rejected and the alternative is accepted. In other words, the use of the KWL Strategy has caused an improvement in the experimental group pupils' reading comprehension skills.

Paired T-test Calculation in the Control Group

The calculation results below were also all computed by the SPSS software:

Figure 08: Control Group's Paired T-test Results.

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Post test scores - Pre test scores	.292	2.010	.410	-.557	1.141	.711	23	.484

Figure 08 exhibits that, with (df = 23) and 95% of confidence interval percentage ($\alpha = 0.05$) we obtained $t_{\text{obtained}} = 0.711$. and since $t_{\text{obtained}} < t_{\text{critical}}$ ($0.711 < 2.07$), the results fail

to reject the null hypothesis. In other words, there is a high probability that the changes occurred by chance.

Independent T-test Calculation between both Groups

To further investigate the indications above this second type of t-test was calculated.

Figure 09: Independent T-test Results of both the Post-tests.

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
post test scores	Equal variances assumed	.127	.723	2.047	46	.046	1.708	.835	.028	3.388
	Equal variances not assumed			2.047	45.928	.046	1.708	.835	.028	3.388

As we see in Figure 09 above, with (df = 46) and 95% of confidence interval percentage ($\alpha = 0.05$) we obtained $t_{\text{obtained}} = 2.047$. and since $t_{\text{obtained}} > t_{\text{critical}}$ ($2.047 > 2.013$), the results obtained show that there is a statistically significant difference between the two groups which further support the first paired t-test results of rejecting the null hypothesis and accepting the alternative. To put it simply, all of the findings above support the indications that exposure to the KWL strategy has caused an improvement in pupils' reading comprehension skills.

3.2. Teachers' Questionnaire

The main reason behind the teachers' questionnaire is to collect data about teachers' perspectives about reading comprehension and its importance in reading classes. The questionnaire was given to the teachers of English at Zighoud Youcef's middle-school, El Harrouch, Skikda.

The questionnaire was mainly designed to collect data about the teachers views on reading comprehension and its importance in their class. It also aimed to collect data about the pupils' level and reading comprehension skills, the difficulties they face and the strategy

used to solve them. The data gathered was mainly used to design the tests and treatment phase of the experiment.

3.2.1. Description of the Questionnaire

The English teachers of Zighoud Youcef middle-school of El Harrouch, Skikda were requested to answer the questionnaire in order to obtain information about pupils' reading comprehension skills and difficulties, as well as the strategies the teachers use to face those difficulties and facilitate the teaching process.

The questionnaire consists of thirteen (13) closed-ended and open-ended questions built in a logical and serial order. It was distributed ten (10) days before the pre-test in order to plan an appropriate test for the pupils and it is divided into three sections.

Section one entitled "Background Information" contains three (3) questions aimed to gather information about the background of the teachers. The first question enquires about the teachers' age range, the second and third questions are about the teacher's experience and degree respectively. The second section entitled "Reading Comprehension", which is the longest, is dedicated to collect data on reading comprehension. The seven (7) questions forming this section aim to explore teachers' views on reading time in class, pupils' reading comprehension skills and difficulties, as well as the strategies used by teachers to tackle those difficulties.

Finally, the third and last section entitled "The Effects of Background Knowledge in Reading Classes" includes two (2) questions about the learners' background knowledge and its use and effects in reading classes. The second question attempts to gather more information on whether the teachers use graphic organizers and how. It is also important to note that multiple questions require a justification that aims to investigate the reasons behind each teacher's perspectives.

3.2.2. Analysis and Interpretation of the Questionnaire Results

After collecting all the teachers' questionnaire copies, they were organized, thoroughly analyzed then interpreted.

Section One: Background Information

Q1. Would you specify your age range?

Table 04

Teachers' Age Range

Option	Number	Percentage (%)
Between 24 and 30 years	1	20%
Between 31 and 40 years	2	40%
Between 41 and 50 years	2	40%
Total	5	100%

As the table above illustrates, only one (1) teacher is below 30 years old with a rate of (20%). The remaining (80%) is equally divided between the two last options as two (2) teachers are between 31 and 40 years old (40%), and two are between 41 and 50 years old (40%).

Q2. How long have you been a middle-school English teacher?

Table 05

Teachers' Experience

Option	Number	Percentage (%)
Between 2 and 6 years	2	40%
Between 7 and 12 years	1	20%
Beyond 13 years	2	40%
Total	5	100%

The table above shows that 40% of the teachers have between 2 and 6 years of experience. Additionally, another 40% of teachers are well-experienced as they have more than thirteen (13) years of practice. However; only 20% of the surveyed teachers have

between 7 and 12 years of experience. Based on that, the majority (60%) of teachers are well-experienced (more than 7 years of practice).

Q3. What degree do you currently have?

Table 06

Teachers' Degree

Option	Number	Percentage (%)
License	3	60%
Master	1	20%
Magister	1	20%
Doctorate	0	0%
Total	5	100%

It is indicated in the table above that three (3) of the teachers have a license degree whereas one (1) has a master's degree and one (1) has a magister.

Section Two: Reading Comprehension

Q4. How often do you encourage your pupils to read in class?

Table 07

Teachers' Reading Encouragement

Option	Number	Percentage (%)
Always	3	60%
Usually	2	40%
Rarely	0	0%
Never	0	0%
Total	5	100%

As shown by table 04, 60% of the teachers claimed that they always encourage their pupils to read. The remaining 40% claimed that they generally advise pupils to read. However, none of the teachers answered by "rarely" or "never". It is clear then, that reading is of huge importance in the teachers' perspectives.

Q5. Do you think that reading comprehension skills are important for learning the English language? If yes, why?

Table 08

Teachers' Perspective on Reading Comprehension Skill's Importance

Option	Number	Percentage (%)
Yes	5	100%
No	0	0
Total	5	100%

100% of the surveyed teachers agreed that reading comprehension skills are crucial in the English language learning process.

Justification

The teachers justified their answer by claiming that when a learner reads a lot and understands what he read, he would witness a big improvement in many other aspects: his vocabulary, spelling, text structure knowledge and writing skills. Therefore, teachers unanimously believe that reading comprehension is greatly beneficial in learning the English language.

Q6. Do you think that the time allocated for the reading session is sufficient? why?

Table 09

Teachers' Perspective on Reading Time Sufficiency

Option	Number	Percentage (%)
Yes	1	20%
No	4	80%
Total	5	100%

The results of this question indicate that 80% of the teachers believe that reading time in classes is insufficient while only 20% answered that it is. That is, the majority of teachers think that the time dedicated to reading time should be increased.

Justification

The teachers who claimed that reading time is insufficient justified their answer by stating that the time allocated for reading is not enough to read the text, understand all the ideas and then answer all the comprehension questions. They claimed that some texts require re-reading multiple times especially by average and below average pupils.

The teachers who answered that reading time is sufficient justified their answer by claiming that pupils should be encouraged to read more during off-school time as it allows them to take their time and fully assimilate all the benefits from their reading, rather than extending reading time at the expense of other language aspects.

Q7. How do you find the level of your pupils concerning reading comprehension skills?

Table 10

Teachers' Perspective on Pupils' Reading Comprehension Level

Option	Number	Percentage (%)
Low	2	40%
Average	2	40%
Good	1	20%
Excellent	0	0
Total	5	100%

As table 10 demonstrates, 80% of the teachers' opinions were on the lower end of pupils reading comprehension levels as 40% found it low and the other 40% found it average. The remaining 20% claimed that it was good. Based on this, teachers believe that pupils reading comprehension skills need improvement.

Q8. What strategy do you use to facilitate teaching reading comprehension?

Table 11

Teachers' Strategy to Improve Pupils' Reading Comprehension

Option	Number	Percentage (%)
Questioning	5	50%
Summarizing	3	30%
Analyzing text structure	1	10%
Graphic and semantic organizers	1	10%
Visualization	0	0%
Prediction	0	0%
Total	10	100%

Table 11 illustrates the strategies used by the surveyed teachers to improve their pupils' reading comprehension skills. We can see that all of the five (5) teachers included questioning in their strategies. Additionally, a fair amount (3) also claimed using summarizing as well. On the other hand, text structure analysis and graphic and semantic organizers were only picked once each whereas no teacher included visualization or prediction among their strategies. It is clear then, that questioning and summarizing are the most used reading comprehension strategies.

Q9. Do you find your strategy helpful for middle-school pupil's reading comprehension? And why?

Table 12

Teachers' Perspective on the Effectiveness of their Strategy

Option	Number	Percentage (%)
Yes	1	40%
No	4	60%
Total	5	100%

Table 14 clarifies the teacher's personal point of view concerning the effectiveness of their strategy in improving pupils reading comprehension. The majority (80%) answered with no, while only 20% answered with yes. This indicates that most of the teachers are not entirely satisfied with the used strategies.

Justification

The teachers who answered negatively expressed their dissatisfaction with the used strategies. They claimed that those strategies do not work all the time or they only work with excellent level pupils which are not so many. They also expressed that the repeated use of the same strategy may also affect pupils' motivation.

The teacher who answered positively believed that although the strategies used do not greatly improve the pupils reading comprehension skills, however there is a progress which was described by "slowly but surely".

Q10. What are the reading comprehension difficulties that pupils face while reading a text?

Table 13

Teachers' Views on Pupils' Reading Comprehension Difficulties

Option	Number	Percentage (%)
Decoding	4	31.25%
Vocabulary knowledge	2	18.75%
lack of prior knowledge	3	18.75%
Fluency	2	12.5%
text structure knowledge	2	12.5%
lack of motivation	4	18.75%
Total	16	100%

Judging by the teachers' answers (table 13), decoding, lack of motivation and lack of prior knowledge are the most faced difficulties by pupils in reading class. Meaning that the strategies used by the teachers should tackle those difficulties in an effective manner.

Section Three: The Effects of Background Knowledge in Reading Classes

Q11. When your pupils read, do they usually use their background knowledge in order to understand?

Table 14

Teachers' Perspective on Pupils' Background Knowledge Activation

Option	Number	Percentage (%)
Yes	0	0%
No	5	100%
Total	5	100%

The teachers, as table 14 shows above, unanimously claim that pupils do not activate their prior knowledge as they read.

Q12. Do you agree that background knowledge can enhance pupils reading comprehension?

Table 15

Teachers' Opinion on the Background Knowledge's Benefits

Option	Number	Percentage (%)
Strongly agree	2	40%
Agree	3	60%
Neutral	0	0%
Disagree	0	0%
Strongly disagree	0	0%
Total	5	100%

It is clear from the results illustrated in table 15 above that all the teachers believe in the positive impact of pupils' background knowledge in improving reading comprehension.

Q13. Do you use graphic organizers in the reading session?

Table 16

Teachers' Perspective on Using Graphic Organizers

Option	Number	Percentage (%)
Yes	1	20%
No	4	80%
Total	5	100%

In the final question's results, it is shown that only 20% of the teachers use graphic organizers in reading class whereas the vast majority does not.

Justification

The teachers who answered with yes justified their answer by claiming that they are useful in simplifying complex concepts to pupils and they provide a different view of the information given.

However, the teachers who answered with no justified their answer by stating that it may not be in coherence with the strategy they use or by lack of time and opportunity.

3.3. Discussion of the Results

This study's primary aim is to investigate the effect of the KWL strategy in enhancing pupils' reading comprehension skills, especially in an Algerian middle-school context. The pupils' reading comprehension difficulties are an important factor in encouraging conducting this study. Thus, the KWL strategy is implemented as a way to eliminate or at least neutralize those difficulties. The study's findings, which resulted from the examination of the two data collection instruments, are addressed as answers to the research questions raised by this study.

After the thorough investigation and examination of the information collected through the true-experimental design and teachers' questionnaire, the research hypotheses are verified and the research questions are answered. With regard to what are the reading comprehension strategies that teachers instruct their pupils to use, the data collected from teachers' questionnaire has answered this question by stating that questioning and summarizing are the most used strategies by the teachers to face pupils' reading comprehension difficulties.

The second question, which enquires if the KWL strategy improves second-year middle-school pupils' reading comprehension skills, has been answered by the results of the conducted experiment, following the true-experimental design, where the analysis of the

findings concluded in a positive effect of the strategy. The third and last question is to what extent may the KWL chart assist EFL pupils in improving their reading comprehensions skills. This question has been answered by the pupils' test score improvement calculated and analyzed in the experiment.

Therefore, the alternative hypothesis is confirmed by this study's findings **“Integrating the KWL reading strategy chart in reading assignments by Algerian middle school teachers would improve their pupils' reading comprehension.”**. Meaning that the KWL strategy has positively affected the pupils' reading comprehension skills as their performance witnessed a significant progress.

Conclusion

This chapter aimed to practically investigate the impact of implementing the KWL strategy in Algerian middle-school context. The research questions were answered and the research hypotheses were verified, where the alternative hypothesis was accepted as a result of a thorough descriptive and statistical analysis and interpretation of the study's collected data by the teachers' questionnaire and the true-experiment. It is validated at this point, that the KWL strategy has enhanced middle-school pupils' reading comprehension skills.

Study Limitation

In this study, the analysis and interpretation of the collected information support the positive impact of the KWL strategy on learners' reading comprehension skills. However, despite of the compelling evidence that was provided, there are multiple limitations to be tended to.

First and foremost, time was a critical factor. The one-hour session duration was not enough, for both the teacher and the students, to cover all the required reading activities. Therefore, it would have been better to have a longer session duration.

Additionally, although the experiment was conducted within four (4) weeks and with two (2) groups, but it is still a relatively short period in comparison to large-scale experiments, and the population and sample may not represent all the Algerian schools and students.

Moreover, some students did not take the research seriously as they knew that the tests would not affect their grades. Furthermore, the lack of references was a real obstacle in carrying out this research as the majority of the referenced books were not available for free.

Recommendations

- Teachers should attribute more importance to reading comprehension skills and students' difficulties in that matter.
- Teachers should consider applying the KWL strategy as one of their strategies to tackle the difficulties students face.
- Learners also should give more importance to reading comprehension skills as they help them progress in their language learning process.
- Learners should consider applying the KWL strategy as a way to improve their reading comprehension.

- Future researchers should consider taking larger samples for similar researches in order to have more precise results.
- Future researchers should allocate more time to the experiment phase of the procedure.
- Future researchers should encourage students to take the process more seriously for more accurate findings.
- Future researchers should compare the effects of the KWL strategy to another reading comprehension strategy in order to find out which provides more improvement.

General Conclusion

Reading is an essential ability in language learning. Thus, this study was conducted to investigate the impact of the KWL strategy on the students' reading abilities, especially reading comprehension skills, and also to see whether there is some form of structured reading applied by middle-school teachers in EFL classes. The second-year students of Zighoud Youcef middle-school were the participants in this study aiming to explore the effects of using this strategy. In order to confirm or reject the study's hypotheses, a true experiment was carried out on a two-group pre-test/post-test design. Additionally, a teachers' questionnaire was administered to collect valuable information from the teachers' perspectives concerning their classes.

This dissertation consists mainly of two chapters: a theoretical part, which included the literature review and a practical part, which included the fieldwork reports. The first part provides an overview on the existing knowledge concerning reading, reading comprehension and the KWL strategy. The second part, on the other hand, is dedicated to the analysis and interpretation of the collected data from the true-experiment and the teachers' questionnaire. Moreover, these two chapters are followed by a set of limitations to be addressed and a

bundle of recommendations to the teachers, students and future researchers that may improve their experience with reading comprehension and the KWL strategy

Finally, the findings of this dissertation were eye-opening. The first chapter shed light on the importance of reading comprehension skills in language learning process focusing on the KWL strategy as one of the most useful tools to improve those skills. Later on, the case study's findings confirmed that, as the results obtained from a thorough statistical and descriptive examination of the collected data accepted the alternative hypothesis and rejected the null. Furthermore, the analysis of the teachers' questionnaire brought to light the difficulties students generally face which needed to be effectively addressed. Eventually, as an overall conclusion, this dissertation proves the positive effect of using the KWL strategy as a teaching tool in order to enhance student's reading comprehension skills.

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Appendices

Appendix A. Approval letter

الجمهورية الجزائرية الديمقراطية الشعبية
وزارة التعليم العالي و البحث العلمي
جامعة جيجل

كلية الآداب و اللغات
قسم الآداب واللغة والانجليزية

جيجل في : 2022/05/16
إلى السيد: مدير التربية لولاية
سكيكدة.....

الموضوع: طلب ترخيص بدخول
لطلبة ماستر 2

يشرفني أن أتقدم إلى سيادتكم طالبين منكم تقديم ما أمكن من تسهيلات
وعون للطالب(ة): بكوش هبة..... والطالب(ة).....
تخصص..انجليزية تعليمية اللغة ، لاستكمال البحث الميداني حول
موضوع: The effect... of the...K...W...L... strategy... chart... in...
Enhancing... Students' Reading... Comprehension... Skills...
يرجى إعطاء رخصة الدخول للمؤسسة: ثانوية زيفود يوسف.....
..... والمؤسسة:.....

تقبلوا منا أسمى عبارات التقدير والاحترام.

رئيس القسم
قسم الآداب
واللغة الانجليزية
رئيس قسم الآداب واللغة الإنجليزية
فاطمة رضوان

Appendix B. Attendance sheet G01

		Attendance Sheet 2AS- G01							
Names	Week One		Week Two		Week Three		Week Four		
	S1	S2	S1	S2	S1	S2	S1	S2	
1. سلطان اسلام	✓	✓	✓	✓	✓	✓	✓	✓	
2. شنانة مروة	✓	✓	⊖	✓	✓	✓	✓	✓	
3. شويط نورهان	✓	✓	✓	✓	✓	✓	✓	✓	
4. صيفي محمد	✓	✓	✓	✓	✓	✓	✓	✓	
5. قارة لميس	✓	✓	✓	✓	✓	✓	✓	✓	
6. كركوب منصف	✓	✓	✓	✓	✓	✓	✓	✓	
7. لطرش جمانة	✓	✓	✓	✓	✓	✓	✓	✓	
8. كرموز ادريس	✓	✓	✓	⊖	✓	⊖	✓	✓	
9. شوالب زهرة	✓	✓	✓	✓	✓	✓	⊖	✓	
10. نغيفش ادم	✓	✓	✓	✓	✓	✓	✓	✓	
11. قطاطفة محمد لمين	✓	✓	✓	✓	✓	✓	✓	✓	
12. عليوش قربوع اسامة	✓	✓	✓	✓	✓	✓	✓	✓	
13. لظوي بلال	✓	✓	⊖	✓	✓	✓	✓	⊖	
14. عليوط احمد	✓	✓	✓	✓	✓	✓	✓	✓	
15. شلابي وليد	✓	✓	✓	✓	✓	✓	✓	✓	
16. قنملي سعد الدين	✓	✓	✓	✓	✓	✓	✓	✓	
17. بوطيبيبة انس	✓	✓	✓	✓	✓	✓	✓	✓	
18. بولمرقي سعادة	✓	✓	✓	✓	✓	✓	✓	✓	
19. بوالنمورة احلام	✓	✓	✓	✓	✓	✓	✓	✓	
20. خلفي منال	✓	✓	✓	✓	✓	⊖	✓	✓	
21. سواعدي سوسن	✓	✓	✓	✓	✓	✓	⊖	✓	
22. بن شيخ امينة	✓	✓	✓	✓	✓	✓	✓	✓	
23. فورة عبير	✓	✓	✓	✓	✓	✓	✓	✓	
24. عبد العزيز منيرة	✓	✓	✓	✓	✓	✓	✓	✓	

Appendix C. Attendance sheet G02

Attendance Sheet 2AS-G02

Names	Week One		Week Two		Week Three		Week Four	
	S1	S2	S1	S2	S1	S2	S1	S2
1. سعيد امين	✓	✓	✓	✓	✓	✓	✓	✓
2. العطوي ملاك	✓	✓	✓	✓	✓	⊖	✓	✓
3. القوطي لرح	✓	✓	✓	✓	✓	✓	✓	✓
4. بخوش بشرى	✓	✓	✓	✓	✓	✓	✓	⊖
5. بعيرة انيس	✓	✓	✓	✓	✓	⊖	✓	✓
6. رحابيل جيهان	✓	✓	✓	✓	✓	✓	✓	✓
7. بن ذياب ابركان هديل	⊖	✓	✓	✓	✓	✓	✓	✓
8. بوجعادة ضياء الدين	✓	✓	✓	✓	✓	✓	✓	✓
9. بوجعادة خفران	✓	✓	✓	✓	⊖	✓	✓	✓
10. بوجلال رحمة	✓	✓	✓	✓	✓	✓	✓	✓
11. بونخاعة لميس	✓	✓	✓	✓	✓	✓	✓	✓
12. بونخاعة نور الهدى	✓	✓	✓	✓	✓	✓	✓	✓
13. بورصاص ملاك	✓	✓	✓	✓	✓	✓	✓	✓
14. بوذرزور امين	✓	✓	⊖	✓	✓	✓	✓	✓
15. بوميسي اكرام	✓	✓	✓	✓	✓	✓	✓	✓
16. نويصر اكرم الله	✓	✓	✓	✓	✓	✓	✓	✓
17. ربيعة بوطيوزة	✓	✓	✓	✓	✓	✓	✓	✓
18. بوصامة قطر الندى	✓	✓	✓	✓	✓	✓	✓	✓
19. بوعويطة ياسر	✓	✓	✓	✓	✓	✓	✓	⊖
20. كندديس شيماء	✓	✓	✓	✓	✓	✓	✓	✓
21. تفوتي رحاب	✓	✓	✓	✓	✓	✓	✓	✓
22. نوب اسمتي	✓	✓	✓	✓	✓	✓	✓	✓
23. زويون نيل	✓	✓	✓	✓	✓	✓	✓	✓
24. مناطوح ريان	✓	✓	✓	✓	✓	✓	✓	✓

Appendix D. Teachers Questionnaire

People's Democratic Republic of Algeria
Ministry of Higher Education and Scientific Research
University of Mohamed Seddik BenYahia Jijel
Faculty of Letters and Languages
Department of English

Teacher's questionnaire

Dear teachers,

We would be happy if you could complete the following questionnaire, which is designed to collect relevant information for the completion of a Master's dissertation about 'The Effect of the K.W.L Strategy chart in Enhancing Students' Reading Comprehension Skills'. As a result, you are kindly invited to respond to the following questions, with the assurance that your comments will be kept anonymous and used solely for research reasons. Thank you for your assistance.

Section one: Background information:

1. Age: a-Between 24 and 30 years
b-Between 31 and 40 years
c-Between 41 and 50 years
2. Experience: a-Between 2 and 6 years
b-Between 7 and 12 years
c-Beyond 13 years
3. Degree: a- License
b- Master
c- Magister
d-PhD

Section two: Reading comprehension:

4. How often do you encourage your students to read in class?

- a-Always b-usually c- Rarely d-Never

5. Do you think that the reading comprehension skills are important for learning the English language?

- Yes No

If yes, why?

.....
.....
.....

6. Do you think that the time allocated for the reading session is sufficient?

- a-Yes b-No

Justify,

.....
.....

7. How do you find the level of your students concerning reading comprehension skills?

- a- Low b-Average c- Good d-Excellent

8. What strategy do you use to facilitate teaching reading comprehension? (You can check one or multiple answers)

- A-Questioning b-Summarizing c-Analyzing text structure

- D-Graphic and semantic organizers e-Visualization f-Prediction

9. Do you find your strategy helpful for high school pupil's reading comprehension?

- Yes No

Justify you answer,

.....
.....
.....

10. What are the reading comprehension difficulties that students' face while reading a text?

- a-Decoding b-Vocabulary knowledge c-lack of prior knowledge
d-Fluency e- text structure knowledge f- lack of motivation

Section Three: The effects of background knowledge in reading classes.

11. When your students read, do they usually use their background knowledge in order to understand?

- a-Yes b-No

12. Do you agree that background knowledge can enhance students reading comprehension?

- a-Strongly agree b- Agree c- Neutral
d-Disagree e-Strongly disagree

13. Do you use graphic organizers in the reading session?

- Yes No

Justify you answer,

.....
.....
.....

Appendix E. Pre-test

Test 01

The giant panda has a distinctive white head with black eye patches, ears and shoulders. Unlike other bear species, giant pandas are herbivorous spending up to 12 hours a day chewing bamboo shoots and roots. Because of poaching and habitat loss, they are extremely rare, occurring in small populations in the bamboo forests of China. Despite being the subject of major international conservation efforts, wild populations of giant pandas may not be enough to save this species.

Giant pandas live in the bamboo forests of China for millions of years and have been honored by the Chinese for a very long time. In fact, giant pandas have appeared in Chinese art for thousands of years. Because the giant panda is considered a national treasure in China, it is protected by law so that it does not become extinct.

Although giant pandas have long been known to the Chinese, they are a recent discovery for people living outside of China. The first westerner to observe a live giant panda in the wild was a German zoologist named Hugo Weigold. In 1916, he bought a cub while he was on expedition which he personally surnamed Pandoo.

There is only one place where giant pandas live in the wild: high in the mountains of central China. There, they live in cold and rainy bamboo forests that are often misty and shrouded in heavy clouds. Once upon a time, giant pandas lived in lowland areas. However, as people built more and more farms and cities on that land, the giant pandas were forced up into the mountains. Today, they live at elevations of 5,000 to 10,000 feet.

In the wild, a giant panda's diet is 99% bamboo. Bamboo is a giant grass that grows in the mountains of China. Because bamboo is so low in nutrients, an adult giant panda eats between 20 and 40 or more pounds of it each day. It eats the stems, shoots, leaves and all. In zoos, giant pandas eat bamboo too, but they may also eat sugar cane, rice gruel, carrots, apples and sweet potatoes.

When a giant panda is first born, it is tiny. It weighs between four and six ounces and is about the size of a stick of butter. At birth, it is pink, blind, helpless and hairless. During this time, the mother cares for it closely, often cradling it in her paw and keeping it close to her chest. The cub doesn't open its eyes until it is six-weeks-old and it doesn't walk until it is three months. Cubs nurse for about nine months but they stay with their mothers for a long time after that. In fact, it can be up to three years before a giant panda cub strikes out on its own.

Last name:

First name:

Class: 2AS

Duration: 1 Hour

Questions (Circle only correct answer/answers)

1. The text is about:
 - a- China
 - b- Bamboo forests
 - c- Pandas
 - d- Extinction of bears
2. What do pandas primarily eat?
 - a- Grass
 - b- Meat
 - c- Both
3. Giant pandas currently live at
 - a- High-altitude
 - b- Low-altitude
 - c- not mentioned
4. How much time do pandas spend eating per day?
 - a- Quarter of a day
 - b- Half a day
 - c- Whole day
5. pandas are extremely rare because
 - a- Of accidents
 - b- Of deforestation
 - c- Of poaching and habitat loss
6. The Chinese think highly of pandas.
 - a- True
 - b- False
7. The discovery of pandas is new to
 - a- People inside of China
 - b- People outside of China
 - c- The whole world
8. Why are pandas protected by law in China?
 - a- Fear of extinction
 - b- For being a national treasure
 - c- For religious reasons
9. The first man from the west to observe a live panda was
 - a- European
 - b- African
 - c- Latin American
10. What is the name of a baby panda?
 - a- Pandoo
 - b- Cub
 - c- Not mentioned
11. Pandas live in a
 - a- Foggy place
 - b- Hot place
 - c- Not mentioned
12. Why do adult pandas eat a lot of Bamboo?
 - a- Because it is poor in nutrition
 - b- because they are giant
 - c- Both
13. In the Zoo, Giant pandas only eat bamboo.
 - a- True
 - b- False
14. What is the size of a baby panda at birth?
 - a- 3 Kilograms
 - b- Between 20 and 40 pounds
 - c- Less than half a kilogram
15. Baby pandas at birth are really vulnerable.
 - a- True
 - b- False
 - c- Not mentioned
16. The baby panda opens his eyes after
 - a- A month and a half
 - b- Three months
 - c- Nine months
17. A baby panda stays with his mother for up to ...
 - a- Nine months
 - b- Three years
 - c- Three months
18. Pandas are a kind of bears.
 - a- True
 - b- False
19. How many paragraphs does the text have?
 - a- Five
 - b- Six
 - c- Not mentioned
20. In 1916, Hugo Weigold
 - a- purchased Pandoo
 - b- saw a panda for the first-time
 - c- was on an expedition

Good Luck !

Appendix F. Post-test

Test 02

Albert Einstein was one of the most famous scientists of all time. He developed the special and general theories of relativity and made many other important discoveries.

Albert Einstein was born on March 14, 1879, in Ulm, Germany. His father was a salesman and engineer and his mother was a housewife. Einstein had one sister, Maja, who was born two years after him. He studied at the Luitpold Gymnasium in Munich. He didn't enjoy studying there. One teacher even told him that he would never get anywhere. At this time, Einstein became interested in classical music and he learned to play the violin. He was also interested in science.

In the 1890s, Einstein's family moved to Milan, Italy. Einstein started studying at the Swiss Federal Polytechnic School in Zürich. His years in Zürich were some of the happiest years of his life. He became friends with many other students and met his future wife, Mileva Maric, a physics student from Serbia.

Einstein finished his university studies and found work in a Swiss patent office. In his free time, Einstein continued studying physics. He married Mileva Maric in 1903, but the marriage was not a happy one. They divorced in 1919 and Einstein married Elsa Löwenthal. In 1905, Einstein published four important papers about physics. The fourth paper included the famous equation $E=mc^2$. In 1921, he won the Nobel Prize for Physics.

From 1913 to 1933, Albert Einstein was the director of the Kaiser Wilhelm Institute for Physics in Berlin. He often travelled around the world and gave talks about physics. While Einstein was travelling and speaking internationally, the Nazis were becoming more and more powerful. Einstein's life was threatened. In 1932, he decided to leave Germany forever. He moved to the United States and took on a position at the Institute for Advanced Study at Princeton, New Jersey.

Einstein became an American citizen in 1935. In 1939, he and his friend Leo Szilard wrote a letter to President Franklin D. Roosevelt. They warned him that the Nazis might be trying to create an atomic bomb. The United States started a program to create its own nuclear weapons. After learning of the 1945 bombing of Hiroshima, Einstein became active in trying to stop future use of nuclear weapons. He also supported the civil rights of African Americans. In 1952, he was offered to become the president of Israel, but he respectfully declined.

Albert Einstein died on April 18, 1955, in Princeton, New Jersey.

Class: 2AS

Last name:

Duration: 1 Hour

First name:

Questions (Circle only correct answer/answers)

1. The text is about:
 - a- Science
 - b- Albert Einstein
 - c- Physics
2. What was Einstein's mother's job?
 - a- Salesman
 - b- Engineer
 - c- Stay-at-home wife
3. Where was Einstein's first job?
 - a- Switzerland
 - b- Germany
 - c- Not mentioned
4. When did Einstein get the Nobel prize for Mathematics?
 - a- 1913
 - b- 1921
 - c- Not mentioned
5. Einstein left Germany because
 - a- He wanted to move to the United States
 - b- He was in danger
 - c- He wanted a better job
6. After leaving Germany, Einstein became a citizen of
 - a- The USA
 - b- Italy
 - c- Switzerland
7. Who is Franklin D. Roosevelt?
 - a- President of the Nazis
 - b- President of the USA
 - c- Not mentioned
8. Einstein became active in trying to stop future use of nuclear weapons
 - a- After learning of the 1945 bombing
 - b- After Hiroshima bombing
 - c- After 1952
9. Einstein's sister was older than him
 - a- True
 - b- False
10. Einstein disliked studying in
 - a- Munich, Germany
 - b- Milan, Italy
 - c- Zurich, Switzerland
11. In 1901, Einstein was
 - a- Married to Elsa Löwenthal
 - b- Married to Mileva Maric
 - c- Not married
12. Einstein supported the right of black people.
 - a- True
 - b- False
 - c- Not mentioned
13. When did Einstein become president?
 - a- 1939
 - b- 1952
 - c- 1935
14. According to the text, Einstein was a
 - a- Mathematician
 - b- Physicist
 - c- Scientist
15. Einstein's contribution to science was huge
 - a- True
 - b- False
 - c- Not mentioned

Good Luck !

Appendix G. KWL Chart Sample

K I Know	W I Want to Know	L I Learned
<ul style="list-style-type: none">- Panda is black and white- It is animal- It eats grass- They are small number-	<ul style="list-style-type: none">- where to find pandas?- why it is in small number?- what is the name of his son?-	<ul style="list-style-type: none">- Pandas live in forest in China- Pandas are herbivorous- Baby name is Cub- Pandas eat alot of Bamboos

ملخص

استقصت هذه الدراسة تأثير إستراتيجية "Know-Want to know-Learnt" في تعزيز مهارات الفهم القرائي لدى التلاميذ. وبشكل أكثر تحديداً ، ينقسم جوهر هذه الدراسة إلى شقين: دراسة تأثير استخدام إستراتيجية "Know-Want to know-Learnt" في مهام فهم القراءة وكذلك قياس آراء المعلمين حول الصعوبات الرئيسية التي يواجهها الطلاب مرارًا وتكرارًا في الفهم القرائي والاستراتيجيات التي يستخدمون لمحاولة القضاء عليها. وبالتالي ، يُفترض أن استخدام إستراتيجية "Know-Want to know-Learnt" قد تنعكس بشكل إيجابي على مهارات فهم القراءة لدى التلاميذ. أيضًا ، إلى جانب طريقة "Know-Want to know-Learnt" ، قد يستخدم المعلمون مجموعة متنوعة من التقنيات الأخرى. لتحقيق أهداف الدراسة ، تم جمع البيانات عن طريق استبيان شخصي تم تصميمه وتقديمه إلى 5 مدرسين للغة الإنجليزية وتجربة حقيقية أجريت على مجموعتين (24 تلميذًا في كل مجموعة) من تلاميذ السنة الثانية الإعدادية في مدرسة زغود يوسف المتوسطة في الحروش ، سكيكدة. أولاً ، هدف الاستبيان إلى استكشاف آراء المعلمين حول الصعوبات الرئيسية التي يواجهها التلاميذ في تحقيق الفهم القرائي وتقنياتهم التي يستعملونها في استهداف تلك الصعوبات. ثانياً، اختبرت التجربة الحقيقية عملياً الفعالية المحتملة لاستخدام إستراتيجية "Know-Want to know-Learnt" على قدرات الفهم القرائي لمجموعات العينة المختارة عشوائياً. تم تحليل نتائج كل أدوات جمع البيانات بشكل وصفي وإحصائي ثم تم تفسيرها. أثبتت النتائج التي تم الحصول عليها صحة الفرضية القائلة بأن إستراتيجية "Know-Want to know-Learnt" كان لها تأثير إيجابي على قدرات الفهم القرائي لدى التلاميذ. في الواقع ، النتائج تم التوصل إليها من خلال رفض الفرضية الصفرية و قبول الفرضية البديلة. بالإضافة إلى ذلك ، أوضحت النتائج الصعوبات الرئيسية التي يواجهها التلاميذ وأن المعلمين استخدموا مجموعة متنوعة من التقنيات الأخرى غير إستراتيجية "Know-Want to know-Learnt" لمعالجة تلك الصعوبات. بناءً على النتائج التي تم الحصول عليها ، تم اقتراح بعض التوصيات لمزيد من البحث والممارسات التربوية.

الكلمات المفتاحية: إستراتيجية "Know-Want to know-Learnt" ، الفهم القرائي، تلاميذ اللغة الإنجليزية كلغة أجنبية، التجربة الحقيقية.

Résumé

Cette étude a examiné l'effet de la stratégie « Know-Want to know-Learnt » dans l'amélioration des compétences de compréhension en lecture des élèves. Plus précisément, l'essentiel de cette étude est double : examiner l'influence de l'utilisation de la stratégie « Know-Want to know-Learnt » dans les tâches de compréhension en lecture et évaluer les points de vue des enseignants sur les difficultés majeures auxquelles leurs élèves sont confrontés à plusieurs reprises en compréhension en lecture et les stratégies qu'ils emploient pour tenter de les éliminer. Ainsi, on émet l'hypothèse que l'utilisation de la stratégie « Know-Want to know-Learnt » peut avoir un effet positif sur les compétences de compréhension en lecture des élèves. Aussi, en plus de la méthode « Know-Want to know-Learnt », les enseignants peuvent utiliser une variété d'autres techniques. Pour atteindre les objectifs de l'étude, les données ont été recueillies au moyen d'un questionnaire qui a été conçu et administré à 5 professeurs d'anglais et une conception expérimentale véritable qui a été menée sur deux groupes, sélectionnés au hasard, (de 24 élèves chacun) de deuxième année du collège Zighoud Youcef à El Harrouch, Skikda. Premièrement, le questionnaire visait à explorer les opinions des enseignants sur les principales difficultés rencontrées par les élèves pour atteindre la compréhension en lecture et leurs méthodes pour cibler ces difficultés. La véritable conception expérimentale a pratiquement testé l'efficacité possible de l'utilisation de la stratégie « Know-Want to know-Learnt » sur les capacités de compréhension en lecture des groupes d'échantillons. Les résultats des deux outils de collecte de données ont été analysés de manière descriptive et statistique puis interprétés. Les résultats obtenus ont validé l'hypothèse selon laquelle la stratégie « Know-Want to know-Learnt » avait un effet positif sur les capacités de compréhension en lecture des élèves. En fait, les résultats obtenus ont abouti par le rejet de l'hypothèse nulle et l'acceptation de l'alternative. De plus, les résultats ont illustré les principales difficultés rencontrées par les

élèves et le fait que les enseignants ont utilisé une variété d'autres techniques que la stratégie « Know-Want to know-Learnt » pour résoudre ces difficultés. En se basant sur ces résultats, des recommandations pour des recherches futures et des pratiques pédagogiques ont été suggérées.

Mots-clés : Étudiants d'anglais comme langue étrangère, la stratégie de « Know-Want to know-Learnt », compréhension en lecture, conception expérimentale véritable.