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Investigating the Effect of Mnemonic –Based –Instruction in Enhancing EFL Student’s Reading Comprehension Skill

The Case of First-Year LMD Students at Biskra University

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Dedication

*To all my family father **Salih**, mother **Hayziya**, sister **Salma** and
brothers **Nabil, Jamal, Imad, Thamer, and Mouhamed.***

*To my beloved soulmate **Ahmed** and sweetheart **Manissa ,Laith and
NourEdin***

*To all my friends **Jihad, Nour, Sabrin, Asma, Mhani, Ikram, Ayman,
Laamra, khadija and Doja.***

To all colleges who will graduate in 2020

To all my wonderful teachers

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Abstract

The present study aims at investigating the nature of the relationship between reading comprehension and mnemonic instruction. It further attempts to examine the possibility of enhancing students' reading comprehension through the application of mnemonic strategies namely, visuals, key word methods, questioning, predicting, acrostics and acronyms. It takes the case of First year LMD students at Mohamed Kheider University. The current study is stimulated by the fact that the reading skill becomes very complex in the education field; therefore, students need to be trained in order to have a good reading skill. Since knowledge is rapidly accumulated and committed to print. The ability to comprehend reading is primarily crucial to be improved. In reality, most of students at Mohamed Kheider University still have problems in comprehending the texts. Perhaps, students may have difficulties to comprehend a passage because of the same problems like unfamiliar words in the text, no previous knowledge and the complexity of concepts expressed. To test the hypotheses of this study, the mixed method approach is adopted by the researcher through two instruments: a quasi-experiment that was conducted with one group consisted of 12 students, and questionnaires for both students and teachers. The findings gained from this study were analyzed quantitatively and qualitatively have proved that Mnemonics could help students to overcome their comprehension difficulties. Therefore, the alternative hypothesis in this study was confirmed, and the null hypothesis was rejected.

Key words: Reading, Reading comprehension, Memory, Mnemonic instruction/strategies.

List of Acronyms and Abbreviations

EFL: English foreign language.

FL: First Letter.

LTM: Long Term Memory.

M: Memory.

MI: Mnemonic Instructions.

RC: Reading Comprehension.

STM: Short term Memory.

WM: Working Memory.

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General Introduction

Introduction

Reading is an important skill that plays a significant role in improving reader's language proficiency. Thus learners basically rely on this skill in order to acquire knowledge and improve their performance, but to handle reading skill is not that easy thing for most of students. Furthermore, some students tend to handle this skill without any adequate skillfulness, and this may negatively affect their reading efficiency and causes comprehension deficiencies. Such difficulties are mainly related to memory, where students often face the usual problem which is forgetting and find it difficult to store, and retrieve information, while others may not be able to associate new knowledge with prior one. As result, they cannot achieve the goal of reading that is comprehension. In addition, reading difficulties can refer to poor strategies that teachers apply in the class room. Therefore, in order to help students improve their memory, we could teach them to use Mnemonic instruction strategy, as memory aid strategy that can significantly enhance their comprehension, this may make it possible for most of students to aid their memory and assist them to develop an effective comprehension of what they read.

1. Study background

Reading is by far the most eminent skill that plays a significant role in improving readers' language proficiency, especially in a foreign language setting. Actually, EFL learners basically rely on this skill to acquire knowledge as the Foreign language learners is seldom spoken outside the classroom. Nevertheless, students tend to handle reading without adequate skillfulness, and this may negatively affect their reading efficiency and causes comprehension deficiencies that are not easy to discern.

It has been established beyond the shadow of doubt that EFL students in general endure serious reading difficulties which are mainly caused by the lack of reading fluency. This is revealed through the great amount of time and effort they invest when they read. Added to this, their inefficient reading which is no more advanced than when they were young children. The majority of students tend to plough through a written print struggling in word-by-word reading stumbling at every unknown word (Mbarki, 2009). This makes it more difficult to grasp the meaning of what they read and causes them to get stuck on individual words which may not absolutely essential to the general understanding of a text.

Perhaps one may find difficulties to comprehend a passage because of some problems like unfamiliar words in the text, the amount of previous knowledge that the reader brings to the text, and vocabulary knowledge. Besides that, teaching reading techniques is also a substantial factor that may become students' problem in reading.

Essentially considering this issue, this study tries to introduce a technique that may help teachers to teach reading comprehension, that is Mnemonic Technique (MT). Mnemonic is a strategy which makes the brain work maximally, so that it can make new information as an input more memorable even though it preserves for long term in the memory. This technique is intended to make the students think harder to get the information from the English text that they read.

2. Statement of the Problem

As EFL learners, we are experiencing many problems in learning. Such problems may affect our performance as well as our achievement in the four skills. One major problem that we faced is that we still getting difficulty in comprehending what the teacher give us as

reading texts. Some of these difficulties might be related to our memory because reading comprehension can be very demanding for memory resources. For example, forgetting, the disability in storing and retrieving of information. Some students find it difficult to store and retrieve information. In addition, they could not associate the new knowledge with knowledge they already know. Others confess that what they are taught today will be forgotten tomorrow. Since the ultimate goal of any readings is comprehension, some reading difficulties can be attributed to poor reading strategies. Therefore, it is a challenge to find a good strategy which will help students store thoughts and ideas in a useful way. We undertake this research to present the Mnemonic strategy that will serve as learning memory aid; it could help students to improve their reading comprehension skill.

3. Research Questions

This study is based on the following questions:

1. What are the difficulties the students face in reading comprehension?
2. What is the relationship between the difficulties students face in reading comprehension and memory?
3. What is Mnemonic-based-instruction strategy?
4. To what extent does the use of Mnemonic-based-instruction affect reading comprehension skill?

5. Research Hypothesis

We hypothesize that:

- 1) If EFL teachers use the Mnemonic-based-instruction in classes as memory aid strategy, their student's reading comprehension skill will be improved.

6. Research Aims

This study aims to investigate the use of Mnemonic strategy by EFL learners in reading comprehension tasks. More specifically, it aims at:

- 1) Investigating the effect of the application of Mnemonic strategy in reading tasks that requires the students to use their memory.
- 2) Raising the awareness of teachers about the use of Mnemonics and its techniques.
- 3) Determining the effect of Mnemonic strategy has on reading comprehension.

7. Research Methodology of this Study

While the researcher is conducting his\her research, s\he needs specific research methodology that he \she goes through to collect, analyse, and present data in this research.

7.1. Research Design

A research design is simply the frame work or plan for a study that is used as a guide in collecting and analysing the data. Research design is considered to be as blue print for collecting, and analysing data. Actually it is a map that is usually developed to guide the researcher.

In this study, the researcher conducted quantitative approach with Pre- test and Post- test. The main reason behind this choice of this specific research design is to minimize bias and maximize reliability and generalization. It is also helpful to compare students' achievements before and after applying mnemonic techniques in class. Thus, this type is suitable for the present study.

7.2.Population and Sample

The population of the current investigation consists of First year LMD students English Branch at Mohamed Khider University of Biskra, Algeria. This population is specifically chosen for the main reason that first year students have the module of "reading" compared to other levels, second and third year LMD, which makes it possible for the researcher to carry out this study.

7.3.Sample

For teachers: from about (n=52) teachers of English language of the English Branch at Mohamed Kheider University of Biskra, the researcher dealt with (n=6) volunteer teachers who were chosen because they teach the reading module, and they would be more familiar with students' difficulties.

For students: the sample was one group which consists of (30) students but because of limited time and the absentees of some students; the researcher limited the number to be just (12) students who answered the Pre and Post-test and attended all the treatment sessions in order to have valid data.

7.4.Data Gathering Tools

A research requires many data gathering tools. Tests are the tools of measurement and they guide the researcher in data collection and also in evaluation. Tools may vary in complexity, interpretation, design and administration. Each tool is suitable for the collection of certain type of data (Panday, 2015).

In this study, the researcher opted for quasi-experimental method in which we dealt with pre and post-test. Since this research is based on mixed method approach, the

researcher used questionnaires for both students and teachers to collect the needed data for this investigation.

8. Significance of the Study

So far little attention paid to student's reading comprehension and its improvement by using mnemonic strategies, previous studies focused more on using pictures, vocabulary spelling, reading aloud strategies to help students understand the meaning of words but not for comprehending the whole passage.

That is why, this study would be significant not only for EFL learners but also for teachers. It could raise the awareness of teachers and students of the mnemonic strategies that may lead to better achievement in learning English language, and skills, especially reading comprehension skill. Learning to use memory improvement strategies will be beneficial not only for student with impaired memory but also with well achieved students. Many of researchers in the field advised teachers to adopt the Mnemonic instruction strategy in all English classes to make the learning of their students meaningful and enjoyable.

9. Structure of the Study

This dissertation is divided into three main chapters, the theoretical part and practical part. The theoretical part is divided into two chapters, the first chapter consists of definition of reading, definition of reading comprehension, providing models of reading and its importance, discussing the main aspects of reading comprehension. The second chapter contains definition of mnemonic instructions, the different types, and focusing on techniques and finally the reasons of forgetting words, and presenting the advantages of mnemonic types in teaching reading. The last chapter concerns the practical work of the study. It focused on analyzing the results obtained from the pre-test and post-test to test the hypothesis whether

Mnemonic techniques can improve reading comprehension of first year LMD students of the English Branch at Mohamed Kheider University of Biskra.

Chapter One

Reading Comprehension

Introduction

Reading is unique in its use of the eye and the brain; it is an intellectual feat that entails many intricate processes and skills. Throughout this chapter, we will travel inside the human mind in order to get more profound understanding of reading and its mechanism. This chapter provides the diverse definition attributed to reading according to varying focuses. It also features the visual and mental processes of reading and thrashes out the eminent reading models namely the bottom-up, the top-down, and the interactive models. In addition, this chapter accentuates the importance of working memory in reading and its relationship with memory strategies.

1. Reading

The concept of reading can be defined generally from two opposing views. One focuses on the process of reading and the other one focuses more on the result of that process which is the product.

According to the first view, reading is considered as primarily decoding process involving four signposts of letter and word recognition, sentence reading, story reading and reading for its own sake (Taylor and Taylor, 1983 as cited in Mebarki, 2008). On the other hand, according to Spink (1989) the reading process involves the perception of words, the comprehension of text, a reaction to what is read, and a fusion of old and new ideas.

From the product point of view, reading is the process of constructing meaning from written text, which is comprehending which requires the coordination of a number of interrelated sources of information and dynamic interaction among:

- The reader's existing knowledge.

- The information suggested by the text being read.
- The context of the reading situation.

(Anderson et al, 1985 as cited in Mebarki, 2008)

These definitions seem to be a big overlap due to the difficulty to associate the process and the product even theoretically. Henceforth, and restricting ourselves to this two views, and for the purpose of the study we can conclude with working definition of reading as follows : reading is an interactive process between the text leading to the creation of meaning.

2. Reading Process

The process of reading is a cognitive activity operating in real time. It is the interaction between a reader and the text which entails two main processes: the visual process which involves receiving the visual information via the eyes under the brain direction, and the mental process that requires the brain in the interpretation of this information. (Dechant, *ibid* as cited in Arab, 2009).

2. The Visual Process in Reading

Reading begins as a sensory process, the reader then needs to react visually to the graphic symbols; an act which is made impossible in the absence of light or when our eyes are closed. It is through the vision that a reader is able to recognize the letters and words (Dechant, *ibid* as cited in Arab, 2009).

2.1.The Role of Vision in Reading

Generally, it is assumed that we perceive things immediately after we turn our eyes upon them. However, as believed by Smith (1985 as cited in Arab, 2009) the eyes have a part to

play in reading , where the eyes do not see what happens actually that they nevely recieve the visual information under the form of light, and converti to the brain under the form of nervous energy. The brain then translates this data into meaningful information.

2.2.Eye-Movement in Reading

In the perception of the outside world, the eyes do not move continuously only if they are fixed on moving things. The eyes rather jump from one side to another to pick information. Likewise, in reading in English, the eyes do not glide continuously over each line of a print from left to right ; they rather progress by little jumps or leaps called saccades, the eye move then stop along the lines in saccades movement. These intervening stops or pauses are called fix action. The eye can only see or pick information when they are motionless (Arab, 2009). Again, according to Smith (1985) when the eyes are in motion, they are functionally blind because they are very rapid, movement produces only a vague image of the print. Slow readers tend to read at word level (word by word) making more fictions, whereas faster readers pick up 2.5 to 3 words per fixation (Caman and Heavers, 1998).

3. Mental Process in Reading

The visual information is processed by the brain, in the act of reading; it seems to be of a great concern. A brief description of how this data goes ahead in the human information processing system is indispensable (Arab, 2009). According to Dechant (1991), there are

three types of information storage: the sensory or iconic store, the short term store, and the long term store. Each of them distinguishes from the other two in terms of its processing capacity and its functions.

3.1.The Sensory or Iconic Store

The sensory store is considered to be the lowest level in the information process system, and the visual information lasts for a very limited time. It maintains the physical features of a stimulus after its termination (Pollasek and Rayner,1990 as cited by Arab, 2009). Dechant (1991) defines the sensory store as "the visual image, the icon where an input is immediately changed into sensation and held for 250 millisecond. In reading, the image of the words is imprinted on the visual sensory memory, after the stimulus has gone off, the content of the sensory store decay rapidly whenever new visual information reaches it.

3.2.Short – Term Store

The short – term store is more permanent compared to the sensory store because it is considered as a more convenient structure for holding information got by the eyes (Pollostek, 1990 as cited in Arab, 2009). It is where the data changed into meaning, more precisely, in reading, it is where the analysis of the words and sentences is undertaken (McGuiness, 2005).

3.3.Long – Term Store

It is generally believed that once information enters long term memory, it is stored there for short time. In reading, it is the place where the sense of the sentences is stored. It is very significant in reading since the reader relies heavily on his or her background knowledge to make sense of the print (Arab, 2009).

4. Models of Reading

Some researchers have tried to explain reading mechanism and, therefore, establishes certain processes through which reading happens; The term models may be just defined as "a systematic set of guesses or predictions about a hidden process" (Davis, 1995, p. 57). It refers to what happens on the level of perception by the eyes and analysis by the brain during the process of reading, and also to certain policies and approaches to the teaching of reading.

Reading models are just frame works about which aspect of reading process are most important (Wolf and Vellutino, 1993 as cited in Gridi, 2009). They differ simply in the emphasis; each model produce particular aspects and their role in the process of reading. From a cognitive point of view, reading models are Bottom- up (stimulus driven), Top-down (context driven) and Interactive models.

4.1.The Bottom-up Models

This type of model is based on the assumption that reading is " a process in which small chunks of text are absorbed, analysed and gradually added to the next chunks untile they become meaningful" (Barnett, 1989 as cited in Mebarki, 2008). According to the bottom- up principles, a text is organized in a form of a heirarchy from the smellest linguistic units to the higher units in this order of levels: the graphic, phonic, phonemic, syllabic, morphemic, word and sentence levels.

Stanovich (1980 as cited in Arab, 2008) states that bottom- up models tend to describe information flow in the form of distinct stages. Each stage changes the input and sends it to a higher stage for further transformation.

Nevertheless, a sound criticism directed by Stanovich, it lies in the fact that bottom-up models lack feedback among different stages or sequences of the model. This presents the low processing stages to interact with the higher ones to decode meanings, so that makes it difficult to account for sentence context effect and the role of prior knowledge of topic of text to facilitate word recognition and comprehension.

From what has been said previously, we admit that bottom-up processes as basic prerequisites for reading, if only we can correctly recognize the letters of language, we cannot even start to read a word. However, and according to what Arab (2009) assumes, the knowledge, experiences and concepts that readers bring to the text are also part of the reading process. This, in fact, has paved the way for the emergence of a model to correct the pitfalls of the bottom-up model and to account for these new assumptions, this model is dubbed the Top-down model of reading process.

4.2. Top- Down Model

Top-down models describe reading as a linear process which moves from top, the higher mental stages, to down, the text itself. In fact, this model stresses the reader's reliance on existing syntactic and semantic knowledge structure, so that reliance on graphophonic knowledge can be minimized (Sanuels and Kamil, 2012). Top-down models view the reading process to be driven by the reader's mind at work on the text, rather s/he utilizes his or her general knowledge of the world or of a particular text components to make intelligent guesses about what might come next in the text (Gridi, 2006).

Godman (1968) and Smith (1971) are most closely associated with top-down theories of reading process. Godman's emphasis is on the central role of readers prediction and

background knowledge that makes them attributes to the name "psycholinguistic guessing game" to reading (Alderson, 2000). Dechant (1991 as cited in Arab, 2009) defends the top-down model focusing on the fact that the processing of the print begins in the mind of readers by generating hypothesis about the text. In this way readers engage in lower processes; that is to say, identify letters and words only to confirm these hypotheses about meaning of the print.

Smith (1971) also focuses on the top-down nature of reading. He shares a number of points with Godman like the emphasis, the emphasis he places on the role of meaning and readers need to make prediction when reading, the distinction he makes between medited (through recoeding to sound) and immedited meaning identification (print to meaning). Smith in his research refers to four characterstics of reading :

- Reading is purposful: people read for specific reasons and goals.
- Reading is selective: readers attand only to what is necessary to their purpose.
- Reading is based on comprehension : the readers brings certain prior knowledge to the text and adds to it the information and ideas gathered from reading.
- Reading is anticipatory: the interaction of prior knowledge, the expectation, of comprehanding and the purpose in reading lead to the anticipate text content.

In sum, one way to differentiate between top-down models and bottom-up models is that in the former, the reader starts with making hypothesis and prediction and attempts to verify them by working down the printed stimuli ; whereas, in the latter, the reader starts with printed stimuli and work. Their way up to the higher level stages, unlike the bottom-up approach, the top-down approach consederd the reader as an active reader. However, problems of top-down models emerge when the reader has little knowledge of the text

topic and fails to generate predictions. It may simply be that the amount of time required to simply recognizing the words. Top-down model are rare, having quickly given way to interactive models.

4.3. Interactive Models

As the name suggests, interactive models theorize an interaction between the reader and the written text. Rumelhart (1977 as cited in Arab, 2008) proposed the interactive model to account for both bottom-up and top-down processing. He, in contrast to top-down models, gives a considerable attention to the visual information.

For him, the process of reading starts by taking up cues to meaning from page by the eyes and ends with the contribution of meaning, he views the skilled readers as being able to use both sensory and semantic information. The letter interacts in many ways during the process of reading to construct meaning.

Interactive models, unlike the other models, do not predetermine any direction for processing. Instead, the reader may engage in parallel processes relying on a range of information sources: visual, orthographic, lexical, semantic, syntactic, and semantic information (Davis, 1990 as cited in Arab, 2009). Stanovich (2012) explains the parallel processing of information in interactive models as follows: interactive models of reading appear to provide a more accurate conceptualization of reading performance than top-down or bottom-up models, when an assumption of compensatory processing (that a deficit in any particular process) will result in greater reliance on other knowledge sources, regardless of their level in processing .

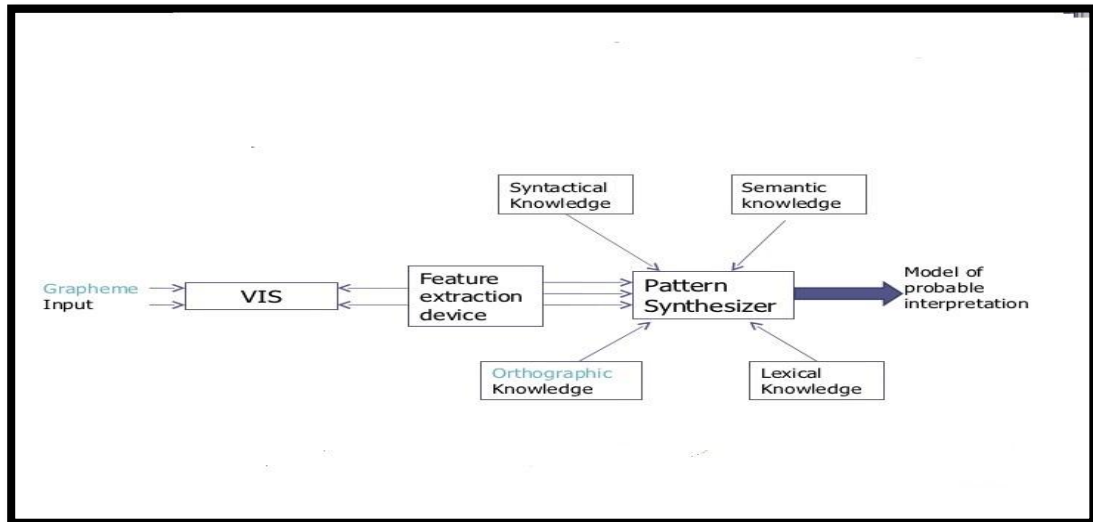


Figure 1 : Models of reading (Rumhart 1977 as cited in Mbarki, 2009).

1. Interactive reading process (Rumhart 1977 as cited in Mbarki, 2008).

The figure 1 represents the reading process as follows: first, the graphic input is registered in a visual information store (vis), and then it is operated on by features extraction device. After that, the features pass to pattern synthesizers which simultaneously receive input from orthographic, syntactic, lexical and semantic knowledge, all potentially operating at the same point; however, this model which is represented in this figure does not show how the interaction between these information sources takes place.

So, like the other models, the interactive model is based on four principles:

- Selective use of information: the interactive model considers the reader to be able to draw upon a range of sources of information.
- Account for different kinds of reading behaviour: as demonstrated by the Stanovich model, readers are unexperienced in any area of knowledge, they may place more reliance on another source which they are good at. For instance, lexical or orthographic knowledge.

- Account for both L1 and L2 reading : this model gives importance to L1 reading as well as suggesting that readers have resources to different sources of information instead of relying just on one source. This model also suggests applying this principle for second language pedagogy. Eskey (1988 as cited in Mebarki, 2008) said that " an interactive model can, for example, accomodate the problems of developing less fluent readers who seem to need as much help in holdeing the botoom", (that is simple decoding) as they do in performing higher interpretation of text.

Schema- theoretic account of comprehension process: Runlhart (1977 as cited in Mebarki, 2008) extanded his model by allowing the semantic level of processing to play greater role and this by suggesting a ‘schema – thearetic’ of the comprehension process. These schemata are fluid and constantly capable of adapting to new information.

To sum up what have been said about reading, we may say that, no matter how reading is being defined, and whatever definitions are attributed to it, all of them agree on the fact that reading is meaningless without comprehension, and that understanding is the essence of reading.

5. Reading Comprehension

Reading comprehension might seem to be a simple concept that every one understand what is stand for; however, it is a conversational issue because it have been changed over the years. Avery luid meaning accrideted to comprehension is understanding what we read. Understanding is a very intricate process that entails as many definitions as reading;

it is mainly because comprehension is generally regarded as the essence of reading (Tankersly, 2005).

Reading comprehension's favored definition according to Arab (2009) would consider comprehension as an active process in which readers work at constructing meaning. Readers engage in a mutual relation with the printed text relying on their general knowledge about the world to get the message from the script. Reading comprehension is further specified by Durkin (1993 as cited in Ma and Med, 2005) as a process that involves 'intentional thinking'. According to what is stated by this view, to understand a written material a reader engages his intention, problem solving, and thinking processes. In this respect, when comprehension takes place, words are recognized and their meanings are accessed in the readers' memory. Phrases and sentences are quickly processed, so that their meanings do not fade before the next ones are handled.

A more extended definition which attempts to explain the complex nature of comprehension is put forward by Snow (2002) who describes comprehension as the process of simultaneously extracting and constructing meaning through interaction and involvement with written language. According to this interpretation, comprehension does entail three elements:

- The reader: who is doing the comprehension, here, we include all the abilities, knowledge and experience that a person brings to the act of reading.
- The text: what is to be comprehended include any printed materials.
- The activity: in which comprehension is a part; it involves the purpose, processes, and consequences of the act of reading.

These three elements are interwoven and influenced by larger social and cultural context in which the reading occurs (Med and Ma, 2005).

6. Processes Affecting Reading Comprehension

Comprehension entails a number of sub- processes: lower or word-level processes and higher or text processes that are specific to reading (Pressely, 2000).

6.1.Lower- level Processes Affecting Reading Comprehension

Word- level processes are related to decoding words and accessing their meaning in memory. They consist of decoding and vocabulary.

6.1.1. Decoding

Decoding is process of going from the printed shapes of the words to some articulated or phonological representation of letters relying on graphemic-phonemic relationships (Arab, 2009) unless the reader is able to decode, his or her comprehension will be impaired. In fact, skilled decoders do not sound unfamiliar words letter by letter; they are rather able to recognize letter chunks such as suffixes, prefixes, Latin and Greek roots...etc. In other words, the more readers develop the skill recognize these chunks quickly, the more this facilitate their comprehension.

6.1.2. Vocabulary

The quantity of vocabulary a reader knows is closely linked to his/ her comprehension skills (Pressely, 2000). However, as skilled decoding tends to affect reading comprehension, it also relies much on understanding. On the other hand, skilled deciphering of vocabulary depends partially on comprehension, i.e; readers have to consider the context in order to determine if words they read make sense. In like manner, readers are able to detect the miscread lexicons if they do not match to the context in which they occur (Arab, 2009).

Higher Level of Processes Affecting Reading Comprehension

Higher-level or text level processes are needed most in assembling words, phrases, and sentences taking into consideration their semantic, syntactic, and referential relationships to construct their meaning of the print (Arab, 2009). They are also involved in relating the content of a text to the reader's background knowledge (Pressly, 2006).

7. Reading Comprehension strategies

Reading comprehension strategies are often seen as comprehension processes that enable readers to construct meaning from the printed page most effectively. In other words, these strategies shows how readers tackle a reading task, and how they interpret their readings. (Morteza et al, 2012) believed that good readers draw on prior knowledge and experience to help them understand what they read and are thus able to use that knowledge to make connection. Whereas, struggling readers often move directly through the text without stopping to consider whether the text make sense or not based on their background knowledge. Therefore, teachers need to be more aware of the specific RS in order to apply it inside the classroom which will allow the students to become effective strategy users such as:

1. **Predicting:** occurs when students hypothesize what the author discusses next in the text. In order to make these successful, students must activate the relevant background knowledge that they already process regarding the topic. Furthermore, the opportunity has been created for the students to link the new knowledge they already process. With making prediction, readers can activate their background knowledge and their brain work maximally.

2. **Question generating:** reinforce the summarizing strategy and carries the learner one more step along in comprehension activity. In using questioning generating, the students should use stems like: who, what, where, when, and how.
3. **Clarifying:** is making the meaning of the text clear to the reader. This reading strategy is used throughout reading. Students can be taught to ask questions, reread, and visualize, making the text more comprehensible. When the students are asked to clarify, their attention is called to the fact that there may be reason why the text is difficult to understand (e.g., new vocabulary, unclear reference words, unfamiliar and perhaps difficult concept) they are taught to be alert to the effects of such impediment to comprehension and take the necessary measures to restore meaning.
4. **Summarizing:** provides the opportunity to identify and integrate the most important information in the text (Milton, 2008). Text can be summarized across sentence, paragraph, and passage levels.
5. **Main idea:** being able to determine the main idea helps the readers to recall important information. The students who are able to locate the main idea of any text and significant details could help the readers to identify the relationship between the main idea and significant details. Thus, will improve comprehension. Teaching the student how to determine the main is crucial in which the student begin by learning the definition of the main idea and then apply this definition to identify it in sentences and short text. The ability to identify the main idea in a text,

wether it is stated directly or inferred is critical for students to gain meaning when reading.

6. **Visualising:** according to NSW, visaulising is when the reader uses prior knowledge and experiences to create a mental image from what is happening in a text read, veiwed, and heard. Visualising is a process that is called sensory imaging, creating pictures in the reader's mind like 'a movie in the mind'. It is important for the students to use this strategy because it brings the text to life which make it easier for the students to engage their imagination and make use of all the senses.

8. Intgrated Strategies in Reading

Milton (2008) considered that successful readers are the ones who use multiple cognitive strategies in a flexible and personalized way to comprehend the text. Integrated strategies are comprehension strategies that aim to check for comprehension breakdown and apply alternate strategies to improve thier understanding, as we can see in Reciprocal teaching and Collaborative strategic reading.

8.1. Reciprocal strategy instruction

Reciprocal teaching is an instructional strategy for teaching strategic reading developed by Annemarie S. Palincsar in 1984. It is used to develop comprehension of expository text which teachers and students take turn leading to concerning sections of a text. At the start, the teacher is principally responsible for imitating and sustaining the dialogue through modeling and thinking out load. As students acquire more practice with dialogue in small groups, the teacher consciously imparts responsibility for the dialogue to the students,

while becoming a coach to provide evaluative information and to prompt for more higher levels of participation (Palinscar, 1986 as cited in Morteza et al , 2012).

Reciprocal teaching involves a higher degree of social interaction and collaboration, as students gradually learn to assume the role of teacher in helping their peers construct meaning from text. In essence, reciprocal teaching is authentic activity because learning, both inside and outside of school, advances through collaborative, social, and interaction and the social-construction of knowledge (Sirgear, 2016). According to Palinscar and Brown (1984 as cited in Milton, 2008) the purpose of reciprocal teaching is to facilitate a group effort between teacher and students as well as among students in the task of bringing meaning to the text.

However, reciprocal teaching technique could have many weaknesses according to Sirgear (2016) such as:

- a. It will be confusing to the students because of the complex steps of activity.
- b. The class might be noisy because of the dailouge in groups.
- c. The teacher will be very busy to take control and minitor the class. The teacher will be very busy to take control and monitor the class.

8.2.Collaborative Strategy Instruction

Collaborative strategic reading (CSR) teaches students to use comprehension strategies while working cooperatively. Students strategies include previewing the text ; giving ongoing feedback by deciding ‘click’ or ‘ clunk’ at the end of each paragraph ; getting the gist of most important parts of the text ; and wraping up keydeas (Allington, 2011). This is the way to help students of mixed achievement levels apply comprehension strategies. Below are the goals for each strategy according to Milton:

1. Preview and Predict

- Learn as much about the passage they can in a brief period of time.
- Activate their background knowledge about the topic.
- Use this information to make prediction about what they learn.

2. Click and Clunk

- Learn to monitor their reading comprehension and identify when they have breakdowns in understanding.

3. Get *the gist

- Restate in their own words the most important points as a way of making sure they have understood.

4. Wrap up

- Summarize the complete passage.
- improve their knowledge.

9. The Importance of Working Memory in Reading Comprehension

Working memory has been identified as an integral part of reading comprehension. As assumed by Moore (2014) working memory is responsible for managing the process of extracting information from text and integrating it with prior knowledge to create meaning. Smith (2004) stresses its significance stating that it is of ‘central importance’ in reading, it is where the students’ lodge the traces of what they have just read while they go on to make sense of the few next words. Deneman (1991 as cited in Arab, 2009) has also stated that considering the WM as a space where comprehension processes are introduced, partly processed sentences are stored, grouping words into chunks is achieved.

Seigneuric (2005) and his colleagues find that WM can be a direct predictor of reading comprehension scores. Further, a similar result by Christopher et al (2012) in identifying

WM as statistically significant predictor of reading comprehension. The significance of WM in RC described by both studies suggest that as the text complexity increases, a greater amount of WM is needed for assimilating longer sentences with new vocabulary into rapidly changing mental (Moore, 2014).

Eventually, working memory seems to play critical role in reading comprehension. Though skilled reading does not imply a larger working memory capacity, but rather more effective use of this capacity. To achieve the ultimate goal of reading act which is comprehension students are encouraged to use memory aids or strategies that help them in the reading process, such strategies and techniques are used to improve memory and leads to better achievements in reading. An example of that and according to what this research suggests is mnemonic strategies which will be discussed in the next chapter.

Conclusion

In conclusion, since reading comprehension is an important and necessary skill for the students to develop their language proficiency (writing, vocabulary) so, students who can comprehend what they read in effective ways are able to achieve better in class. However, most of students fail to understand and recall information in the text. More specifically, the students may not be able to connect what they have as prior knowledge with what they have in the text as new knowledge and this could prevent them from understanding the text. Hence, teachers are required and in need to select techniques and strategies that can improve comprehension. This chapter shed the light on reading on general definition, processes, models, and then reading comprehension and its strategies, as this study focus more on memory problems that lead students to not achieve well on comprehension tasks

so, the chapter will include a description about the role of memory on reading comprehension.

Chapter Two

Mnemonic-Based- Instructions

Introduction

Mnemonics or the art of memory is considered to be unfathomable intellectual interest, throughout this chapter, the reader will get a more profound understanding of mnemonic strategy and its techniques. In this chapter, the reader will understand the relationship between working memory and the concept of mnemonics, as well as getting a clear idea about mnemonic techniques and its effectiveness according to varying focuses. The reader will also know about the different principles and finally its significance.

1. Working memory

Working memory is one of the most important concepts to emerge from cognitive psychology. Generally working memory is considered as a dynamic mechanism that involves the capacity to store information over short periods of time while engaging in other cognitively demanding activities (Savage, 2006,p.186). Working memory (WM) refers to a set of processes or structures that are associated with cognitive processes making it a cornerstone of cognitive psychology (Jachie, 2001). Furthermore, Baddy (1986 as cited in Milton, 2008) view memory as a comprehensive system that unites various short and long term memory subsystem and functions.

2. Types of Memory

Generally, there are two types of memory. Short term memory and long term memory which will be explained in these two aspects.

2.1. Short-term Memory

The short-term memory keeps information for seconds, or at most minutes, the duration as stated in the literature varies considerably. Miller (1956 as cited in Hauptmann, 2004)

suggested that the short-term memory (STM) cannot process more than 7 ± 2 single items of information. He suggested again referring to Polluck (1952) that there is a way to increase this limited capacity- chunking, i.e. grouping information.

The term short-term memory was replaced with working memory (WM). According to the theory of Baddely and Hitch (1974 as cited in Hauptmann, 2004) with its components central executive, and phonological loop. Later, another aspect was added, the primary acoustic store. The central executive is responsible for coordinating the flow of information and for dealing with processing and storage. It is short-term processor with the added capacity to have higher cognitive function, including problem solving and reasoning or metacognitive function (Slame&Baddely, 1982 as cited in Hauptmann, 2004 and Milton, 2008).

2.2 Long-term Memory

Language learners need all the information of language to be learnt transferred into long-term memory (LTM). Therefore, it has been of interest to cognitivists how this encoding process could be achieved, how LTM operates and how information found in the text can be retrieved from this store. According to Hauptmann (2004), the main way of transferring from WM to LTM is by finding some pre-existing information in LTM to attach the new information to. He also added that in the case of vocabulary, it means finding some elements already in the mental lexicon to relate the new lexical information to (Schmitt,2000).

3. Retrieval

Retrieving information from a text can be often quite challenging. However, it is often seen as the most significant reading skill and needs to be taught and practiced regularly

effectively delving deeper into a text (Dean,2019). Strong retrieval needs strong memory resources and strategies that are essential for confident and effective comprehension and therefore, should be practiced daily, whether part of oral questioning in lessons or within a written activity.

4. Spacing

Understanding vocabulary or the terms in the text as block without connecting them to the text is not helpful for the memory or even for comprehending the text, as a result this will lead the student to understand just what is meant by the terms it self instead of the whole passage (Milton, 2008).

5. Forgetting

The study of memory is also the study of forgetting. Huaptmann (2004, p. 48) said that "It is claimed that forgetting information in the sensory register is caused by spontaneous decay and what in the short-term is caused by arrival of new information." However, in LTM the main cause for forgetting according to Milton (2008) is probably because information falls into disuse, which is the result of lack of repetition. Forgetting can be caused by proactive interference (previously stored information), interference (information added later).(Spear, 1978 as cited in Haupmann, 2004).

Mnemonics or the Art of Memory

Mnemonics or the art of memory have different definition according to different scholars.

Terminology Of The word Mnemonics

The word mnemonics derived from μνημονικός (mnémonikos) means "of memory " or "relating to memory ". It is also derived from "mnemon" which means remembering or mindful and from "mnesthai" to remember that comes from "men" means to think. Mnemonics "mee-moh-nicks" also called strategies, techniques, methods, and devices are systematic procedures designed to improve our memory on the other hand, the general name of mnemonics or "memoria technica" was applied to devices for aiding the memory, enabling the mind to reproduce a relatively unfamiliar ideas, and especially serves of dissociated ideas by connecting them (Jurowski, and Krzeczowski, 2015).

6. Brief History of Mnemonics

The history of mnemonics was very rich. Thus, it is not possible to determine the first start because it did not appear as a separate subject , but embedded on memory subject , but it was believed that the possible dating back to prehistoric times when it most likely aided in recording and storytelling. The history of this strategy was subdivided between a number of scholars: Starting by the Greek poet Simonides, he had created the first system of memory aids in 477bc. He discussed the memory aids for objects, for words, he also discussed the techniques of rote memorization. The concept of memory increased techniques spread to the Romans, as almost all things were divided among those two cultures: the Rhetorica and the Heremnium. the oldest surviving Latin book on rhetoric dating from 90 BC, this book focused on the problem of how the Romans viewed memory aids and discussed how people wishing to enhance their memory should create a place in their mind such as building, what is known as loci (the creation of an image related to the thing that wish to remember and put it in the formed location).

After the fall of the Roman Empire, in the 13th century, Thomas valued soul and memory aids began to be applied in classrooms of younger students, it was common to be used in learning grammar and more complex ideas, not for letters, in the 16th century, Ignatius of Loyola wrote the work about the application of all the five senses when developing memory in order to increase longevity of the memory. During the same time, the peg system was introduced (where a given set of images are associated with several members, these images serve as pegs). In the late of 19th century, mnemonics once again came back as a field of psychology.

Mnemonics, which go back to the days of ancient Greeks, have been used in schools for over than 250 years (Milton, 2008, p.283). This issue of memory improvement technique (mnemonics) in language learning and teaching received some interest in research over 20 years ago, in particular, the topic has rekindled both theoretical and empirical research and yet there is no general agreement about to what extent teaching mnemonics could improve student's reading comprehension (Fasih, 2017).

7. Mnemonics Today

In modern times, mnemonics are described as "the art of refreshing, improving or developing memory." Especially by artificial aids which are a system of precepts and rules intended to aid or improve memory (Hauptmann, 2004). While Bellezza (1987 as cited in Hauptmann, 2004) stated that mnemonic is strategy for organizing and \ or encoding information through the creation and use of cognitive cueing structures. These definitions exemplified the fact that mnemonics are no longer as considered in the prehistoric times, but as instructions which are used in class by teachers or students to promote and develop the students' ability to memorize and understand the content.

8. Mnemonics' Definition

Bruning (1985 as cited in Sirgear,2016) stated that those mnemonics are memory strategies that help people to remember information. It helps the students to learn information by making it easier to elaborate, chunk, or retrieve it from memory. Mnemonic device is a memory directed tactic that helps the students transform, or organizes information.

Mnemonic is a memory enhancing instructional strategy that involves teaching students to link new information that is taught to information they already know. It means that the researchers tried to lead students to link new vocabulary word to knowledge that they had learned before. Simply, the term of mnemonic according to Bruning (1995 as cited in Sirgear, 2016) are rhythms, sayings, and procedures designed to make new materials more memorable. Mnemonic strategy had also been defined as any procedures or operation designed to improve one's memory. In short, mnemonic is a strategy to make the brain work maximally so that it can make new information as input more meaningful and memorable.

Mnemonic instruction is a useful tool for students across a wide range, in which it improves retention and recall because it encodes information in ways that make retrieval easier. In many cases, it refers to modifying or changing to-be-learned information to information that learners already know (Levin, 1993 as cited in Sirgear 2016).This definition clarifies the main advantage of mnemonic device in helping the students to remember. In addition to this advantage, mnemonic could also reduce the amount of study time spent in memorizing information through sheer repetition. Hence, this will open-up more time for comprehension and higher forms of thinking.

Furthermore, Sarip et al (2014) stated that mnemonic bridges the gap and provides a meaningful connection between the known to unknown that are difficult to remember, it also builds the learner self-confidence in coping with their language learning tasks and even other field of discipline that require memory retrieval. He also added that learning to use memory improvement strategies will reduce the risk of forgetting information that students had studied as well as it will help them to store and retrieve information in orderly string.

Memory (M) was defined as "a technique or strategies for improving memory "(Mastropieri, 1991 as cited in Karen, 2005). These strategies were traced back to various points in history, as mentioned earlier; the ancient Greeks, a culture that highly prioritized fully developed memory abilities utilized these techniques. Each strategy had an appropriate use depending upon the type of information to be recalled.

9. Mnemonic Types

9.1 Peg word method

An example of a visual imagery mnemonic rhymes peg word method. It was the first strategy supported in the research of (Mestropieri & Scruggs 1997). The Peg word method (PWM) is more appropriate for remembering ordered or numbered information, whereby the number from one to ten are associated with easily pictured rhyming words (Milton,2008).

The teacher or the learner creates an image that pairs each item to be learned with the predetermined images associated with particular numbers. (PM) is ideal for remembering numerical information or materials that needs to be recalled sequentially.

Peg word method is usually used to memorize new vocabulary by using simple rhyme such as:

One is a ben	Six is a shricks
Two is a shoe	Seven is a heaven
Three is tree	Eight is a agate
Four is a door	Nine is a pine
Five is a hive	Ten is a hen

(Sirgear,2016, p. 17)

9.2 The method of Loci

The second method is the method of Loci. It is one of the oldest mnemonic methods that were described in the Roman rhetoric books. The name of 'loci' according to Siregar (2016) came from Simonides' use of location to recall information. It means that the students are going to memorize information by connecting it to a place. For instance, the students could use this method by imagine some things that they need to remember in the place that they are familiar with. The mnemonist must have pre memorized the images of a sequence of location because the loci method organizes information by providing a ready-made structure for it.

One student tries to memorize United States president; therefore s\he images one president and one place. As the following example:

1. Abraham Lincoln – sitting on the sofa.
2. George Washington – looking out the window.

3. Jefferson– turning the television.
4. Theodore Roosevelt– sitting in the armchair. (Extracted from Siregar, 2016, p.18)

9.3 The Link Method

The third method is the link method; it is also called the chaining method, that can be used when items must be remembered in the serial order. Milton (2008) had stated that in the visual variation of chaining, the learner creates a visual image associating the first and second word in the list, then another image to link the second and the third, and so on the process continues.

Milton (2008) introduced the example of the participant which were trained to remember up to 15 words from a list by incorporating each successive item into a story that the learner creates. The emphasis is on creating simple stories with interrelated sentences, and syntactic and semantic errors are ignored.

After the story is recalled, learner usually has no difficulty distinguishing the stimulus words from words used to create the story (Bellezza, 1981 as cited in Milton, 2008).

9.4 First-letter Method

The fourth method in mnemonic techniques (MT) is first-letter method. This method is quite familiar to teachers and students, which include acrostics and acronyms, make use of first-letter cuing and seen to be helpful when it is necessary to recall already known material in the correct form (Wilson, 1987 as cited in Milton, 2008).

At recall, students recall the acronym and then using its letters to recall the items on the list. There are two ways to use first-letter method that are, acronyms and story acrostics. Acronym is the first letters in a list of words are used to form a word. Whereas story

acrostics is first letter in a list of words are used to form words that tell a story (Sirgear, 2016).

Milton (2008) provides a very helpful example which could simplify the use of First letter method (FLM) method and for the students to understand the way it works. The well-worm acronym (HOMES) may help to remember the names of the Great lakes. He also states that when the acronyms cannot be created, then it may be possible to form an acrostic. For instance, the colors of the rainbow can be remembered by acrostic (Richard Of York Gives Battle In Vain).

9.5 Key word Method

The sixth mnemonic method is the key word method. It is a mnemonic that incorporates visual imagery, that can be used when learning a variety of materials, but is especially effective when learning new vocabulary. Sirgear (2016) indicated that the key word method is a multi- step process used for bridging the gap between what is already known from previous experience and the new knowledge information.

Essentially, the key word method is a mnemonic that combines verbal information with visual imagery. The process of forming and retrieving a key word method consist of several stages according to Milton(2008) and Sirgear (2016):

1. A familiar, acoustically similar proxy for new word is created by the student or the teacher. E.g. in the first, the student selects or is given a concrete word (key word) that sounds like stimulus word.
2. In the second stage, the student is provided with or creates an image of the key word interacting with the appropriate definition or response, which means that the student

create an interactive picture which the key word and the meaning of the word is combined.

3. The third stage, student is directed to think of the key word first and then think of the picture with the key word in it.

The key word method, like most mnemonics, is most necessary and effective when the student does not have sufficient background knowledge or a schema to which the new material can be linked. In such instance, the key word strategy allows the creation of a meaningful proxy that indirectly ties the stimulus (e.g., a word) with the response (Scruggs & Mastropieri, 1990 as cited in Milton, 2008).

9. Principles and Properties of Effective Mnemonics

Mnemonics can be divided into two classes. In both classes, there are purely verbal mnemonics, purely visual mnemonics, imagery mnemonics, and mnemonics that incorporate both verbal and visual imagery skill. According to Hauptmann (2004) there are several principles or properties of effective mnemonics which are:

- **Free mnemonics**

The preliminary preparation is not required for the class of free mnemonics because they are independent or free, and sometimes they are called ‘naive mnemonics’.

- **Bound mnemonics**

The second class of mnemonics is called Bound mnemonics (BM) which are seen as more powerful compared to the first class. The bound M requires the user or the practitioner to participate in the process of memorization. The name was derived from the idea that they are dependent on an intermediate code and/or sequencing, also they are called ‘technical method’.

The modern mnemonic techniques are mainly based on the principle of recoding, relating, and retrieving (Mastropieri & Scruggs, 1991).

- a. **Recoding:** to treat information in a way that is better imaginable, a process of making it concrete or in the case of extensive information, simpler.
- b. **Relating:** to bring together two or more pieces of information with the aim of remembering one piece of information through the other (association and elaboration).
- c. **Retrieving:** a mechanism to remember. This can be achieved through the interaction of recoding and relating. Hence, the success in learning with mnemonics depends on the interaction of the first two principles and their strength.

Elaboration

The third principle is elaboration or links, i.e. the adding of additional meaning to material to be learned. Mcpherson (2000) considered elaboration as one of the advantages of mnemonics in general and keyword method in particular. Seel (2000) sees the inherent elaboration technique of memory as crucial for its effectiveness.

In order to get information into long-term memory, we must elaborate it. The best way to understand elaboration is to think of it as a process that forms connections either within the material to be learned, or between the material to be learned, and other things we already know. The more connection the material has the more likely we are to be able to remember it. We might think of an elaborated memory as a satchel with lots of handles the more handles it has, the easier it is to get hold of.

- **Interaction**

The fourth principle is interaction, a major element of keyword techniques the practice of linking keyword and target word by some form of interaction even if it is not in the

logical or natural context (Speter, 1989 as cited in Hauptamnn, 2004). Bower (1972 as cited in Hauptamnn, 2004) asked an experimental group to connect the image of two words with interaction, while the control group was asked to form the image separately with the result that the experimental group performed 54% better than the control group 46%.

- **Concrete vs Abstract**

Concreteness is real, sensually, observable, and factual whereas abstract words are detached from reality, conceptually, generalized, only thought, and vivid (Duden, 1961 as cited in Hauptamnn, 2004). According to Hibgee (1977) concrete words such as apple, car, book, horse...etc, are easier to visualize than abstract words such as nourishment, liberty, justice and

happiness. Thus concreteness is defined by how easy it is to form mental image of the word.

Conclusion

To sum up, the main focus of this chapter is showing the role of Mnemonic instruction (MI) in teaching reading comprehension. The researcher demonstrates how mnemonic instruction (MI) can develop students' retention, and its importance in EFL classrooms which may make learning reading different from other strategies. It is an attractive way that makes the students' use their previous knowledge to get deep understanding of new words in the text. Therefore, students can recall the new words and be more familiar with them.

Chapter Three
Fieldwork and Data
Analysis

Introduction

The present chapter is the practical part of this study, in which we aim to examine and to test the hypothesis that aims to investigate the effect of mnemonic based instruction in enhancing and developing EFL student's reading comprehension. An experimental design is led in three steps. The first step is the pretest, in order to evaluate the student's level. The second step is the treatment, to apply mnemonic instructions in five interventions. And finally the post test to see to which extent does the use of mnemonics could help students to overcome their comprehension difficulties and enhance it. For the research tools used in this study, a questionnaire is prepared for both students and teachers in order to collect data about their opinions and attitude towards this issue. Thus, through the findings and results obtained the hypothesis will be tested and the questions will be answered.

1. Research Methodology

While the researcher is conducting his\her research, he\she needs specific research methodology that he \she goes through to collect, analyse, and present data in this research.

1.1. Research Approach for this Study

This study is conducted based on the mixed method approach which is selected based on the type and the nature of the research, for the reason that it is suitable for the nature of the present study and its aim which is investigating the role of mnemonic-based instruction in enhancing EFL students reading comprehension. This approach helps us to get more detailed and credible responses; also it gives the chance to know teachers' and students' attitudes towards using mnemonics to develop students performance in reading comprehension.

1.2. Research Design

A research design is simply the frame work or plan for a study that is used as a guide in collecting and analysing the data. Research design is considered to be as blue print for collecting, and analysing of data. Actually it is a map that is usually developed to guide the researcher.

In this study, the researcher conducted quantitative approach with Pre test and Post test. The main reason behind this choice of this specific research design is to minimize bias and maximize reliability and generalization. It is also helpful to compare students' achievements before and after applying mnemonic techniques in class. Thus, this type is suitable for our study.

1.3. Population and Sample

The population of the current investigation consist of First year LMD students at Mohamed Khider University of Biskra, Algeria. This population is specifically chosen for the main reason that first year students have the module of "reading" compared to other levels, second and third year LMD, which makes it possible for the researcher to carry out this study.

1.4. Sample

For teachers : from about (n=52) teachers of English language at Mohamed Khider University of Biskra the researcher dealt with (n=6) volunteer teachers who were chosen because they teach reading module, and they would be more familiar with students' difficulties.

For students: the sample was one group which consists of (30) students but because of limited time and the absences of some students the researcher limited the number to be just (12) students who answered the Pre and Post test and attended all the treatment sessions in order to have valid data.

1.5.Data Gathering Tools

A researcher requires many data gathering tools. Tests are the tools of measurement and they guide the researcher in data collection and also in evaluation. Tools may vary in complexity, interpretation, design and administration. Each tool is suitable for the collection of certain type of data (Panday, 2015).

In this study, the researcher opted for quasi-experimental method in which we dealt with pre and post test that is considered to be this study. Since this research is based on mixed method approach, the researcher used questionnaires for both students and teachers to collect the needed data for this investigation.

2. Reading Test

To collect data, the researcher has used a reading test as the instrument. There are two kinds of tests: Pre test and Post test.

2.1.Pre Test

The pre test aimed to know the students' basic reading comprehension abilities before the treatments. The Pretest was taken by students on November 28th,2019. It consists of four activities, the first activity for preparing the students see appendix. The second activity is for reading the text carefully. The third activity is to decide whether statement true, false or not given in the text. The last activity is for production, students asked to write few

sentences about certain question from the text to know how deep they understand the text.

2.1.1. Piloting the Pre Test

In order to determine the quality of the test, the test was given to one teacher who tried to check its content and form before giving it to students. The teacher changed few things and advised the researcher to add few things like the format.

2.1.2. Administering the Pre Test

The Pretest was administered after the piloting stage, in November 28, 2019. In one of the reading sessions. The test lasted for 40 minutes.

3. Conducting Treatments

The aim of this study is to apply Mnemonic strategies in reading sessions. Based on this aim, the researcher tried to teach the students how to apply mnemonics in reading text. The researcher takes five sessions because of the limited time and the availability of the students, each session lasted for one hour and in each session the researcher introduced a new technique for the students to apply it in reading text. The texts were chosen randomly but were given to students after the permission of the supervisor. The first session was on Friday 10, 2020. The second and the third sessions were on Friday 12, 2020. The fourth and the fifth were on Friday 17, 2020.

3.1. The Description of the Treatment using Mnemonic Instructions

According to Palinscar and Brown (1984 as cited in Sirgear, 2016), the procedures of teaching reading using mnemonic techniques are as follows :

Pre activities

Pre activities used to prepare the students for reading and helps them to activate their prior knowledge in order to connect it with new knowledge in the text:

- a. Teacher greets the students.
- b. Teacher checks the students' attendance list.
- c. Firstly, the teacher introduces the techniques to be applied.
- d. Teacher asks the students to make some groups (students can do this activity individually).
- e. Teacher delivers visual clues, cue cards and learning logs.
- f. Teacher asks the students to do the first step by looking at the cue cards.

1st step: predicting (determining the title and main idea of the text)

The students are encouraged to predict what the author will discuss next in the text by looking at the visual clues. In order to do this successfully, the students must activate the relevant background knowledge that they already have regarding the topic of the text.

The leading question can be:

“From the title and the visual illustration; can you predict the topic of the text?”

“What do you think might happen next in the first paragraph?”

During Prediction:

Use prediction language:

I think.....

I predict.....

I suppose....

Use clues or illustration from the text to support the prediction :

I predictbecause.....

- g. Teacher checks the prediction to see whether it makes sense or not.
- h. Teacher delivers the first paragraph of the text.
- i. Teacher asks students to read the text carefully.

2st step: questioning (finding specific information and part of the text)

The students need to generate appropriate questions from the passage to monitor how deep their comprehension is. The leading question may be:

“Make some questions based on the text”

During questioning:

Use the WH- questions, such as who, what, where, when, and how.

3rd step: clarifying (finding difficult vocabulary, key words)

The students need to identify what makes a given text difficult and seek an understanding of vocabulary, unclear words, and difficult concepts.

The leading question can be:

what words you did not understand in the text?

Do you know, what does the sentences mean?

Post Activity:

Close the class and make review about what have the students learned.

4. Post Test

After administering the treatments, the Post test was conducted after the stage in fiveri24, 2020. the same teacher and was administered to the students after her permission. The Posttest like the Pretest lasted for 40 minutes, and they were similar in terms of the format, the type, and the order of the questions.

The aim of the Post test is to discover whether the application of mnemonic techniques in reading sessions will enhance the comprehension of the students or not. The Post test was immediately after the last session of the treatments, this test consists of four tasks as the Pretest; the preparation task, reading task, and two tasks after reading.

5. Analysis and Interpretation of Scores

In order to get the results from both pretest and post test, we needed to use scores since they are (tests) on comprehension in which we can not judge the results unless we used scores. The scores were gained by students after they answered the pretest questions and post test questions.

6. Statistical Consideration

Descriptive statistics were computed, and it is presented through tables and graphs. In order to find the difference between the pretest and posttest then, the calculating was made by SPSS package through formulas as it is shown in this box.

7. The formula of Standard Deviation and the Mean

The mean is the average of the scores. It is calculated by using the sum of scores divided by the number of scores (sample) as represented in the formula below. The standard

deviation is indicator of the average distance of the scores from the mean. Its formula is as bellow

8. Pretest and Posttest Scores

The table 2 below includes the scores of participants in the pretest and posttest.

$$\bar{X} = \frac{\sum Fx}{N}$$

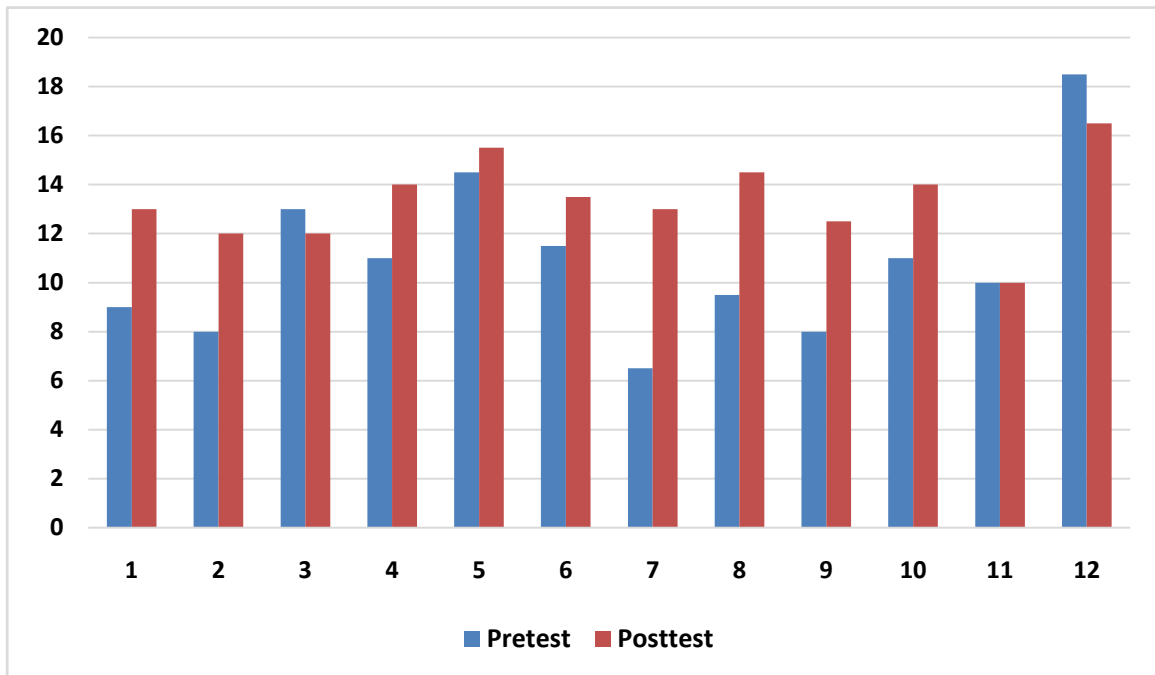
\bar{X} : Mean F_x : Score Frequency N: Number of scores Σ : The sum

$$SD = \sqrt{\frac{\sum x^2 - \bar{X}^2}{N}}$$

N	Pupils' Code	Pretest	Posttest
01	R.S	9,00	13,00
02	O.R	8,00	12,00
03	R.R	13,00	12,00
04	Z.K	11,00	14,00
05	N.S	14,50	15,50
06	S.S	11,50	13,50
07	R.N	6,50	13,00

08	Z.F	9,50	14,50
09	S.F	8,00	12,50
10	R.N	11,00	14,00
11	R.M	10,00	10,00
12	S.H	18,50	16,50

Table 2: Pretest and Posttest Pupils' Scores



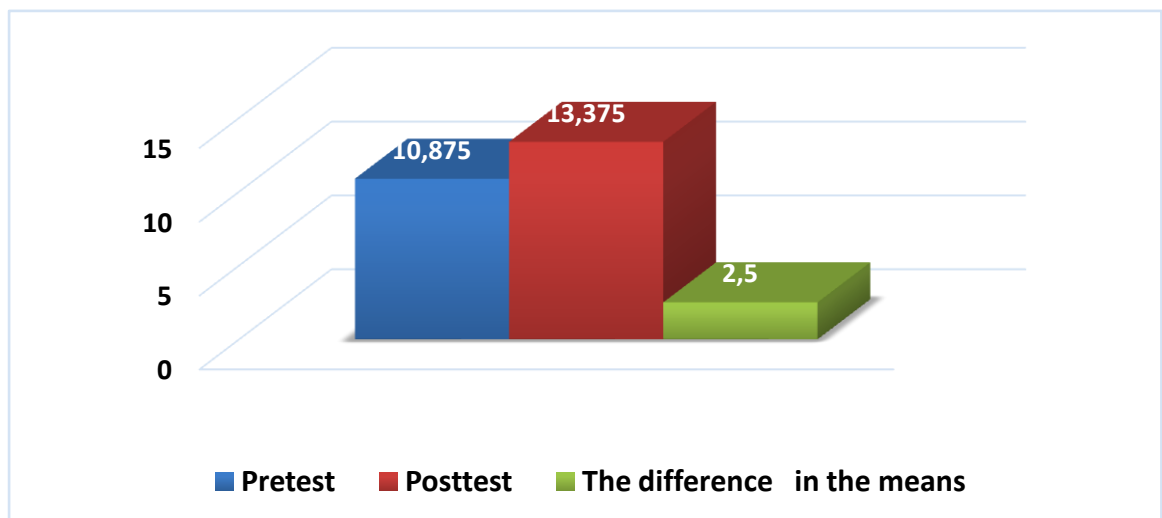
Graph 1:Pretest and Posttest Pupils' Scores

Table 1 and graph 1 depict that there is an increase in participants' scores from pretest to posttest which is shown below in the table 2, the sum of scores (130,50vs160,50.) and the difference in the means (10.87vs.13.37).

Statistics		
	Pre_Test	Post_Test
Mean	10,8750	13,3750
Std. Deviation	3,27612	1,72053
Sum	130,50	160,50

	Pretest	Posttest	The difference in the Means
Means	10,875	13,375	2.50

The table represents the difference in means of the pretest and the posttest.

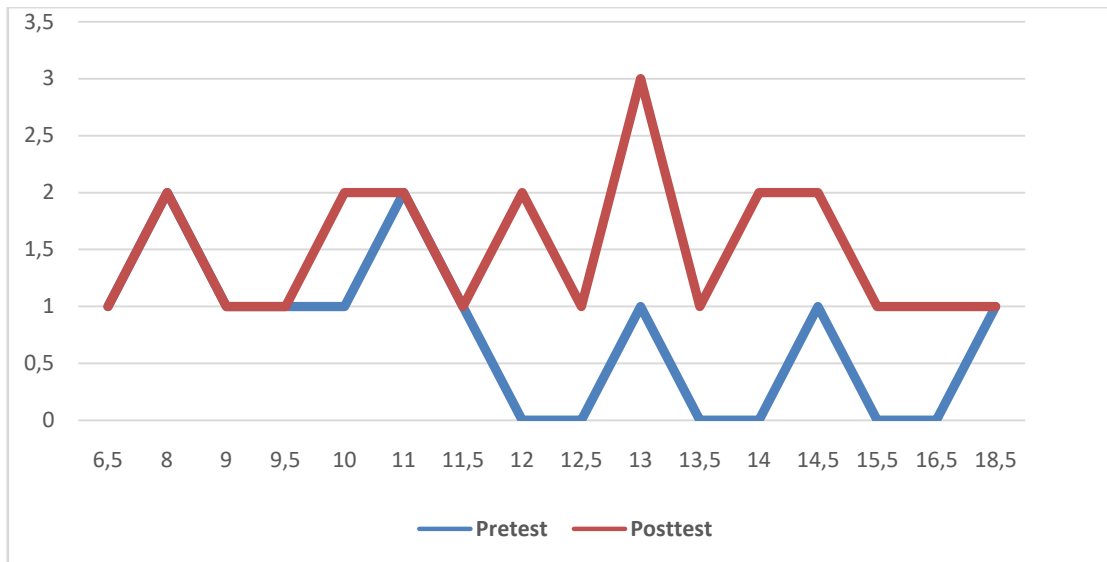


Graph 2: The Means of Scores in the Pretest and Posttest

As it is shown in the table 3 above and the graph 2, there is a difference between the pretest and posttest scores, this is demonstrated through the progress of posttest scores of the participants after the treatment as compared to the pretest. In addition, the mean is (2.5) which clearly shows that there is a positive development in the students' post test scores. Thus, it is noticed that the students' scores in the posttest are better than those in the pretest. As a result, the researcher can deduce that due to the treatment and the use of mnemonic techniques.

Pretest		Posttest	
Score "Xpre"	Frequency "F"	Score "Xpost"	Frequency "F"
6.50	1	10,00	1
8.00	2	12,00	2
9.00	1	12,50	1
9.50	1	13,00	2
10.00	1	13,50	1
11.00	2	14,00	2
11.50	1	14,50	1
13.00	1	15,50	1
14.50	1	16,50	1
18.50	1	Sum of "F"	12
Sum of "F"	12		

Table 4: Frequency Distribution of Scores



Graph3: Frequency Score values of Pretest and Posttest

From table 5 and graph 4, the researcher noticed the following results:

In the Pretest :

- The scores values rang from 6 to 18 with the superemacy of the score 8.
- 4 scores were less than the average 10 and 6 were above the average 10.
- The highest score was 18.

In the Posttest :

- The score values rang from 10 to 16 with the supermacy of the scores :
12,13,14
- All values were above the average 10.
- The score 16 is the highest score.

Thus, the researcher observed that 6 of students' scores were above the average 10. So, these students find some difficulties in comprehending the text. Concerning the posttest scores, the researcher noticed that all the scores were above the average 10, which may indicate that the mnemonic strategies have helped the students to overcome their comprehension difficulties.

Table 5: Comparison of the Pretest and Posttest's Mean and Standard Deviation.

Descriptivestatistics	Pretest	Posttest
Mean	10,875	13,375
StandardDeviation	3,27612	1,72053

Graph4: Comparison of the Pretest and Posttest's Mean and Standard Deviation.

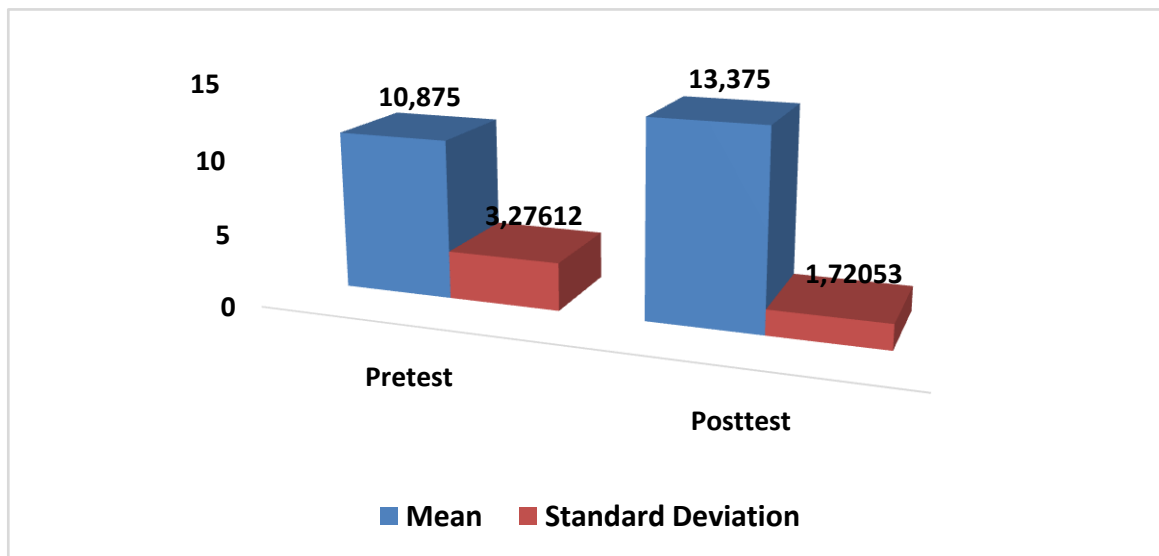


Table 6: Standard Error Difference in Means.

PairedSample Test				
		PairedDifferences		
		Mean	Std. Deviation	Std.Error Mean
	Posttest– Pretest	2.5	2,56728	1,74111

T-testCalculation

To find the difference between the means and the standard deviations of two tests, it is necessary to calculate the t-test. Yet, according to Cohen, Manion, and Morrison (2007, p.543, as cited in Bekhle, 2019), the t value formula is as follows:

$$t = \frac{\text{sample (or test)one mean} - \text{sample (or test)two mean}}{\text{Standard Error of the difference in means (SE)}}$$

Also, to calculate the t-test, the standard Error (SE) must be calculated and its formulas the following:

$$SE = \frac{SD}{\sqrt{N}}$$

SD: Standard Deviation N: The number of the sample, which is 30

Table 7 : Statistiques des échantillons appariés.

		Moyenne	N	Ecart type	Erreur Standard
Paire 1	Pre_Test	10,8750	12	3,27612	,94573
	Post_Test	13,3750	12	1,72053	,49667

Table 8 :Descriptive Statistics

	N	Sum	Mean	Std. Deviation
Pre_Test	12	130,50	10,8750	3,27612
Post_Test	12	160,50	13,3750	1,72053

Table 9: Standard Error Difference in Means

	N	Mean	Std. Deviation	Std. Error Mean
Def	12	2,5000	,56728	,74111

Table 9 displays the difference of mean and standard deviation of the two tests: the pretest is (3.27) and the posttest is (1, 72). The standard error difference in means of the two tests is (0.74).

Table 10: The t-Test and Degree of Freedom.

PairedSamplesTest						
		PairedDifferenc		T	Df	Sig.(2-tailed)
		95% ConfidenceInte				
		rvaloftheDiff				
		Low	Upper			
Pair 1	Posttest–Pretest	,8688	4,1312	6.328	11	,006

➤ **Degree of freedom**

The formula of degree of freedom appropriate for this t-test is $df=N-1$. It is obtained 12 as

shown in the table and calculated as follows:

$$df= (N - 1)= (12- 1)$$

$$df= 11$$

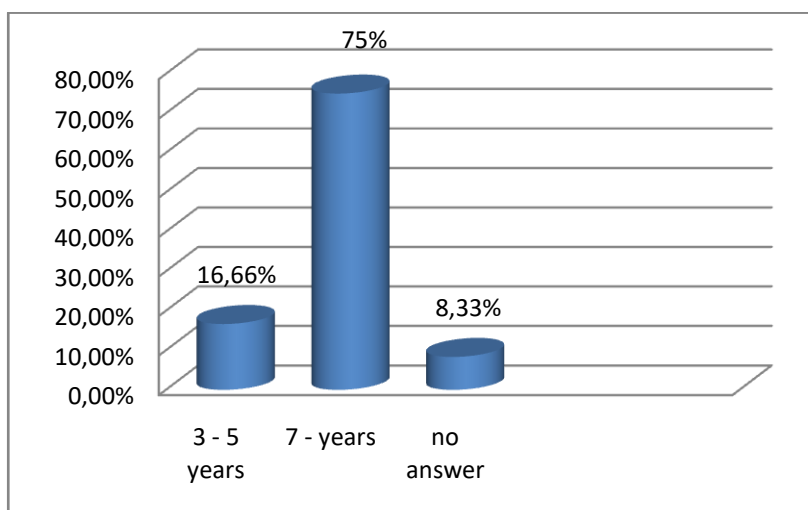
8. Analysis of the Students' Questionnaire

Section One: General Information

Item.1. How long have you been learning English?

Period	Participants	Percentage
3 – 5 years	2	16.66%
7 – 9 years	9	75%
No answer	1	8.33%
Total	12	100%

Table 11: Period of learning English language



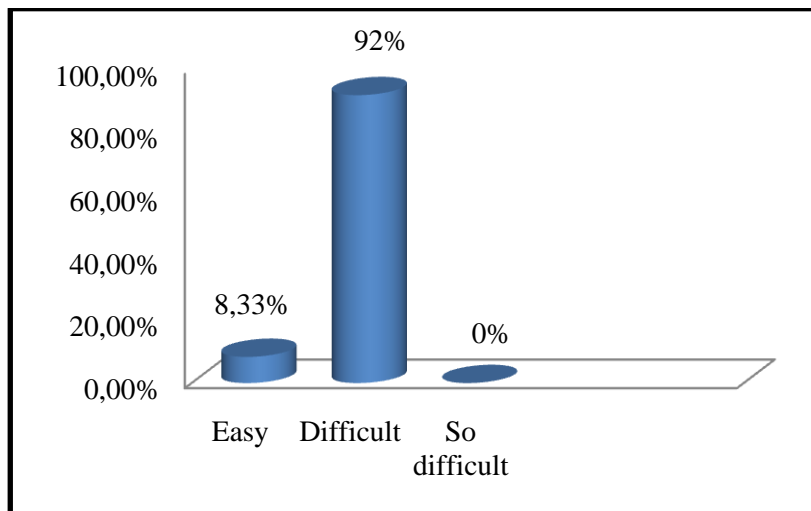
Graph5: Period of learning English language.

The table shows that the majority 75 % of the students have been studying the English language from 7 to 9 years. Yet, two students studied English language from 3 to 5 years **16,66%**. Though one student could not answer the question **8,33%**. As a result, the majority of the students have long experience in learning English language as described in graph 5.

Item.2.How did you find learning at University?

Options	Participants	Percentage
a. Easy	1	8.33%
b. Difficult	11	91.66%
c. So Difficult	0	0%
Total	12	100%

Table 3.2: Students' evaluation of learning at University



Graph 6: Students' attitudes towards learning at University

This question aims to discover students attitudes towards learning at University. The table shows that the majority of the students (**92%**) as seen in the Graph 2 found difficulties in learning at University. Yet, just one student **8,33%** found no difficulty in learning at University. We can notice that students in general consider learning at University difficult because they face different sabbaticals prevent them from enjoying learning English at University.

Difficult:

- Because my background knowledge is bad not good.

- .Difficult because the system of study is changed completely and it came very hard and difficult.
- It is difficult for a little because the new system of it that make us get confused.
- Because learning in the Universities is very hard.
- Because the lessons are difficult and also the teachers difficult.

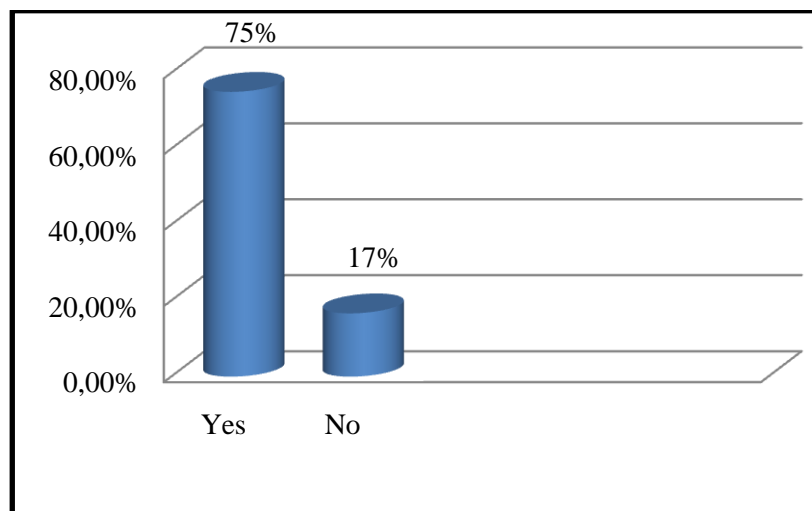
Easy:

- Because it is easy and beautiful language.

Item.3. Did you find some difficulties when learning at University?

Options	Participants	Percentage
a. Yes	9	75%
b. No	2	16.66%
No answer	1	8.33%
Total	12	100%

Table12: Difficulties when learning at University



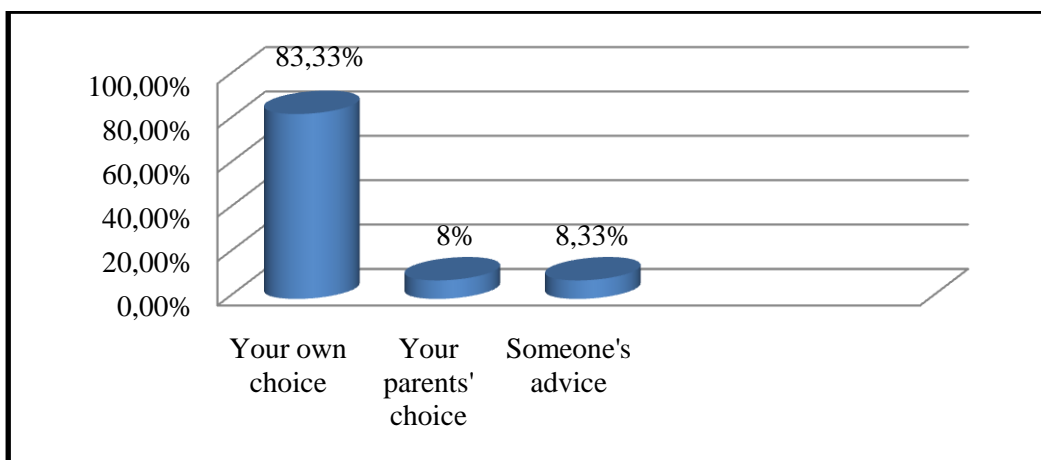
Graph 7: Difficulties when learning at University

This question is included to determine that the students find difficulties when learning at university, where the majority of the students' answers were positive **75%** in which students agreed that they have many difficulties as it is shown in Graph 3. However only **17%** did not agree and they think that learning at University is not difficult at all.

Item.4. Learning English at University was:

Options	Participants	Percentage
a. Yourownchoice	10	83.33%
b. Your parents' choice	1	8.33%
c. Someone'sadvice	1	8.33%
Total	12	100%

Table13: Students' choice of learning English at University



Graph 8: Students' choice of learning English at University.

In this question, students are asked if the learning of English language was their choice, parents' choice, or some one's advise. The answers of the majority of the stu*dents **83.83%** in which they agreed that it was their own choice, and the other options were equal **8,33%**. Since the majority of the students choose to learn English language with all

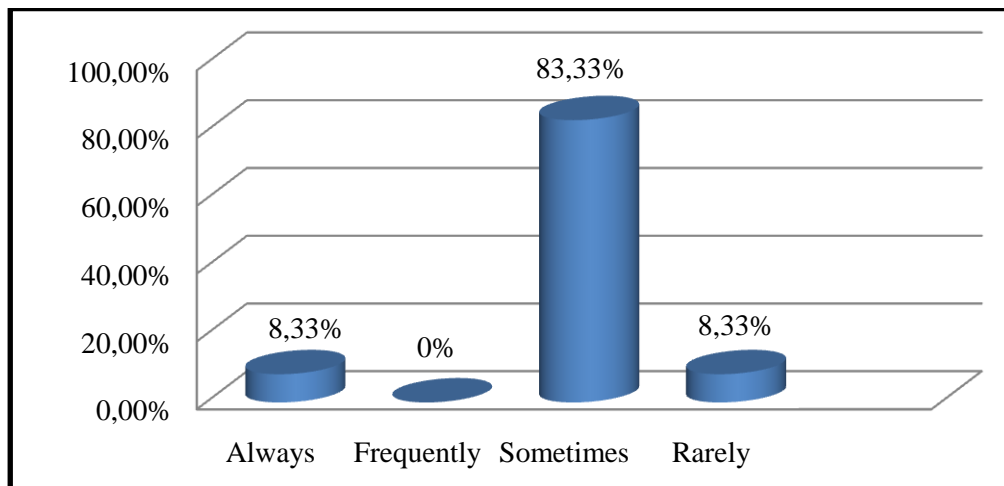
their willingness, we can notice that they are motivated to learn but they still find some difficulties due to different factors.

Section Two: Reading Skill

Item.5. How often do you read in English?

Frequency	Participants	Percentage
a. Always	1	8.33%
b. Frequently	0	0%
c. Sometimes	10	83.33%-
d. Rarely	1	8.33%
Total	12	100%

Table14:The frequency of reading in English language.



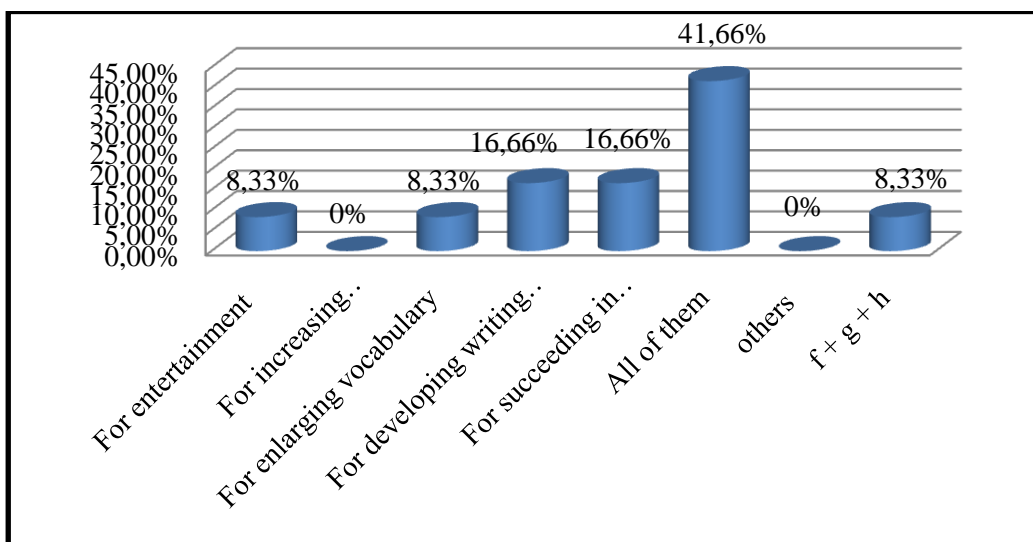
Graph 9: The frequency of reading in English language.

The fifth question is included in order to know whether the students read in English or not. (83,33%)as shown in Graph 5, say that they read sometimes. Whereas, only 8,33% read rarely and (8,33%) read always.

Item.6. Do you read?

Options	Participants	Percentage
e. For entertainment	1	8.33%
f. For increasing your background knowledge	0	0%
g. For Enlarging your vocabulary	1	8.33%
h. For developing your writing skill	2	16.66%
i. For succeeding in your academic courses	2	16.66%
j. All of them	5	41.66%
k. Others	0	0%
F + g + h	1	8.33%
Total	12	100%

Table15:Reasons for reading.



Graph10: Reasons for reading

Since the question aims to know how much the students read, we also need to know why they read. In order to do this we supply them with the different and the possible reasons as

it is shown above in the table and Graph₁₀. 41, 66% agreed that they could read for all the reasons, and 16,66% read in order to develop writing skill and to succeed in academic courses, yet only 8,33 read for entertainment.

Item.7. What kind of materials do you prefer to read?

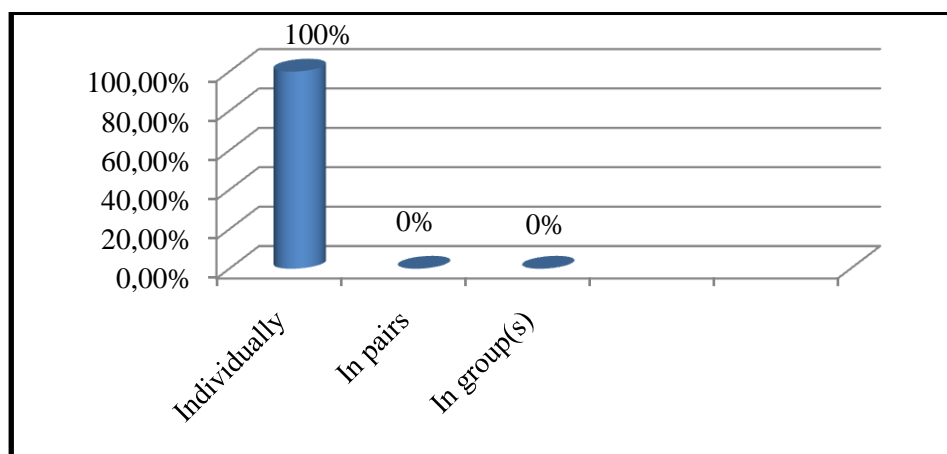
- Novels, books
- I like to read the short stories
- Reading and writing strategies
- Quotes and books
- I prefer to read novels (literary text)
- I prefer read books and novels and short stories
- I prefer to read stories

This questions aims to discover what kind of reading materials the students prefer to read. This kind of question does not need a table or Graph because the answers would be according to the students' choices and beliefs.

Item.8. How would you like to read?

Options	Participants	Percentage
a. Individually	12	100%
b. In pairs	0	0%
c. In group (s)	0	0%
Total	12	100%

Table16: Students' preferable way of reading



Graph11: Students’ preferable way of reading.

Question eight is included in this questionnaire to know the students’ preferable way of reading. In fact, all of them like to read individually (**100%**) as it is shown in Graph 11. As a result, we notice that teachers need to consider the students’ preferable way to read before applying any strategy, and we can notice also that students are not yet open minded to share their knowledge.

Here are some of students’ justifications:

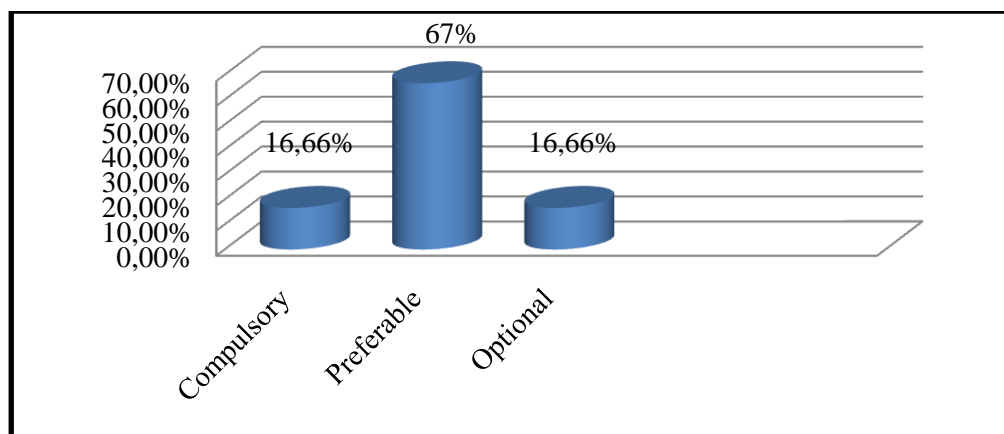
- For the focus and understanding well
- I understand better
- Because I did not enjoy and understand what I read when I read with others
- Because when I read individually, I enjoy with book and focus with it

Section Three: Reading Comprehension Difficulties

Item.9. What do you think of having good reading skills?

Options	Participants	Percentage
a. Compulsory	2	16.66%
b. Preferable	8	66.66%
c. Optional	2	16.66%
Total	12	100%

Table 17: Students’ attitude towards having good reading skill.



Graph12: Students' attitudes towards having good reading skills.

Through this question, the aim is to explore students' opinions of having good reading skill. As it is shown in table the highest percentage (**66,66%**) agreed that having good reading skills is preferable, whereas just (**16,66%**) agreed that it is compulsory. As the results show, So we need to advise them or the teachers to make more efforts so that the reading skill could have the right position in university.

Item.10. Please mention whether you agree or disagree with the following statements:

Statement	Agree		Disagree	
	N	%	N	%
1.It is always necessary to read every word of a passage	8	66.66%	4	33.33%
2. It is good idea to say the words aloud when you read	6	50%	6	50%
3. As you read, you should always look up the meaning of words you do not know	11	91.66%	1	8.33%
4. To read well, you need to know the pronunciation of every word.	9	75%	3	25%
5. Learning vocabulary is the only way to improve reading ability.	4	33.33%	8	66.66%

6. Learning grammar is the only way to improve reading ability	4	33.33%	8	66.66%
7. You can read all kinds of texts (books, newspapers, etc.) the same way.	6	50%	6	50%
8. Reading in different languages requires some different reading methods.	8	66.66%	4	33.33%

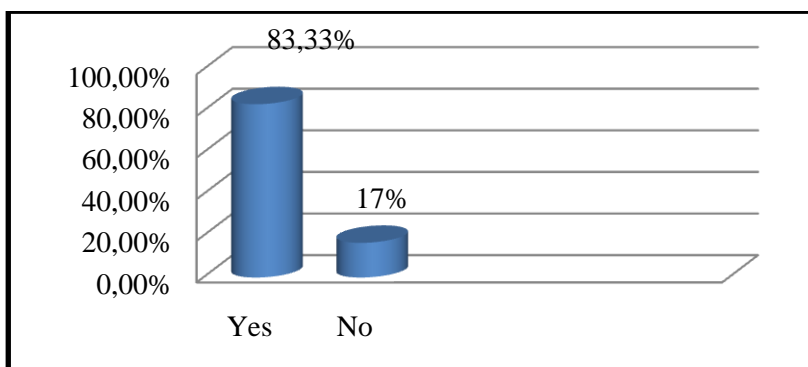
Table 18: Ways of reading

This question aim to know the ways students agree or not agree to use while reading, the highest percentage was for the option 3 (91,66%) in which students agree that they should always look up the meaning of words. Thus, we can notice how important is the meaning of words for the students to comprehend the text.

Item.11. Do you have any reading comprehension difficulties?

	Participants	Percentage
a. Yes	10	83.33%
b. No	2	16.66%
Total	12	100%

Table 19: Reading comprehension difficulties



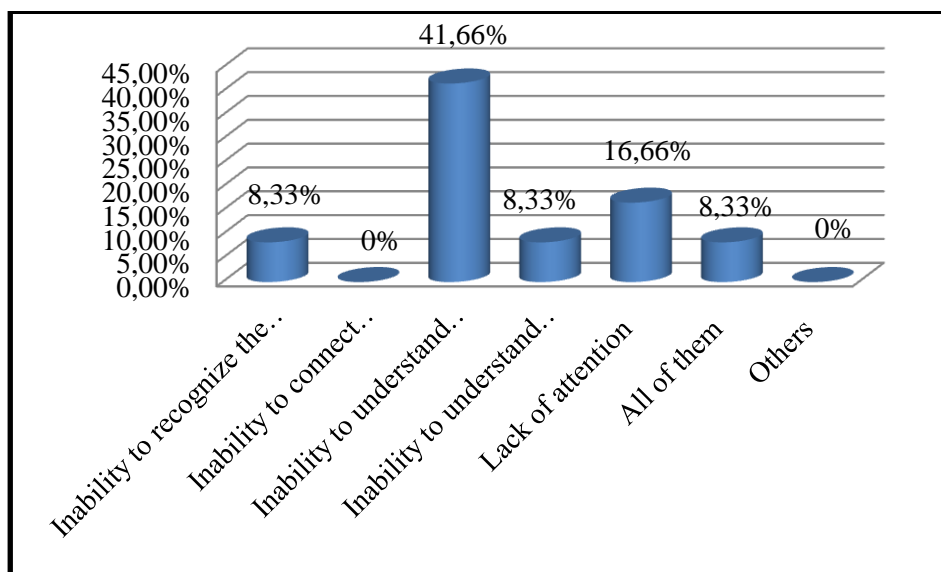
Graph13: Reading comprehension difficulties.

In order to know whether students have any comprehension difficulties, the majority of the students agree and said yes 83,33%, so we discover that the students faced different problems that prevent them from comprehending the text.

If yes, what kind of difficulties:

Options	Participants	Percentage
a. The inability to recognize the types of text	1	8.33%
b. The inability to connect background knowledge with new one	0	0%
c. The inability to understand complex sentences	5	41.66%
d. The inability to understand new vocabulary	1	8.33%
e. Lack of attention	2	16.66%
f. All of them	1	8.33%
g. Others	0	0%
Total	12	100%

Table19 : Reading comprehension challenges.



Graph14: The kind of challenges encountered in reading comprehension.

In this question, different problems had been suggested to students that could be the reason behind their comprehension difficulties, thus we asked them to choose the one they think is the source of their comprehension problems. As it is shown in table 19 we can see that the majority of students choose option c (41,66%) the inability to understand complex sentences and this prevents them from understanding the text.

Item.12. Would you specify the main reasons behind your reading difficulties?

Reasons	Participants	Percentage
a. Lack of exposure to different text genres and to different text structures	2	16.66%
b. Having poor reading and reading comprehension strategies	2	16.66%
c. Having poor vocabulary	1	8.33%
d. Having poor background knowledge	2	16.66%
e. Facing a difficulty in recalling previous knowledge	0	0%
f. Learning in disorganized and noisy environment	1	8.33%
g. All of them	0	0%
h. Others	0	0%
b + d	1	8.33%
b + c + f	1	8.33%
c + f	1	8.33%
c + d + f	1	8.33%
Total	12	100%

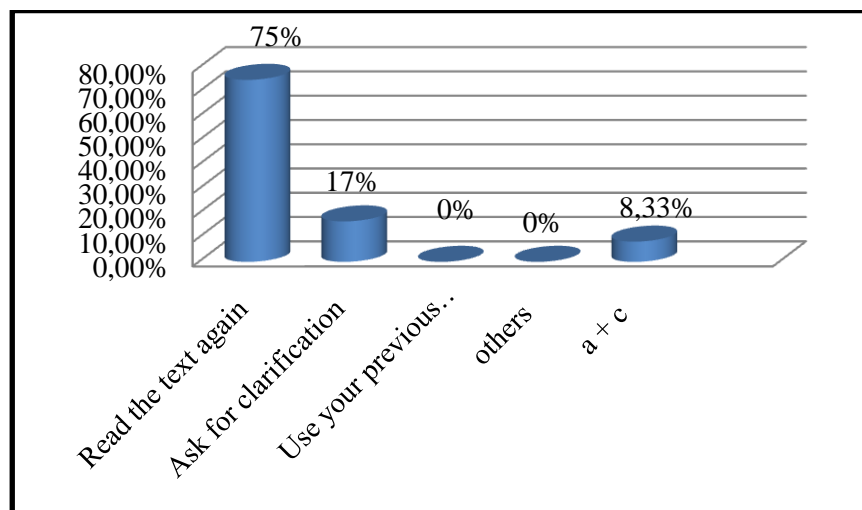
Table20 :The main reasons behind reading comprehension difficulties.

In this question. As table 20 show, the highest percentage was for a, b, d. So, the students thought that the major reasons not to comprehend the text were that they are not exposed to different text genres and different text structures that is why they do not have enough background. But as a common problem, students thought there are no new strategies that could help them to avoid such difficulties.

Item.13. To overcome your comprehension difficulties, you

Options	Participants	Percentage
a. Read the text again	9	75%
b. Ask for clarification	2	16.66%
c. Use your previous knowledge	0	0%
d. Others	0	0%
a + c	1	8.33%
Total	12	100%

Table 21: Overcoming reading comprehension difficulties



Graph15: Overcoming reading comprehension difficulties.

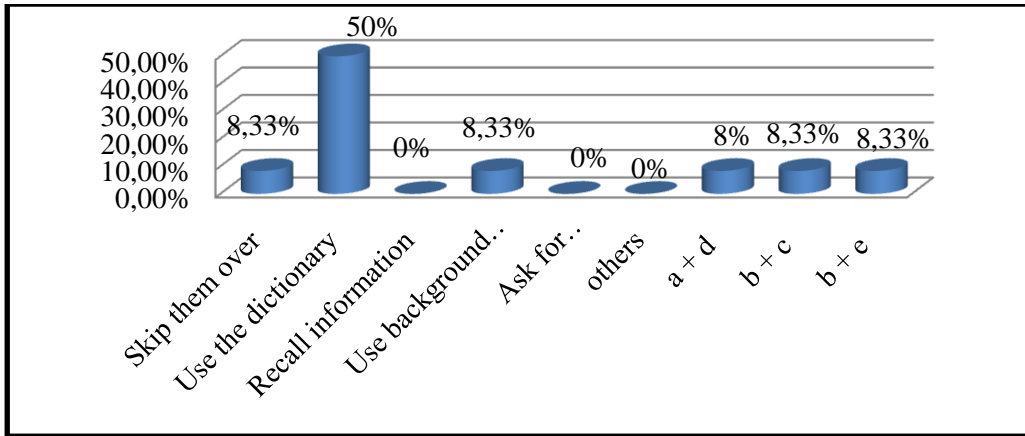
This question is included in this section to know how students deal with their comprehension difficulties. The majority of students (75%) agree that they read texts just for a little of times in order to understand it. Whereas, they did not choose to use their background knowledge, and this might be due to the reason that students are not aware of its importance and its benefits.

Section Four: Reading Comprehension Strategies

Item.14. When you face unfamiliar words during the reading tasks, you?

Options	Participants	Percentage
a. Skip them over	1	8.33%
b. Use the dictionary	6	50%
c. Recall information	0	0%
d. Use background knowledge	1	8.33%
e. Ask the clarification	0	0%
f. Others	0	0%
A + d	1	8.33%
B + c	1	8.33%
b + e	1	8.33%
No answer	1	8.33%
Total	12	100%

Table 22: Students' attitude towards unfamiliar words during the reading tasks



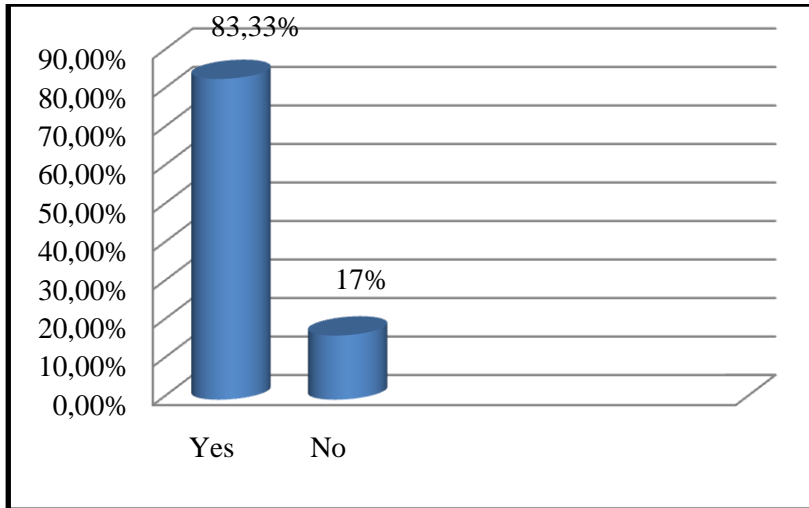
Graph16: Students' attitude towards unfamiliar words during the reading tasks.

Question fourteen is designed to discover the students' solutions about the strategies they may use when they face unfamiliar words in the text. According to what table 21 and Graph 16 shows that the highest percentage was for using dictionary (50%) which makes us think that the students are not aware yet about the different techniques they could benefit from.

Item.15. Do you think that activating prior knowledge is crucial for reading comprehension?

Options	Participants	Percentage
a. Yes	10	83.33%
b. No	2	16.66%
Total	12	100%

Table 23: Students' opinion towards activating prior knowledge for reading comprehension



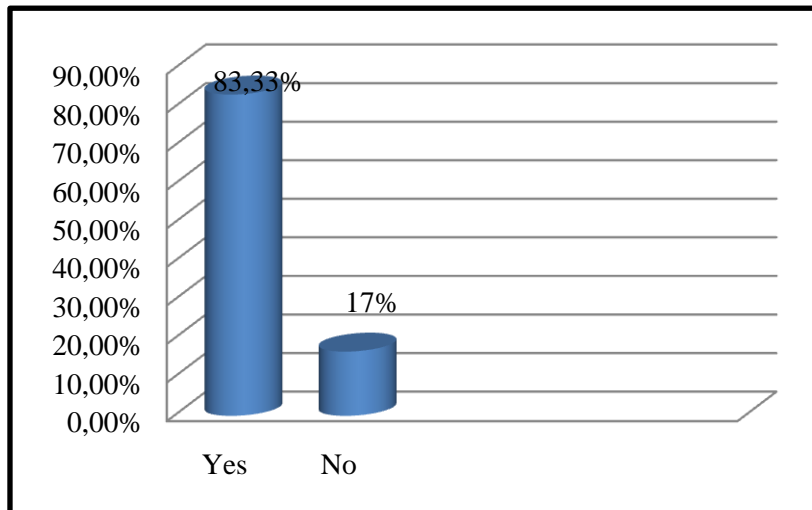
Graph17: Students’ opining towards activating prior knowledge for reading comprehension.

Question fifteen aims to see whether the students are aware of the importance of prior knowledge or not. As stated in table, the majority of students (83,33) agreed that activating their prior knowledge before or while reading is very crucial for them in order to understand the text.

Item.16. Do your teachers try to check your background knowledge before the reading tasks?

Options	Participants	Percentage
a. Yes	10	83.33%
b. No	2	16.66%
Total	12	100%

Table 24: Checking students’ background knowledge before the reading tasks



Graph 18: Checking students' background knowledge before the reading tasks.

This question seeks to gather the students' opinions about the teachers' use of their previous knowledge as a technique before giving them the text. We can assume from table and the Graph that the majority of students (83,33 %) agreed that teachers do use this technique before any readings and they confirm that teachers check their background knowledge to help them understand the text. However, only (17 %) of students deny that their teachers check their background before reading.

Justification:

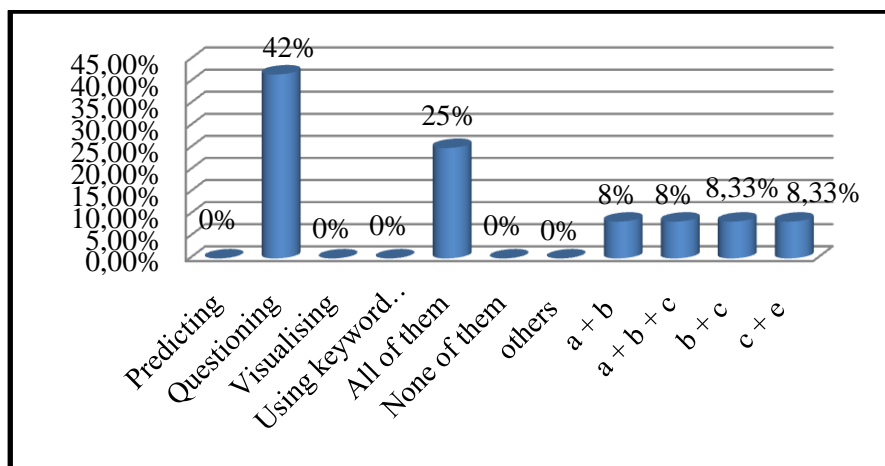
Yes:

- To help us to understand the piece of writing.
- Because with that we could be able to know the title of what that reading text talks about.
- For remember why we study last session.

Item.17. Which of the following strategies your teachers try to activate your background knowledge?

Strategies	Participants	Percentage
a. Predicting	0	0%
b. Questioning	5	41.66%
c. Visualising (using images)	0	0%
d. Using keyword method	0	0%
e. All of them	3	25%
f. None of them	0	0%
g. Others	0	0%
A + b	1	8.33%
A + b + c	1	8.33%
B + c	1	8.33%
C + e	1	8.33%
Total	12	100%

Table 25: The strategies used by the teacher to activate/check students' background knowledge



Graph 19: The strategies used by the teacher to activate/check students' background knowledge.

The aim of this question is to discover what kind of strategies to use to activate the students' background knowledge. About (41,66) of the students state that their teachers use questioning strategy. Though no one agrees that their teachers use images or key words or predicting, yet, 25% agreed to use all of them, which reveals us to think that teachers are not paying any importance to these strategies which could help their students to better comprehend the text.

Item.18. After experiencing the use of the following mnemonics (memory aids), which of them facilitate (s) the process of reading comprehension for you?

Memory aids	Participants	Percentage
a. Predicting	0	0%
b. Questioning	3	25%
c. Visualising (using images)	1	8.33%
d. Using keyword method	1	8.33%
e. All of them	2	16.66%
f. None of them	1	8.33%
A + b + c	1	8.33%
B + c	2	16.66%
C + d	1	8.33%
Total	12	100%

Table26: The mnemonics and the process of reading comprehension

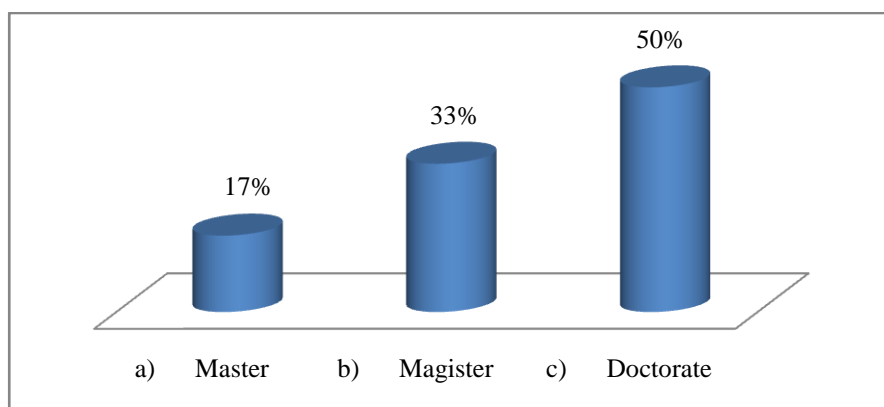
Question 26 aims to know what kind of mnemonics facilitates the process of reading for the students. (25%) of students choose questioning technique, and then for b+c (16%). While the other options were equal (8,33%) as shown in table 26.

9. Results of Teachers' Questionnaire

Item 1.Would you specify your degree?

Statement	Number	Percentage
a) Master	1	17%
b) Magister	2	33%
c) Doctorate	3	50%
Total	6	100%

Table 27: Teachers educational degree.



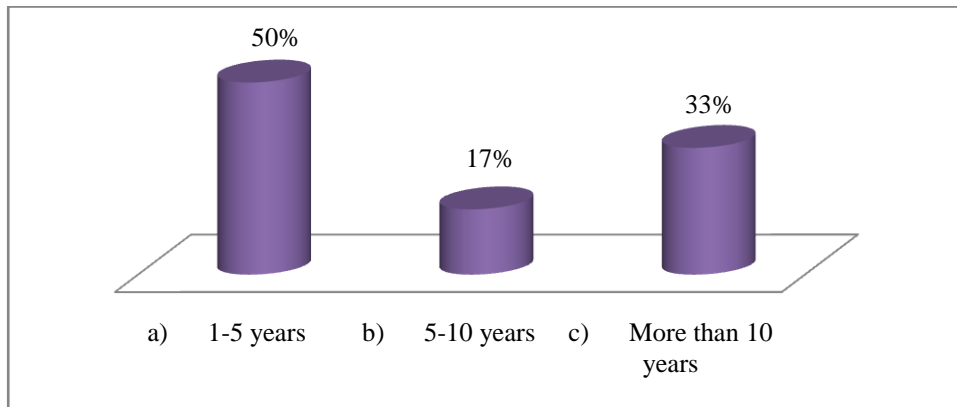
Graph 20: Teachers educational degree.

Table 27 indicates that the half of teachers (50%) have doctorate degree While (33%) of teachers have magister degree, yet 17% have master degree see Graph 20.

Item 2.How long have you been teaching EFL at university?

Statement	Number	Percentage
a) 1-5 years	3	50%
b) 5-10 years	1	17%
c) More than 10 years	2	33%
Total	6	100%

Table 28 :Teachers’ years of experience



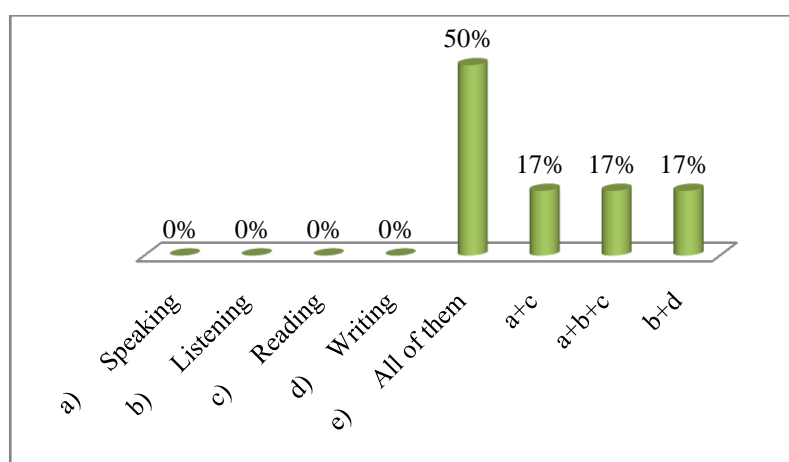
Graph 21: Teachers’ years of experience.

From the data presented in table28, we notice that the teachers have long experience in teaching at university.

Item 3. As an English language teacher, which language skill (s) do you focus on more?

Statement	Number	Percentage
a) Speaking	0	0%
b) Listening	0	0%
c) Reading	0	0%
d) Writing	0	0%
e) All of them	3	50%
a+c	1	17%
a+b+c	1	17%
b+d	1	17%
Total	6	100%

Table 29 Skills that EFL teachers focus on more.



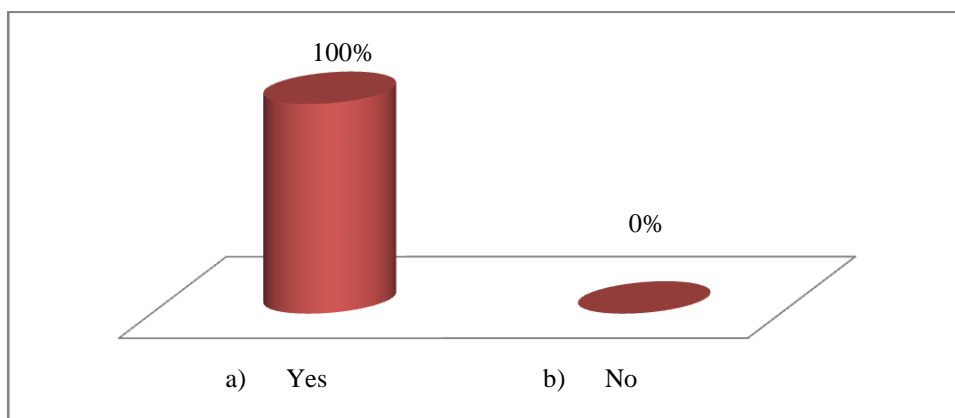
Graph 22: Skills that EFL teachers focus on more

This question aims to discover which of these skills (speaking, listening, reading and writing) teachers give much importance. Table 29 shows that the majority of teachers (50%) chose all of them which means that they consider all skills equal in terms of importance. However, no one was precise to choose just one option, so they combined between two or more. For example, speaking and reading 17%, listening and writing 17% see Graph 22.

Item 4. From your experience as a teacher of English language, do you think that there is a relationship between reading and EFL students' language proficiency?

Statement	Number	Percentage
a) Yes	6	100%
b) No	0	0%
Total	6	100%

Table 30 The relationship between reading and students' language proficiency from teachers' perspective



Graph 23:The relationship between reading and students' language proficiency from teachers' perspective.

As table 30 reveals, all teachers 100% agreed that there is a strong relationship between reading and students language proficiency. This clearly shows the importance of reading in enhancing students' level.

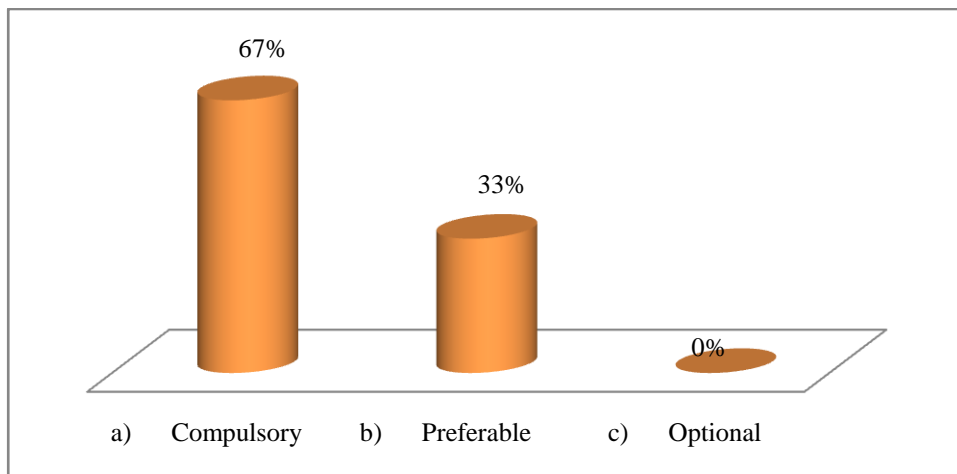
Here are some justifications according to some teachers:

- *There is a strong relationship as reading enables students to develop many aspects of the language including vocabulary, grammar and writing in general. This enables him/her to develop even his or her own style leading to proficiency not only in writing but in the four skills as well.*
- *Reading improves writing style, enlarges memory, gains more vocabulary, analysing cultural aspects...*
- *Reading is believed to help develop learners' language proficiency. If they read, their English will be better.*
- *For students, to have language proficiency, they should master the four skills. Thus, reading is one that is required to build their language proficiency.*
- *Reading enriches EFL students' background knowledge. It sharpens their communicative proficiency, etc.*
- *The more students read, the more they develop their language proficiency (writing and speaking mainly).*

Item 5. What do you think of having good reading skills?

Statement	Number	Percentage
a) Compulsory	4	67%
b) Preferable	2	33%
c) Optional	0	0%
Total	6	100%

Table 31: The importance of having good reading skills



Graph24: The importance of having good reading skills.

In their responses, as seen in table 31 and illustrated in Graph24, which seeks to find out the teachers' opinions about the importance of having good reading skills, the majority of teachers (67%) agreed that it is obligatory for the students to read and develop their reading skill. Whereas, 33% of teachers agreed that having good reading skill is preferable for the students.

Here are some justifications:

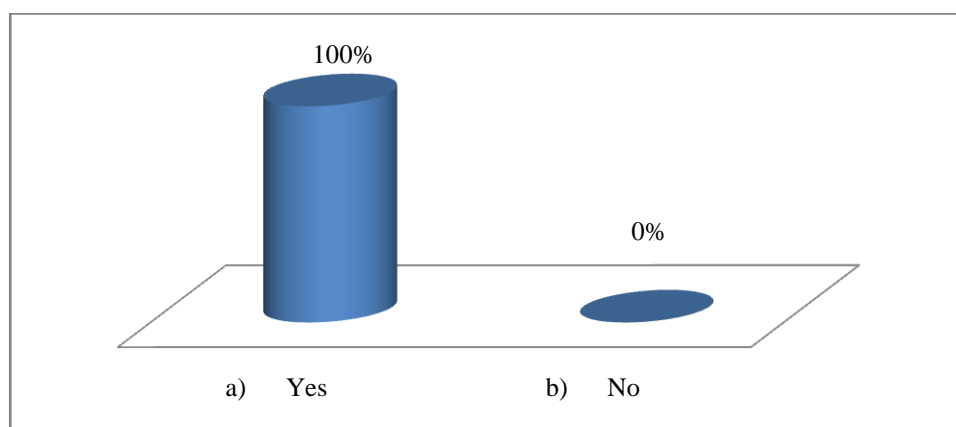
- *The learner needs reading skills which can be including strategies helpful to benefit of reading.*

- *Without reading, students' abilities will not develop. These skills overcome many writing issues in terms of accuracy and being strategic reader.*
- *If students do not know what/how to read, they will not benefit of reading any item.*
- *Because the fact that students have different learning styles and strategies, they may prefer one skill at the expense of another. Thus, they may be skillful in one more than in the other(s). However, as an English proficient student, s/he has to have them preferably.*
- *Reading is fundamental for going on further studies. It widens the scopes of learners. It contributes in developing the learners' minds.*

Item 6. Do you encourage your students to read?

Statement	Number	Percentage
a) Yes	6	100%
b) No	0	0%
Total	6	100%

Table 32: Teachers' encouragement four students to read.



Graph 25: Teachers' encouragement four students to read.

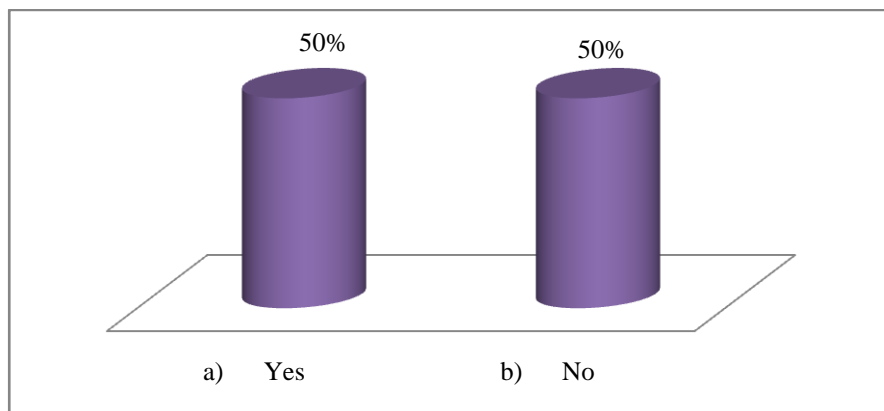
In this question, teachers are invited to state whether they encourage their students to read or not. According to the results revealed in table32and Graph 25,all the teachers 100% agreed that they do encourage their students to read all the time and they provide them with many and different sources such as:

- Providing them with some documents... by advising them to practise extensive reading.
- Asking them to read because this will influence their overall language quality and sometimes suggesting ‘titles’ or even giving them pdf versions; so that they can read them at any time.

Item 7.Do you find teaching reading difficult?

Statement	Number	Percentage
a) Yes	3	50%
b) No	3	50%
Total	6	100%

Table 33: The difficulty of teaching reading



Graph26: The difficulty of teaching reading.

Question seven is given to teachers in order to determine if they find teaching reading difficult or not. The answers were equal for both yes 50% and no 50% which make us think that the difficulty in teaching reading can differ from one teacher to another. See Graph26.

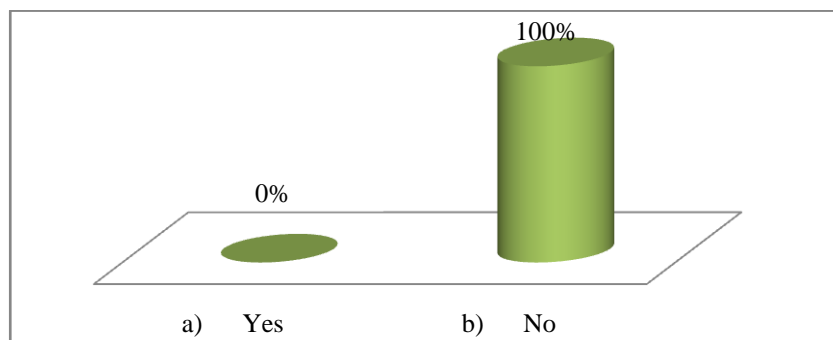
Teacher's justification:

- *Because it is a complex process in which many psychological and linguistic components are interacted.*
- *Most of students do not read giving justifications (lack of time, feeling bored, etc) so they either read summaries or do not read at all.*
- *The problem is that learners are not willing to read only when they are obliged to.*
- *It is not that much difficult. However, this is my first experience teaching it within a short period of time. Maybe the difficulty I have is managing time which is insufficient.*

Item 8. Do you think that time allocated to teaching reading is enough to develop students' reading strategies?

Statement	Number	Percentage
a) Yes	0	0%
b) No	6	100%
Total	6	100%

Table34: Teachers' attitudes towards time allocated to teaching reading.



Graph27: Teachers' attitudes towards time allocated to teaching reading.

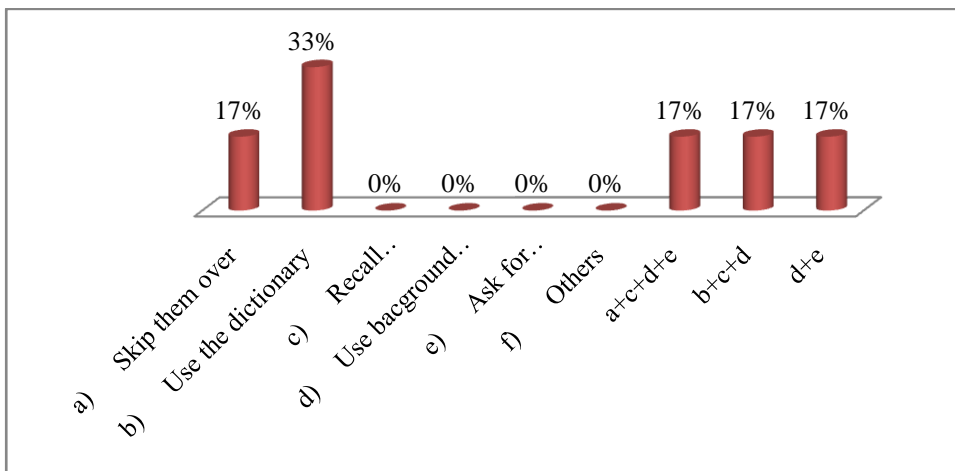
According to table 34, all teachers 100% agreed that the time that is allocated for teaching reading is not sufficient and they believe that students need more time to master this skill.

See Graph 27.

Item 9.When your students face unfamiliar words during the reading tasks you advise them to:

.Statement	Number	Percentage
a) Skip them over	1	17%
b) Use the dictionary	2	33%
c) Recall information	0	0%
d) Use background knowledge	0	0%
e) Ask for clarification	0	0%
f) Others	0	0%
a+c+d+e	1	17%
b+c+d	1	17%
d+e	1	17%
Total	6	100%

Table35:Teachers’ advice for students during the reading task



Graph 28: Teachers’ advice for students during the reading task.

In this question, teachers are asked to suggest the advice for the students whenever they face unfamiliar words in the text. Many possibilities are mentioned in table 35, so the of teachers (33 %) who are using dictionary, which is an old strategy and not parctical and yet, students cannot bring dictionary in exams. However, some of them agreed using more than one possibility as illstrated in Graph 28, 17% for (a+c+d+e) and (17%)for (d+e).

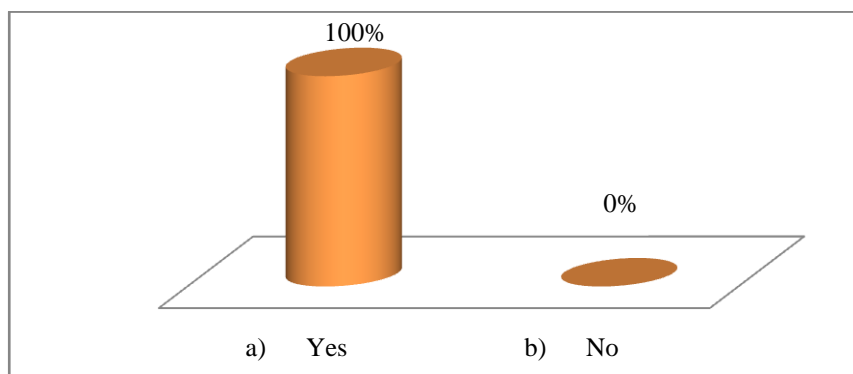
Others

- *Use context clues*
- *Reading beyond the lines and critical reading*
- *Although unfamiliar words represent a stumbling block for readers, EFL students have to skip over them and try to understand them according to their context*
- *I try always to use students' mother toungue culture in order to explain certain phenomena. I stimulate their memory to remember the words or meanings through gestures.*

Item 10.Do your students have reading comprehension difficulties?

Statement	Number	Percentage
a) Yes	6	100%
b) No	0	0%
Total	6	100%

Table36 : Students' reading comprehension difficulties.

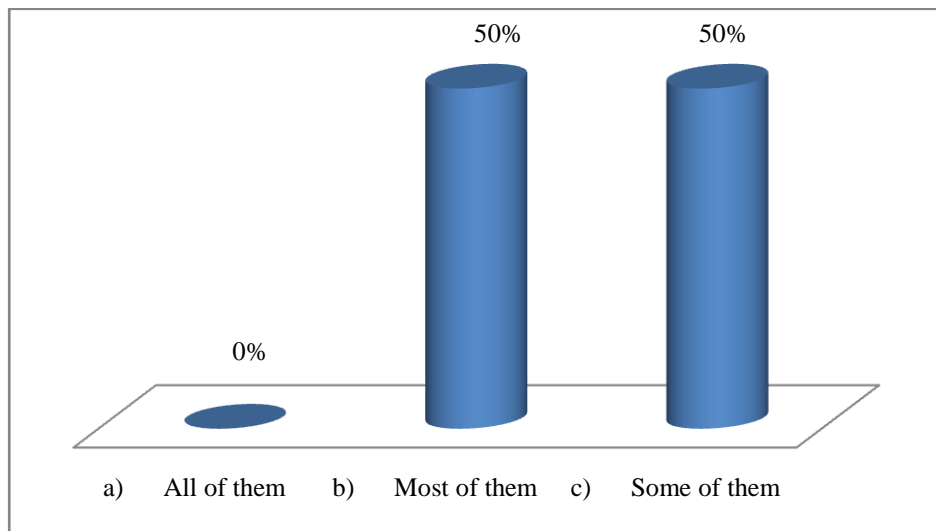


Graph29: Students' reading comprehension difficulties.

Question ten aims to determine whether students have reading comprehension difficulties or not. As seen in table 36 (100%) of teachers answered(yes) and they confirm that students have comprehension difficulties. See Graph 29.

Statement	Number	Percentage
a) All of them	0	0%
b) Most of them	3	50%
c) Some of them	3	50%
Total	6	100%

Table.37: Frequency of students who have reading difficulties.

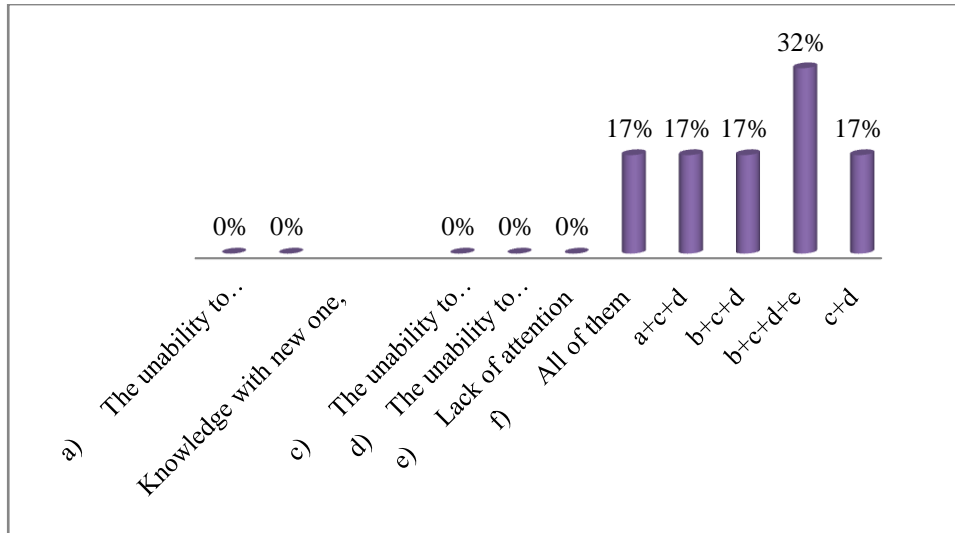


Graph 30: Frequency/Number of students who have reading difficulties.

Item 11.What kind of difficulties do your students face most? You may choose more than one option.

Statement	Number	Percentage
a) The inability to recognize the types of text	0	0%
b) The inability to connect background Knowledge with new one,	0	0%
c) The inability to understand complex sentences	0	0%
d) The inability to understand new vocabulary	0	0%
e) Lack of attention	0	0%
f) All of them	1	17%
a+c+d	1	17%
b+c+d	1	17%
b+c+d+e	2	32%
c+d	1	17%
Total	6	100%

Table 38: Kinds of students' reading difficulties.



Graph31: Kinds of students' reading difficulties.

As seen in table 38, we supply teachers with some difficulties that students may face, and we asked them to choose the most occurring problem. The highest percentage was for **(b+c+d+e)** (32%). However, the rest of the choices were equal 17% see Graph31. We can notice that the most occurring problem according to teachers is d (the inability to understand new vocabulary).

Others

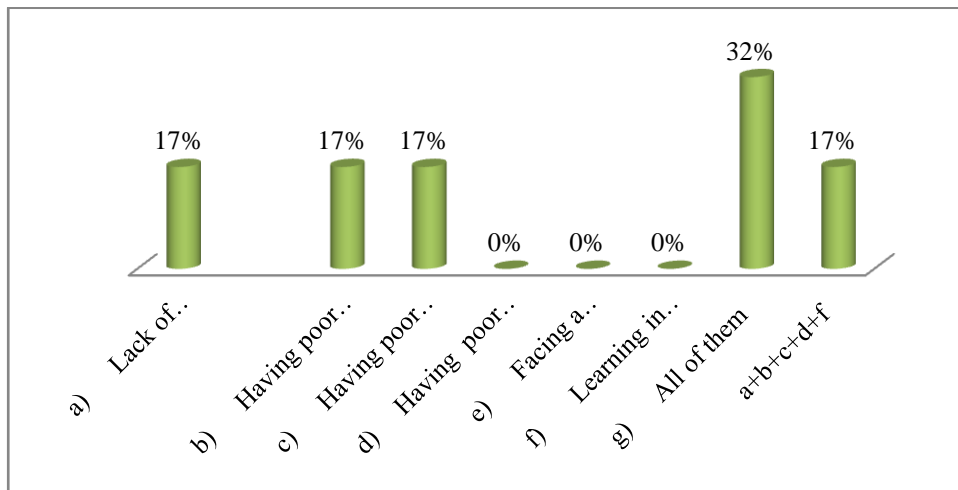
- *Lack of concentration while reading (distracted by their cell phones and Pcs, etc) they are not equipped with the pre-requisite reading strategies and techniques.*

Item 12. Which of the following factors can be the main reason behind students' reading comprehension difficulties? Choose just one option.

Statement	Number	Percentage
a) Lack of exposure to different text genres and to different text structures	1	17%
b) Having poor reading and reading comprehension strategies	1	17%
c) Having poor vocabulary	1	17%

d) Having poor background knowledge	0	0%
e) Facing a difficulty in recalling previous knowledge	0	0%
f) Learning in disorganized and noisy environments	0	0%
g) All of them	2	32%
a+b+c+d+f	1	17%
Total	6	100%

Table 39: The main reason behind students’ reading comprehension difficulties



Graph 32: The main reason behind students’ reading comprehension difficulties.

In order to understand why these problems happen with students, we asked the teachers what can be the main reason(s) behind students’ comprehension problems. To know the answers of this question, we supply them with many possibilities as shown in table39. The of teachers (32%) agreed these suggestion could be the reason why students fail to comprehend the text. See Graph32.

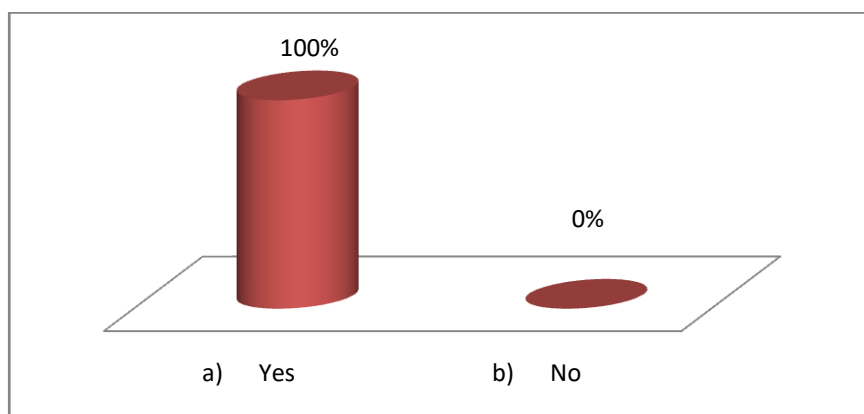
Others

- The difficulties are rooted in our countries' environment as it does not encourage the child in reading and it is also the school's carelessness towards this important skill.

Item 13. Do you teach your students reading comprehension strategies?

Statement	Number	Percentage
a) Yes	6	100%
b) No	0	0%
Total	6	100%

Table 40: Reading comprehension strategies

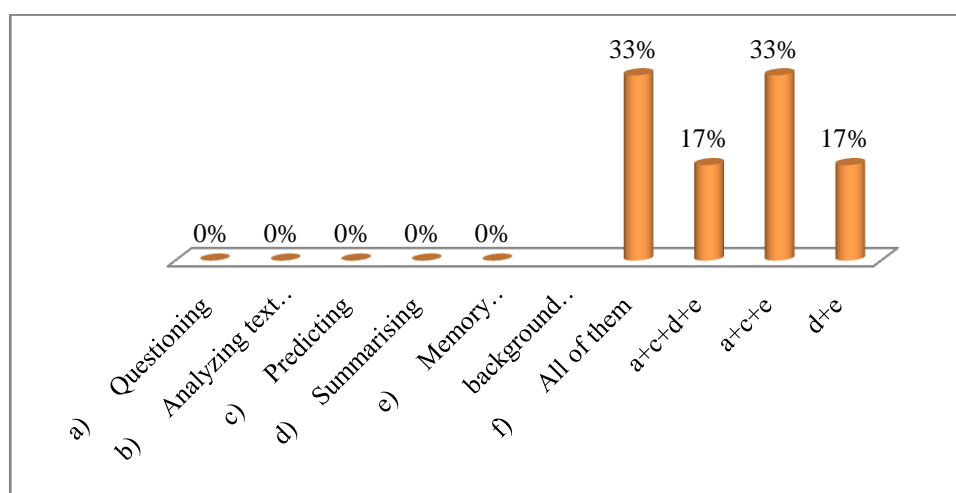


Graph33: The teachability of reading comprehension strategies.

All teachers 100% agreed that they do teach their students comprehension strategies as seen in table40which means that all teachers consider comprehension strategies important for students to overcome their difficulties.

Statement	Number	Percentage
a) Questioning	0	0%
b) Analyzing text structure	0	0%
c) Predicting	0	0%
d) Summarising	0	0%
e) Memory strategies (activating background knowledge, visual illustrations, etc)	0	0%
f) All of them	2	33%
a+c+d+e	1	17%
a+c+e	2	33%
d+e	1	17%
Total	6	100%

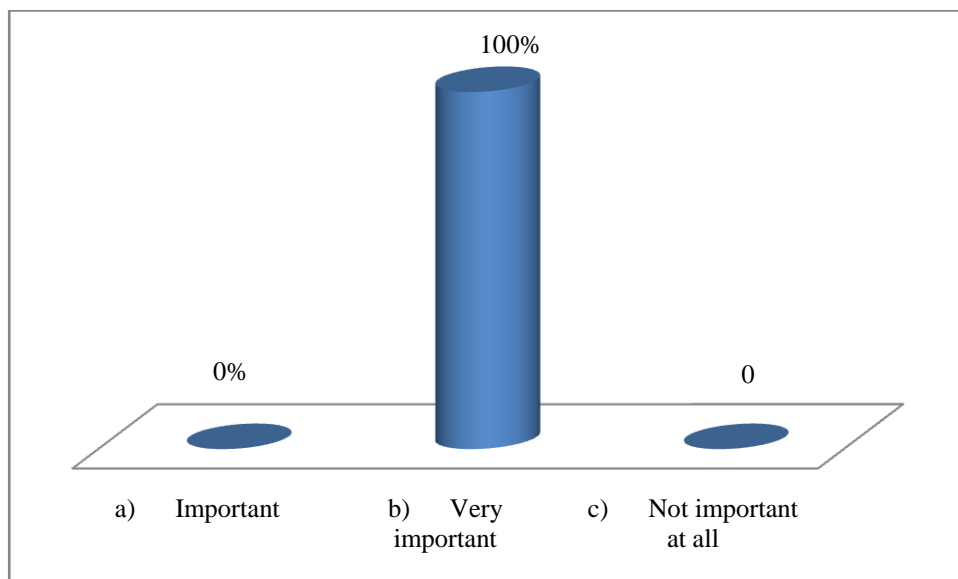
Table 41:The teachers' most useful reading strategies.



Graph34:The most useful teachers' reading strategies

Statement	Number	Percentage
a) Important	0	0%
b) Very important	6	100%
c) Not important at all	0	0
Total	6	100%

Table 42: teachers views about the role of memory strategies in the process of reading comprehension



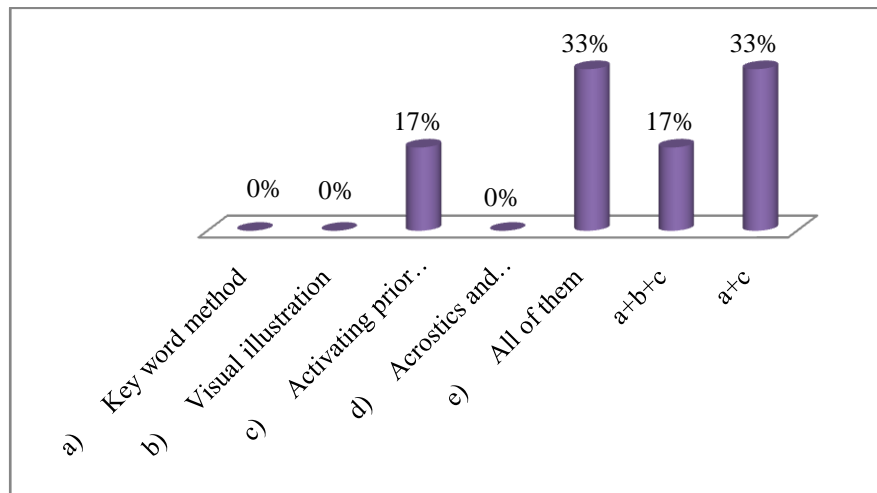
Graph 35: Teachers' views about the role of memory strategies in the process of reading comprehension.

This question aims to determine the role of memory strategies in the process of reading comprehension. According to all teachers (100%), memory strategies are very important for students to develop their comprehension see Graph35.

Item 15 Which memory strategy do you use to help your students overcome their reading comprehension difficulties?

Statement	Number	Percentage
a) Key word method	0	0%
b) Visual illustration	0	0%
c) Activating prior knowledge	1	17%
d) Acrostics and accronymes	0	0%
e) All of them	2	33%
a+b+c	1	17%
a+c	2	33%
Total	6	100%

Table43: Memory strategy(ies)teachers use to help students in reading comprehension.



Graph36 : Memory strategy(ies)teachers use to help students in reading comprehension.

This question aims to discover which of these memory strategies could help students to overcome their comprehension problems. As table 43shows, (33%) of the teachers agreed on using all of them, and only (17%) for (a+b+c). The common strategy that teachers

agreed to use is activating prior knowledge. As a result, we consider that this agreement as confirmation of the importance of this strategy.

Discussion of the results

The main purpose of this study is to investigate the effect of using Mnemonic instruction (MI) to help EFL students overcome their comprehension problems. It sought to decrease a phenomenon which is most of EFL students forget words and cannot produce the language, or express their ideas because they cannot recall words from their memories. Hence, mnemonic strategies were applied as reading teaching strategy in the current study in order to improve students comprehension.

After the data gathered and analyzed through the quasi-experiment and questionnaire for both students and teachers, the research questions answered and the hypothesis verified. Thus, the first question which is what are the difficulties the students face in reading comprehension was answered by teachers with a common answer which is the inability to connect new knowledge with previous one. In addition, they agree that students unable to understand complex sentences and new vocabulary. In the quasi-experiment, the researcher noticed that in the pretest students were unable to understand words, and students were also unable to use their background knowledge to understand the text. However, after the exposures to Mnemonic instruction (MI) in five sessions which allows students to use some of their previous knowledge to understand some vocabularies in the text. Therefore, students' performance developed in the posttest.

The second question is about the relationship between the difficulties students face in reading comprehension and memory. Teachers answered this question by describing the role of memory strategies in the process of reading comprehension. According to them

memory strategies are very important for students to developed their comprehension. The third question is about describing the nature and definitions of mnemonic instructions, this question is answered is chapter where the reader can find different definition according to variety of sources. Thus, students and teachers can understand this strategy and apply it in class.

Furthermore, the last question is to what extant does the use of mnemonic-based- instruction affect reading comprehension skill. It is deduced that through the students' performance in the treatment, the class was active and pupils were the center in the class. In addition, students' scores were better than pretest.

Consequently, the results and the findings of the study confirmed, the alternative hypothesis ' if EFL teachers use the mnemonic-based- instruction in classes as memory aid strategy, their student's reading comprehension skill will be improved.' Then, the results of the study indicate that there was an improvement of the students' comprehension through the use of mnemonic instruction. On the other hand, other studies confirmed that this study, such as, Sirgear (2016) who suggested that the teacher should apply mnemonic technique in teaching reading comprehension because this technique increase students reading comprehension achievement.

Conclusion

The current chapter deals with the analysis and interpretation of data. Besides, the description of theoretical background about the methodology of the study was presented. The data collected were through quasi-experiment instrument, student's and teacher's questionnaire. First, the result of the quasi-experiment were analysed through descriptive statistics and inferential statistics in tables and graphs. Second, the results of the teacher's

and student's questionnaire were descriptively analyzed and interpreted. Thus, the findings of the study revealed that the alternative hypothesis is accepted because the t- value was greater than critical value, however; the null hypothesis is rejected. Hence, the researcher can deduce that teaching reading comprehension through the use of mnemonic strategy may be helpful way for comprehension text.

General Conclusion

The present study aims at casting light on the significance of improving reading comprehension skill for EFL students. It has been concerned with investigating the effect of adopting Mnemonic instruction of first year LMD students reading comprehension. Furthermore, it has allowed us to examine the nature of the relationship that exists between reading comprehension and mnemonic instruction.

The study comprises three chapters, the two initial chapters were devoted to the theoretical part of the study; whereas, the third chapter shed light on the study framework. Firstly, the first chapter was devoted to highlight all the basics of reading comprehension skill, to be precise, it dealt with a general of reading comprehension (its meaning, and history). Moreover; it presents its importance and skills. In addition, it shed light on reading position in education and in research conduction.

Secondly, the second chapter consisted of two sections. The initial section provided definition and types of memory in general. While the second section focused on mnemonic instruction (history, definition, types and principles).

Thirdly, the last chapter was about the methodology selected for this study which has mixed approach through two instruments: a quasi-experiment and teachers and students questionnaire. So these tools were selected to gather data and test the hypothesis. The quasi-

experiment was conducted in seven sessions; five of them were devoted for the treatment with two sessions devoted for the pretest and posttest. The results obtained from teacher's questionnaire revealed that teaching reading comprehension is compulsory for teaching and learning English language, and they proposed some of difficulties that might be the causes why students fail to comprehend text. Furthermore, results gained from quasi-experiment showed that exposure to mnemonic technique during the treatment has contributed to the improvement of student's scores. Therefore, it is indicated that the alternative hypothesis was confirmed and the null hypothesis was rejected due to the t-test value that was higher than critical value.

Finally, EFL students should improve their reading comprehension skill in order to master the language. They also should be able to recall words, and not only to be able to recognize them. For that reason, it is necessary to choose effective strategies that can develop EFL students and improve their reading. Thus, Mnemonic instruction was suggested as a strategy for improving student's reading. Moreover, the significant results and findings of this study showed that students were able to read in an effective way in the treatment and posttest.

Limitations of the study

This study focuses on improving EFL students' comprehension through the use of Mnemonic instructions. Nevertheless, it has faces some obstacles and limitations. The first limitation is that five sessions were not enough to present all the texts in order to train the students in an effective way, which it is better to be carried out for long time. Second limitation was that the research was conducted only with one group because of time limits which were supposed to be with two groups or more. Hence, one sample may not represent the whole population.

Suggestions and Recommendations

Based on the findings and data obtained from this study and the limitations, there are some recommendations suggested for future research as follows:

1. Since reading comprehension is very important in learning English language, teachers and students need to provide more time to this module.
2. Teachers should be aware about the importance of selecting the most helpful strategy which gives the students the opportunity to acquire and practice reading.
3. Teachers also need to apply Mnemonic technique in teaching reading because this technique makes the teaching learning activity more effective as well as it improves language skills, especially reading.
4. In addition, mnemonic instruction makes students actively engaged in the process of learning and increases their reading comprehension achievement.

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Appendices

Appendix One: Pretest

Reading Test 2

Read a travel guide about Bangkok to practise and improve your reading skills.

Before reading

Do the preparation task first. Then read the text and do the exercises.

Preparation task

Match the definitions (a–f) with the vocabulary (1–6).

Vocabulary	Definition
1.polluted	a. real or normal for a place, not specially for tourists
2.noodles	b. dirty from traffic or chemicals
3.alternative	c. fast
4.authentic	d. another way to do something
5.express	e. a table where food or other things are sold in a market
6.stand	f. along, thin food made from flour, water and eggs

Reading text: A travel guide

Whether you're travelling to the islands or the mountains of Thailand, you're likely to spend at least one night in its capital city on the way. Bangkok might be noisy and polluted but it's also an exciting city with plenty of things to see and do. Why not make it a longer stay?

Where to stay

The Khao San Road was a famous traveller spot even before Leonardo di Caprio's character in the film *The Beach* stayed there. But it's noisy, not very pretty and not very Thai. For something more authentic, Phra Kanong offers an alternative place to stay, with its fantastic street markets where everyday Bangkok people eat, work and live. It's not as convenient for the main tourist sites, but it has a Skytrain station so you can be at the Grand Palace in 20 minutes.

How to get around

Bangkok's traffic can be a nightmare. Sure, you can easily take a taxi – if you want to spend hours stuck in traffic jams – but there are two much better ways to get around the city. To explore the temples and historical sites, catch an express boat river taxi or a longtail boat along the Chao Phraya river and the canals. For them, the depart of the city, the Skytrain is a fast, cheap way to travel from the river to the shopping malls and night life of Sukhumvit, and the famous Chatuchak street market.

Where to eat

The simple answer is: everywhere! Thai street food is among the best in the world, and for around \$5 you can eat a filling and delicious meal. Some food stands have little plastic seats where you can sit and eat and they cook the same dish over and over, like fried chicken on rice or Pad Thai noodles. Head for China town – Yaowar at Street – and choose whatever looks most interesting from them any excellent Chinese and Thai restaurants and food stands.

What to do

After you've seen the main sites like the Giant Buddha at the temple of Wat Pho and the spectacular Grand Palace, and shopped at Chatuchak market, check out the snake farm and watch the live snake show. You can even touch a snake yourself if you want to!

Reading test 1

Task 1

Match the Bangkok landmarks and places with the descriptions.

Wat Pho	Khao San Road	Sukhum vit
Yaow arat Street	PhraKanon g	Chao Phraya

1. a place that you might see in the film *The Beach*
2. a place where local Thai people go
3. an alternative route through the city
4. a place to go for shopping and bars
5. a place to go for food
6. an important sight seeing spot

Task 2

Are the sentences true or false?

Answer

1. One night is enough time to see Bangkok.
2. Khao San Road is an authentic Thai area of the city.
3. PhraKanon is further a way from the main tourist sites than Khao San Road is.
4. The river boat taxis often get stuck in traffic too.
5. Taking the Skytrain is a faster way to see the city than going by taxi.

6. You need to choose where to eat carefully, as not everywhere is good.

Discussion

Would you like to visit Bangkok? Why or why not?

Appendix two : Posttest

Life on Mars

Read an article about life on Mars to practise and improve your reading skills.

Before reading

Do the preparation task first. Then read the text and do the exercises.

Preparation task

Circle the word that does not belong.

1. Which word does not belong?

- a. sulfur
- b. cardboard
- c. methane
- d. carbon

2. Which word does not belong?

- a. astonishing
- b. amazing
- c. tedious
- d. remarkable

3. Which word does not belong?

- a. data
- b. query
- c. evidence
- d. findings

4. Which word does not belong?

- a. speculate
- b. suspect
- c. consider
- d. rehearse

5. Which word does not belong?

- a. periodically
- b. repeatedly

- c. consistently
- d. frequently

6. Which word does not belong?

- a. source
- b. result
- c. origin
- d. root

Reading text: Life on Mars

A new study published in the journal *Science* shows definitive evidence of organic matter on the surface of Mars. The data was collected by NASA's nuclear-powered rover Curiosity. It confirms earlier findings that the Red Planet once contained carbon-based compounds. These compounds – also called organic molecules – are essential ingredients for life as scientists understand it.

The organic molecules were found in Mars's Gale Crater, a large area that may have been a watery lake over three billion years ago. The rover encountered traces of the molecule in rocks extracted from the area. The rocks also contain sulfur, which scientists speculate helped preserve the organics even when the rocks were exposed to the harsh radiation on the surface of the planet.

Scientists are quick to state that the presence of these organic molecules is not sufficient evidence for ancient life on Mars, as the molecules could have been formed by non-living processes. But it's still one of the most astonishing discoveries, which could lead to future revelations. Especially when one considers the other startling find that Curiosity uncovered around five years ago.

The rover analyses the air around it periodically, and in 2014 it found the air contained another of the most basic organic molecules and a key ingredient of natural gas: methane. One of the characteristics of methane is that it only survives a few hundred years. This means that something, somewhere on Mars, is replenishing the supply. According to NASA, Mars emits thousands of tons of methane at a time. The level of methane rises and falls at seasonal intervals in the year, almost as if the planet is breathing it.

- | | | | |
|----|---|-------|-----------|
| | True | False | Not given |
| 5. | Methane is a natural molecule that is a sign of life. | | |
| | True | False | Not given |
| 6. | All organic molecules have a limited lifespan. | | |
| | True | False | Not given |
| 7. | Mars can be said to have a winter and a summer. | | |
| | True | False | Not given |
| 8. | There are at least two more scientific expeditions heading to Mars. | | |
| | True | False | Not given |

Discussion

Do you think people will live on Mars?

Appedix three : Student's Questionnaire

A Questionnaire for First Year EFL

Students Title:

Investigating the Effect of Mnemonic-based Instruction in Enhancing Students' Reading Comprehension Skill

Dear student,

You are kindly requested to contribute in this study by answering the following questions. The study aims to explore your attitudes towards the use of mnemonics (memory strategies) including: Visual illustration, key word method, activating prior knowledge, acrostics and acronymes for developing EFL students' reading comprehension. Therefore, we would be so grateful if you provide us with precise, clear, and complete responses. Be sure that your answers will be anonymous and will be used for research purposes only.

Prepared by

Yousra KECHAI

Supervised by

Dr. Salima RABEHI

Academic Year: 2019-2020

Section One: General Information

Q1. How long have you been learning English?

Years

Q2. How did you find learning at university?

a) Easy

b) Difficult

c) So difficult

Justify your answer please

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Q3. Did you find some difficulties when learning at university?

a) Yes

b) No

If yes, what kind of difficulties?

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

Q4. Learning English at university was:

a) Your own choice

b) Your parents' choice

c) Someone's advice

Section Two: Reading Skill

Q.5 How often do you read in English?

- a) Always
- b) Frequently
- c) Sometimes
- d) Rarely

Q6. Do you read?

- e) For entertainment
- f) For increasing your background knowledge
- g) For Enlarging your vocabulary
- h) For developing your writing skill
- i) For succeeding in your academic courses
- j) All of them
- k) Others

Q7. What kind of materials do you prefer to read?

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

Q8. How would you like to read?

- a) Individually
- b) In pairs
- c) In group(s)

Please justify

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.....
.....

Section Three: Reading Comprehension Difficulties

Q9. What do you think of having good reading skills?

- a) Compulsory
- b) Preferable
- c) Optional

Justify your answer please

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.....

Q10. Please mention whether you agree or disagree with the following statements:

Statement	Agree	Disagree
1. It is always necessary to read every word of a passage		
2. It is a good idea to say the words aloud when you read.		
3. As you read, you should always look up the meaning of words you do not know.		
4. To read well, you need to know the pronunciation of every word.		
5. Learning vocabulary is the only way to improve reading ability.		
6. Learning grammar is the only way to improve reading ability.		
7. You can read all kinds of texts (books, news papers, etc.) the same way.		
8. Reading in different languages requires some different reading Methods		

Q11. Do you have any reading comprehension difficulties?

- a) Yes
- b) No

If yes, what kind of difficulties

- a) The inability to recognize the types of text,
- b) The inability to connect background
Knowledge with new one,
- c) The inability to understand complex sentences,
- d) The inability to understand new vocabulary,
- e) Lack of attention
- f) All of them
- g) Others

If others, please specify

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.....

Q12. Would you specify the main reasons behind your reading comprehension difficulties:

- a) Lack of exposure to different text genres and to
Different text structures,
- b) Having poor reading and reading comprehension strategies,
- c) Having poor vocabulary,
- d) Having poor background knowledge,
- e) Facing a difficulty in recalling previous knowledge, and
- f) Learning in disorganized and noisy environments.
- g) All of them
- h) Others

Q13. To Overcome your comprehension difficulties, you

- a) Read the text again
- b) Ask for clarifications
- c) Use your previous knowledge
- d) Others

If others, please specify

.....
.....

Section Four: Reading Comprehension Strategies

Q14. When you face unfamiliar words during the reading tasks you:

- a) Skip them over
- b) Use the dictionary
- c) Recall information
- d) Use background knowledge
- e) Ask for clarification
- f) Others

If others, please specify

.....
.....

Q15. Do you think that activating prior knowledge is crucial for reading comprehension?

- a) Yes
- b) No

Q16. Do your teachers try to check your background knowledge before the reading tasks?

- a) Yes
- b) No

Justify your answer please

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

Q17. Which of the following strategies your teachers use to activate/check your background knowledge?

- a) Predicting
- b) Questioning
- c) Visualising (using images)
- d) Using keyword method
- e) All of them
- f) None of them
- g) Others

If others, please specify

.....
.....

Q18. After experiencing the use of the following mnemonics (memory aids), which of them facilitate(s) the process of reading comprehension for you:

- a) Predicting
- b) Questioning
- c) Visualising (using images)
- d) Using keyword method
- e) All of them
- f) None of them

Thank you for your time, efforts and collaboration

Appendix four : Teacher's Questionnaire

A Questionnaire for First Year EFL Teachers

Title:

Investigating the Effect of Mnemonic-based Instruction in Enhancing Students' Reading Comprehension Skill

Dear teacher,

You are kindly invited to contribute in this study by answering the following questions through which, we aim to explore your attitudes towards the use of mnemonics (memory strategies) including: visual illustration, key word method, activating prior knowledge, acrostics and acronyms for developing EFL students' reading comprehension. Therefore, we would be so grateful if you provide us with precise, clear, and complete responses. Be sure that your answers will be anonymous and will be used for research purposes only.

Prepared by:

Yousra Khechai

Supervised by:

Dr. Rabehi Salima

Academic Year: 2019-2020

Section One: Personal Information

Q1. Would you specify your degree?

- a) Master
- b) Magister
- c) Doctorate

Q2. How long have you been teaching EFL at university?

- a) 1-5 years
- b) 5-10 years
- c) More than 10 years

Section Two: Reading Skill

Q3. As an English language teacher, which language skill(s) do you focus on more?

- a) Speaking
- b) Listening
- c) Writing
- d) Reading

Q4. From your experience as a teacher of English language, do you think that there is a relationship between reading and EFL students' language proficiency?

- a) Yes
- b) No

Please specify what kind of relationship exists between them

.....

Q5. What do you think of having good reading skills?

- a) Compulsory
- b) Preferable
- c) Optional

Justify your answer please

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

Q6. Do you encourage your students to read?

- a) Yes b) No

If yes, please say how?

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.....
.....

Q7. Do you find teaching reading difficult?

- a) Yes b) No

Please justify

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

Q8. Do you think that time allocated to teaching reading is enough to develop students' reading strategies?

- a) Yes b) No

Q9. When your students face unfamiliar words during the reading tasks you advise them to:

- a) Skip them over
b) Use the dictionary
c) Recall information
d) Use background knowledge
e) Ask for clarification
f) Others

If others, please specify

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

Section Three: Reading Comprehension Difficulties

Q10. Do your students have reading comprehension difficulties?

- a) Yes b) No

If yes, how many of them have reading comprehension difficulties?

- a) All of them
b) Most of them
c) Some of them

Q11. What kind of difficulties do your students face most? You may choose more than one option.

- a) The inability to recognize the types of text,
b) The inability to connect background
 Knowledge with new one,
c) The inability to understand complex sentences,
d) The inability to understand new vocabulary,
e) Lack of attention
f) All of them
g) Others

If others, please specify

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

Q12. Which of the following factors can be the main reason behind students' reading comprehension difficulties? Choose just one option.

- a) Lack of exposure to different text genres and to different text structures,
- b) Having poor reading and reading comprehension strategies,
- c) Having poor vocabulary,
- d) Having poor background knowledge,
- e) Facing a difficulty in recalling previous knowledge
- f) Learning in disorganized and noisy environments.
- g) All of them
- h) Others

If others, please specify

.....

.....

.....

Section Four: Reading Comprehension Strategies

Q13. Do you teach your students reading comprehension strategies?

- a) Yes
- b) No

If yes, which of the following reading comprehension strategies you find more useful?

- a) Questioning
- b) Analyzing text structure
- c) Predicting
- d) Summarising
- e) Memory strategies (activating background knowledge, visual illustrations, etc)
- f) All of them
- g) Others

If others, mention some please

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

Q14. How do you consider the role of memory strategies in the process of reading comprehension?

- a) Important b) Very important c) Not important at all

Q15. Which memory strategy do you use to help your students overcome their reading comprehension difficulties?

- a) Key word method
b) Visual illustration
c) Activating prior knowledge
d) Acrostics and accronymes
e) All of them
f) Others

If others, mention them please

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

We would really appreciate any suggestions or comments from your part. Please feel free

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

المخلص

إن الهدف الأساسي من هذا البحث العلمي هو معرفة طبيعة العلاقة بين القراءة و نموذج نيمونيك , كما إن هذا البحث يهدف أيضا إلى تحسين مستوى التلاميذ في القراءة عن طريق استخدام و تطبيق نموذج نيمونيك. للتحقق من هذه الفرضية منهج البحث المختلط مع استخدام وسيلتين للبحث في جامعة محمد خيضر ببسكرة , و هما توزيع استبيان للأساتذة و الطلاب يحتوي على أسئلة تتعلق بالقراءة و نموذج نيمونيك . بالإضافة إلى إجراء تجربة مع 12 طالب لقسم السنة الأولى جامعي خلال 8 حصص. بعد تحليل النتائج المتحصل عليها كما و نوعا تبين للباحث أنها لأسباب التي تؤدي بالطلاب إلى الفشل في فهم النصوص و عدم قدرتهم على ربط معطياتهم السابقة مع المعطيات الجديدة. من خلال هذه النتائج العلمية يقترح على أساتذة اللغة الانجليزية استعمال هذه التقنيات كوسيلة لمساعدة الطلاب على فهم النصوص و استيعابها. و منه قد تم إثبات فرضية هذا البحث