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**The Role of Prior Knowledge Activation (Schema) in Enhancing EFL  
Learners' Reading Comprehension**

*Case Study of: First Year Master Students of English, Mohamed Kheider of  
Biskra University*

Dissertation submitted to the department of foreign Languages in partial requirement for  
the fulfillment of Master degree in English language: Sciences of Language.

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## ***Dedication***

*I dedicate this work to:*

*My parents, Mohammed and Yamina Bendjedidi who light up my world.*

*My brothers and sisters who center the most important part of my life.*

*My friends with whom I share memories those never die.*

*Mouna, Hanane, Nour, Zineb, Rokja , Assma and Nessrine.*

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## **Abstract**

Reading is indispensable skill which reflects the interaction between learners' eye and brain to get requisite comprehension from what they read. The current work aims to find out the role of prior knowledge activation in enhancing EFL learners' reading comprehension. Throughout this study, we suggest various strategies such as asking questions; know, want to know and learned strategy; semantic mapping; prediction and brainstorming, in addition, models and aids for reading that dealt with prior knowledge too for better comprehension. In the present study, we hypothesize that if the activation of EFL learners' prior knowledge, it may enhance reading comprehension. To conduct this research, we have followed descriptive method in which we designed questionnaire for fifty master one students and interview with five teachers of the branch of English language at Mohamed Kheider University of Biskra to gather information. The data collected from both tools supports us to confirm that prior knowledge activation enhances EFL learners' reading comprehension as mentioned in hypothesis through certain findings are: the closer the match between the readers' schema and the text, the more comprehension occurs, also the agreement of learners concerning the role of teacher in activating their prior knowledge where s/he stirs their comprehension to get rid the blurred understanding. We conclude that, prior knowledge activation and reading comprehension are closely related.

## **List of Acronyms and abbreviations**

**EFL:** English as foreign language

**kWL:** know, want to know, learned

**M 1:** Master one.

**ms:** mili seconds, 1ms =0.001s

**PP:** pages.

**Q:** question.

**R= RW×LC:** Reading = Reading word× Language comprehension

**%:** percentage.

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## **General Introduction**

Language is one of the most essential means of human communication; it helps us to be in contact with others. As a universal language, English which is considered as foreign language in Algeria plays a big role in many aspects like education and other interrelationships. There are four skills listening, speaking, reading and writing in which reading skill should be mastered well by learners since the success of their studies depends on the great part of their ability to read. Besides all of that, university learners are asked to read a wide range of texts and many of them face difficulties when reading caused lack of background knowledge and strategies that help learners to make connection between what they already know and the new information. These difficulties are doubled when readers have to read academic text in foreign language. For that, teachers should use certain strategies to activate learners' prior knowledge and spread the activation which believed to be answering questions, (know, want to know, learned ) strategy, semantic mapping, prediction, brainstorming for better achievement and capability in reading comprehension.

## **Statement of the problem**

The comprehension of reading material demands certain efforts believed to be activating learners' already existing knowledge. From that, the ultimate reason of this study was teachers do not offer an opportunity for learners to be pertinent with a given text in which the learner exercises his or her pre-existing information in order to comprehend the content well rather than reading the text directly, also, teachers are conscious about learners' background knowledge but in some extent they are unknowledgeable concerning appropriate strategies to be used.

## **Objective of the study**

This research aims to:

- Bring sufficient knowledge about the importance of activating learners' prior knowledge for increasing their comprehension.
- Raising teachers' awareness about the importance of prior knowledge activation.
- Provide learners with strategies to be used appropriately.

## **Research hypothesis**

We hypothesize that the activation of EFL learners' prior knowledge may enhance their reading comprehension.

## **Research questions**

- What is the role of prior knowledge activation in enhancing EFL learners' reading comprehension?
- What are the strategies of prior knowledge activation for effective reading comprehension?
- What is the role of teacher in activating learners' prior knowledge for better comprehension?

## **Research methodology**

This work is qualitative research; it is conducted by descriptive study through the students' questionnaire designed for fifty students of master one of English at Biskra University and interview with five teachers at the same division of English.

### **Limitation of the study**

As any other study, the research work has a certain limitations among them limitations about the nature of a topic which is vague and complex; however, we tried to present the most important aspects in a simple and comprehensible way.

### **Structure of the study**

In this research, we will provide the role of prior knowledge activation in enhancing EFL learners' reading comprehension.

Chapter one deals with the various definitions of reading; its types; models too. In addition to reading comprehension, its strategies, levels, models, characteristics of good reader, and other factors could be aids for reading and building vocabularies.

Chapter two refers to the prior knowledge activation which tackles the schema theory and its types; schema activation; also strategies to activate learners' prior knowledge such as asking questions, k-w-l strategy, semantic mapping, prediction and brainstorming. As well as, the role of teacher in activating learners' prior knowledge.

Chapter three highlights the field work. It includes description and analysis of the students' questionnaire and teachers' interview.

## **Chapter One: Reading and Reading Comprehension**

### **Introduction**

Reading is believed to be important language skill which indicates how the reader constructs meaning from a text to comprehend the passage's content. Part of this chapter is devoted to the attempt of looking back to the different views of some scholars about reading, it is not easy to define it just in a single sentence since it includes its types through intensive and extensive one; moreover, reading can be done using a number of models which are divided into three main categories: bottom up, top-down and the interactive model. Then, the crucial part is related to reading comprehension based on an understanding of comprehension and reading comprehension, characteristics of good readers, its various levels 'surface level and deep level', models of reading comprehension. They are: decoding & listening comprehension, the construction-integration and situation model which have great role to successful reading with help of different strategies for reading comprehension. In the concluding chapter, we have to shed light on some factors that are belonged to reading comprehension such as aids to reading and building vocabulary.

### **1. Reading**

#### **1.1. Definition of reading**

Reading is difficult task to define since each one may see reading from various sides. Yet, simple definition of reading cannot fit all of its aspects. In most general terms, reading is defined as the activity in which the reader is trying to get meaning from a written text.

According to Johnson (2008)“Reading integrates visual and non visual information....The visual information found on the page combines with the non visual information contained in your head to create meaning”(p.4),it implies what exactly happens when we are trying to read a text and making sense of what we read through using eye and brain as visual and mental phenomena .In this regard, Harmer (1998) states that , reading is an active occupation which bases on going further deeply to get meaning and arguments rather than restrict in the surface of the text . Moreover, reading goes through linguistic path which means we move from grapheme to the high level in linguistic and the learner should be aware and has already stored these major components that facilitate a way to comprehend what s/he has read, if s/he does not access to these linguistic background, reader will not be able to realize upcoming material as Grabe (2009) explains in the following:

Reading is a linguistic process. It is not possible to read without making graphemic-phonemic connections, without recognizing the words ,and without having a reasonable store of linguistic knowledge (morphological, syntactic, and semantic) of the language of the text. At one level, this is obvious but it is so easily overlooked or ignored that it must be stated explicitly. If we are asked to read a newspaper in Arabic, no amount of background knowledge on a topic will assist us in reading that text. There are clear and obvious limits to background knowledge and reasoning as foundations for reading .The processing of linguistic information is central to reading comprehension. (p.16)

Similarly to Tracey and Morrow (2006) classify reading as constructivist in nature, in which, reading relies on language cueing systems with psycholinguistic theory are: the syntactic cues related to grammatical structure; semantic cues with meaning of the words and sentences, the last one graphphonic cues are those that are derived from the visual patterns of letters and words with their sounds.

Furthermore, from above we could notice how much reading’s views difficult to conceptualize and scholars meet in one point; others defined it as activity and process.

Based on Oakhill, Cain, and Elbro (2015), reading is a product of two major components that are word reading (decoding) and language comprehension. The former refers to reading words out of the context, and the latter is related to understanding a text, which means both of these parts work together, not just on the sum of the two:  $R = RW \times LC$  and if reading word and language comprehension were zero, it would reflect a lack of reading ability. (see Figure 01)

Broadly speaking, reading is regarded to be full of complexity because each one may have their own definition even a child for him or her, reading means turning the pages of a book or the eye meets the page.

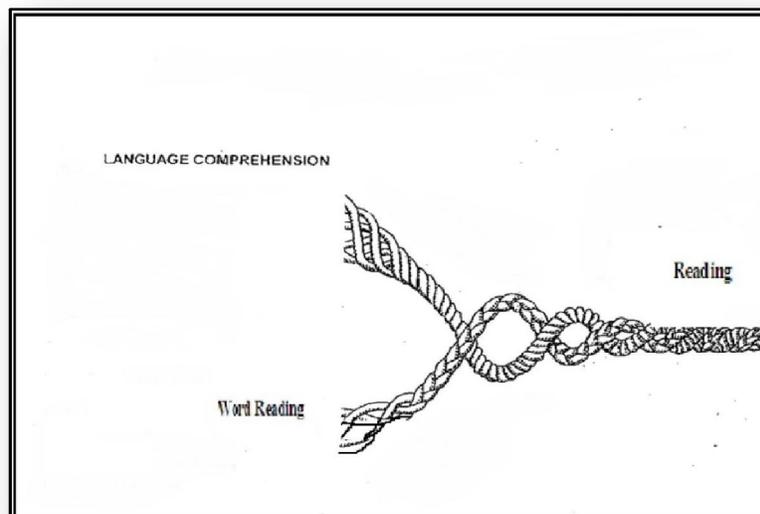


Figure 01: Skilled reading depends on abilities with both  
Word reading and language comprehension

(Adapted from Scarborough, 2001). (Cited in Oakhill, Cain and Elbro, 2015, p. 3).

## **1.2. Types of reading**

We have tried to elucidate and make the term reading clear from multiple ranges that proposed via many researchers as Grabe, even if all of them are stand up with one attitude that is not an easy matter to introduce reading .In this respect, we will present two main types of reading to make reading effective in classroom through: Intensive reading and Extensive reading. The former depend on language itself; grammatical rules, vocabularies and idioms unlike the second one based on enjoyment, developing reading skills and fluency.

### **1.2.1. Intensive reading**

According to Brown (2000 ),intensive reading focuses on the linguistic or semantic details of passage which calls for student’s attention to understand literal meaning implications, rhetorical relationships whereas Nation(2009) mentions to intensive reading as “intensive reading is the grammar-translation approach where the teacher works with the learners, using the first language to explain the meaning of a text, sentence by sentence” (p.25).That refers to how teacher applies first language in classroom to facilitate learners’ reading and meaning of features in the text .Moreover, Extensive reading foundation (2011) shows intensive reading as reading to learn which related to the typical reading (pre-and post-reading activities and comprehension questions as well ) that many students do in their textbook and also using reading skills such as guessing the topic of an article from its title.(p.2)

### **1.2.2. Extensive reading**

Based on Brown (2000) ,extensive reading described as “ Zoom Lens” strategy for taking a closer look at a text ,also it is considered as reading for pleasure .Extensive

reading can help learners to overanalyze words and read for understanding too .As well as, Nation (2009) outlines extensive reading as a form of “meaning focused input and fluency development” (p.49), which means we read a text for sake of getting meaning from it with self-selected at the right level of us and fluent reading rather than focusing on language itself ;furthermore, Extensive reading foundation (2011 ) describes extensive reading as learning to read which discusses the practicing of reading skill to gain information from a book and extensive reading usually have done with graded readers it means they go through certain pedagogical syllabus which has increasing grades or levels of difficulty by providing comprehensible language to students ; in addition, it allows them to step up their reading ability gradually .(p.1)

### **1. 3.Models of reading**

Reading is the window of the world. By reading people can get the information from everywhere without going anywhere but each one of us has its own way to interact with text as many scholars provide three major classes of models of how reading occurs and processing. They are bottom–up model, top-down model and interactive model.

#### **1.3.1. Bottom-up model of reading**

According to Vacca et al .(2006), bottom-up model is translating print to meaning by moving gradually from decoding graphic symbols into sounds and combining letters to spelling patterns until text level processing ,in addition to that other researchers dubbed models as approaches. Based on Hudson (2007) “bottom-up approach is that proposed by Gough (1972), which he calls one second of reading.”(p.34) .He refers to how the reader moves from one letter to the second one.

### **1.3.2. Top-down model of reading**

Vacca et al. (2006) suggest that top-down model is the process of translating print to meaning through reader's prior knowledge which s/he tries to guess the meaning. Also, Hudson (2007) informs us that top-down approach discussed deeply by Goodman and Smith who share the same view of reading process but with different explanations. The former provides us with "psycholinguistic guessing game", that readers use their existing syntactic and semantic knowledge structures to predict meaning by decoding directly from graphemes to meaning or mediated in which the reader passes through graphemes to phonemes to meaning. Additionally, Smith supplied the notion of "redundancy in language" as the reader focuses on every letter or word in a text that Smith gives us an example of unfinished sentence: 'The captain ordered the mate to drop the an', and he follows four sources of information to finish the sentence: visual, orthographic (spelling), syntactic, and semantic. The first item shows how sounds co-occur 'a n p', orthographic which concentrate in letter could follow an -, and the third one syntactic information means it is only noun phrase or adjective after 'the'. The last one semantic shows schematic knowledge to predict things that captain do so, the full sentence could be: the captain ordered the mate to drop the **anchor**. (pp. 37-39)

### **1.3.3. Interactive model of reading**

Based on Vacca et al. (2006), interactive model refers to translate print to meaning which involves making use of both prior knowledge (predictions) and print (decoding graphic symbols). Concerning Interactive approach via Hudson's point view (2007) that "Currently, most researchers and teachers have accepted some version of an interactive model of reading which acknowledges a great deal of communication between

the differing bottom –up and top -down processes.” (p.39) .Which means that, interactive approach is the result of interaction between both of bottom–up and top-down approaches.

## **2. Reading Comprehension**

### **2.1. Definition of Reading Comprehension**

Many authors such as Smith and Snow try to explicit the relationship between reading and comprehension that the former to be effective should be well comprehended. Comprehension as any other terms requires clarification which shows how much it is an essential part in reading a written text and how the reader could interpret information ;this process occurs to meet the learner’s understanding and activate his/her prior knowledge .

Based on Smith (2004), comprehension could be similar to the word understanding which reflects that it should stand with another term as skills, process, strategies, reading, listening, etc. As he says “Comprehension is a kind of up-market synonym for understanding in discussions that are (or are intended to appear) technical and scientific.” (p. 12).

As well as, Scanlon, Anderson, and Sweeney (2010) say that “Comprehension is an active, constructive process in which the ultimate understanding of the text is determined by a combination of what is stated directly in the text and the reader’s preexisting knowledge related to the topic of the text” (p.276).

The process of reading comprehension and how the reader deduces and builds a meaning from written language and comprehends the whole text in which s/he should be involved in that activity have related to each other as Snow (2002) explains these facets: the reader who is doing the comprehending, the text that is to be comprehended and the activity in which comprehension is a part (p.11).

In that sense, we mean by the reader all of its abilities, background knowledge, information and experiences that s/he is going to use to interact with a text that will be printed or electronic, then all of what the reader wants from the text is considered to be the activity.

Most definitions of reading skill are stressed on how the reader gets the meaning from a text and fits his or her prior knowledge. So, from that side reading comprehension has been described as complex intellectual process that requires multiple capacities of a learner as Westwood (2001) says “Readers must use information already acquired to filter, interpret, organize, reflect upon and establish relationships with the new incoming information on the page”(p.10). Simply put, as Caldwell (2008) adds that “Comprehension is reading” (p.175), which means comprehension is the outcome of successful reading and it attracts the reader to persist reading without interruption in meaning since s/he has finished interpretation of text; on other hand, McIntyre et al.(2011) claim “Reading is comprehending” (p.113). In doing so, we mean by comprehending to ongoing process that the reader still thinking about the meaning of a message and s/he has not gotten it yet in his or her mind.

Furthermore, reading comprehension stands up through three main pillars which are linguistic structures refer to shallow level of text and metacognitive is the level of understanding texts then we move to whether content of text fits his or her pre-existing information or not where Tankersley (2003) explains that as follow:

Reading comprehension is dependent on three factors. The first factor is that the reader has command of the linguistic structures of the text. The second factor is that the reader is able to exercise metacognitive control over the content being read. This means that the reader is able to monitor and reflect on his or her own level of understanding while reading the material. The third and most important criterion influencing comprehension is that the reader has adequate background in the content and vocabulary (p.90).

## **2.2. Characteristics of good readers**

There are various features that good reader should possess to be able to read effectively and comprehend well. These characteristics are provided by Barbara (2009) which believed to be strategies used by good reader when s/he meets the text. They are as follows:

- 1- Reads actively (thinks about what is being read).
- 2- Reads for a purpose (goal-oriented).
- 3- Previews text (structure, relevant sections).
- 4- Predicts while reading.
- 5- Reads selectively (focusing on what is important)
- 6- Constructs, revises, and questions meanings while reading.
- 7- Determines meaning of unfamiliar words and concepts.
- 8- Uses prior Knowledge to help understand the text.
- 9- Monitors understanding.
- 10- Adjusts reading rate and approach based genre (Cited in Mimoune, 2015, p.18).

## **2.3. Levels of Reading Comprehension**

Comprehension is the heart of reading and if there is not understanding of written material, it would be impossible to continue reading. From that, many educators have provided two main levels to immerse into a text.

### **2.3.1. Surface level**

According to Dorn and Soffos (2005), surface level is literal level in which the reader attempts to understand represented information with certain ability of link it to recency of reading that stored in short term-memory and steady surface level reading will enhance the reader's mind for growth in knowledge.

### **2.3.2. Deep level**

It refers to the ability of the reader to think beyond the text which means the interaction between the author's intention and the reader's point view that leads to build a meaning of a text in the reader's mind to accommodate his or her background. Discussing a book with others has significant influence on one's depth of comprehension. (Dorn & Soffos, 2005).

In addition to these two levels, Smith (1969) brings before levels that named differently: Literal level, inferential level, critical level, and creative level which he discusses them as literal level shows the explicit information and the intelligible facts that we have understood from a text. Also, inferential level focus on what extent the reader go beyond a written text and gets meaning or draws conclusions. Critical level is the ability of reader to evaluate what s/he has read its accuracy and clarity. etc, and the last level is creative which means the reader takes information from a text and s/he tries to develop new ideas (Cited in Westwood, pp. 21-22).

### **2.4. Models of Reading Comprehension**

In order to understand processes and skills that used to interpret what we have read, we have to follow three important models which are highlighted by Clarke, Truelove, Hulme, and Snowling (2014): Listening comprehension and decoding model, the construction-integration model, and situation model.

The first one shows how the learner could recognize and pronounce a words in text and comprehend spoken language in which this model has raised as result for those who are not able to understand well even if they try to conduct other ways as reading aloud.(see Figure 02).Moreover; the construction-integration model is described as deciphering the text according to three levels which are: linguistic level that reflects the recognition of a

words and their meanings ,microstructure level in which the reader tries to recognize a words in isolation and process the meaning of larger chunks of text, while macrostructure level is processing the theme and information about a text and all give a form of ( text base ) which goes alongside with existing knowledge to present personal meaning about text and all of these lead to each individual who has his/her own interpretation of text and that called situation model .(p.5) (see Figures 03,04 )

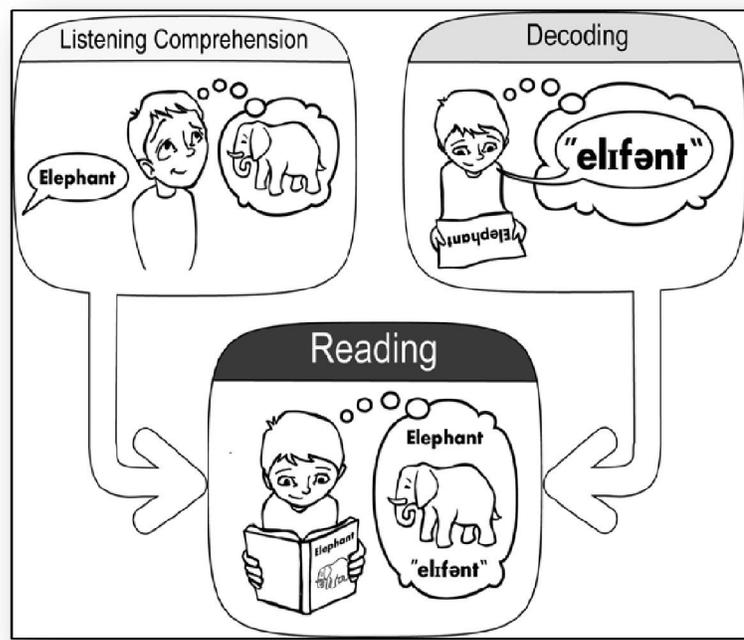


Figure02: the simple view of Reading

(Gough and Tunmer, 1986) (Cited in Clarke et al., 2014, p.4)

By the following figure 03, we mean by the Construction–integration model that learners use three components which are: linguistic, microstructure and macrostructure to comprehend well the written material.

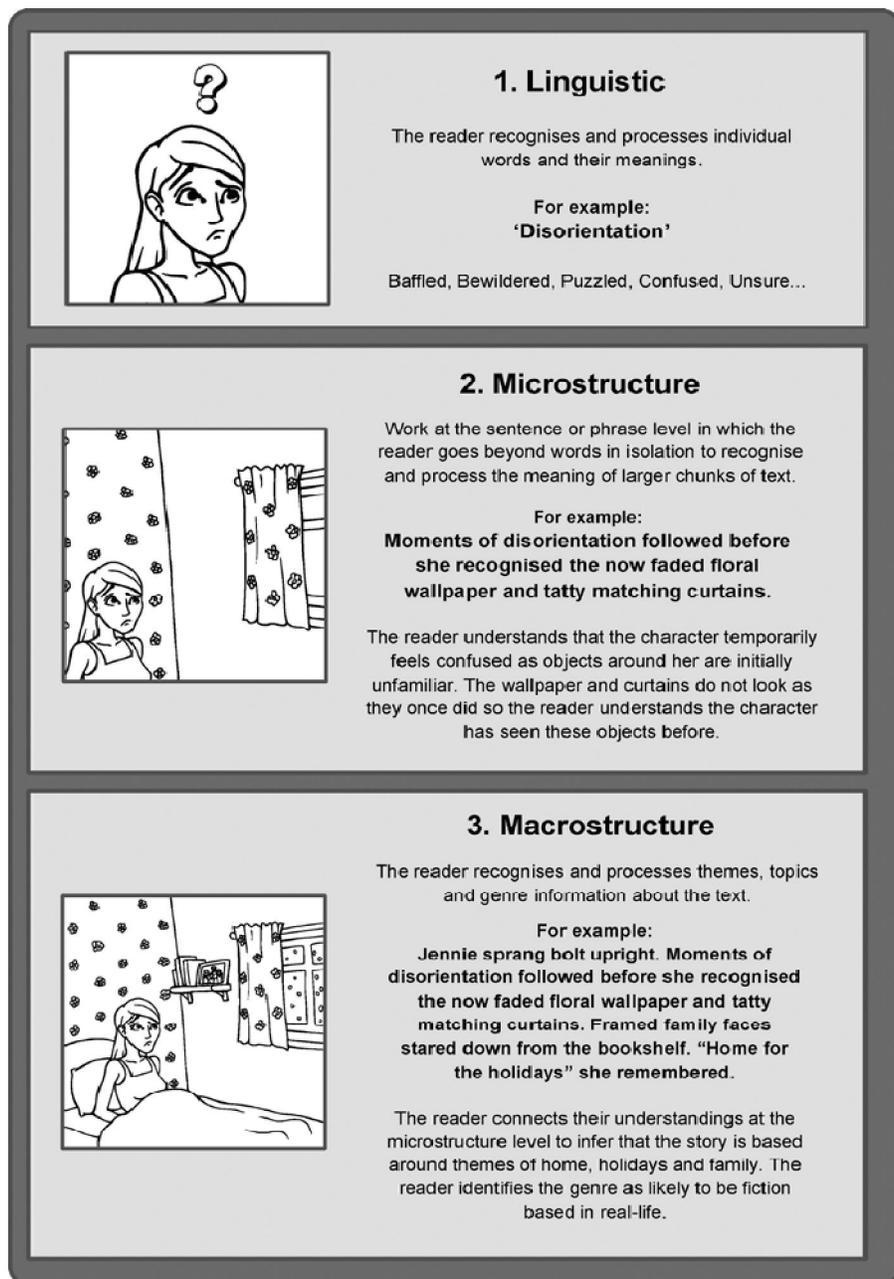


Figure 03: The Construction-integration model (Cited in Clarke et al., 2014, p.6)

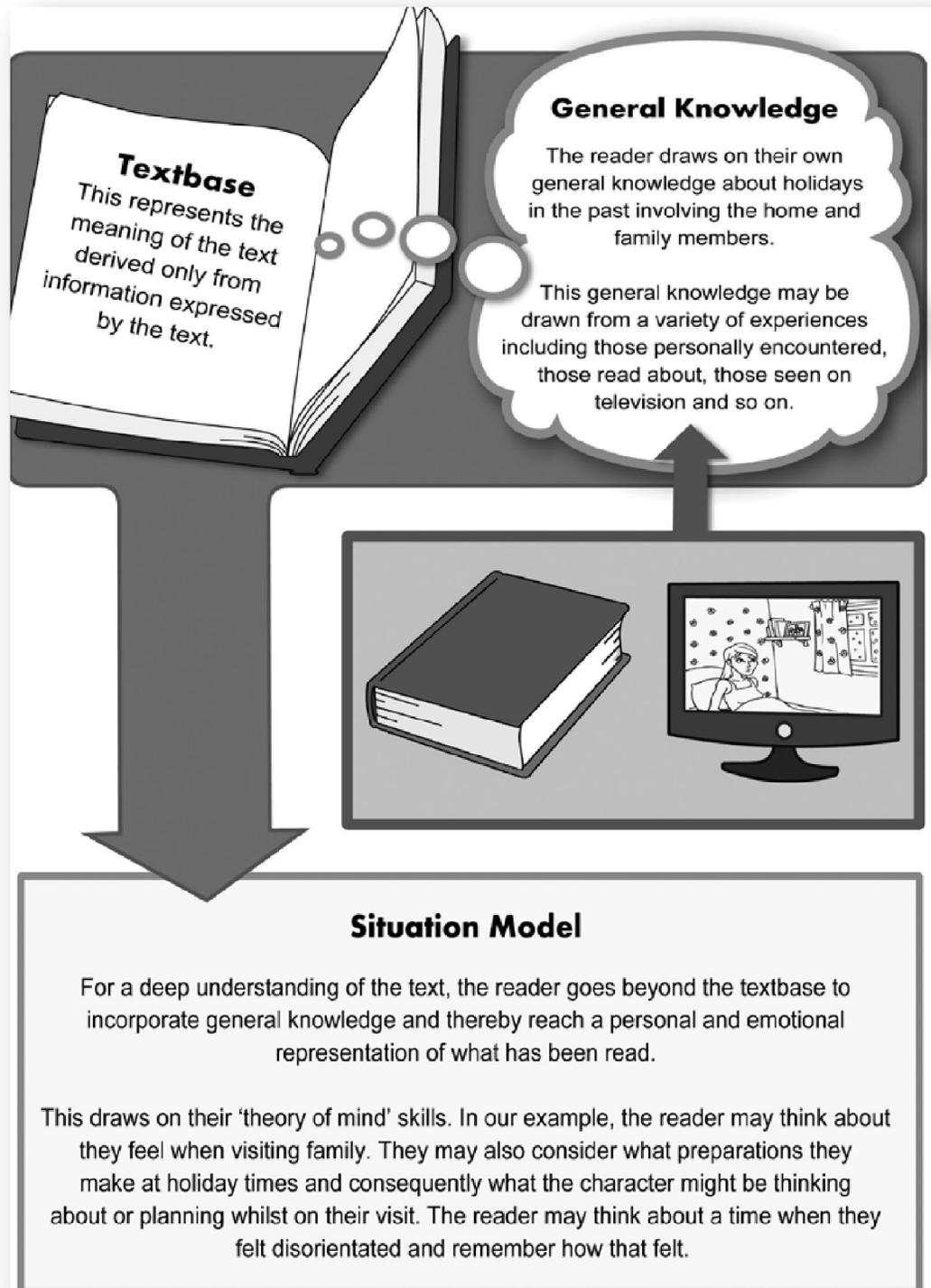


Figure04: Situation model (Cited in Clarke et al., 2014, p.7)

From figure 04, we deduce that learners to construct a meaning from text, they incorporate what has presented in text book with their background knowledge.

## 2.5. Strategies of Reading Comprehension

Strategies are set of abilities under conscious control of the reader, through this common definition we move to Brown (2000) outlines them into ten are: identify the purpose in reading, use graphemic rules, use efficient silent reading techniques, skim the text, scan the text, use semantic mapping, guess when you are not certain, analyze vocabulary, distinguish between literal and implied meanings and capitalize on discourse markers. From that, we will shed light on five strategies as follow:

1. Identify the purpose in reading: it will be better to know, what is the purpose from reading something to leap into the exact information.
2. Use efficient silent reading techniques for relatively rapid comprehension: in that case for intermediate and advanced students should follow some guidelines of silent reading rules such as vocabularies, it does not matter to pronounce each word to yourself and try to infer its meaning from a context.
3. Guess when you are not certain: we do not mean here the reader being haphazard instead he/she should apply all of his/her skills, efforts to reach the target of guessing, for example: guessing for the meaning of a word; the grammatical relationship (pronoun reference).
4. distinguish between literal and implied meaning: we mean by literal meaning is the syntactic surface structure of written piece but in some cases the former one does not interpret the hidden meaning in which it demands pragmatics information to understand the implied meaning like: « it is sure cold in here, bob » it is indirect request to ask someone to close the window without forming a question.
5. Capitalize on discourse markers to process relationship: these markers which make connection between phrases, clauses, and sentences; it may improve reading efficiency (pp. 306-310). For more clarification (see Table 01)

Notional category/meaning	Marker
<p>1. Enumerative</p> <p>Introduce in order in which points are to be made or the time sequence in which actions or processes took place.</p>	<p>first(ly), second(ly), third(ly), one, two, three / a, b, c, next, then, finally, last(ly), in the first / second place, for one thing / for another thing, to begin with, subsequently, eventually, finally, in the end, to conclude</p>
<p>2. Additive</p> <p>2.1 Reinforcing. Introduces a reinforcement or confirmation of what has preceded.</p> <p>2.2 Similarity. Introduces a statement of similarity with what has preceded.</p> <p>2.3 Transition. Introduces a new stage in the sequence of presentation of information.</p>	<p>again, then again, also, moreover, furthermore, in addition, above all, what is more equally, likewise, similarly, correspondingly, in the same way</p> <p>Now, well incidentally, by the way. O.K., fine</p>
<p>3. Logical Sequence</p> <p>3.1 Summative. Introduces a summary of what has preceded.</p>	<p>so, so far, altogether, overall, then, thus, therefore, in short, to sum up, to conclude, to summarize so, as a result, consequently,</p>

Table 01: Types of discourse markers (Mackay, 1987, p.254) (Adapted from Brown, 2000, p.311)

On the other hand ; Grabe (2009) dubbed strategies of reading comprehension by abilities which are : building main- idea comprehension ,becoming a strategic reader ,and building awareness of discourse .Simply put, the reader demonstrates main-idea comprehension on the basis of task outcomes in interactions with others around text

information ,this implies that teachers and students talk about what text means, what difficulties might arise in interpreting it, how these difficulties can be resolved where important information is found and various exercises assessment practice. Moreover, becoming a strategic reader is the one who automatically and routinely applies combinations of effective and appropriate strategies depending on reader goals, reading tasks, and strategic processing abilities, the strategic reader is also aware of his or her comprehension effectiveness in relation to reading goals, and applies sets of strategies as (previewing, predicting, skipping words, skimming, rereading sentences) to enhance comprehension of difficult texts. The third deals with the reader can develop his or her awareness of discourse structure through recognizing coherent representations of texts, lexical and anaphoric signaling; in addition to text genres, text purposes and other types of text.

These strategies above that Grabe provides ,they should not be taught as a separate topic in the curriculum .Rather they should be taught throughout the curriculum as a part of the actual academic tasks that students encounter (pp.198-243).

### **3. Aids to Reading**

Most of readers are facing troubles when it comes to read certain type of reading material whatever it is, from that many researchers have provided aids to overcome this problem through helping reader to comprehend and get the idea, among them Adler and Doren (1972) present four aids are: making connection to relevant experience, using other books as extrinsic aid to reading, commentaries and abstracts, and the last is using reference books. We sum them as follow:

### **3.1. The role of relevant experience**

To assist reader while reading process could be realized by two main types are common experience and special experience; the former one is more suitable to the reading of fiction, philosophy and novels, as an example to simplify what have discussed above the philosopher like the poet appeals to common experience of mankind. He does not work in laboratories instead of that he refers you to your own common sense and your daily observation of the world in which you live while special experience is mainly relevant to the reading of scientific works since to be able to understand arguments in scientific books, you must follow the evidence that the scientist reports, also illustrations and diagrams help the reader to comprehend a scientific book. Finally ,both common and special experiences are relevant to the reading of history books because history includes fictional and scientific as narrative history is story contains plot , characters, episodes but history is also as science when it comes to civilizations, the historian collects data through many documents and extensive researches (pp.115-116).

### **3.2. Using other books as extrinsic aid for reading a particular work**

It means that the reader to understand certain book s/he should read other related books so-called great books especially in philosophy and history but not in science or fiction because to be able to go beyond and comprehend what philosopher or historian expressions meant, you must read another related and ordered books whereas scientific work is quite finished result, it does not require other extrinsic books (p.117).

### **3.3. How to use commentaries and abstracts**

The reader here can follow commentaries and read them after reading a book since reading introduction ,preface ,and commentaries before can mislead a reader and being at

author's mercy .Concerning abstracts provide you a glance whether you want or need to read a book or not (p.118).

### **3.4. How to use reference books**

There are many reference books but mainly we will focus on two kinds and most used by readers are dictionaries and encyclopedias .To select appropriate dictionary you should first know a type of book, its intension because in terms of pronunciation and spelling it is easy but in case of scientific, geographic, medical and historical books, it demands to pay attention not merely to a list of meaning in dictionary but also to their order and relation. Furthermore, the usage of dictionary must not be at hand all the time since you will lose track of the book's unity only with technical words or wholly new to you whilst encyclopedia is about facts as a dictionary is about words Encyclopedia helps a reader to answer his /her questions concerning facts since they are not physical things but propositions require explanation for knowledge and understanding too (pp.119-120).

### **4. Building Vocabulary**

Vocabulary is a word that used specifically by author for a certain intention .In a text words are not in the same degree of importance since we can find terms or words are more significant than others that the reader should comprehend because vocabularies can be back bone of a text and basic element to get the whole idea.

According to Nation (2000) “When students build vocabulary mastery, they can more effectively communicate their ideas, knowledge, and voice” (p.80). This shows that reading helps learners to enlarge their vocabularies, discuss and interact with others effectively .Furthermore, Johnson (2008) states four different vocabularies that the learner can construct from listening, speaking, reading and writing skill in which s/he builds

vocabularies from what s/he hears and understands and we mean by speaking vocabularies these are we employ in conversations and discussions, in addition to reading vocabularies refers to words we could read while writing vocabularies are words we use to express ourselves through written form, that is, we write using only words we could read and comprehend (p.93).

Vacca et al.(2006) state that there are five principles to teach learners vocabularies, but the most important and could support our study is: teaching words in relation to other words which refer to developing the ability of reader to relate new words to known words because s/he must use background knowledge and experiences to detect similarities and differences through three main cognitive operations .The first involves reader joining or ‘bringing together’ by ‘comparing, classifying and generalizing’ words ,the second is the act of excluding which shows how the reader reject certain words since they are irrelevant or even do not belong to his or her background knowledge and his “conceptual category” such as, flower, music, perfume, skunk .In this case, the process involves exclusion because the word music has little to do with the concept smell .The third is the act of selecting in relation to his or her experience and understanding whether synonym or antonym. “For example, select the best word from the choices given in the following sentence: Tyrone’s quiet behavior was mistaken for shyness/modesty/terror” (p.262).

## **Conclusion**

Reading is more than pronouncing the printed words or following each line of written page, instead of that, reading is a bridge to access knowledge by books, journals, etc. From that, it was hard to settle a definition of reading since each researcher defines it differently from the other as an activity, process and product. Mainly, this chapter focused on reading comprehension with its definitions, levels, strategies, and characteristics of

good readers too. Moreover; this chapter discussed two major factors that affecting reading comprehension such as aids to reading: using relevant experiences, commentaries and abstracts, etc. Also, reading comprehension related to vocabularies because the more reader recognizes new words, the more s/he is able to comprehend a text and enlarge the zone of his or her vocabularies.

## **Chapter Two: Prior Knowledge Activation**

### **Introduction**

Reading is consequence of learners associating prior knowledge with new information and using this to comprehend what they read. Throughout this chapter, we will try to browse inside the human mind in order to tackle more understanding of the schema theory and its types: formal schemata and content schemata. Also, the purpose of this chapter is to recognize how background knowledge activated by process of schema activation, in addition to certain strategies that used to activate learners' prior knowledge in reading to make connection to the pre-existing knowledge. It occurs through answering questions, k-w-l strategy, semantic mapping, prediction and brainstorming which help learners to activate their non-visual information and plain experience to comprehend well. The second chapter also accentuates on the role of teacher in activating learners' prior knowledge. Last but not least, we will use certain terms synonymously in this chapter, they are: background knowledge, schematic knowledge, pre-existing knowledge/information, old knowledge, prior knowledge, non-visual knowledge/information.

### **1. Schema theory**

#### **1.1. Definition of schema**

In every aspect of our lives, we used to deal with knowledge from the moment of birth since it is the power of any facet of life. From that, prior knowledge is an essential material of learning a new task, it helps learners to identify new information and integrate it into their pre-existing knowledge to comprehend what they have read. In this sense, a learner tries to activate his or her old information that accumulated and categorized in his or her schema (plural schemata/schemas) whenever s/he meets new information.

According to Kujawa and Huske (1995), prior knowledge is a set of three basic categories the learner has, they are: attitudes, experience and knowledge. The first deals with beliefs about learners themselves and desire to read, then experience refers to everyday activities, events in their lives to provide background, etc. The last category is knowledge as broaden term indicates all what a learner kept in his or her mind concerning reading process itself; content whatever it is literature or science. Also, topics (e.g., fables, fractions, etc.). In addition , knowledge of concepts such as main ideas and theory. Thus, all of these suggested categories help learner to comprehend what s/he is going to read (Cited in Macceca, 2014, p.80).

Based on schema theory that brought by Bartlett (1932), the word schema was defined by the latter as “Schema refers to an active organization of past reactions, or of past experiences, which must always be supposed to be operating in any well-adapted organic response.” (p.201).In this regard, Vacca et al. (2006) explain “schemata reflect the prior knowledge, experiences, conceptual understandings, attitudes, values, skills, and procedures a reader brings to a reading situation.”(p.17).It implies that, schema is the amount of knowledge that the learner knows before and stored in his or her mind which can be used to comprehend a new topic or text.

In addition to Brown (2000) defines schema as a set of questions of how learner carries out a meaning to the printed word, he says that:

How do readers construct meaning? How do they decide what to hold on and having made that decision, how do they infer a writer’s message? These are the sorts of questions addressed by what has come to be known as Schema theory, the hallmark of which is that a text does not by itself carry Meaning. The reader brings information, knowledge emotion, experience And culture- that is, schemata (plural)-to the printed word (p.299).

As we noticed above these are several questions asked by reader in terms of comprehending what text provides information in which s/he uses his or her schematic

knowledge stored in mind as past experiences, emotions, culture to be at the point of text since Brown (2000) believes in the text alone does not contain the overall meaning but it requires what the reader brings to the text too.

## **2. Types of schema**

One of the most important parts of reading is how the learner builds a meaning from a text. Simply put, if learners have not schema for a particular topic, they begin that encounter with loss of comprehension. Based on that, many researchers as Carrell (1983) who classifies schema into two types are: formal schemata and content schemata.

### **2.1. Formal schemata**

According to Carrell (1983) claims that formal schemata include three main components are: knowledge of language, knowledge of genre/text type and metalinguistic knowledge. First of all, knowledge of language is believed to be so important for learner to know the language of text that s/he is going to read since linguistic knowledge (syntactic and semantic, etc.) helps learner to comprehend a text, also vocabularies, lexis and conventions are elements which facilitate understanding of a text as well. Second, knowledge of genre/text type demands that learner being able to recognize how texts are organized and knowing how to identify the main ideas in a paragraph; knowledge of genre assists a learner to account for how subsidiary ideas are used. Third component is metalinguistic knowledge which provided by Block (1992) who says that learner should have metalinguistic awareness since it plays a significant role in learning to read through which learners possess knowledge about the nature of language and being able to recognize the rules such as knowing the function of verbs (Cited in Alderson ,2000, pp.41-43).

According to Hudson (2007) “formal schemata represent the reader’s knowledge relative to the language ,conventions” (p.165) .It means that all what the learner has stored in his or her mind concerning the surface level of text such as language and its components, syntax and cohesion. Also, Brown (2000) mentions formal schemata as “formal schemata consist of our knowledge about discourse structure” (p.300).

Summing up, formal schemata are the umbrella of various types of knowledge which increased according to the growth of learner and the development of linguistics competence.

## **2.2. Content schemata**

Content schemata refer to what is beyond a language and internal structure of text which related to social life and any knowledge rose behind the text or topic. That is, content schemata have three facets that work as keystones for comprehending a text which suggested by Carrell (1983) are as follow: “knowledge of subject matter/topic” reflects in what extent the learner knows and being familiar with a certain text because if learner knows nothing about the topic of text, s/he will find difficulties while processing it. Therefore, learner faces troubles to integrate new information with non-existent one, that is to say, subject familiarity might be expected to have a facilitating effect.

Moreover, “knowledge of the world” is predictor of knowledge which contained in a text as Rumelhart (1985) gives an example to explain the idea of the importance of having accepted knowledge of the world to be able to infer what the text means and going beyond the words. “The policeman held up his hand and the car stopped”. From a sentence we could deduce that the car has a driver; the policeman holding up his hand is a sign to the driver to stop the car, etc. Also, we can notice that none of this is stated above in the example but it is a part of our knowledge of how the world works. Thus, world knowledge

is important to reading since it reflects what your own world brings to the text to be well comprehended and each learner has typical way of how his or her world work and such knowledge may be limited which require “cultural knowledge” where it is a crucial to text to be understood as well. (Cited in Alderson 2000, p.45).

Brown (2000) says “content schemata include what we know about people, the world, culture, and the universe” (p.300).Furthermore, Tavakoli (2012) defines content schemata as all what contained in text which interpreted by our previously acquired knowledge by his saying «schemas which supply background knowledge to the interpretation of text are sometimes referred to as content schemas” (p.303).

### **3. Background Knowledge Activation**

Background knowledge is raw material of reading comprehension whereby before reading learner should posses a certain amount of knowledge that s/he acquired to be used as mainstay to bridge with new information, and that occurs only if learner activates his or her stored schema through various strategies which applied by teacher in classroom and help learners to tap into their prior knowledge.

#### **3.1. Schema Activation**

Schema activation occurs through the “spreading activation” by which the activation is best accounts for an unconscious process called “associative priming”, it means the learner can access to information when associated items are presented. Based on Meyer and Schvaneveldt (1971) explain “positive priming” which is one of types derived from associative priming by an experiment made for participants was asked to judge whether pair items are unrelated such as nurse and butter or related pairs with associative relation as bread and butter. That is to say, participants were 85 ms faster on the related

pairs that showed how these two associated items attract their attention and spreading the activation of schema from first item ‘bread’ to the second item ‘butter’ because the familiarity of the item bread primes them to spot the second item butter faster (Cited in Anderson,2009,p.159) . (See Table 02 adapted from Anderson, 2009, p.159 which illustrates what we have discussed above)

<b>Unrelated pair items</b>	<b>related pair items</b>
Nurse	Bread
Butter	Butter
<b>940 ms</b>	<b>855ms</b>

Table 02: Examples of the pairs used to demonstrate associative priming

In addition to Kaplan (1989) in his dissertation research, he reports an effect of associative priming, in which he tries to present a riddle to members of his dissertation committee, was: “On this hill there was a green house. And inside the green house there was a white house. And inside the white house, there was a red house. And inside the red house there were a lot of little blacks and whites sitting there.”, and he asked them to solve that riddle. After this, he provides them with clues to solution; he drew a picture of watermelon as graffiti in the men’s restroom to activate their prior knowledge. From that, one of members was able to associate the riddle with picture of watermelon. All in all, clues that given by Kaplan were helpful to spreading the activation from the picture was presented to the knowledge was in member’s mind about watermelon. (Cited in Anderson, 2009, p.160)

#### **4. Strategies to activate background knowledge in reading**

Background knowledge is considered as glue that makes comprehension of what learners read stick which assists him or her to incorporate new information easily and this happens through tapping into prior knowledge as being stored in schemata. Whenever we recall it for certain issue, it will be retrieved according to various strategies.

##### **4.1. Answering questions**

Asking and answering questions are impetus for learner to activate his or her prior knowledge and opportunity to recall back what s/he acquired to comprehend a new input and that occurs via remembering about a topic which presented by a teacher through cues such as 'questions'. As Moreillon (2007) claims as follow:

After carefully selecting texts, educators can offer cues and questions as previews to what will be important in the literary engagement. This helps students' minds begin to focus and prepare for the literacy event to come. This information is used to frame the listening or reading experience. Often these introductions help students to remember and connect with what already know about a topic...these cues and questions, then, are linked to the background knowledge strategy. (p.60)

Based on Brown (2000) provides table where he classifies several types of questions. Which are as follow: knowledge questions, comprehension questions, application questions, inference questions, analysis questions, synthesis questions and evaluation questions but we have mentioned only the first four types .Each of these types of questions seek to bring back and activate learners' prior knowledge in specific area such as knowledge questions asked by teacher to bring back learners' information for factual answers (see Table 03).Hence, these kinds of questions proposed by teacher can motivate learner too to read deeply and going beyond informational text to reach the exact answer.

In addition to self-questioning by learners in which they try to ask themselves certain questions about a text that are going to study and the more material provided by teacher in great way as using vivid pictures and concept-rich texts with related details, the more learners being able to ask good questions (Seidel & Kett, 2007).

Categories of questions	Typical classroom question words
<b>Knowledge questions:</b> Eliciting factual answers, testing, recall and recognition	Define, tell, list, identify, describe, select, name, point out, label, and reproduce.  Who? What? Where? When?  Answer “yes” or “no”.
<b>Comprehension questions:</b>  Interpreting , extrapolating.	State in your own words, explain, define, locate, select, indicate, summarize, outline, match.
<b>Application questions:</b> Applying information heard or read to new situations.	Demonstrate how, use the data to solve, illustrate how, show how, apply, construct, explain.  What is ... used for? What would result?  What would happen?
<b>Inference questions:</b> forming conclusions that are not directly stated in instructional materials.	How? Why? What did... mean by?  What does... believe? What conclusions can you draw from...?

Table03: Categories of questions and typical classroom question words (Adapted from Kinsella 1991 and Bloom 1956) (Cited in Brown, 2000, p.172).

## 4.2. K-W-L strategy

Macceca (2014) states that Know, want to know, learned is strategy created by Ogle in 1986 to support learners for active reading that was first created by this latter.

k-w-l chart is divided into three categories that require writing down ideas with each stage of reading process: pre-reading stage (k) where learners asked to explain what they know about a topic to activate their prior knowledge, in during reading stage (w) learners asked what they want to look for in further reading, then the last category is post reading where (L) learners explain what they have learned from the topic.(see Figure 05) which illustrates KWL strategy applied in classroom for learners' grades 9-12.

Topic: Pressure		
K	W	L
Pressure is a force exerted on the surface area of an object by something in contact with it.	Does the amount of pressure exerted change as the surface area changes?	You can determine pressure by dividing the amount of force exerted by the surface area. The amount of pressure decreases as the surface area increases if the force stays the same.
Pressure can be exerted by an object (solid), liquid, or gas.	Does air exert pressure?	Air has mass so it does exert pressure. We don't feel the pressure of air on our bodies because the air in our internal cavities and tissues counterbalances it.
You can use a barometer to measure air pressure.	How does a barometer work?	Barometers measure the pressure exerted by air on a sealed vacuum chamber. In aneroid barometers, air exerts pressure on the malleable cover of a metal vacuum chamber. The pressure is recorded by a pointer moving over a scale.

Figure05: Grades 9–12 example of KWL chart of topic, pressure (Macceca, 2014, p.86).

## 4.3. Semantic mapping

According to Garmston and Wellman (1992) “Semantic mapping is a useful strategy for activating prior knowledge and assessing participants' knowledge before and

after specific segments of training or learning” (p.84). This means that, semantic mapping can be used to tap into learners’ prior knowledge whether before or after learning a task. In addition, he provides another term similar to semantic maps in its structure which is mind maps with the addition of colors and strong graphics. Mind maps defined by Buzan (n.d) “Mind maps are graphic, networked method of storing, organizing and prioritizing information (usually on paper) using key or trigger words, each of which will ‘snap on’ specific memories and encourage new thoughts and ideas” (p.138).It implies that, mind maps are effective in way the learner can retrieve his or her stored ideas from memory easily and organizes his or her thoughts in terms of shape through writing a key word or even key image in the centre of paper to stimulate his or her brain to gather ideas that fit and related to the key word or image. (See Figure 06 which illustrates semantic mapping)

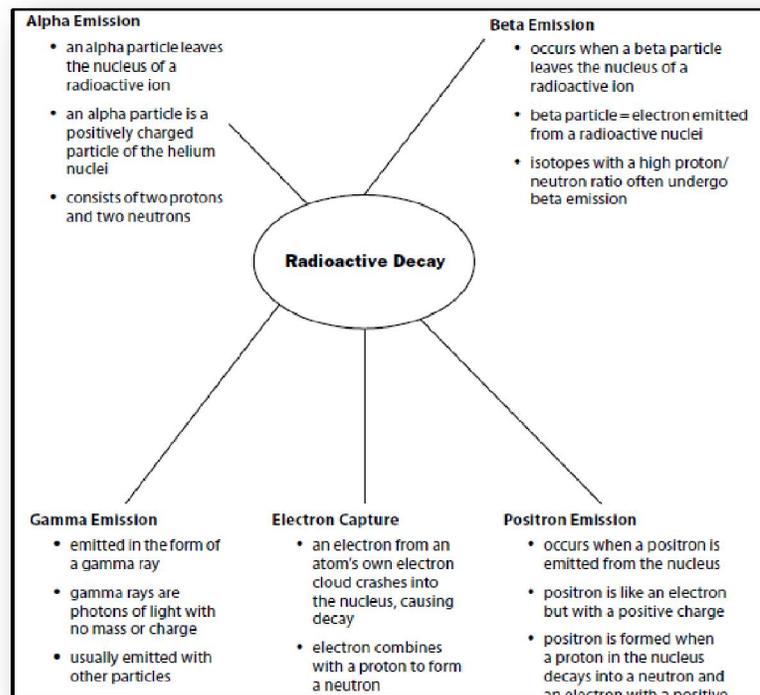


Figure 06: Example of semantic map word for grades 9-12 (Macceca, 2014, p.71).

#### 4.4. Prediction

Based on Parris and Headley (2015), prediction strategy considered as looking for CLUE where each letter refers to certain step in prediction, C reflects checking for clues which brings an ideas for learner, in addition to L requires to link what you have found in text to your old information and U is uncovering information that you have meet in topic, the last letter E demands evaluating your predictions (p.185).

Crawford, Saul, and Mathews (2005) say that prediction is used in anticipation phase of a lesson to encourage learners to think about topic through guessing from terms that topic contains since that it will teach them to read actively, consider important vocabularies, use their awareness of the genre of a text to know what to expect from it, and to collaborate with others to solve a problem.

In the same sense, Duffy (2009) claims that “comprehension is an active cycle of mental activity. It starts when readers anticipate meaning by predicting ahead of time what they will find in a passage” (p.107).It implies that, learner to comprehend what s/he reads s/he should activate his or her prior knowledge through predicting what the passage will present.

Duffy (2009) provides a description of how a learner tries to read aloud for prediction and plains experience to fit new information through clues that s/he found in text, and if prediction does not get place in text, s/he tries to modify. As he says “Do you see how I am talking to myself as I read? I make a prediction and then I ask questions about whether my prediction is still making sense. If as I read along I encounter new information....I modify my prediction.”(p.111)

#### **4.5. Brainstorming**

Brainstorming is a strategy in which learners bring back all their spontaneous ideas before reading a text through activating their existing schemata to unlock the hidden ideas that they kept in their mind.

According to Barker (1997) “brainstorming is a structured process for having ideas. It was invented in the late 1930s by an American advertising executive, Alex Osborn” (p.7). It implies that the first one who brings the term brainstorming was Alex Osborn in 1930 as strategy used for developing ideas concerning an advertisement through making a group meeting to collect a large number of ideas whatever it is without a judgment since Osborn believes that bad idea could be a powerful one with few modifications and this strategy helps us to reach flexible thinking rather than being rigid and waiting for inspiration. It is just matter of writing down what comes to our mind and saved in our schemata concerning a certain topic.

To be accurate, Cullen (1998) explains how brainstorming works and the importance of all the ideas that produced by the group in the case of the quantity as we mentioned above, through this passage:

Brainstorming is an activity used to generate ideas in small groups. The purpose is to generate as many ideas as possible within a specified time-period. These ideas are not evaluated until the end and a wide range of ideas is often produced does not need to be usable. Instead, initial ideas can be viewed as starting point for more workable ideas. The principle of brainstorming is that you need lots of ideas to get good ideas. (Cited in Lenski & Lewis, 2008, p.334)

In addition to that, brainstorming is an strategy encourages learners to activate their prior knowledge to set out their ideas through “associations” to link what they have already know with the presented topic in terms of the same sense that teacher looks for. Grahm and Bachman (2004) state “the capacity of human brain to make associations. For

example, when a person sees or hears the word “fun”, the brain automatically searches for word associations and produces suggestions such as cinema, theatre or concert, or terms such as humour...” (p. 75).

Beside all of that, brainstorming has forms as many authors indicate like Crawford, Saul, and Mathews (2005) ,it can be done by individuals, pairs, small groups, or the whole class while De bono (1973) believes in paired brainstorming which he calls it “lateral thinking” since he argued that through an experiment in which he asks learners individually to generate ideas related to topic after few minutes he asks them to form pairs to share ideas with each other, and later, he orders pairs of learners to spread their ideas to the whole group that is why called lateral thinking ,moving from individual thinking to pairs till reach the whole (Cited in Crawford, Saul,& Mathews 2005, pp.29-30).

To guide brainstorming sessions successfully should follow four basic rules that proposed by Osborn(1953) are as follow: Criticism is ruled out, freewheeling is welcomed, quantity is wanted and combination and improvement are sought, as we noticed Osborn tries to bring four main principles to facilitate the brainstorming session to help teacher to access into learners’ background knowledge and looking for requisite ideas, also to avoid some of the problems that teacher could face to keep moving. From that, these principles are, there is not criticism or judgment other learners’ ideas even if they are outlandish ideas, teacher should let learners spring into their mind to keep the creative process going on as well as during brainstorming learners are welcomed to express their ideas freely without interruption and all ideas are acceptable. In addition to the quantity not the quality of ideas are required because it does not matter of new idea but the most important is to bring back a large number of ideas as possible, and the last principle refers to how these suggested ideas can be great ideas through few changes or integrate them into others ideas to generate another idea (Cited in Barker, 1997, p.8).

## **5. The role of teacher in activating learner's prior knowledge**

Teacher is basic element in education, s/he plays a great role in teaching learning process that assumes a lot of responsibilities which lead him or her to be well expertise in introducing a topic in classroom; moreover, s/he should be aware about all aspects of his/her learners specifically learners' background knowledge and how to exercise their mind for activating their pre-existing knowledge to comprehend new information to be read.

From what presented above in the strategies that used to activate learners 'prior knowledge as answering questions, k-w-l strategy, semantic word map, prediction and brainstorming, we are going to shed light on the role of teacher in activating learners' prior knowledge in some of these strategies.

### **5.1. Activating learners' prior knowledge through K-W-L strategy**

According to Crawford, Saul, and Mathews (2005), the teacher should orient his or her session using k-w-l strategy to present his or her topic in way that learners' prior knowledge activated to share what they already know about a topic as "the process of decision making in the government" to develop questions about what they want to know since it could be the case for learners to investigate till they reach the learned phase of that strategy. Here the teacher draws k-w-l chart in the board which divided into three column are, known, want to know, and learned; moreover, s/he writes all what learners bring ideas, information, questions to be answered in the third column .Thus, learners use their background knowledge which is activated by their teacher to comprehend the new information to be read in which they set purpose for reading, asking questions to know more and that help them to be interested to what they read till they find answers and monitor their comprehension after reading.

## **5.2. Activating learners' prior knowledge through semantic mapping**

We move now to semantic mapping which introduces a vocabularies and concepts which means the teacher writes a word in the center of paper or board that word extracted is the basic idea of what they will read and then asks learners to spell out the information they know about that word just to ease into what they are going to read whatever it is.

Simply put, Crawford, Saul, and Mathews (2005) provide an example of how the teacher presents his or her lesson 'reading short story about some old men and yacht' activates learners' prior knowledge through central concept "yacht" has written in the middle of sheet paper, then he asks his or her learners for three minutes to recall back all knowledge they know about that word and organize them into semantic map.

Teacher starts this activity by an introduction "we are going to read a short story about some old men and a yacht. Who can tell us something about yacht looks like? I'm going to write what you tell me on this semantic map." ,all of them are participating others say that yacht like boat, also teacher asks more questions to simplify the word yacht to collect a lot of information about it by what do you know more ? , learners answer was "It has sails. It goes slow."

In addition to many other questions asked by teacher to assess learners' background knowledge such as "Now I want you to think about these four things: coin, a yacht, a coiled rope, and yellow muffler. What story can you imagine that would contain these four things" to tap into learners' prior knowledge and help them to make various ideas and knowledge related to the story and reach the comprehension of the whole story. Therefore, learners draw final story by saying "A rich old man was sailing on his yacht. He slipped on coin , tripped on coild , rope, and caught his neck in his yellow muffler. He died. His yacht

continued to sail.” Here, teacher at the beginning uses semantic map and then s/he moves to predictions terms as in example below for more clarification. (See Figure07.)

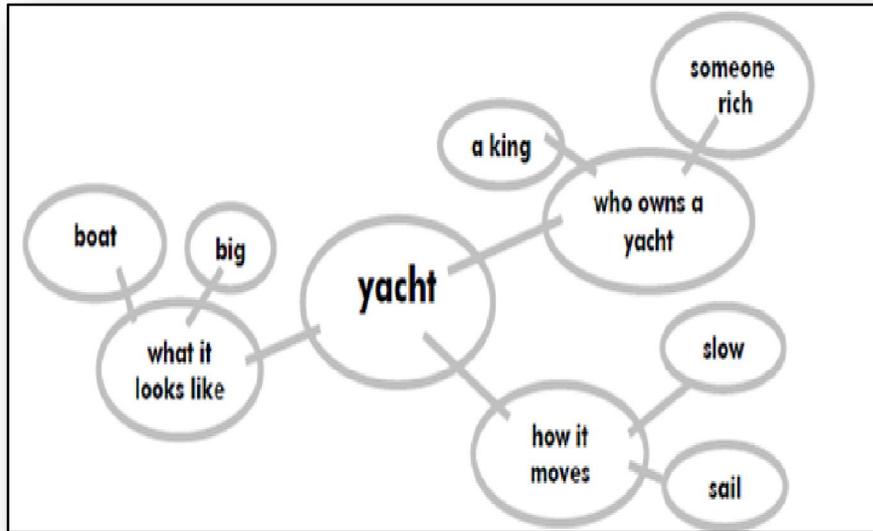


Figure07:..Example of semantic word map “Yacht” (Crawford, Saul and Mathews, 2005, p.36)

### 5.3. Activating learners’ prior knowledge through prediction

In addition to prediction strategy which assists learners to anticipate what the content of reading material would present and that occurs through topic clues, and type of text will be found, etc. In this case, Duffy (2009) tries to explain this strategy used by teacher to present lesson introduction about reading a historical event, through which teacher activates learners ‘prior knowledge to predict what they think will happen, and all of that to comprehend the new information they will meet in reading. Duffy (2009) says that:

We have been learning about different points of view regarding various famous historical events, such as Custer’s last sand. Today, we are going to read more about custer’s last sand. But before we start, I want to show you strategy that will help you understand more of what you read in this book.

This strategy is called 'predicting' which means to think ahead about what is going to happen in the selection. The author always provides clues to what the topic is. One secret to predicting is to find clues....We are going to read this book together, and, as we get into the book, I am going to expect you to use your prior knowledge about the topic to make predictions as we go along. (p. 103).

As can be seen previously, teacher tries to present his or her lesson in way to attract learners' attention to engage them in lesson that will be about historical events by using prediction strategy since it fits more his or her lesson through which learner finds clues that help him or her to tap into his or her prior knowledge to foretell what the book will contain. (See Figure08 which illustrates learners' prior knowledge activation through prediction terms).

**Teacher:** Now I want you to think about these four things: a coin, a yacht, a coiled rope, and a yellow muffler. What story can you imagine that would contain these four things? Think about that for a couple of moments. Think about a scene, characters, and events from a story that has these objects in it. After two to three minutes, tell them: Now form yourselves into pairs and combine your ideas into a story. One member of your pair should be ready to tell your story. After about five minutes, ask them: Who wants to share their story?

**Student Pair:** "A yacht sank in a big storm. The next day, they found a coin, a coiled rope, and a yellow muffler on the beach."

**Student Pair:** "A rich old man was sailing on his yacht. He slipped on a coin, tripped on a coiled rope, and caught his neck in his yellow muffler. He died. His yacht continued to sail."

Figure 08: Students' prior knowledge activation through prediction terms (Adapted from Duffy, 2009, p.103)

#### **5.4. Activating learners' prior knowledge through brainstorming**

As well as brainstorming strategy is used by teachers to help learners to generate ideas and bring back all what they know about a topic to comprehend more. Based on Crawford, Saul, and Mathews (2005) mention to certain steps of brainstorming that teacher applies in his or her classroom to facilitate understanding a lesson which demands only pencil and paper for writing ideas in approximately ten minutes, these steps are being able to introduce first brainstorming to the learners, then teacher tries to simplify the topic will be dealt with. After all, s/he encourages his or her learners to share their ideas in few minutes and it is not matter of the ideas quality but the quantity, also the teacher or learners must not judge others ideas whatever it is even if odd since it will limit their thinking and this strategy believes in the creativity of ideas based on prior knowledge. Later, teacher writes down all learners' ideas and when the brainstorming session has finished s/he can evaluate learners' ideas and make modifications if necessary.

Similarly, Ur (1996) indicates how the teacher activates his or her learners' prior knowledge through brainstorming in which he says "write single word in the centre of the board, and ask students to brainstorm all the words they can think of that are connected with it. Every item that is suggested in written up on the board with a line connecting it to the original word."(p.68).It implies that, teacher helps his or her learners to generate a massive amount of ideas specifically retrieving words the learners already knows and the new ones will be presented by teacher or learner. The Figure 09 shows brainstorming activity of the word 'tree'.

In doing so, teacher is the main hallmark in the classroom through its instructions and multiple strategies that s/he applies for learners to help them link new information with their prior knowledge to construct meaning from what they read.

In addition to what discussed above, schema and teaching are closely related where schema theory has great role through activating learners' prior knowledge in which the teacher is trying to organize and outlines activities as well as other materials as handouts to stimulate learners to comprehend what they read. From that, Miller (2002) provides a set of teacher's responsibilities in classroom to activate learners' pre-existing knowledge and helping them to link it to new one which are as follow:

- Activate their prior knowledge before ,during ,and after reading;
- Using schema to make connections between the text and their lives, between one text and another, between the text and the world;
- Distinguish between connections that are meaningful and relevant and those that are not;
- Build, change, and revise their schema when they encounter new information in the text , engage in conversations with others, and gain personal experience ;
- Use their schema to enhance understanding (Cited in Hunt, Wiseman, & Tousei, 2009, p.94).

As being seen above, teacher should facilitate a way to learner to assist him or her to comprehend from reading (before, while and after) by activating his or her schema and making associations about what already know and new information; moreover, teacher can provide newly learning advocated by piaget, namely ,assimilation when it comes to engaging new knowledge to schema which recently called accretion while accommodation is certain modification in pre-existing schema to fit new information that psychologists dubbed it tuning (Cited in Macceca ,2014,p.78).

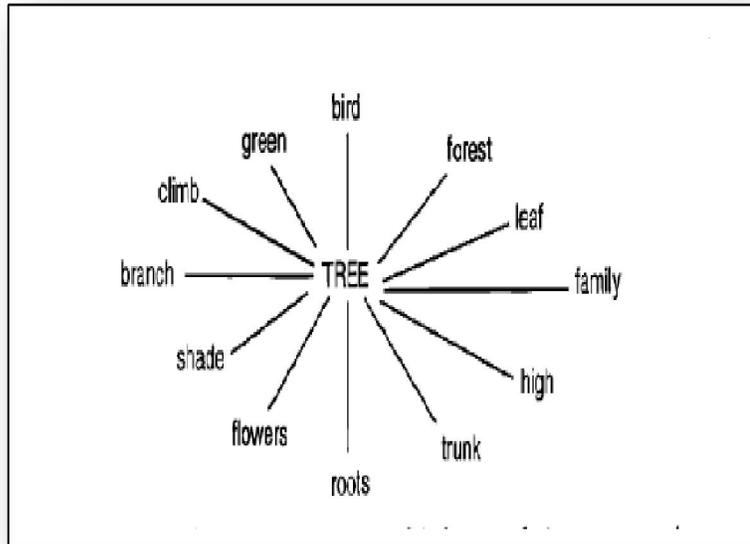


Figure 09: An example of a brainstorming about the word "Tree" (Ur, 1996, p.69).

## Conclusion

Prior knowledge activation is the core of reading comprehension, in which schema facilitates to retrieve background knowledge that stored and organized into patterns in mind whenever learners meet with known clues, typical questions, or asked to generate ideas for certain topic, etc. From that, there are several strategies that proved by many authors as mentioned in this chapter to help learners to tap into their pre-existing information to enhance their comprehension such as answering questions, k-w-l strategy, semantic mapping, prediction, and brainstorming and each of these strategies have its own application in classroom as illustrated previously; furthermore, in this chapter we used to focus too on the role of teacher in activating learners' prior knowledge and how s/he provides a requisite strategy to each session as it requires.

## **Chapter three: The field work**

### **Introduction**

After the theoretical view presented previously into two chapters concerning the role of prior knowledge activation in enhancing EFL learners' reading comprehension. This chapter attempts to enrich this study with accurate data wherein using two tools for collecting data are as follow: a questionnaire and an interview. The former is designed and distributed to first year master English students (M1) and the latter with five teachers in English branch. Each of these research instruments are seeking for gathering data through several questions which allow us access to required information. In doing so, both of these tools comprise of open-ended questions for more details, respondents' attitudes and opinions towards a topic while they differ in case of questionnaire we used to subsume closed-ended questions as multiple choice questions, rating scale, likert scale, yes/no questions for straightforward answers and space for adding any comments or suggestions about that topic. Furthermore, the chapter will provide description of the data from these two tools and analyzing them by coding data into tables, figures and interpretations.

#### **1. Population and sampling**

Since this study is about the role of prior knowledge activation in enhancing learners' reading comprehension, we have chosen randomly (50) first year master students of sciences of the language among population (308 students) at the Division of English at Mohamed Kheider University, they were at different genders, ages and levels too. In addition to the second sample, we have selected five teachers for interview individually from the population of (33 teachers).

## **2. Pilot study**

As already mentioned in an introduction, we are interested in administering a questionnaire and an interview to participants without ambiguity. That is why, we have submitted questionnaire to fifteen students to pilot our mistakes through their comments in terms of clarify some items and rectify them to be easy answered by students.

## **3. Description of the questionnaire for students**

Students' questionnaire is divided into three main sections which are: personal background information, reading comprehension and the last section is about prior knowledge activation in which to collate attitudes and thoughts of students toward the role of prior knowledge activation in enhancing EFL learners' reading comprehension.

### **3.1. Section 01: Personal background information.**

It reflects collecting personal knowledge about student through his or her gender (1), age (2), choice to English (3) and his/her level by 5 rating items from very good to very poor (4).

### **3.2. Section 02: Reading comprehension**

In addition to collating data about reading skill in section two by asking them if they like reading with three options to pick one from a lot to not at all (5), also frequency question seeks to how often they read in English whether frequently, sometimes or rarely (6) As well as, we move to multiple choices questions which restrict student to only one option where the question asked was which model do they prefer to use when reading, choices were bottom-up model, top-down model, or the interactive model (7). The next question was which of these levels they accomplish through reading comprehension?

Literal level, inferential level, critical level, or creative level(8),and other question refers to how often do they use reading comprehension strategies(identifying purpose in silent reading, guessing for meaning, building main idea comprehension, skimming, etc.) whether frequently, sometimes, rarely, or never(9). Moreover; asking question that deals with what makes a text difficult to comprehend for them? , here the student is able to tick both of answers among three are: when it contains difficult or unfamiliar words, when you lack aids for reading (relevant experience, related books, etc.) or other (10).

### **3.3. Section 03: Prior knowledge activation.**

As we shall see in section three various questions, each question carries out a specific intention as the dichotomous question requires yes or no response such as the following question asked to obtain the view of students if they use what they know before as background knowledge to understand what they read(11),as we can see through the upcoming question is looking for students' clarification toward the kind of background knowledge they use in terms of formal schema (as knowledge about a language, conventions),content schema (as knowledge about people, culture and universe) or both of them(12).The likert scale question being asked to know the degree of agreement concerning the importance of prior knowledge activation in reading comprehension from strongly agree to strongly disagree(13),in particular to strategies that used by students to activate their prior knowledge were five classified to choose the appropriate one used by them are answering questions that they have already asked about, using k-w-l (know, want to know, learned) strategy, using semantic mapping, prediction or brainstorming(14),the following question tackles whether teachers use certain strategies to activate their prior knowledge or not which refers to student attempt to answer yes or no(15),and in case of 'yes' ,the students should mention to what kind of strategies used by his or her teacher(16).

Conventionally, we have asked them too to say if their teachers ask them questions that are central for overall comprehension of topic as (what are your ideas about...?, what did you think about ...?) the answer will be yes or no (17), commonly, other question showed if the teachers criticize their ideas that brainstorm concerning new lecture before reading handout. Yes or no (28).The last question was about students comments and suggestions toward our topic (19).

#### 4. Results and interpretations

##### 4.1. Section 01: Personal Background Information

Q: 1 Gender

a- Male

b- Female

Gender	Student	%
Male	9	18
Female	41	82
Total	50	100

Table 04: Students' Gender

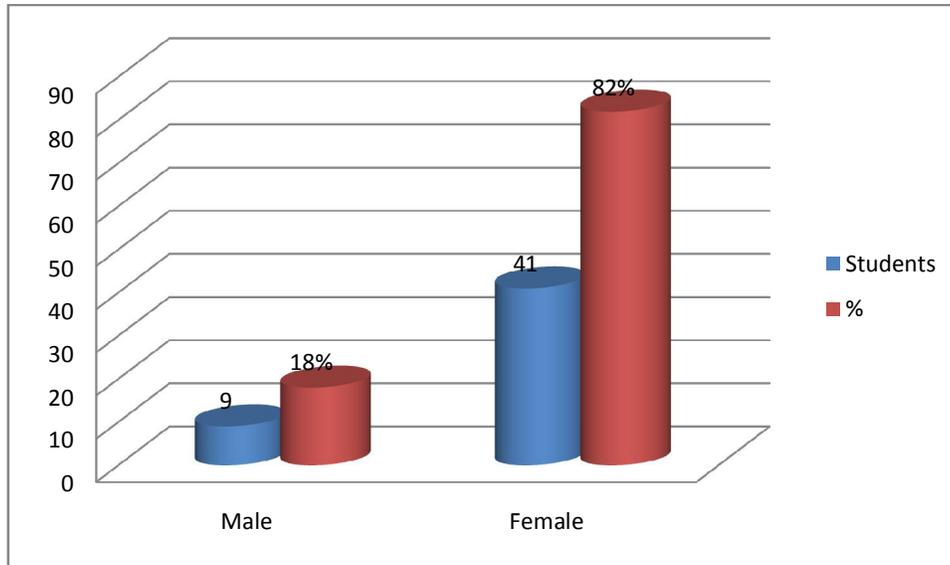


Figure10: Students' Gender

Through that figure, we can see that females' number is more than males by 82% where males are 18% which reflects how females are interested in studying English language more than males.

**Q: 2** Age .....years old

Options	Students	%
22 year	32	64
23-25 year	15	30
30 and over	3	6
Total	50	100

Table05: Students' age

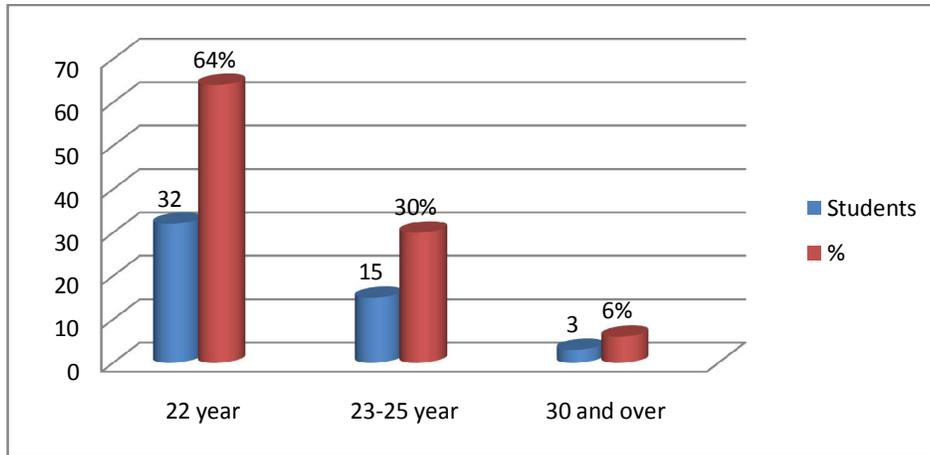


Figure11: Students' age

We have noticed that thirty-two students in rate of (64%) are 22 year and fifteen students (30%) are between 23-25 year while the rest three students (6%) are 30 and over. It implies that, various ages of students which appear as a predictor of how they carry out different background knowledge, However, they may affect on how the students approximated ages activate their prior knowledge in sense of comprehending what they read whereas those who are 30 and over could be as a challenge since not all of them interpret or comprehend what they read in the same way.

**Q3:** Your choice to study English was:

a- Personal

b- Imposed

Options	Students	%
Personal	49	98
Imposed	1	2
Total	50	100

Table06: Students' English choice

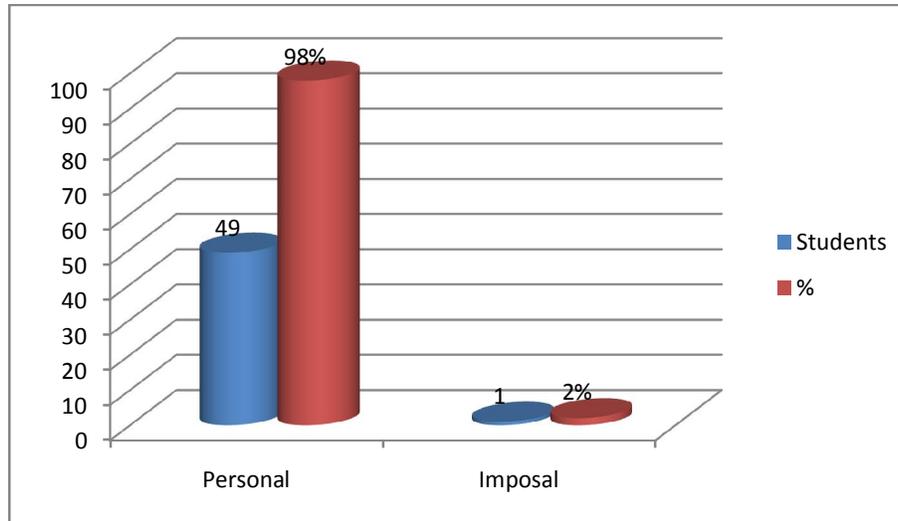


Figure12: Students' English choice.

The main remark that could be extracted from data presented above is that forty-nine students who are personal English choice were (98%), where only one students (2%) imposed which reflects to be sign of the more being freely to study a language you choose, the more you will be able to go beyond what the teacher presents in classroom and being interested to what you read. In addition, students' choice will help them develop their level and build their background knowledge to be used later on to comprehend the reading material whenever they across a text.

**Q4:** Do you consider your level in English?

a- Very good     b- good     c- Average     d- Poor     e- Very poor

Options	Students	%
Very good	3	6
Good	19	38
Average	26	52
Poor	1	2
Very poor	1	2
Total	50	100

Table 07: Students' English Level.

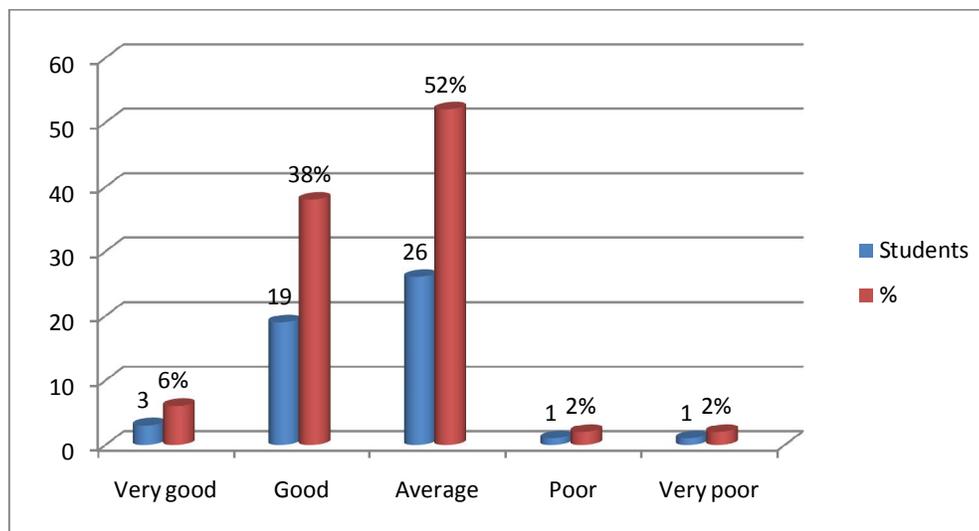


Figure13: Students' English Level

All in all, this question has been done for purpose to check out students' English level to see in what extent their level gets place since it related to the ability of students to comprehend what reading material brings through the quantity of their knowledge which has stored in their schemata to be used effectively. From that, most of them twenty-six students have average level (52%) while nineteen students (38%) belong to good level and three students (6%) have very good level. However, the rest among of them one student chooses poor level (2%) and the other one very poor level (2%) as well. This implies that, those who have average level in English; they could have at least an acceptable prior

knowledge concerning formal schemata which include knowledge about language. In that sense, they will be able to decode what they read.

#### 4. 2. Section 2: Reading Comprehension

**Q5:** Do you like reading?

a-A lot  b-A little  c- Not at all

Options	Students	%
A lot	12	24
A little	35	70
Not at all	3	6
Total	50	100

Table 08: Students' attitudes towards reading

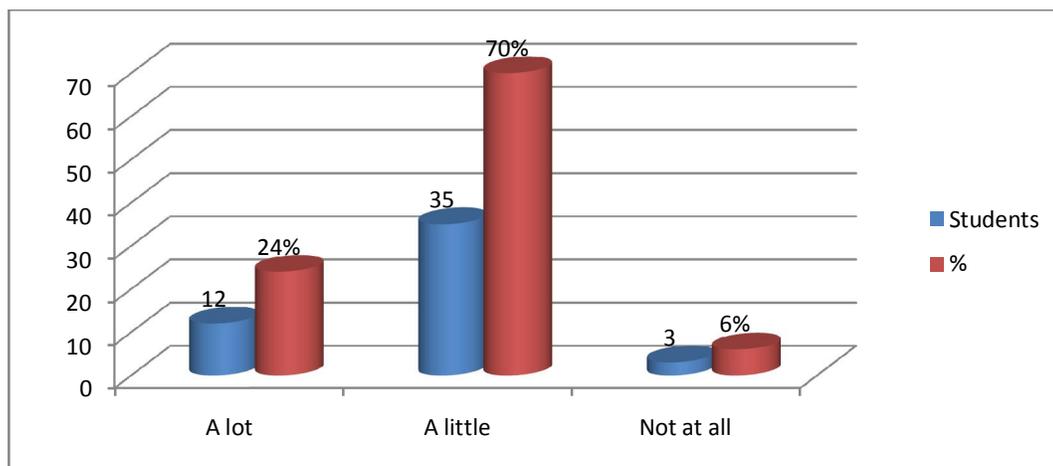


Figure14: Students' attitudes towards reading

Concerning this question was made for diagnosing opinions of students towards reading, the data was as follow: thirty-five students (70%) were at a little preferring to read while twelve students (24%) like to read a lot and others are three students restricted in (6%) dislike to read under the option not at all. It reflects that, students who select the option a lot and a little, they may recognize the great role of reading and characterized by some features of good readers as reading for purpose, constructing meaning and monitor understanding whilst those who dislike reading, they lack the importance of reading in enhancing their comprehension because reading is comprehension and comprehending is reading.

**Q6:** How often do you read in English?

a- Frequently  b-Sometimes  c-Rarely

Options	Students	%
Frequently	6	12
Sometimes	30	60
Rarely	14	28
Total	50	100

Table09: Students' attitudes towards reading in English

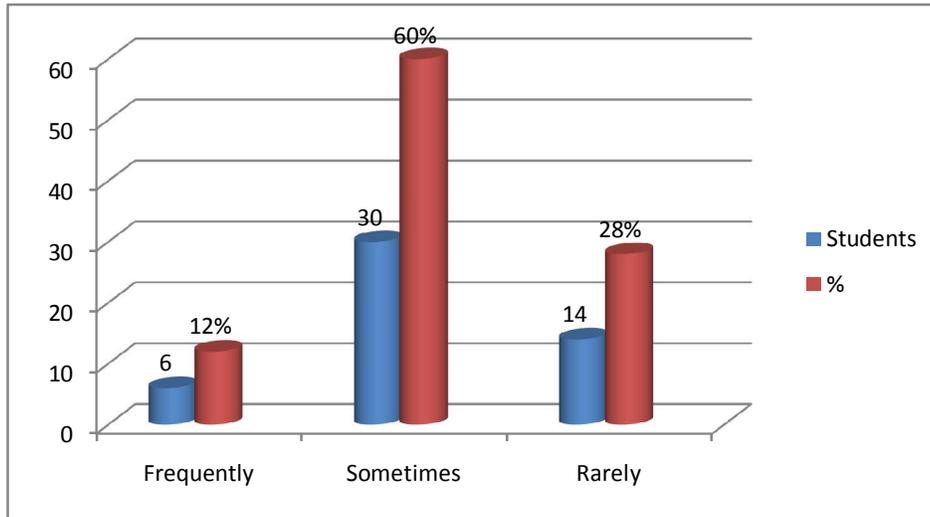


Figure15: Students' attitudes towards reading in English

Regarding this frequency question was asked to extract datum about their options towards reading in English, it highlights that thirty students (60%) read sometimes in English and fourteen students (28%) rarely read in English while six students (12%) frequently read in English. It shows that, those who are reading sometimes in English are more to have acceptable and well developed background knowledge.

**Q7:** Which model do you like to use when reading?

- a- Bottom- up model (focus on linguistic structure)
- b- Top – down model (using your prior knowledge )
- c- The interactive Model (focus on both text and prior knowledge )

Options	Students	%
Bottom-up model	7	14
Top-down model	12	24
The interactive model	31	62
Total	50	100

Table10: Students' attitudes towards the preferable model used

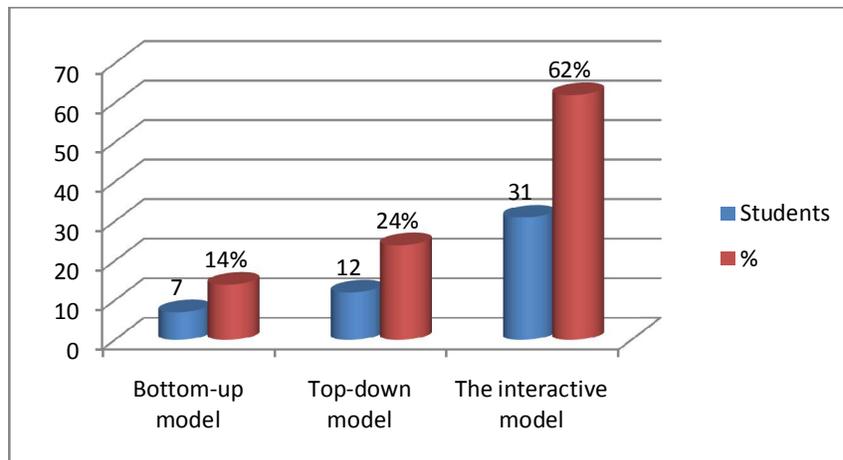


Figure16: Students' attitudes towards the preferable model used.

In particular, this question mentioned to gather data about the most model used by students when reading. The results show that most of students thirty-one in rate of (62%) prefer the interactive model while top-down model is utilized by twelve students (24%) and seven students (14%) choose bottom-up model. It reflects that, those who are following the interactive model when reading are apparently using their prior knowledge and information from text since it boosts their comprehension, in which, reading with good comprehension supports the use of both bottom- up and top-down model together where students move from the linguistic components: letters, morphemes till the up discourse

markers and then to go beyond the text for better understanding, students will travel in their minds by starting with top element which is background knowledge towards down element to build comprehension.

**Q8:** Which of these levels you reach through reading comprehension?

- a- Literal level (the ability of comprehending explicit information of text)
- b- Inferential level (the ability of going beyond written text and get meaning )
- c- Critical level (the ability of evaluating what you have read)
- d- Creative level (the reader able to take information from text and create new ideas)

Options	Students	%
Literal level	16	32
Inferential level	19	38
Critical level	12	24
Creative level	3	6
Total	50	100

Table11: Students' level in reading comprehension

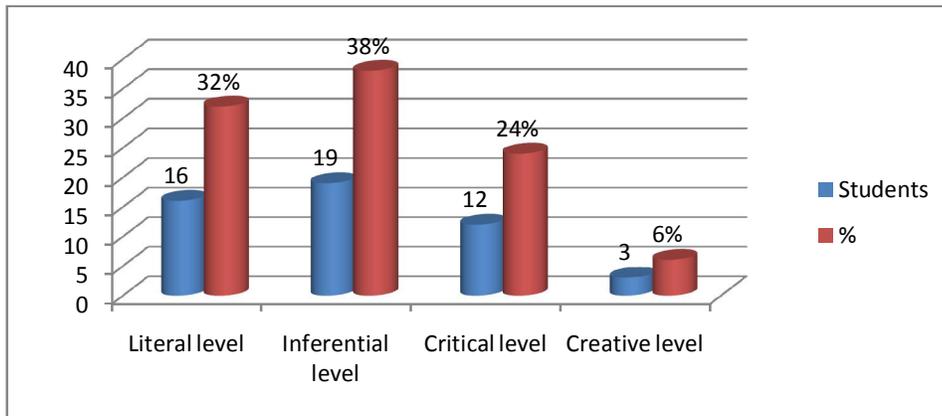


Figure17: Students' level in reading comprehension

The collected data reveals that sixteen students reach the literal level at rate (32%) are being able to comprehend explicit information of text and nineteen students (38%) enable of going beyond written text and get meaning, in addition, critical level were captured by twelve students (24%) who have ability of evaluating what they read and three students rated (6%) were at creative level to take information from text and create new ideas. So, inferential level is considered to be the most level that students tackle to infer the meaning of what they read because it assist students to back up their thinking and making prediction about what the text will contain as well as students are being able to recognize unstated main information.

**Q9:** How often do you use reading comprehension strategies (Identifying purpose in silent reading, guessing for meaning, building main idea comprehension and skimming, etc.)?

a- Frequently  b-Sometimes  c-Rarely  d-Never

Options	Students	%
Frequently	8	16
Sometimes	25	50
Rarely	8	16
Never	9	18
Total	50	100

Table 12: Students' attitudes towards reading comprehension strategies

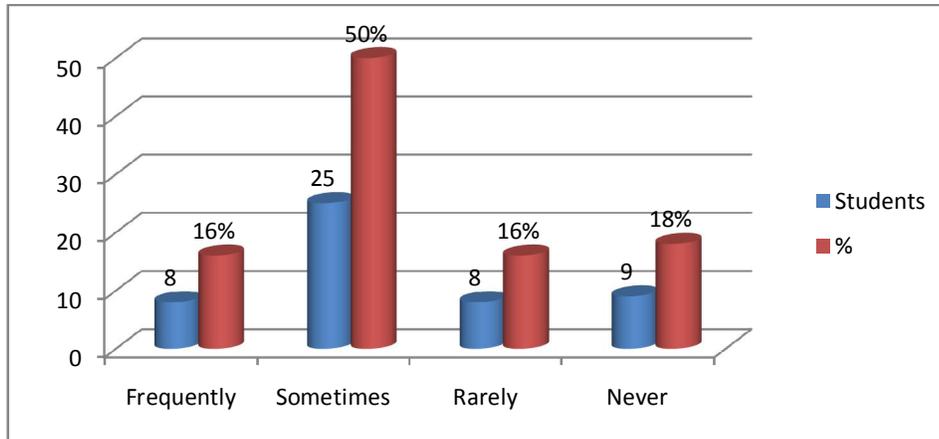


Figure18: Students' attitudes towards reading comprehension strategies

We can deduce from the results above that students use reading comprehension strategies, in which eight students use them frequently at the rate of (16%) and twenty-five students (50%) apply reading comprehension strategies just sometimes while other eight students use them rarely at rate (16%) and the rest nine students never use reading comprehension strategies rated (18%).It means that, those who are sometimes using reading comprehension strategies are more likely aware about the tactical way to process what they read through various strategies such as : guessing meaning , building main idea comprehension and skimming which lead them to comprehend well.

**Q10:** What makes a text difficult to comprehend for you?

a. When it contains difficult or unfamiliar words

b. When you lack aids for reading (relevant experience,related books..etc)

c. Other

Options	Students	%
Difficult and unfamiliar words	39	78
Lack aids of reading	10	20
Other	1	2
Total	50	100

Table 13: Students' difficulties for comprehending a text.

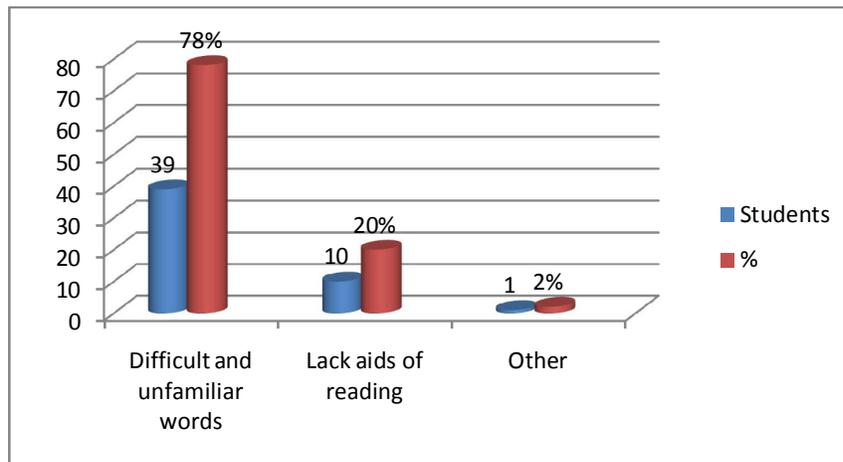


Figure19: Students' difficulties for comprehending a text.

Glancing at the result above, it is clear that the majority of students thirty-nine face problem to comprehend text caused difficult and unfamiliar words which rated at (78%) and ten students (20%) lack the appropriate aids for reading to assist them to comprehend a text such as relevant experience or related books and only one student (2%) who has other causes that hinder his or her understanding. Thus, the modicum vocabularies that students possess could be a factor that disrupts comprehending a text since the low vocabulary mastery and the lack of deducing meaning from words, it shows the insufficient interaction between the student and the context.

**4. 3. Section 03: Prior knowledge activation.**

**Q11:** Do you use what you know before as background knowledge to understand when reading?

a- Yes  b-No

Options	Students	%
Yes	34	68
No	16	32
Total	50	100

Table 14: Students' attitudes of background knowledge usage.

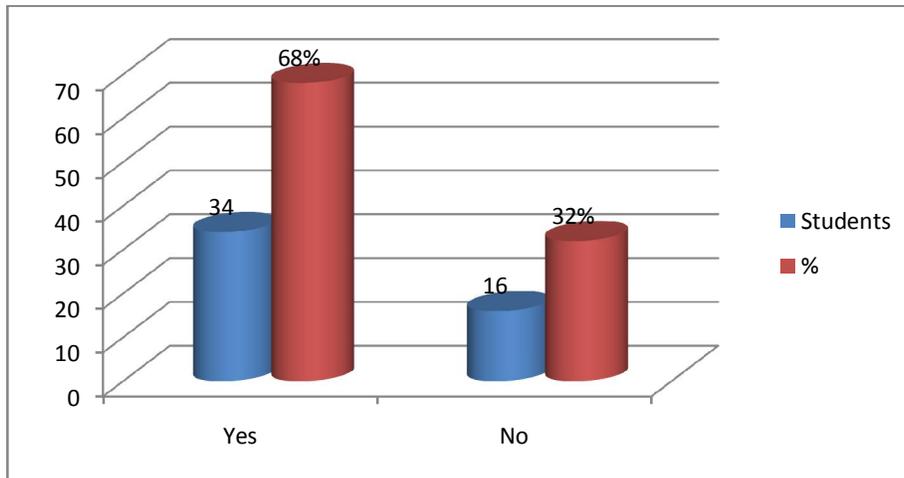


Figure20: Students' attitudes of background knowledge usage.

The data above indicates that great number thirty-four students use their background knowledge when reading at rate (68%) since it has a significant role in facilitating the comprehension to occur unlike sixteen students (32%) who do not give importance to background knowledge. This means that , those who agree about using

background knowledge when reading are more aware about the usefulness of their pre-existing knowledge since they consider it as a base to get inclusive comprehension .

**Q12:** If yes, what kind of background knowledge do you use? Why?

- a- Formal schema (as knowledge about a language ,conventions )
- b- Content schema (as knowledge about a people, culture and universe)
- c- Both of them

Options	Students	%
Formal schema	11	22
Content schema	18	36
Both of them	5	10
Total	34	68

Table15: Background knowledge' kind that used by students.

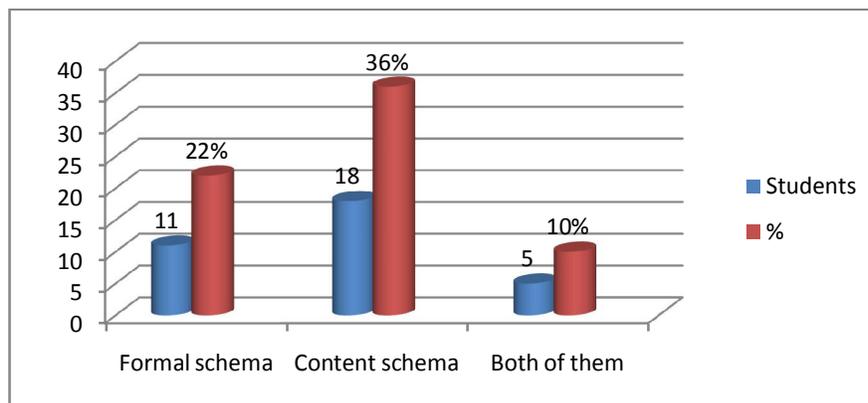


Figure21: Background knowledge' kind used by students.

What can see from data that thirty-four students choose the item 'yes' in **Q11**.From that, almost of them eighteen (36%) students are selecting the option content schema which contains knowledge about a people, culture and universe and eleven (22%) of students use

formal schema reflects knowledge concerning a language and conventions, whilst five (10%) among 34 students rely on both of these kinds of schema. Accordingly, this question aimed to know which kind of background knowledge used most by students caused its prominent role as Smith (1971) upholds that by his saying “Non-visual information transcends the text, and includes the reader’s experience with the reading process, knowledge of the context of the text ... as well as generalized knowledge of the world.”(Cited in Alderson, 2000, p.17).

Furthermore, students are asked to provide precise clarification about their choice. Some of them claim that, whenever they read they try to remember what they know before about people, culture and universe if the content of text requires that to build a comprehension and relating their previous knowledge to new information. Despite those who choose formal schema, they maintain that the text to be comprehended the reader should use his or her background knowledge as reference to understand and to make the information becomes closer to him or her by using formal schema meaning that the knowledge about language which every person is agreed on. As corollary, students who prefer to use both of these background knowledge are being able to comprehend the knowledge of word and the world as other participants says, while reading they come cross words familiar with and the text may contain information about culture, people they already have background about. Therefore, they will be able to get better understanding of text.

**Q13:** Do you agree that prior knowledge activation has a great importance in reading comprehension?

- a- Strongly agree  b- Agree  c- Neither agree nor disagree   
 a- Disagree  e-Strongly disagree

Options	Students	%
Strongly agree	12	24
Agree	26	52
Neither agree nor disagree	10	20
Disagree	1	2
Strongly disagree	0	0
Total	50	100

Table16: The importance of prior knowledge activation in reading comprehension

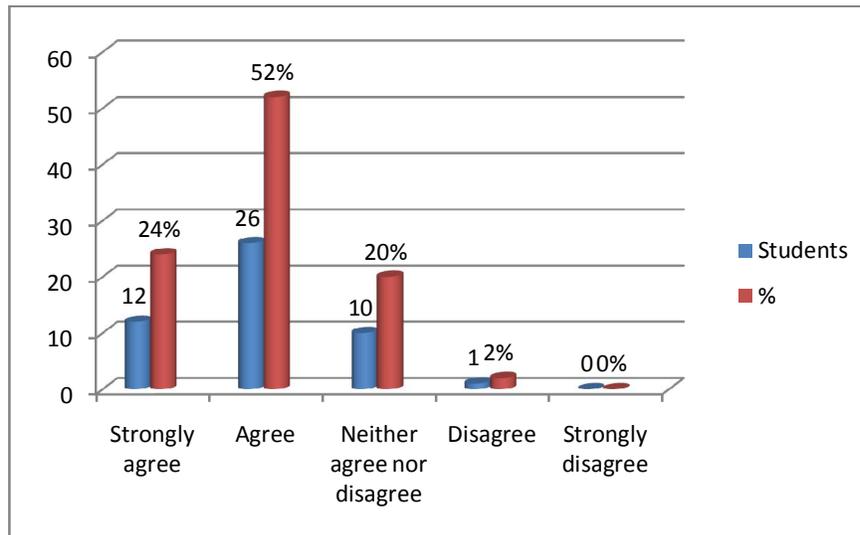


Figure22: The importance of prior knowledge activation in reading comprehension

By this question, students were asked to identify their degree of agreement (strongly agree, agree, neither agree nor disagree, disagree or strongly disagree) towards the importance of prior knowledge activation in reading comprehension. The results are as follow: twelve (24%) of students were strongly agree and the most of students approximately twenty –six (52%) agree while ten (20%) were divided between neither agree nor disagree and one student (2%) was disagree but the option strongly disagree was (0%).To the end, majority who are agree about the effective role of prior knowledge activation in reading comprehension because they believe in the more they tap into their pre-existing knowledge and exercise their mind, the more being able to comprehend what they read easily and enhance their comprehension as illustrated in questions **11 & 12**.

**Q14:** Which kind of these strategies you use to activate your prior knowledge?

- a- Answering questions that you have already asked about.
- b- Using KWL (Know. Want to know. Learned) strategy.
- c- Using semantic mapping
- d- Using prediction (guessing).
- e- Using brainstorming

Options	Students	%
Answering questions that you have already asked about	17	34
Using k-w-l strategy	5	10
Using semantic mapping	0	0
Prediction	21	42
Brainstorming	7	14
Total	50	100

Table17: Students' usage of prior knowledge activation strategies.

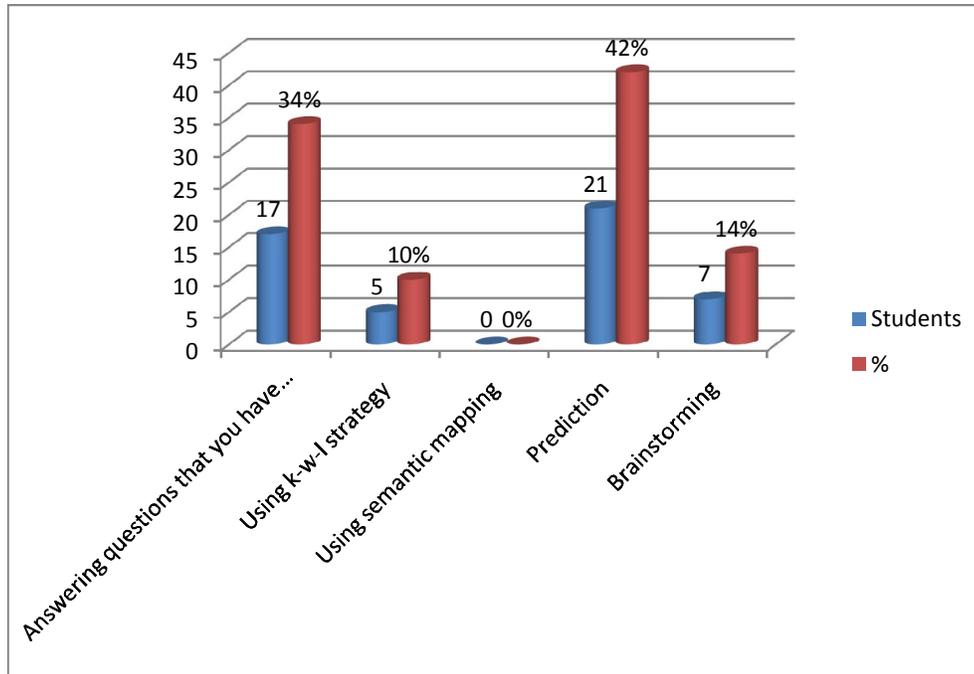


Figure23: Students' usage of prior knowledge activation strategies.

Students, here, are required to select which kind of strategy they use to activate their prior knowledge. We can notice most of them seventeen (34%) use answering questions strategy and five (10%) follow k-w-l strategy while semantic mapping strategy were unselected (0%), also the majority of students twenty-one (42%) apply prediction strategy to foretell what the text will present before embarking on reading it as well as seven students (14%) attempt to use brainstorming strategy. This urged us to say, students who are predicting before reading certain text; they prefer to explore what the text will contain based on their anticipations.

**Q15:** Does your teacher use certain strategies to activate your prior knowledge?

a- Yes  b- No

Options	Students	%
Yes	27	54
No	23	46
Total	50	100

Table18: Strategies used by teacher to activate students' prior knowledge

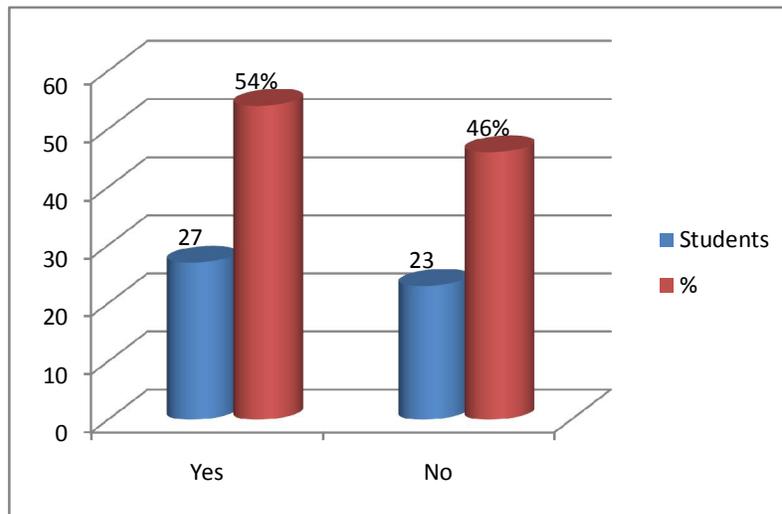


Figure24: Strategies used by teacher to activate students' prior knowledge

According to the data, the majority of students twenty-seven (54%) agree about the teacher uses strategies to activate their prior knowledge unlike some of them twenty-three (46%) their answer was no. This indicates that, Students who agree about teacher uses strategies to activate their prior knowledge are more conscious about the major role of teacher in helping them to incorporate new information into their old information in which teacher provides certain strategies that fit their learning situations and differ from one strategy to another according to the task will be studied.

**Q16:** If yes, what kind of strategies does s/he use?

This question was asked to confirm students' answer 'yes' as previously mentioned in **Q15** towards 'the dominant strategies that used by their teacher in classroom to activate their prior knowledge' Only few number of them answer that question by asking questions before each lecture, making a short activity, teacher tries to give them minutes to brainstorm their ideas about previous information and others indicate to the prediction strategy too.

**Q17:** Does your teacher ask you questions that are central for the overall comprehension of topic? (as what are your ideas about...? ,What did you think about...?)

a- Yes  b- No

Options	Students	%
Yes	41	82
No	9	18
Total	50	100

Table19: Students' attitudes towards teachers' questions for comprehension.

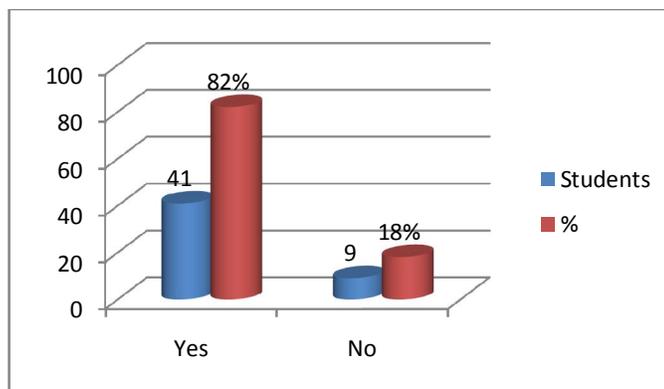


Figure25: Students' attitudes towards teachers' questions for comprehension.

In fact, this question was asked for discern whether teacher uses such this questions which provide clues to help students predict what content include and activating their non-visual information to build the whole comprehension of topic. From data above, almost of them answer yes forty-four (82%) and the rest nine (18%) say no. That is to say, teachers who use these kinds of question as mentioned in that question are seeking for helping students to interpret and extrapolating what they read.

**Q18:** Does your teacher criticize your ideas that you brainstorm concerning new lecture before reading a handout?

a- Yes  b- No

Options	Students	%
Yes	28	56
No	22	44
Total	50	100

Table20: Students' attitudes towards teachers' criticism to their brainstormed ideas.

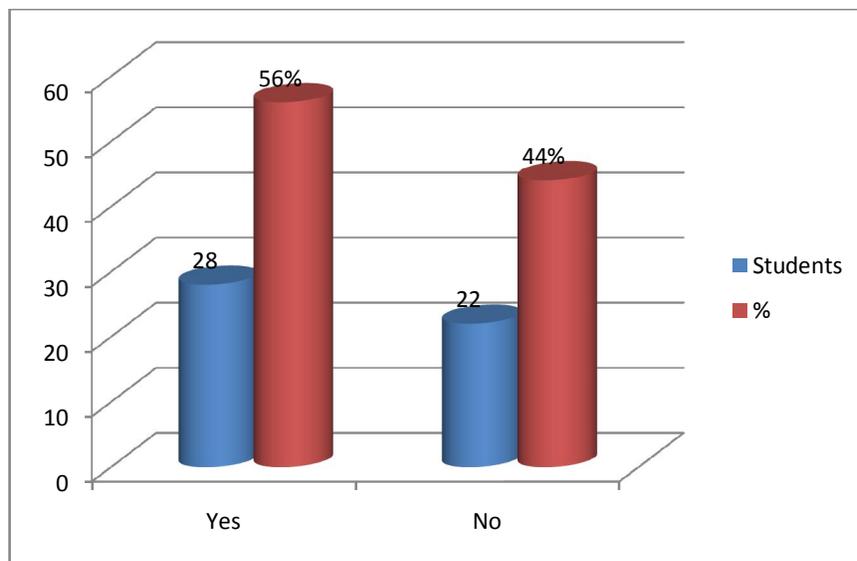


Figure26: Students' attitudes towards teachers' criticism to their brainstormed ideas.

This question was asked for determining if the teacher criticizes and judges students' brainstormed ideas before reading a handout since it may affect on prior knowledge activation process and interrupt students' fleeting thoughts and the results lay out that twenty-eight students (56%) answer yes while twenty-two (44%) choose no. Thus, based on brainstorming rules 'no criticism' since students who are being criticized by their teacher during brainstorming session may disrupt their spreading activation in which they lose the activation of the ideas are associatively related.

**Q19:** Do you like to add any comments or suggestions?

The aim behind this question is looking for their attitudes towards our research; it could be in terms of comments or suggestions. Only few of them answer that question by wishing luck for that work.

## **5. Description the interview of teachers**

For this study, we attempt to use semi-structured interview beside students' questionnaire where the questions are fixed in mind or prepared before at prompt sheet that allow interviewee to diverge into other areas (Macaro,2001).To get closer to what teachers' attitudes and thoughts concerning the role of prior knowledge activation and whether s/he uses certain strategies to help learners plain experiences and connect what they have already known with new information for better comprehension, we have interviewed five teachers individually in teachers' staff room at Biskra university from 3<sup>rd</sup> to 8<sup>th</sup> march,2016 where each interview takes approximately 20 minutes to answer six questions in details.

## **5.1. Analysis and interpretations**

**Question one: Do you encourage your learners to use reading comprehension strategies?( Identifying purpose in silent reading, guessing, building main-idea comprehension and building discourse awareness, etc.)**

**Teacher 1:** Yes, I do it always since these strategies are very important to gain proficiency in text comprehension.

**Teacher 2:** I always encourage them to use reading comprehension strategies.

**Teacher 3:** All the time and I tend to help them to use all the mentioned strategies according to the task.

**Teacher 4:** I use it a lot to help learners understand the main idea of topic.

**Teacher 5:** Yes, I encourage learners to use reading comprehension strategies.

According to the interviewees' answers, we deduce that all of them are encouraging their learners to use reading comprehension strategies because they are quite significant in terms of increasing the learners' knowledge but also to develop perspectives towards the subject matter discussed in a text. As teacher 3 proclaims that s/he encourages them to use these strategies depend on the task requirement and purposes. It means that if the text will be taught was about a narrative, the preferable strategy could be building discourse awareness through recognizing coherent representation, lexical, anaphoric signaling and genre for better comprehension.

**Question two: What, in your opinion, is the role of prior knowledge activation in enhancing learners' reading comprehension?**

**Teacher 1:** I think that prior knowledge helps learners in filling gaps of different items not understood, these items are important for the overall comprehension. In many cases learners need prior knowledge to get involved into any text and break it up into comprehensible pieces easy to understand and use too.

**Teacher2:** It is important because it constitutes the main reference, they can relate to any new data they receive in the foreign language.

**Teacher3:** It eases the way for the learners and it takes them beyond the comprehension, i.e: it leads to activating their thinking abilities.

**Teacher4:** It is very important since learners cannot generally understand new items without a logical link or connection with the previous ones.

**Teacher5:**The role of prior knowledge is a very important factor in enhancing the learners 'reading comprehension .It helps the readers (learners) to interact with the text in a very smart way or with little difficulty. It facilitates the acquisition of vocabulary terms.(learners are able to understand the context in which certain words are used.).It broadens the scopes of the learners and enhances their prediction.

The interviewees' answers revealed that they agree about the importance of prior knowledge which enables the learners to identify the text key points and it is considered as a reference where mentioned from teacher 2, s/he means that prior knowledge contains what the learners store before as past experiences, old information whenever they meet with new data, they try to go back to their prior knowledge (reference) to comprehend what

they obtain in foreign language. Concerning teacher 3, s/ he means by prior knowledge assist learners to go behind what they have comprehend through activating their thinking abilities such as problem solving and self-questioning to integrate new information to ones pre-existing knowledge. All in all, teachers more likely consider prior knowledge activation as a very crucial to improve learners' comprehension of what they read.

**Question 3: Do you use any strategies to activate your learners' prior knowledge?**

**Teacher 1:** Yes, by asking some pertinent questions that are indirectly related to the text. Also, open discussion to test out if learners have background knowledge about the subject material.

**Teacher 2:** Yes, I use brainstorming which helps in activating the short and long term memory to recall previous information and to put the learner in a state of brain activity.

**Teacher 3:** I tend to use the pedagogy of questioning, pre-teaching vocabulary.

**Teacher 4:** Yes, there are numerous different strategies which are usually incorporated in pedagogical materials in connection with reading comprehension as: generating background knowledge using clues to guess meaning; annotating; clustering ideas from reading; taking notes on reading.

**Teacher 5:** Yes, using some visual aids or illustrations as pictures, also questions and answers, identifying title of topic.

In doing so, teachers are definitely agree about employing certain strategies to activate learners' prior knowledge in which they are in some extent using similar strategies as asking questions, using brainstorming, pre-reading tasks, visual aids or illustrations like pictures. Among them teacher 3 utilizes the term pedagogy of questioning that refers to

effective questions that asked by teacher to help learners to leap from one way of thinking to another in terms of finding out what already know about a topic and pre-teaching vocabulary which helps learners to be prepared before reading in terms of teaching them certain vocabularies that are keys for the text will be read. As it can be seen above, teacher 4 provides us with additional strategies that used by him or her in classroom such as annotating text during reading that could be a strategy to identify the main ideas in text by highlighting them as clues to activate learners' prior knowledge to comprehend the content well. The variation of strategies used, it implies that, teachers are aware about the importance of activating learners' prior knowledge through these strategies to give opportunity for learners to comprehend the topic easily and exploit their background knowledge correctly.

**Question 4: What do learners look like while activating their prior knowledge?**

This question aims to determine what the effectiveness of these strategies that mentioned above used by teacher.

**Teacher 1:** They brainstorm ideas; meditation time [giving time to learners to facilitate discussion and find out answers for questions].

**Teacher 2:** They look happy, at ease, comfortable, very satisfied and understanding quickly and answer quickly as well.

**Teacher3:** Usually, interested, motivated, active in their answers and discussions.

**Teacher 4:** When activating their prior knowledge, they do like such these activities [activities based on strategies mentioned above in Q3, teacher 4], it helps them to revise the already acquired knowledge and relate it to the new one.

**Teacher 5:** While activating their prior knowledge, learners are approaching the text with self-confidence and certainty because they interact towards it is very high (affect and concentration). They are like a soldier who enters the battle-field with a strong arm /weapon in hand or as one who have road map. They can also create mental images from their beforehand information they possess about topic.

From what presented above by teachers, we determine that learners' comprehension is increased due to prior knowledge activation through strategies were named previously since all teachers explain how the learners being at good range while activating their background knowledge effectively. This reflects how much the activation of learners' prior knowledge plays major role to make them incorporate new input successfully.

**Question 5: Do you provide any background knowledge before each lesson? And which materials do you use? (From curriculum or your own selection).**

**Teacher 1:** Sometimes, in reality it is not background knowledge but a kind of introductory discussion to probe the general mood of knowledge needed.

**Teacher 2:** I certainly do. I am inclined to use materials out of the programmed cursus because I encourage learners to enlarge the scope of their prior knowledge through the variation of the sources.

**Teacher 3:** Yes, as a way of brainstorming and eliciting ideas from the learners; my own selection; real-life like situations.

**Teacher 4:** I usually start my lectures using questions. The answers or responses are used to assess the learners' background knowledge. I use my own selection and curriculum too.

**Teacher 5:** Yes of course, sometimes the material is taken from the curriculum and sometimes from my own selection.

This question is asked to diagnose the role of teacher in terms of background knowledge s/he provides to learners whether suit learners' needs; from where his or her materials are selected. Almost of interviewees claim that, they do select material from both curriculum and own selection. Simply put, the teacher should be conscious about learners' level of background knowledge whether limited, incorrect or correct through which s/he is able to supply them with an interesting introductory lectures or variation of sources such teacher 1,2,3 and 4 mentioned above as sufficient substance that could be more vital to prepare learners to engage into new lecture.

**Question 6: Are there any factors/difficulties that prevent you from activating learners' prior knowledge for better comprehension of handout's information?**

**Teacher 1:** Generally not, but the teacher needs to master some strategies for use; taking into consideration different kinds of learners and the appropriateness of the strategy.

**Teacher 2:** Yes, poor prior knowledge

**Teacher 3:** It is the poor linguistic level of the learners.

**Teacher 4:** The problem is the crowded classes, it is extremely difficult to develop certain classroom activities such as discussion after you read (one cannot assess learners' background knowledge).

**Teacher5:** The lack/shortage of visual aids or illustration with which the teacher motivates his or her learners to activate their prior knowledge (schemata).

To be clear, this question is asked to know what the obstacles are faced by teachers to prevent them from activating learners' prior knowledge. We sum up, responses are: learners' poor of formal schemata will hinder their ability to access into content schemata through which the insufficient knowledge of language as vocabularies, grammar rules will disrupt them moving towards world knowledge as many researchers advocates that such as Carrell (1983).Teacher 5 insists in the lack of visual aids to present a lecture in interesting way to help learners being motivated and browse inside their prior knowledge in enjoyable way.

## **6. Discussion and recommendations**

The aim of this study is to describe the role of prior knowledge activation in enhancing EFL learners' reading comprehension. Through that, the data above was gathered from questionnaire for students and interview with teachers. The former results coded into figures and tabulations that show certain outcomes discussed in that part. We have noticed that the majority of learners little bit prefer to read in ratio (70%) which implies how they are conscious in some extent to the importance of reading as skill among the rest skills listening, speaking and writing. By reading, learners are filling their head with information and expand their vocabularies to deduce a meaning since no one could comprehend a text with an empty mind; in addition, reading helps learners to be active readers if they read in English from time to time as almost of learners in this study do (60%). It will encourage them to be more knowledgeable in their field and building their background knowledge whether knowledge of language or knowledge of the world since all of that will assist them to be good comprehenders to what the teacher presents in classroom in forms of handouts, lectures, etc. From that, learners are going to employ a model for reading to process a material where the great number opt interactive model (62%) since it requires the implementation of learners' non-visual information and visual

one from a text to infer its implicit message through which learners achieve comprehensible level called inferential one (38%). Moreover, there are other procedures that provide learners with policies to comprehend what they read ; they are strategies of reading comprehension , (50%) of learners use them sometimes to facilitate the engagement to what they read via building main idea of comprehension , skimming, etc. It is noticeable that, (78%) of learners face problem with difficult words which indicate the low vocabulary mastery and its effect on disrupt the comprehension. As well as, learners in order to understand what they read should tap into their prior knowledge, in that case, (68%) of learners agree about the usage of background knowledge and among them (36%) prefer to use content schema since it helps them to comprehend the context well. In doing so , learners to be able to use these knowledge has stored in schema demands strategies which (42%) apply prediction strategy to activate their prior knowledge effectively where the learner anticipates or expects what the content will present. All in all, the majority of learners are with the importance of prior knowledge activation in enhancing their reading comprehension.

The latter seeks to gain more information concerning our study in which teachers' responses were generally agreed upon the whole questions that were asked to. In other words, the fifth teachers encourage their learners to use reading comprehension strategies which help them to ease into the passage they read. Also, all of them admit the great role of prior knowledge activation in reading comprehension through effective strategies to be used in which learners are more concentrate and are more ready to encounter the topic. Beside of that, teachers provide appropriate background knowledge for learners in which the latter are able to comprehend what they read. Therefore, some of teachers claim that they face difficulties when it comes to activate learners prior knowledge, for instance, the poor linguistic level of learners that could be a factor of low grammatical rules mastery and

the very reason is learners are ignoring the major effect of reading as we know reading is the core of skills and to comprehend what you read, you should at least be able to interact with text through acceptable prior knowledge to construct and extract requisite meaning. Also, other teachers say that they are sometimes not able to assess learners' like discussion after reading just to monitor their comprehension. In short, all what presented above have drawn a conclusion that is a confirmation of our hypothesis to this study.

Opportunely to what discussed above, we yield the following recommendations were derived from this study as suggestions to students, teachers and future researchers.

#### 1-Students

- Students should read regularly in order to improve their reading skill and build background knowledge.
- Students have to enlarge their vocabularies zone to be able to recognize unfamiliar words and deduce meaning from context.
- Students should apply various strategies of reading comprehension where strategies used by one student may differ from another according to his or her level.
- Students should get a backing through their acquired background knowledge to comprehend the reading material rather than rely on the teachers' efforts all the time.
- Students should stress on the strategies that aid them to activate their prior knowledge for better content understanding not just decoding the writing material.

#### 2-Teachers

- Teachers should build interest in reading for learners.
- Teachers have to select fitted background knowledge for learners.

- Teachers should activate learners' prior knowledge to think about the content rather than pushing them to read directly.
- Teachers should be well versed concerning the intended implementation of each strategy used by him or her, such as brainstorming strategy refuses criticizing learners' ideas only after brainstorming session where teacher is able to evaluate learners' ideas.
- Teachers should take into consideration learners' background knowledge in which they could ensure suitable strategy for them.
- Teachers should be conscious about the strategy that is used before, during, after reading.

### 3-Researchers

- Researchers can conduct this study in high school in which findings will be more satisfactory.
- Researchers can conduct research in one of the strategies discussed in this study.
- Researchers can conduct research about what we have noticed from the findings was learners' lack of comprehension caused unfamiliar words. It could be enhancing learners' vocabulary mastery in reading comprehension through deducing meaning of unfamiliar words from the context.
- Researchers can conduct research concerning the use of visual aids in classroom to improve EFL learners' reading comprehension.

### **Conclusion**

This chapter provides answers for the questions that guide our work in terms of finding out confirmation to our hypothesis. Results are broadly presenting a positive attitude towards this study whether questionnaire designed for students or teachers' interview. In other words, the findings set out the straightforward acceptance through

which students' views concerning prior knowledge activation in enhancing EFL learners' reading comprehension where the majority answers support our assumption, even teachers' responses demonstrate their great role to improve learners' reading comprehension in which they provide them with fitted background knowledge and an appropriate strategy to activate their pre-existing knowledge.

## **General conclusion**

As the title of this study presents, the role of prior knowledge activation in enhancing EFL learners' reading comprehension. It serves to three chapters where the first two chapters dealt with literature review of reading comprehension and prior knowledge activation as follow. Furthermore, the last chapter presents analysis of students' questionnaire and teachers' interview, the crux results of this study is that there is positive association between the two variables in which the more learners activate their prior knowledge, the more they will be able to comprehend well. Basically, learners cannot understand what they read without previous input that assist them to extract inclusive meaning through which they interact with text to process writing material using their background knowledge and being activated via various strategies presented in this study applied by teachers in classroom for sake of improving learners' comprehension and his or her a great role in doing so. Consequently, there is pertinent relationship between prior knowledge activation which induces the incorporation of new information into previous one to comprehend what they read.

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## Appendices

### Appendix A:

#### Questionnaire for students

#### Questionnaire for students

This questionnaire attempt to gather comprehensive data about students' attitudes towards the prior knowledge activation in enhancing their reading comprehension as a part of a master dissertation. Your answers will be of a great help. The answer of the following questions will be by ticking the appropriate box or by making a full statement if necessary.

Please answer the following questions:

#### Section 01: Personal Background Information

##### 1-Gender

b- Male

b- Female

2-Age .....years old

3-Your choice to study English was:

b- Personal

c- Imposed

4-Do you consider your level in English?

b- Very good  b- good  c- Average  d- Poor  e- Very poor

## Section 02: Reading Comprehension

5-Do you like reading?

a-A lot  b-A little  c- Not at all

6. How often do you read in English?

b- Frequently  b-Sometimes  c-Rarely

7- Which model do you like to use when reading?

d- Bottom- up model (focus on linguistic structure)

e- Top – down model (using your prior knowledge )

f- The interactive Model (focus on both text and prior knowledge )

8-Which of these levels you accomplish through reading comprehension?

e- Literal level (the ability of comprehending explicit information of text)

f- Inferential level (the ability of going beyond written text and get meaning )

g- Critical level (the ability of evaluating what you have read)

h- Creative level (the reader able to take information from text and create new ideas)

9- How often do you use reading comprehension strategies (identifying purpose in

Reading silent reading, guessing for meaning, building main idea comprehension,

Skimming ...etc.)

a- Frequently  b-Sometimes  c-Rarely  d-Never

10- What makes a text difficult to comprehend for you?

a. When it contains difficult or unfamiliar words

- b. When you lack aids for reading (relevant experience,related books..etc)
- c. Other

**Section 03: Prior knowledge activation**

**11-** Do you use what you know before as background knowledge to understand when reading ?

- a- Yes  b-No

**12-** If yes, what kind of background knowledge do you use? Why?

- d- Formal schema (as knowledge about a language ,conventions )
- e- Content schema (as knowledge about a people,culture and universe)
- f- Both of them

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**13-** Do you agree that prior knowledge activation has a great importance in reading comprehension?

- a- Strongly agree  b- Agree  c- Neither agree nor disagree
- d- Disagree  e-Strongly disagree

**14-**which kind of these strategies you use to activate your prior knowledge?

- a- Answering questions that you have already asked about.
- b- Using KWL (Know. Want to know. Learned) strategy.
- c- Using semantic mapping
- d- Using prediction strategy (guessing)
- e- Using brainstorming

15- Does your teacher use certain strategies to activate your prior knowledge?

a-Yes  b- No

16- If yes, what kind of strategies do he /she use? .....

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17-Does your teacher ask you questions that are central for the overall comprehension of topic ? (as What are your ideas about...? , What did you think about ...?)

b- Yes  b- No

18-Does your teacher criticize your ideas that you brainstorm concerning new lecture before reading a handout?

a- Yes  b-No

19-Do you like to add any comments or suggestions?

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*Thank you for your collaboration*

*Seloua Yakhelef*

## **Appendix B:**

### **Teachers' interview**

- 1- Do you encourage your learners to use reading comprehension strategies?  
(Identifying purpose in silent reading, guessing main-idea comprehension and building discourse awareness ...etc.)
- 2- What, in your opinion, is the role of prior knowledge activation in enhancing learners' reading comprehension?
- 3- Do you use any strategies to activate your learners' prior knowledge?
- 4- What do learners look like while activating their prior knowledge?
- 5- Do you provide any background knowledge before each new lesson? And which materials do you use? (From curriculum or your own selection).
- 6- Are there any factors /difficulties that prevent you from activating learners' prior knowledge for better comprehension of handout's information?

## **Appendix C:**

### **Glossary**

**Associative priming:** McDonough and Trofimovich (2009) define associative priming as a “Form of semantic priming for prime and target words that are close semantic associative of each other but are not members of the same semantic category. For example, associatively related pairs of words are sugar-sweet and grass-green.” (p. 62).

**Psycholinguistic guessing game:** Birch (2007) defines psycholinguistic guessing game as a “the notion that readers use a small number of textual cues and their own knowledge to “guess” what the text message is.” (p. 7).

**Redundancy in language:** Smith (2004) defines redundancy in language as “Information that is available from more than one source. In reading may be present in the visual information of print, in the orthography, the syntax, the meaning, or in combination of these sources .... Redundancy must always reflect non visual information.” (p. 329).

**Spreading Activation:** It refers to semantic networks that present associative concepts in which one concept activated whether being seen or thought about will spread the activation to other related concepts. (Watts, Cockcroft & Duncan, 2009, p.368)

## ملخص

القراءة هي مهارة تعليمية لا غنى عنها والتي تتجلى في تفاعل ما يراه الطالب وما يعرفه من أجل إستيعاب ما يقرأه، و الدراسة الحالية تهدف إلى تعزيز دور تنشيط المعرفة السابقة في تحسين فهم القراءة لدى طلبة لغة إنجليزية كلغة أجنبية. من خلال هذه الدراسة اقترحنا إستراتيجيات مختلفة كطرح الأسئلة ، إستراتيجية (أعرف ،أريد أن أعرف،تعلمت)، إستراتيجية العصف الذهني وغيرهم من أجل فهم أفضل. و بذلك فرضيتنا تتمثل في أن تنشيط المعرفة السابقة لدى الطلبة قد يحسن فهم ما يقرأ ولهذا قدمنا استبيان لطلبة أولى ما ستر لغة إنجليزية والذي تمت الإجابة عنه وبالإضافة إلى حوار مع بعض الأساتذة لدورهم في تنشيط المعرفة السابقة لدى الطلبة وتسهيل إستيعاب النصوص . و في الأخير تبين لنا أن كل من تنشيط المعرفة السابقة والفهم في القراءة يرتبطان ارتباطاً وثيقاً.