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# <u>Title</u>

The Impact of Activating Schematic Knowledge on L2 Reading Comprehension.

The case of Second year LMD Students of English at KMUO.

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# **DEDICATIONS**

I would like to dedicate this work to the soul of my parents

(ALLAH's mercy be upon them)

to my second mother

to my wife

to my brothers and sisters

Djouahi. M

I would like to dedicate this work to my parents

my wife

my children

my brothers and sisters

Remoune. A

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# Abstract

The present study aims to show the impact of activating schematic knowledge in reading comprehension on second year LMD students of English at KMUO. It identifies and analyses the problem of reading comprehension faced by students whose schematic knowledge is not activated. Students find difficulties in dealing with texts especially when their schemata are not well activated. This study is an attempt to explore the extent to which activating schematic knowledge helps students to develop their reading comprehension. It is hypothesized that students' schemata activation will enhance their reading comprehension. The data were collected using a pre and a post-test and a questionnaire administered to a total number of 40 students. The findings were analysed using a descriptive method. The results of this study revealed that students whose schematic knowledge is not activated find difficulties to understand texts. The study recommends that teachers should take into account this discourse component, *viz* schematic knowledge and how to activate it in reading comprehension and in the learning process in general.

Keywords: schemata, activating schematic knowledge, reading, reading comprehension.

# **List of Abbreviations**

- **EFL**: English as a foreign language.
- **ESL**: English as second language.
- L1: first language.
- L2: second language.
- NL: native language.
- **SLA**: second language acquisition

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## Introduction

Most teachers and students consider reading as the most important skill of the main four skills (listening, speaking, reading, and writing) in SLA. This is true, because without steady reading, L2 learners cannot develop the other skills fluently. Neither can they grasp reading material. It is for these two stated facts that effective L2 reading is considered as critical. Grabe and Stoller (2001) state that reading is the principal means for independent learning, whether the purpose is performing better on academic tasks, learning more about subject matter, or improving language abilities. Likewise, Fairbairn and Fairbairn (2001) state that reading underpins much of the academic work of a student.

Practitioners in EFL education should be concerned with the appropriate methods that can improve the learner's reading skill of the learner. They should, also, pay more attention to the techniques that are likely to make the reading tasks easier for their learners. Understanding a reading material could not be mastered without a prior knowledge in the process of the reading skill. This knowledge will pave the way to a better understanding of a given reading product. But how does this prior knowledge also called schematic knowledge be activated?

The current study tackles this subject and sees if the activation of this knowledge has a positive impact on the L2 reading competence and whether an L2 learner would benefit from this activation.

# **1.1. The Research Problem**

Because reading is important for many EFL students, it is essential to find ways to make their reading process quicker and more efficient. Some learners are not able to use and activate their schematic knowledge which makes their reading process slow and tedious.

## 1.2. The Purpose of the Study

This work aims to study the effect of schematic knowledge on L2 students' reading comprehension. Moreover, it endeavours to explain how L2 teachers activate students' prior knowledge to enhance their reading comprehension. It also aims at examining the correlation between prior knowledge and development reading comprehension.

# **1.3.** The Objectives of the Study

To carry out this research we set the following objectives:

- 1- to explore the impact of schemata activation on L2 students' reading comprehension.
- 2- to find out how L2 teacher activate schematic knowledge to improve student's reading skill.

## **1.4. The Research Questions**

The present inquiry attempts to provide appropriate answer to the following questions:

- 1- What is the effect of activating students 'schematic knowledge on L2 reading comprehension?
- 2- How does a teacher activate L2 students' prior knowledge to enhance their reading skills?

# 1.5. Research Hypothesis

In this study we will try to examine the relationship between schematic knowledge activation and the enhancement of L2 reading comprehension. Thus, we hypothesize that activation of second language learner's schemata about material to be read is likely to enhance their reading comprehension.

#### **1.6. Literature Review**

A number of researchers and authors treat the reading comprehension aspects and problems. They emphasize the role of schemata activation for enhancing reading comprehension and they find strategies as to how to use learner's already existing information about a given text.

Carrell (2006) examines the simultaneous effects of both cultural specific content schemata and formal schemata; she wanted to know which one is more important in affecting reading comprehension. She concluded that texts with familiar content, even if in unfamiliar rhetorical form, are relatively easier than texts in familiar rhetorical form but with unfamiliar content.

Alderson (2000) points out that during reading process; we are engaged in a great deal of mental activity. Part of this activity is automatic, part of it is conscious. He speaks, also, about the influence of schemata by which readers activate what they consider to be relevant existing schemata and map incoming information onto them (ibid). He argues that schemata help a lot in reading top- down wards (ibid).

Winfield and Barnes-Felfeli (1982) observes a class of twenty intermediate level ESL students, half of whom were Hispanic; the other half was Arabic, Hebrew, Navajo, Greek and other non-native speakers of English. Participants were asked to read a passage of two translated texts: Don Quixote and one on the Japanese Noh theatre. The subjects were asked to read the passages and then they were allowed 15 minutes to write about everything they could recall from the text. Hispanic students scored below the others on Noh text but much higher on Don Quixote. The reason, according to the researchers, is that the familiar material increase fluency.

Van Dijk (2010) focuses more on the role that knowledge plays in producing and understanding meaningful and coherent sequences of sentences. At each moment in discourse processing, language users need to activate a relevant portion of their knowledge. People participating in a conversation or reading text, acquire new knowledge which needs to be integrated into what they already know. Knowledge is stored in the long term memory; text readers have to activate that knowledge to produce or understand sentences.

Widdowson (1990) makes difference between schematic knowledge and systematic knowledge. Schematic knowledge refers to socially acquired knowledge, whereas systematic knowledge is the knowledge of the formal properties of language, involving both its semantic and syntactic systems. In native language learning each knowledge supports the other. However, in foreign language learning, learners' schematic knowledge is associated with their culture and their mother tongue. From the beginning, EFL learner is affected by his traditions, religion, rituals...For example, a child of the Anglo-American world thinks of dog as man's best friend; Middle Eastern children consider it as dangerous and dirty.

## **1.7. Limitations of the Study**

In conducting the study, we have faced some problems. First, students may not answer seriously the test questions and the questionnaire. Second, one or even two tests are not enough to measure effectively the impact of schematic knowledge activation on L2 reading comprehension. Third, many problems that can hinder students' reading comprehension (lack of motivation, lack of proficiency, lack of vocabulary...) and can affect negatively the ultimate results. Finally, this study was conducted at one level and one university. It, therefore, cannot be generalized unless the same findings are found by other investigators using the same research steps and tools.

## **1.8.** Methodology

This study is conducted on a number of 40 second year LMD students of English at KMUO.Its main purpose is to investigate the degree of readers' comprehension if their prior knowledge is activated before reading a text.

Due to the nature of the problem, the study adopts a descriptive method. According to Singh (2006), descriptive research is concerned with the present case and attempts to determine the status of the phenomenon under investigation. William (2011) states that descriptive research depends on observation as a means of collecting data and that 'observation' can take many forms, since questions can be distributed, people interviewed. A questionnaire will be administered to 40 students after a test. The latter will be split in two phases: pre and post-test. In pre-test, students' schematic knowledge is not activated; but in post-test the teacher activates students' schematic knowledge using one of schematic knowledge activation strategies. The data collected was analyzed following a descriptive method. At the end, conclusions drawn and propositions made well. are some are as

#### Introduction

Schematic knowledge plays a great role in reader's mind to understand and to construct a meaningful representation of a text. All types of schemata (formal, content and cultural) are necessary for a complete understanding of written texts in a reader's second language (L2). Research on the theory of schema had great impact on learners' reading comprehension in second and foreign language. The role of schema in the reading process provides insights into the cause of learners' failure to comprehend texts.

Learners bring beliefs, life and experiences to the classroom that influence what and how they learn. At times, their schematic knowledge facilitates learning and affects how they perceive new information and helps them to understand and appreciate texts. Teachers also must take into account the knowledge on which any written text is based, and the fact that if a reader is not actively using his/her background knowledge, a significant part of reading process is not taking place. Teachers, in teaching students to activate and use their schematic knowledge, are helping them become better readers.

# 2.1. Definition of Schemata

The term schematic knowledge is used synonymously with other terms such as prior knowledge, background knowledge, previous knowledge, pre-existing knowledge, person's whole knowledge, non-visual information, old knowledge and already acquired knowledge.

Bartelett (1932) defines a schema as "an active organisation supposed to be operating in any well adopted organic response" (p. 201). Schemata can represent knowledge at all levels from ideologies and cultural truths to knowledge about the meaning of particular word (Rumelhart,

1980). A schema (plural schemata) describes an organized pattern of thought or behaviour that organizes categories of information and the relationship among them (DiMaggio, 1997). People use schemata to organize current knowledge and provide a framework for future understanding (Nadkarin & Narayanan 2007). Smith (2004:13) points out that the knowledge that we must have to understand written language must be a part of our long-term memory. He called that knowledge "nonvisual information" contrasting it with "visual information" which arrives through reader's eyes (ibid). Davies (1995) posits that reader exploits many types of knowledge which are used in disorganized way; prior knowledge is the sum of those types of knowledge that helps reader to understand and interpret texts.

Schema can also be defined as:

• Schemata serve a crucial role in providing an account of how old knowledge interacts with new knowledge in perception, language, thought and memory (Brewer & Nakamura, 1984).

• Schema is the already knowledge stored in the memory functions in the process of interpreting new information and allowing it to become part of the knowledge store (Anderson and Pearson, 1984).

• Not only do schemata influence how learners recognize information, but also how they store it (Harmer, 2001).

• A mental model of aspects of the world or of the self that is structured in such a way to facilitate the processes of cognition and perception (Collins Dictionary, 2008).

#### 2.2. Schema Theory

Schema theory is the role of prior knowledge in language comprehension (Carrel & Eisterhold, 1983). Bartlett (1932) and Rumelhurt (1980) posit that text does not carry meaning by itself; readers should retrieve or construct meaning from their own background knowledge. Schemas or schemata are cognitive constructs by which information is organized in our long-term memory (Widdowson, 1983). Schema theory is based on the belief that "every act of comprehension involves one's knowledge of the world" (Anderson et al.1977, cited in Carrell & Einsterhold, 1983, p.73). Similarly Smith (2004, p.14) states that:

Everything we know and believe is organized into a personal theory of what the world is like, a theory that is the basis of all our perception and understanding of the world, the root of all learning, the source of hopes and fears, motive and expectancies, reasoning and creativity. And this theory is all we have. If we make sense of the world at all, it is by interpreting our interactions with the world in the light of our theory. The theory is our shield against bewilderment.

According to schema theory, comprehending a text is an interactive process between the reader's background knowledge and the text (Carrell & Eisterhold, 1983). Efficient comprehension requires the ability to relate the textual material to one's own knowledge (ibid). Comprehending words, sentences, and entire texts involves more than linguistic knowledge (ibid). Alderson (2000) argues that during reading process, readers integrate the new information from the text into their pre-existing schemata.

Tuckey and Brewer (2003) point out that schemata can affect and impede the uptake of new information (proactive interference), such as when existing stereotype, biased discourses and expectations, and because an individual believes more what exist in his/her schema, he or she may see or remember something that has not happened. For example, if a well-dressed business man draws a knife on a vagrant, the schemata of onlookers may (and often do) lead them to remember the vagrant pulling the knife (ibid).

### 2.3. Schema Role

Schemata play an important role in language and linguistic processing by helping readers to understand and interpret texts. Brewer (1977) reports that schemata constitute an effective means used by readers to comprehend information which may be explicit or implicit in text; for example, the sentence " The karate champion broke the cinder block" does not explicitly inform us about the tool that the karate champion used to break the block. Nevertheless, our schema links the verb break to karate champion which leads us to infer that the tool for breaking the block was the champion's own hand. Woolfolk (2004) argues that schema is modified and enlarged each time the reader starts reading. Information processing based on linking the new information to what exists in one's already schema; reader sores it and calls it when it is needed (ibid). Ambrose, Bridges, DiPerto, Lovett and Norman (2010) argue that learners bring their schematic knowledge to classroom; this knowledge influences their understanding and interpreting what they are learning. If learners' background is activated at the appropriate time and by the appropriate way, it provides a strong foundation for building new knowledge (ibid). But if that schematic knowledge is not activated appropriately it can hinder new learning (ibid). Figure 2.1. shows this relationship.

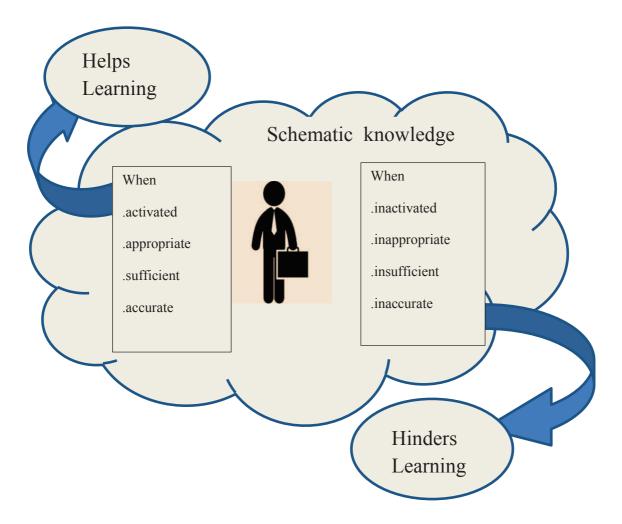


Figure 2.1.: Qualities of schematic knowledge that help or hinder learning.

(Adopted from: Ambrose, Bridges, DiPerto, Lovett and Norman, 2010).

Carrell & Eisterhold (1987, p.220) state that:

The role of background knowledge in language comprehension has been formalized as schema theory. Any text, either spoken or written, does not by itself carry meaning. Rather, according to schema theory, a text only provides directions for listeners or readers as to how they should retrieve or construct meaning from their own previously acquired knowledge, this previously acquired knowledge is called the reader's background knowledge, and the previously acquired knowledge structures are called schemata.

Kramsh (1998) argues that knowledge about the world which people acquired is organized and used to understand the world around them and to predict interpretation and relationships concerning any new information, events and experiences that they face along their lives. Frames or schemata are the general structures of expectation established in people's minds by the culture they live in (ibid). Alderson and Urquhart (1984:54) point out that: "schemata provide the basics for filling the gaps in a text". This means that it serves as stock of information to be used in filling what is missing in the text. Anderson, Joag-dev and steffensen (1979) posit that when a person reads a story, it's his schematic knowledge (background knowledge) that provides the framework for understanding the setting, the mood, the character and the chain of events. In particular, an individual who reads a story that presupposes the schemata of a foreign culture will comprehend it quite differently from a native, and probably will make what a native would classify as mistakes (ibid). Lewis (1991) believes that a child who does not yet understand heat and temperature cannot comprehend quickly the difference between the hot desert and the warm wool; it takes more time for this understanding to appear.

### 2.4. Types of Schemata

It is important at this juncture to distinguish three types of schema: formal, content and cultural schema. In fact, all schemata are used in parallel. It means that this division of labour is more theoretical than real. The learner's formal, content and cultural schemata interact to facilitate extracting meaning.

# 2.4.1. Formal Schemata

Formal schema is "abstract, encoded, internalized, coherent patterns of meta-linguistic, discoursed, and textual organization that guide expectations in our attempts to understand a meaningful piece of language" (Carrell, 1983). Formal schema is the knowledge a learner has about the "rhetorical organizational structures of different types of texts" (Carrell, 1987). Is a particular text a persuasive essay or informal letter from a friend? When a reader recognizes that a piece of writing is persuasive essay and not a descriptive essay, he is using formal schema (ibid). Carrell and Eisterhold (1983) point out that formal schema is one sort of prior information readers need to have. Knowledge type which is linked to formal schema is language knowledge (ibid). Formal schemata include the knowledge about syntax, vocabulary, cohesion and text structure or rhetorical organization of different types of text, i.e. knowledge of how texts are organized (Alderson, 2000). The main part that constitutes the formal schema is the linguistic sources which include vocabulary knowledge, syntax, grammar, meta-linguistic knowledge and genre knowledge (ibid). These features of formal schemata may present hurdles for EFL students while they read. For example, long sentences can impede students' reading comprehension.

#### 2.4.2. Content Schemata

According to the schema theory, it is not enough for the reader to possess only prior linguistic knowledge (linguistic schemata) and level of proficiency in the second language, but the reader's prior background knowledge of the content area of the text (content schemata) are also important (Carrell, 2006). Content schema is the background knowledge a reader brings to a text (ibid). Content schemata have to do with the amounts of information that a learner has acquired through his lifetime of direct and indirect experiences. When we say that a reader has content schema about a text this means that he has knowledge about its topic, culture knowledge ( being that of native or the target language) and world knowledge (ibid). Alderson (2000) reports that: "if one knows absolutely nothing about the topic of a text, one will find it difficult to process". A learner's content schemata will be profoundly influenced by his mother

culture. Also, a FL or SL reader will find difficulties in tackling texts in which he lacks the target culture (ibid). Post and Rathat (1996) state that "research has demonstrated that unfamiliar religious, folklore and literary information can impede students' learning of linguistic information used to convey the content". Another source of knowledge which is a part of content schema is called script or event. It is defined as a schema of sequences of events in everyday situation (Woolfolk, 2004).

## 2.4.3. Cultural schemata

Cultural schema has to do with the knowledge that we store in our memory through experiences in our own culture (Nishida, 1999). It contains information about behavioural rules, traditions, people around us and general information about familiar situations (ibid). Cultural schema is shared by members of society or cultural groups rather than individuals (Garro, 2000). Turner (1994) points out that when people interact with people from different cultures, they expect them to behave like members of their own culture; when their expectations are not achieved, they feel cultural differences because cultural schema differences create cognitive and behavioural differences. Oller (1995) posits that cultural schema helps readers to construct text through referring to personally and culturally relevant scripts. Such texts entail involvement with sociocultural relations, events and places where readers can find familiarity and easiness to understand texts (ibid).

All that is mentioned about types of knowledge stored as formal, content or cultural schema shapes the whole block of prior knowledge store. Readers need these three types of schemata to ensure comprehension. Also their absence is likely to hinder reading process and cause miscomprehension, misinterpretation, misconception and ignorance of material to be read.

#### 2.5. Schema Evolution

Schemata are not constant. This shows that a learner's cognitive development is an ongoing process. They are always changing. Nuttal (1996) states that: "a schema grows and changes throughout our lives, for as long as we retain the capacity to learn." Existing schemata may be changed or modified by new experiences, experiences derived from reading or from our daily affairs (ibid). Davies (1995) points out that schema is not stable; it is in a continuous change. This change is ascribed to time and experience. When a person acquires new information through experience and reading, his schemata grows and changes to fit these incoming data (ibid). Matthews (2002) posits that schema may change because cannot handle new data which are against the existing schemata. Since most people generally don't change their schemata easily, this modification or alteration may take great deal of time and great deal of evidence (ibid). Barnett (1999, p.32 cited in Mirhassani & Khosravi, 2002) states that "if the new textual information does not fit into a reader schemata, the reader misunderstands the new material, ignores the new material or revises the schemata to match the facts within the passage". A good example of this evolution is mentioned in Comprehension and Instruction Pressley, M (2002, p.9): about how a child develops his knowledge about dogs. At his early age his ideas about dogs are very simple. He just thinks that a dog is a white furry pet with which he spends amusing time. As a child gets older, he gains more experiences about different types of dogs in different settings. His schema about dogs is widened and he will discover many things: different type of dogs with different colours; where dogs live; what they eat and how people take care of them. Thus, the experiences that a child acquires progressively over the time make his dog schema modified and refined. By the same token, children's schemata about the world evolve.

#### 2.6. Discourse and Knowledge

The philosopher Plato defined knowledge as "justified true beliefs". Van Dijk (2010) defines knowledge as shared beliefs of an epistemic community. It means that knowledge is beliefs which are consented by members of any community; they may be true or false; for instance, in the past people thought that Earth is flat. It was knowledge in that time but for us today it is false belief. Knowledge is spread through talk and text; it may be true or false (ibid). Beliefs have no truth values unless they are discursively affirmed (ibid). Knowledge is not only mental, but also social; it is our society that influences and shapes our knowledge through discourse (kreckel, 1981). Indeed, without such a social basis, knowledge would be no more than personal belief. The social dimension of knowledge is expressed in different notions among them: consensus, agreement and common sense (Clark, 1996). Van Dijk (2003) states that to produce and to understand discourse we need a huge amount of knowledge. Also to acquire and convey knowledge we presuppose discourse (ibid). Indeed, knowledge is always expressed in text and talk. Knowledge is expressed, conveyed, accepted and shared in discourse and other forms of social interaction. Moreover, social institutions such as government, media, schools, universities and laboratories also are another means that knowledge is acquired and spread through it (ibid).

Knowledge alone is not enough to understand discourse; context also plays a great role. Sivincki (1993) sees that words must be in their context to be understood. For example, if we ask learners what is the first image that you associate with the word "cardinal"? Some learners think immediately Roman Catholic priest, some of football, baseball, birds or the red color. Because the absence of a context, learners make association depending on their prior knowledge and the interpretation of the word "cardinal" is dependent on what they bring to the situation (ibid). Meaning is also important. Woddowson (1979) deals with the problem of meaning in relation to interaction. He believes that text is not a set of direction for conducting interaction and meanings are, they are not in the text, but they are extracted from the discourse that is created from it by the reader. Thus, for him the reader is a central part of reading process.

## 2.7. Schema and Discourse

Bartlett (1932) believes that our memory of discourse was not based on straight reproductions, but was constructive. Building a mental representation is based on the constructive process which also is constructed through using information from the met discourse and knowledge from past experiences linked to the discourse at hand (ibid). According to Van Dijk (2003) people with little or lots of information they make up discourse in all the possible situations till they reach to the situation of total cognitive control. The lack of information made some people abstain from talking and understanding. Schema is an essential element in the process construction and performance of discourse. Producing and comprehending discourse (written or spoken) not only involves the processing of meaning and action, but presupposes vast amounts of knowledge (ibid).

#### 2.8. Strategies to Activate Schematic Knowledge in Reading

Prior to label how to activate the schematic knowledge, it is essential to define strategy. For that we have adopted Van Djik's view of strategy where he states that:

<sup>...</sup>the notion of strategy has been used in many studies in cognitive science, it is very rarely defined. As a metaphor it has been borrowed from military science (Greek strategia means 'military command'), where it is used to denote the organization of military actions to reach a particular military goal. The term has also been

used in political science, economics, and in other disciplines involved with complex, goal-directed actions. Simon (1967) has used the term "design," which seems to lie between our notion of strategy and our notion of plan. 'The term strategy has been used extensively in the theory of decision making (e.g., by Edwards & Tversky, 1967; Lee, 1971; and Moore & Thomas, 1976). In all those cases the concern is not matter with reaching a goal, but with reaching it in some optimal way (e.g., quickly, effectively, or with low cost). Van Dijk (1983, p 62)

We can deduce that strategy generally includes setting goals, defining activities to achieve the goals, and mobilizing resources to execute these activities. A strategy, in short, describes how the goals will be achieved by definite means.

## 2.8.1. Answering Questions

The first and the easiest way to activate one's schemata is by asking questions to be answered by readers. These questions are given before readers start reading. In their attempts to find answers, readers will be activating their prior knowledge. Once they are inside the text, they meet some knowledge which was already activated. The vital role to be played by these questions is that they invite the reader to guess about the text, its content, how it starts and how it ends. These questions can also be asked while reading and serve to guide the reader.

Moreover, having questions in mind to be answered helps readers to pay more attention to the meaning conveyed by the author, which is very helpful in getting a deep understanding of the text at hand and in keeping readers' motivation to read. It is also a way to aid readers to connect their prior knowledge with what they meet as new in the text.

#### 2.8.2. Predictions

Prediction is also a useful strategy to activate readers' prior knowledge before and while reading. Manya and DeLeew (1965: 118) state that: "Anticipation means that the readers' mind

is ahead of his reading, preparing the way". That is, the reader before and while reading puts hypotheses or states deductions in an attempt to make himself ready to confirm these hypotheses .Once the reader hypothesizes about what he is going to find in the text, he is bringing to the surface his already existing knowledge. This means that the reader does not rely only on the text but brings from his own storage and finds links to enhance comprehension. To do this Dutta (1994) argues that the title helps the reader to predict the topic of the text.

Alves and Silveira (1991) see that foreign language readers may use their native language to go with difficult predictions. Another element which is used in prediction to activate readers' prior knowledge is the key words. Some words in a text are seen as key words. That is to say, they help to expect the theme of the text. Dutta (ibid) argues that these key words are clues to the meaning. Pictures also may be sources of prediction. Through these pictures readers may make their guesses about what they are likely to find in the text. However, pictures, graphic organisers as is the case with titles, are not always a source of successful predictions of the text subject. They might be misleading factors which cause wrong expectations.

#### 2.8.3. Debate & Discussion

Debate and discussion are one strategy among the other strategies which activates readers' prior knowledge. They incite readers go into a class or a group discussion about a theme before engaging in the text. This is a very useful strategy which helps the readers to exchange their stocks of knowledge. Also, through debate, a reader who has little experience with the text topic will add chances to enlarge his schema and be best prepared to read it. Therefore, every reader can benefit from the other experiences to enlarge his knowledge. Ideas developed through debate may be of a direct relevance to the text. Moreover, debate, as is argued by

Nuttall (1996), is a good way of involving the reader with the topic and exposing him to different points of view. That is to say, debate activates, stimulates him and invites his basic motivation.

#### 2.8.4. Brainstorming

According to Ontario Curriculum Unit Planner (2002) brainstorming is a group process for generating questions, ideas, and examples. It is used to illustrate, expand, or explore an essential idea or topic. Brainstorming involves students' sharing and collaboration whatever information comes to mind and recording every idea, without making judgments about the material being generated (ibid). Osborn (1953) defined brainstorming as: "An organized way to allow the mind to produce ideas without getting bogged down in trying to judge the value of those ideas at the same time".

Feather (2004 p.82) points out that brainstorming provides plenty of materials for making prediction; it enhances the activation of readers' schematic knowledge so that they will be able to know in advance about ideas, vocabulary, culture, grammatical features and genre structure mostly encountered in the text to be read. Allen (2008) argues that when students talk about a topic, they will understand it better because their brains not only mentally process the information but also it processes it verbally.

Tiarina and Yuli (2013) mention some advantages of using brainstorming in reading comprehension:

- It allows working in group. Learners share their ideas in groups and start to discuss the answer together.
- It activates students' schematic knowledge. This strategy makes learners recall their knowledge and think seriously about what they know about the topic.

- It can increase learners' motivation, focus and participation.
- Learners do not feel bored while they doing this activity.
- Learners whose level is low in reading skill proficiency will get help from the group.

The figure bellow illustrates an example of brainstorming activity about word map (adopted from: http//: www.beaconlearningcenter.com).

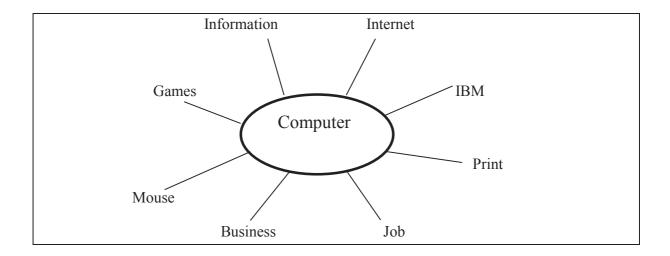


Figure 2.2. An Example of brainstorming about the word 'Computer'.

# 2.8.5. Media

A medium (singular of media) is a channel of communication. It is derived from the Latin word meaning "between". It refers to anything that carries information between a source and a receiver. Definition of media focuses on the use of technologies, concepts and contexts (Dewdney & Ride, 2006).

Carney and Levin (2002) point out that the mnemonic pictures enhancing mechanisms that improve readers' recall of text information. These illustrations seem to be useful for both younger students and middle-age adults' recall of concrete text material (ibid). Peeck (1993) highlight that pictures help increasing motivation, focusing attention, depth of processing clarification of text content (as cited in Carney and Levin 2002). Clark and Lyons (2004) state that a visual mnemonic provides many important cues, so that learners link facts to its meaning of appearance to understand effectively a given topic. According to Morris (1962) the function of technological media is to help the teacher by enhancing his effectiveness in the classroom. Educational media are both tools for teaching and ways for learning, and their function is to serve these two processes by enhancing clarity in communication and diversity in method.

Tomalin (1991) argues that the use of video in the classroom is highly motivational for young students. They are encouraged to acquire new words and phrases while they are learning about the target culture and they are receiving new input of the target language. Kang (2004) claims that media help learners to bring prior knowledge to a conscious level in the form of an organizational structure. It helps enhancing comprehension and learning, as well as eliciting, explaining and communicating information.

## 2.8.6. KWL (know, want, and learned) Strategy

KWL (Know, Want to know, Learned) strategy is one of teaching and learning strategies used mainly with information text (Ogle, 1986). Its purposes are more diverse. It helps readers to bring previous knowledge of the topic of the text, set a goal for reading, monitor their comprehension, and evaluate their comprehension of the text and increase ideas beyond the text (ibid). Ogle (1986) develops the strategy for aiding students to access important background information before starting reading. He (ibid) argues that KWL strategy (accessing what I know, determining what I want to find out, recalling what I learned) combines numerous tasks. Both students and the teacher are involved in oral debate. They reflect on their knowledge about a topic, brainstorm a list of ideas about the topic and identify categories of information. Next, the teacher helps clarify gaps and inconsistencies in students' knowledge, and students create individual lists of things that they want to learn about the topic or questions that they want to answer about the topic. In the last step of the strategy, students read new materials and share what they have learned (ibid). Jablon and Wilkinson (2006) claim that KWL strategy helps learners to realize that their schematic knowledge and interest are of significance while they are reading. Hence, readers will realize that these two factors are the keys to their success while reading. Accordingly they will value the strategy and try to practise it individually outside classroom without their teachers' assistance. Table 2.1 below shows the Ogle's KWL chart for activating learner's schematic knowledge (Ogle, 1986).

W- What I Want to Know	L- What I Learned
1)	1)
2)	2)
3)	3)
	1) 2)

Table 2.1. Ogle's KWL chart.

#### 2.8.7. Previewing

Previewing is a strategy that is used by students to activate their schematic knowledge and set a purpose for reading. Manz (2002) posits that to effectively and thoroughly preview texts, students encouraged be THIEVES. which are is acronym to an first for *t*itle, *h*eadings, *i*ntroduction, *e*very sentence in а paragraph, visuals and vocabulary, end-of-chapter questions and summary. Wassman and Rinsky (1997) argue that teachers direct their students to 'steal' information and take as much as they can. This enhances access of schematic knowledge as well as expectation and purpose. Thus, reading will be relevant and meaningful. The elements of THIEVES are:

T- Title: It is the entrance into a text. It states the topic and establishes a context.

**H-** Headings: Reader asks himself what this heading tells me I will be reading about. And how can I turn this heading into a question that is likely to be answered

**I-** Introduction: It provides background and setting for the text. Texts objectives are often stated in the introduction.

**E-** Every first sentence in a paragraph: For thorough preview, readers have to read the topic sentences.

V- Visuals and vocabulary: Readers translate photographs, drawings, maps and graphs into words for taking idea about the topic.

E- End-of-chapter questions: Students can derive a good deal of information from a question.

S- Summary: Readers ask themselves what we understand and recall about the topics covered in the summary. (Manz, 2002).

# Conclusion

Schematic knowledge and its role in enhancing learner's understanding have solid grounds in cognitive science. Schema theory is the strong argument which offers perceptions about information processing. This occurs by connecting the new information to the previously existing one. Readers need the three types of schemata (formal, content and cultural schemata) to ensure comprehension. There are many strategies for activating readers' schematic knowledge such as, answering questions, debate & discussion, previewing, prediction, etc...

## Introduction

In this chapter we are going to define what is reading as described by some linguists. We will try to trace back the different views on reading. The focus will be on explaining the core of reading comprehension and the process that directs its enhancement for a better understanding. As shown in the precedent chapter, background knowledge is so important that learners' reading comprehension is highly dependent on its activation. This, no doubt, paves the way to learners' success in reading.

# 3.1. Definitions

Grabe (1991) states that reading can be seen as an "interactive" process between a reader and a text which leads to automaticity or (reading fluency). In this process, the reader interacts dynamically with the text as he/she tries to elicit the meaning and where various kinds of knowledge are being used: linguistic or systemic knowledge (through bottom-up processing) as well as schematic knowledge (through top-down processing).

Goodman (1967) sees reading as a psycholinguistic guessing game, allowing readers to rely more on their existing syntactic and semantic knowledge structures than on the knowledge of graphic and sounds.

According to Gough (1972), reading is a unidirectional process from letters to sounds to meaning. Like Gough, La Berge and Samuels (1974) also describe reading as a linear process though they emphasize more the aspect of automaticity in reading.

Milkulecky, B. (2008) terms Reading as a conscious and unconscious thinking process. The reader applies many strategies to reconstruct the meaning that the author is assumed to have

intended. The reader does this by comparing information in the text to his or her background knowledge and prior experience. She argues that the reader is constantly spotting parts of the text and comparing that sample with what he or she already knows.

Regarding many other definitions of reading that have been climbed through the recent years, three prominent ideas emerge critical for understanding what reading is<sup>1</sup>:

- Reading is a process undertaken to reduce uncertainty about meanings a text conveys.
- The process results from a negotiation of meaning between the text and its reader.
- The knowledge, expectations, and strategies a reader uses to uncover textual meaning all play decisive roles way the reader negotiates with the text's meaning.

Additionally the present study adopts Dutcher's definition about reading which appears more relevant to our topic and summarizes the essence of reading Dutcher (1990) sees that "Reading is the process of constructing meaning through the dynamic interaction among the reader's existing knowledge, the information suggested by the written language, and the context of the reading situation."

#### 3.2 Views of Reading

The definitions mentioned above highpoint how complex the meaning of reading is. The term is used differently according to the point of view it is regarded to. It shows that the views about reading would also be different. In the section below we will deal about how the view

<sup>1. (</sup>Retrieved from http://www.coerll.utexas.edu/methods/modules/reading/01/)

of reading has changed over time. Linguists have set three main stages. The traditional, the cognitive and the metacognitive. We will tackle them one by one next.

# 3.1.1. The Traditional View

In the traditional view of reading, according to Dole (1991), beginner readers acquire a set of hierarchically ordered sub-skills that sequentially build toward comprehension ability. It is called the 'bottom-up' model. Readers are passive recipients of information in the text. Meaning resides in the text and the reader has to reproduce meaning. In other words, the reader is expected to proceed in a progressive process of gathering meaning. He/she starts by identifying the smallest components of the text to obtain great number of elements. At a first stage, his/her attention is on the letters which compose the text's words. Then, he/she moves up to find the words meanings. This view was during the early of 1940's and 1950's where TEFL was marked by the dominance of listening and speaking (audio lingual method) over reading and writing (Carrell,1988:2).

### **3.2.2.** The Cognitive View

The 'top-down' model is in direct disagreement to the 'bottom-up' model explained above. Referring to Nunan (1991) and Dubin and Bycina (1991), the psycholinguistic model of reading and the top-down model are in exact concordance. This view is best supported by Dubin and Bycina (1991: 167) who argue that the readers' role is a rather completely active. Readers expect the semantic content as they proceed through the text, they outbreak large portions at a time, they do not pay attention to letters, but instead they work to tie what they already know to what they meet as new in the text. In other words, the reader gives a greater importance to grasping meaning which is acquired through an effective and efficient procedure.

In short, cognitive views of reading comprehension emphasize the interactive nature of reading and the productive nature of understanding.

### 3.2.3. The Metacognitive View

Block (1992) says that there is now no more debate on "whether reading is a bottom-up, language-based process or a top-down, knowledge-based process." Research defines further control by readers on their ability to understand a text. This control, Block (1992) has referred to as metacognition. Metacognition involves thinking about what one is doing while reading. Klein et al. (1991) stated that strategic readers attempt to identifying the purpose of the reading before reading, the form or type of the text before reading and they make continuous predictions about what will occur next, based on information obtained earlier. This is a complete interaction between texts and readers

# **3.3.** Types of Reading

After talking about views about reading we shall tackle briefly the types of reading before defining reading comprehension as it is the main topic of our study. There are several types of reading in language classroom. Researchers in the field have categorised different types. However, in this study we opted for the one suggested by Brown (1989) which is the intensive and the extensive type. We will see also a chart where it is set the differences between both categories i.e. the extensive reading and the intensive one.

### 3.3.1. Intensive Reading

Intensive reading refers to a careful reading of texts with the goal of complete and detailed understanding (Bamford, 1998). Bamford also states that intensive reading can be associated with the teaching of reading.

### 3.3.1. Extensive Reading

Extensive reading is also a language teaching procedure where learners are supposed to read large quantity of long texts for global understanding (ibid). For Palmer (1990) reading extensively has the advantage of being both informative and pleasurable. For Nuttal (1990) "The best way to improve your knowledge of a foreign language is to go and live among its speakers. The next best way is to read extensively in it" (p.168)

The chart below offers basic characteristics of each approach. The difference, here, is mainly related to pedagogical purpose; extensive reading entails general looking on the text and helps reading habits and practices. It also, increases the students' desire for reading. Extensive reading is widely proposed for improving one's knowledge in EFL. (Lui, 2010)

	Intensive Reading	Extensive Reading
Linguistic focus	Analysis of the	Fluency, skill forming
	language	
Difficulty	Usually difficult	Very easy
Amount	Little	A book a week
Selection	Selected by teacher	Selected by Learner
What material	All learners study the	All learners read
	same material	different things
		(something interesting to
		them)
Where	In class	Mostly at home
Comprehension	Checked by specific	Checked by reports /
	questions	summaries

Table 3.1. Characteristics of intensive and extensive reading.

### **3.4. Reading Comprehension**

Defining reading comprehension seems to be very easy and simple. Yet, it is not the case since there are a lot of attempts to provide a definition. Some definitions may occur ambiguous and others may appear very superficial. We have, below, selected the most prominent ones.

Webster's Collegiate Dictionary offers this definition: "comprehension is the capacity of the mind to perceive and understand .Reading comprehension, then, would be the capacity to perceive and understand the meanings communicated by texts. Durkin (1993) sees reading comprehension as the intended thinking during which meaning is built through exchanges between text and reader. Harris & Hodges (1995) found that it is the production of the meaning of a written text through a mutual exchange of ideas between the reader and the message in a specific text. As for Perfetti (1995) "reading comprehension is thinking guided by print". For Catherine (2002) reading Comprehension entails three main elements. Which are: the reader who is doing the comprehending, the text that is to be comprehended and the activity in which comprehension is a part.

We can then say that reading comprehension is a process that builds meaning through communication and interaction with a text that combines the three stated elements. In other words, the latter are the factors that affect reading comprehension.

### **3.5. Factors Affecting Reading Comprehension**

Reading comprehension is influenced by the presence or the lack of some Factors. Some of these factors are attributed to the text while others are related to the reader. Comprehension, thus, is affected by the readers' knowledge of the topic, knowledge of language structures, and

genres. Similarly, it is affected by their intellectual abilities and their motivation. Reading comprehension is also affected by the quality of the reading material. Some writers are better writers than others. The more text is organized, the less work will be required of a reader to comprehend the text.<sup>1</sup>

### 3.5.1. Text Variables

There are, generally, two main type of text processing used by readers: a top-down type and bottom-up one. The top-down mode involves what readers bring to the reading task as to reading skill, language, cognitive processes, background knowledge, interests, goals, and understanding of the necessities of a reading task (Fletcher et al. 1990). The second mode is the bottom-up in which literal features play an important role in determining the clear level of difficulty such as content, style, linguistic, and cognitive features (Fry 2002). That is, the bottom-up process leads to a better and quicker understanding of single words within a sentence and facilitates text processing along with a comprehension of the grammar and semantic aspects of texts (Bishop 1997; Kintsch 1982). According to Armbruster and Anderson (1985), text features such as headings and subheadings, are other helpful labels for various frames, and can also make it easier for the reader to cognitively organize information.

### 3.5.1.1. Text Type

A text type also has an influence on the reader's comprehension. Each type has its own characteristics as to the general theme and the way it is structured. Frequently, many types of

<sup>1 &</sup>lt;u>http://www.specialconnections.ku.edu/?q=instruction/reading\_comprehension#top</u> Keith Lenz, Ph.D., University of Kansas

text carry with them expectable text structures, and readers need to be familiar with each style of text (Whaley 1981a). They may have expectations about what they are reading, for example, understanding the genre of an adventure novel, a travel story or play etc..

# **3.5.1.2.** Cohesion and Coherence

A coherent and cohesive text is for sure to be easier to be read and understood than a text which lacks these two aspects. Furthermore, text punctuations, such as full stops and commas help to organise text (Clark and Clark 1977). At the level of text coherence, pronouns may facilitate the formation of 'cohesive ties' that form connections between the propositions as the reader processes the apparent structure of the text. Other text organizational features, such as italics, underlining, and subheadings along with illustrations, figures, graphs, and maps also help readers process the text content more efficiently (Baddeley and Hitch 1993; Kirby 1991).

### 3.5.2. Reader's Variables

The reader's variables take the wider part and effort of the researchers to prove the extent to which the reader's capacities affect the reading comprehension. There has been a view that learning problems are often composed of a complex interaction between main reader factors as well as the environmental influences (Robinson 2002). Among these factors, we have the reader's level of awareness in the text, his aim of reading, his language skill, culture and his familiarity or unfamiliarity with the topic of the text. Each of these variables is likely to define the reader's level of comprehension.

# 3.5.2.1. Purpose of Reading

Readers proceed with the text with different purposes. Generally, if the purpose of the reading task is clearly set, systematic and well understood the reading progress will be raised (Alfassi 2004; Duffy et al. 1987; Wertsch 1979). Pearson and Raphael (1990) testified that

learners are aided in the comprehension of what they are reading if there is a prior goal or reason for the reading task. In other words, the purpose of the reading task and the nature of the text determine how the reader will line the reading. If reading is not purposeful readers will have more difficulty preventing insignificant information from confusing working memory as attested by Alfassi (2004). The reader should have a goal in his mind while reading. Otherwise, Reading will be a meaningless activity. Wallace (1980: 9) claims for the necessity of having a purpose for a better and easier understanding of a text.

### **3.5.2.2. Reader's Language Proficiency**

Reading comprehension depends on a variety of reader-related and text-related factors (De Corte et al. 2001). However, the reader's linguistic level of the language is the most important factor at the level of the reader's variables because it connects with how much he comprehends the text. If he has a large amount of vocabulary, knows different cohesive devices and masters the different sentence structures, he is likely to face less difficulties while processing the text and vice versa.

### 3.5.2.3. Reader's Background Knowledge

Significance or meaning is formed in the reader's head. That is, a person's prior knowledge affects the kinds of meanings constructed from the text information (Fukkink and de Glopper 1998; Lipson 1983). The point is that a person's existing knowledge is a main factor in acquiring new data (Ausubel 1968; Cain and Oakhill 1999; Griffin et al. 1995). A reader who is familiar with the topic of the text is , of course, likely to succeed in comprehension. Someone who reads without knowing earlier what he is reading about will not get the whole message of the text. The different factors affecting reading comprehension detailed above have been the main focus of reading theorists and teachers. In the present study, the focus will

be on reader's variable which is namely, the activation of prior knowledge. It is going to be developed in the next chapter. To sum up, both reader factors and text factors affect comprehension. The chart below represents an overview of this impact on comprehension<sup>1</sup>.

Туре	Factor	Role in Comprehension
Reader	Background Knowledge	Students activate their prior knowledge to link what they know to what they're reading.
	Vocabulary	Students recognize the meaning of familiar words and apply word-learning strategies to understand what they're reading.
	Fluency	Students have adequate cognitive resources available to understand what they're reading when they read fluently.
	Comprehension Strategies	Students actively direct their reading, monitor their understanding, and troubleshoot problems when they occur.
	Comprehension Skills	Students automatically note details that support main ideas, sequence ideas, and use other skills.
	Motivation	Motivated students are more engaged in reading, more confident, and more likely to comprehend successfully.
Text	Genres	Genres have unique characteristics, and students' knowledge of them provides a scaffold for comprehension.
	Text Structures	Students recognize the important ideas more easily when they understand the patterns that authors use to organize text.
	Text Features	Students apply their language devices in texts to deepen their understanding.

**Table 3.2.** Reader and text factors that affect comprehension.

<sup>1.</sup> http://www.education.com/reference/article/reading-comprehension-factors/

### Conclusion

Reading comprehension is not only a matter of understanding the print on a page or a text in a web site, but, it is the making and the construction of meaning by relating what the print tells with what the reader already possesses as knowledge. To reach comprehension, it is vital for the reader to make use of his previous experiences. Additionally, the reader is to be involved to interact with the text otherwise, he is likely to misunderstand or misinterpret the right message from it. Of course, understanding differs from one reader to another. It is impossible that readers have an identical meaning or the same interpretation from the same text. Thus, every reader gains his own meaning, inferences or interpretation according to his own previous knowledge.

### Introduction

Our study is conducted to examine the extent of the impact of schematic knowledge activation in enhancing learners' reading comprehension. By activating learners' schematic knowledge, we can know its influence on learners' success in understanding texts. In this chapter we try to analyse and discuss the findings to see if they meet the research hypothesis.

# 4.1. Sample and Procedures

This study was conducted on a population of second year LMD students of English at KMUO the department of English. Its main purpose is to investigate the degree of readers' comprehension if their prior knowledge is activated before reading a text. The total number of the study sample is 40 students. A questionnaire is administered to the students after a test. The latter will be split into two phases: pre-test and post-test. We adopt a descriptive method to interpret and analyse data. We will discuss and interpret the results obtained in the pre-test about the non-activated students' schematic knowledge, and then we will move to those obtained in the post-test for those whose schematic knowledge is activated. At the end, results obtained in pre-test and post-test are compared to state the final conclusion.

The test will be carried out in the form of an experiment divided into: Part One (Pre-test) and Part Two (Post-test). In Part one, students' schematic knowledge is not activated. They start reading the text (see Appendix 01) and answering questions without the teacher's help. In Part two, students are given the same test with their schematic knowledge being activated. The teacher uses one of the strategies (brainstorming, media, prediction...) to activate students' schematic knowledge.

### 4.2. Analysis of the Findings

### 4.2.1. Pre-test and Post-test

Both pre-test and post-test are conducted in the same session. Time is divided as follows: 20 min for pre-test, 15 min pause, 15 min for activating students' schematic knowledge then 15 min for post-test. We have used Microsoft Excel 2010 to calculate the mean in pre-test and post-test. Figure 4.1 and Table 4.1 below show students' scores in pre-test and post-test. This helps us to understand the change and difference between part one and part two of the experiment.

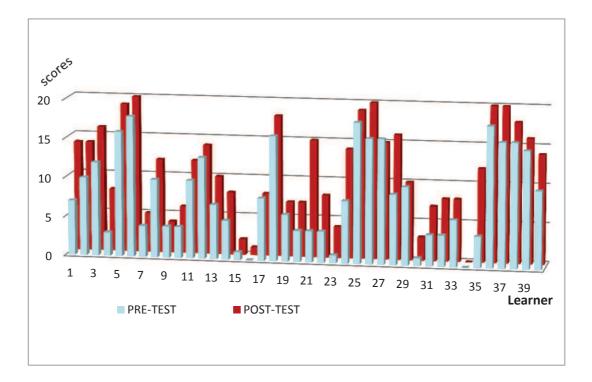


Figure 4.1. Results of pre-test and post-test.

Participants	<b>Pre-test</b>	Post-test	Difference
1	7	14	7
2	10	14	4
3	12	16	4
4	3	8	5
5	16	19	3
6	18	20	2
7	4	5	1
8	10	12	2
9	4	4	0
10	4	6	2
11	10	12	2
12	13	14	1
13	7	10	3
14	5	8	3
15	1	2	1
16	0	1	1
17	8	8	0
18	16	18	2
19	6	7	1
20	4	7	3
21	4	15	11
22	4	8	4
23	1	4	3
24	8	14	6
25	18	19	1
26	16	20	4
27	16	16	0
28	9	16	7
29	10	10	0
30	1	3	2
31	4	7	3
32	4	8	4
33	6	8	2
34	0	0	0
35	4	12	8
36	18	20	2
37	16	20	4
38	16	18	2
39	15	16	1
40	10	14	4
Total	338	452	114
Mean	8,45	11,3	2,85

test and post-test.
l

Students' results in pre-test reveal that students' level in reading comprehension is under the average (mean= 8.45/20). Because students' schematic knowledge is not activated in pre-test, they find difficulties in understanding the text. This affects their pre-test scores. By contrast, students' results in post-test disclose an enhancement in their achievement in reading comprehension (mean= 11.3/20). They scored better in post-test because their schematic knowledge is activated. This explains the easiness they found in understanding the text even though time allotted in post-test (15 min) is inferior compared with that in the pre-test (20 min).

Findings of pre and post-test help us to confirm our hypothesis that learners' comprehension increases when their schematic knowledge is activated. This experiment aims at concluding that students whose schematic knowledge is activated do not find difficulties to understand L2 texts. On the contrary, students whose schematic knowledge is not activated are likely to face many problems in reading L2 texts.

# 4.2.2. Questionnaire Analysis

This questionnaire has been administered to 40 students (see Appendix 02). It was mainly designated as a kind of data collection. It was split into four parts: statements describing the level of the participants (students), statements describing their attitudes towards reading, statements describing problems faced when not activating prior knowledge and statements describing whether activating schematic knowledge enhance their reading comprehension. The questions were selected as to reflect the present study. The aim of this latter is to diagnose whether activating schematic knowledge enhance the readers' comprehension. The

questionnaire lasted fifteen minutes and took place in the lecture's classroom. The technique of percentage (%) is adopted to analyse these data.

# 4.2.2.1. The Level of Participants

N° of years	Number	Percentage
0 to 7	0	0
8 to 9	38	95
Plus 9	2	5

Table 4.2.Number	s of years in	studying	English
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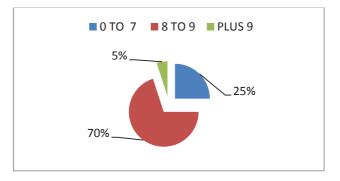


Figure 4.2. Numbers of years in studying English

Table 4.2 and figure 4.2 show that (95 %) of the students have studied more than seven

years of English which means that they have a good background in this language.

# 4.2.2.2. Reading Comprehension Level

Level	Number	Percentage
Middle school	23	57,5
Secondary	32	80
University	9	22,5
Total	40	100

**Table 4.3.** Reading comprehension at different levels

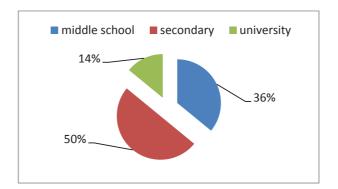


Figure 4.3. Reading comprehension at different levels

Table 4.3 and figure 4.3 show that 36% of the participants have done with the reading comprehension in the middle school and 50% of them have done it at the secondary school, whereas only 14% are doing it at the university. This indicates that students are not sufficiently exposed to this skill.

# 4.2.2.3. Reading in L1 and L2

	Number	Percentage
I read in L1	39	97,5
I read in L2	39	97,5

Table 4.4. Reading in L1 and L2

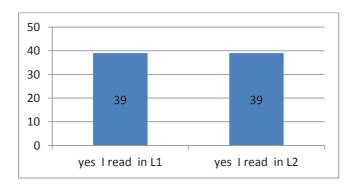


Figure 4.4. Reading in L1 and L2

As shown in the table 4.4 and figure 4.4 above the participants showed interest in both L1 and L2 reading. About 97.5 % of them attested that they read in both languages. This is evidence that these students are aware of the importance of the reading skill. Many researchers ,such as, Grabe (1991; 2009) and Saville-Troike (2006), argue that reading is the most needed skill in academic studies and it is by reading that learners gain knowledge and expand their thinking.

# 4.2.2.4. Comprehension before Activating Schematic Knowledge

	Number	Percentage
I don't comprehend because of the lack of previous knowledge	34	85
I comprehend	6	15
Total	40	100

# Table 4.5. Level of Comprehension before the activation phase

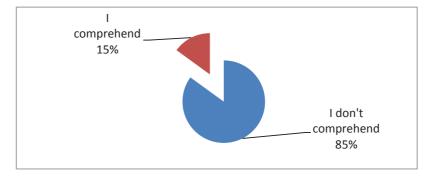


Figure 4.5. Level of Comprehension before the activation phase

The above results in table 4.5 and figure 4.5 show that the majority of students (85%) don't comprehend because previous knowledge is not activated.

### 4.2.2.5. Level of Difficulty before Activating Schematic Knowledge

	Number	Percentage
I see the 1st reading easy	11	27,5
I see the 1st reading difficult	29	72,5
Total	40	100

Table 4.6. Level of difficulty before activating schematic knowledge

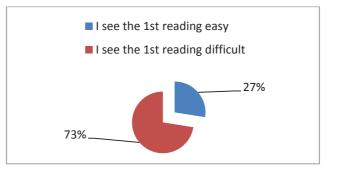


Figure 4.6. Level of difficulty before activating schematic knowledge

Table 4.6 shows that (72.5 %) of the participants find the first reading of the text difficult because of the none activation of their schematic knowledge and it demonstrates that when students are not exposed to a pre reading activity will not understand the text easily.

# 4.2.2.6. Level of Difficulty after Activating Schematic Knowledge

	Number	Percentage
I see the 2nd reading easy	33	82,5
I see the 2nd reading difficult	7	17,5
Total	40	100

Table 4.7. Level of difficulty after activating schematic knowledge

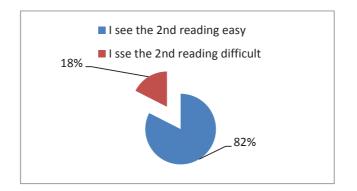


Figure 4.7. Level of difficulty after activating schematic knowledge

Table 4.7 shows that (82%) of the participants admit that they find the second reading of the text easier than the first one. This indicates that activating their schematic knowledge has a major role in enhancing their understanding. Yet, (18%) of the participants still find it difficult to comprehend due maybe to the nature of the strategy used while activating students' schematic knowledge.

### 4.2.2.7. Strategies in Activating Schematic Knowledge

	Number	Percentage
Media	6	15
Debates & Discusion	20	50
Question & Answer	12	30
Prediction	2	5
Total	40	100

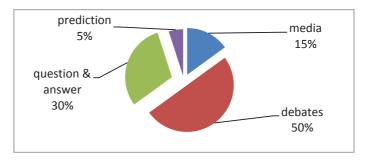


Table 4.8. Strategies in activating schematic knowledge

Figure 4.8. Strategies in activating schematic knowledge

Results above in table 4.8 and figure show that the majority of students (50%) prefer debate and discussion in pre-reading phase as a strategy to activate their schematic knowledge. The second strategy preferred by students is question answer strategy with (30%) and media strategy with only (15%). However, simply (05%) opt for the fourth strategy which is prediction.

### Conclusion

The two tests and the questionnaire were used to have an idea about the level of students' comprehension before and after activating their schematic knowledge. For this reason, it was advisable to investigate the students' comprehension in both phases i.e. before and after activating the schemata. Some students' answers showed a lack of awareness of the reading comprehension. Results of this study revealed that the major reading problem is that students' schematic knowledge is not well activated, and in case this is activated, reading is likely to be easier. The findings also showed that students have a highly positive attitude towards reading in general, considering it as the most important skill in their academic progress

### **General Conclusion**

This study has been conducted on second year LMD students of English at KMUO. Its main goal is to examine the degree of readers' comprehension if their schematic knowledge is activated before reading a text. Findings (two tests and a questionnaire) demonstrated that activating students' schematic knowledge enhances their understanding. Students' scores in post-test increased compared with those in pre-test. This proves the important role of schematic knowledge in improving L2 students' reading comprehension.

Students who have background knowledge in the second language have more chance to be successful in L2 reading comprehension. If they began their learning English language in early years, they will be more self-confident, will be able to read easily and effectively any given text and will spend less time in studying. In contrast, those who have no or less opportunities to an early exposure to second language, will struggle more and make greater efforts understanding texts. Teachers ought to analyze their students' needs and encourage them to overcome encountered difficulties in this connection. Learners must understand that second language learning requires time and efforts.

The current inquiry proved that activating students' schematic knowledge gives valuable impetus in understanding L2 texts. . EFL teachers are invited to recognize the role of schematic knowledge activation in their reading sessions. They are provided with many solutions to increase learners' motivation and comprehension in tackling texts. They are also advised to profit from other schematic knowledge activation strategies that suit other text genres which may also be useful to their readers' attainments.

Because reading is an important skill, it is recommended that a discipline of reading skill be included in the national curriculum at all academic levels. Such a module will help students to develop not only the reading skills and strategies, but also other language skills such as writing, listening and speaking. Students can learn how to write by reading about writing; how to listen by reading about listening; and how to speak by reading about speaking.

It is hopeful that this study will pave the way to further research. Schematic knowledge activation does not only influence the reading field. It may have other effects on other language skills like writing. This may stand as a topic for future research.

## References

- Ambrose, S. A, Bridges, M. W, DiPerto, M, Lovett, M. C, and Norman, M. K (2010). How learning work: Seven research- based principles for smart teaching. San Francisco: Josey-bass.
- Alderson, J, C. (2000). Assessing reading. Cambridge: Cambridge University Press.
- Alderson, J.C. and Urquhart, A.H. (1984). Reading in a Foreign Language. Longman: London and New York.
- Allen, R. (2008). Green light classrooms: Teaching techniques that accelerate learning.Victoria, Australia: Hawker Brownlow.
- Anderson, R.C., & Pearson, P.D. (1984). A schema-theoretic view of basic processes in reading. In P.D. Pearson (Ed.), Handbook of Reading Research (pp.255-291). New York: Longman.
- Bamford, J. & Richard, R. D. (2004). Extensive Reading Activities for Teaching Language. Cambridge: CUP.
- Bamford, J. (1984). Extensive reading by means of graded readers. *Reading in a Foreign Language, 2*, 218–260.

Bartlett, F.C. (1932). Remembering. Cambridge: Cambridge University Press.

- Brewer, W & Nakamura, G.(1984). Handbook of Social Cognition. Erlbaum.
- Brown, D. (1994). *Teaching by principles: an interactive approach to language pedagogy*. Upper Saddle River, Prentice Hall Regents.

Carney, R.N and Levin, J.R. (2002). 'Pictorical illustrations still improve students' learning

from text'. Educational Psychology Review, 14 (1)

- Carrel, P, L. (1990).Reading in a foreign language: research and pedagogy. *JALT journal, 12*, 53-73.
- Carrel, P, L. & Eisterhold, J, C. (1983).Schema theory and ESL reading pedagogy. *TESOL Quarterly*, *17*, 553-573.
- Carrell, P. L. (2006). "Introduction: interactive approaches to second language reading," Interactive approaches to second language reading. Carrell, P. L. Devine, J &. Eskey,
  D. E (Eds). Cambridge University Press, New York, pp. 1-7.
- Catherine, S (2002). *Reading for understanding: toward a research and development program in reading comprehension*. RAND: Santa Monica, Canada
- Clark, H. H. (1996). Using language. Cambridge: Cambridge University Press.
- Clark, R. C. & Lyons, C. C. (2004). Graphics for learning : Proven guidelines for planning, designing, and evaluating visuals in training materials. San Francisco : Pfeiffer.

Collins Concise Englisg Dictionnary (2008). England: Harper Collins Publishers. (2016).

Comprehension Instruction. (2002). Texas Reading Initiative.

Davies, F. (1995). Introducing reading. London: Penguin Group.

Dewdney, A. & Ride, P. (2006). The New Media Handbook. London & New York: Routledge.

Fairbairn, G.J., & Fairbairn, S. A. (2001). Studying at University: A guide for Students. Great Britain. Open University Press.

Feathers, K.M. (2004). *Info Text: Reading and learning*. Ontario: Pippin Publishing Corporation.

Garro, L.C. (2000). Remembering what one knows and the construction of the past: A comparison of Cultural Consensus Theory and Cultural Schema Theory. *Ethos*, 28 (3), 275-319.

Gillian, B & George, Y.(1983). Discourse Analysis. London: Combridge University Press.

- Grabe, W., & Stoller, F. L. (2001). Reading for Academic Purposes: Guidelines for the ESL/EFL Teacher. In M. Celce-Murcia (Ed.), *Teaching English as a Second or Foreign Language* (3rd ed.).(pp. 187-204). United States of America: Heinle & Heinle.
- Harmer, J. (2001). *The practice of English language teaching*. Essex: Pearson Education Limited.
- Jablon, J.R. and Wilkinson, M. (2006). "Using Engagement Strategies to Facilitate Children's Learning and Success." Beyond the Journal: Young Children on the Web. Jablon, R.J andM.Wilkinson. 1-5.
- Jonson, P. (1981). Effects on reading comprehension of language complexity and cultural background of the text. *TESOL Quarterly*, *15*, 169-181.
- Jan, H & Johan, F. (1991). Reading In two Languages. The Netherlands: Haveka.
- Kang, S. (2004). 'Using visual organizers to enhance EFL instruction'. ELT Journal, 58, (1)
- Klark, H. H. (1996). Using language. Cambridge: Cambridge University Press.
- Klein, M. L., Peterson, S., and Simington, L. (1991). *Teaching Reading in the lementary Grades*. Needham Heights, Mass.: Allyn and Bacon.
- Kowsari, M. A & Rouhani, Y. (2015). The effect of prior Knowledge questions on Iranian pre-Intermediate EFL Learners' performance in reading comprehension. *International Journal of English and Education, 4* (1), 197-201.
- Kramsh, C. (1998). Language and culture. Oxford: Oxford University Press.
- Kreckel, M. (1981). Communicative acts and shared knowledge in natural discourse. London; New York: Academic Press.

- Lewis, E.L. (1991). The process of scientific knowledge acquisition of middle school students learning thermodynamics. Unpublished doctoral dissertation. University of Califonia, Berkeley.
- Lui, F. (2010). Reading abilities and strategies. International education study, 3, 1-5.
- Manz, S.L. (2002). A strategy for previewing textbooks: Teaching readers to become THIEVES. *The Reading Teacher*, *55*, 434–435.
- Matthews, C. (2002). Understanding the process of reading comprehension. Retrieved from: http://home.gwu.edu/~cmatt.
- Mirhassani, A., & Khosravi, A. A. (2002). Issues on reading comprehension: Part One. *Roshd Foreign language Teaching Journal, 16* (65), 12-24.
- Mohammad, H & Mahmoud, A. (2007). Content schemata, linguistic simplification and EFL reader's comprehension and recall. *Reading in a foreign language Journal, 19*, 19-33.
- Morris, B. (1962). The function of media in the public schools. *Audiovisual Instruction*, 8(9), 9-14.
- Nishida, H. (1999). Cultural Schema Theory: In W.B. Gudykunst (Ed.), *Theorizing About Intercultural Communication*, (pp. 401–418). Thousand Oaks, CA: Sage Publications, Inc.
- Nuttall, C. 1996. Teaching Reading Skills in a Foreign Language. London: Heinemann Educational
- Ogle, D.M. (1986). KWL: A teaching model that develops active reading of expository text. *Reading Teacher, 39*, 564-570.
- Oller, J. W. (1995). Adding abstract to formal and content schema: Results of recent work in Peircean semiotics. *Applied Linguistics*, *16*, 273- 306

- Osborn, A. F. (1953). *Applied imagination: Principles and procedures of creative problemsolving*. New York: Scribners.
- Pressley, M. (2002). Beginning reading instruction: The rest of the story from research. Washington, DC: National Education Association.
- Rumelhurt, D, E. (1980). *Schemata: the building blocks of cognition*. New Jersey: Lawrence Erlbaum Association.
- Singh, Y. K. (2006). *Fundamental of research methodology and statistics*. New Delhi: New Age International Publishers.
- Sivincki, M. (1993). What they don't know can hurt them: The role of prior knowledge in learning. *Essays on Teaching Excellence*, *5*(4), 1-5.
- Smith, F. (1994). Understanding reading (5<sup>th</sup> ed). Hilsdale, NJ: Lawrance Erlbaum Associates, Publishers.
- Smith, F. (2004). Understanding reading. New Jersey: Lawrance Erlbaurm Association, Inc.
- Steffenson, M. S, Chitra Joag dev & Anderson, R. C. (1979). "A cross cultural perspective on reading comprehension". *Reading Research Quarterly*, 15 (1), 10-29.
- The Ontario Curriculum Unit Planner. (2002). *Assessment Strategies Companion*. Queen's Printer for Ontario.
- Tiarina, Y & Yuli, R. F. (2013). Using carousal brainstorming strategy. *Journal of English* Language Teaching, 1 (2), 417-425.
- Tomalin, B. (1991). 'Teaching Young Children with video'. Stempleski, S. and Arcano, P. (Eds.) Video in Second Language teaching: using, selecting and producing video for the classroom. Teachers of English to speakers of other languages, INC.
- Tuckey, M., & Brewer, N. (2003). The influence of schemas, stimulus ambiguity, and interview schedule on eyewitness memory over time. *Journal Of Experimental*

Psychology: Applied, 9(2), 101-118. doi:10.1037/1076-898X.9.2.101.

- Turner, R. M. (1994). Adaptive reasoning for real-world problems: A schema-based approach. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Van Dijk, T. (1983). Strategies of discourse comprehension. New York: Academic Press.
- Van Dijk, T. (2003). "The discouse knowledge interface". In critical discourse analysis.
  Theory and interdisciplinary, edited by Gilbert, W & Ruth, W, 85 109. Houndsmills:
  Palgrave MacMillan.
- Van Dijk, T. (2010). Discourse, knowledge, power and politic: towards critical epistemic discourse analysis. Barcelona: Pompeu Fabra University.
- Wassman, R. & Rinsky, L. (1997). *Effective reading in a changing world*. Upper Sadlle River, NJ: Prentice Hall.
- Widdowson, H, G. (1990). Aspects of language teaching. Oxford: Oxford University Press.
- Widowson, H. G. (1983). *Learning purposes and language use*. Oxford: Oxford University Press.
- Widdowson, H. G. (1979). The realisation of rules in written discourse. Mimeo, University of London.
- William, N. (2011). Research methods: The basics. New York: Routledge.
- Winfield, F, E. & Barnas-Felfeli, P. (1982). The effect of familiar and unfamiliar cultural context on foreign language composition. *The Modern Language Journal*, 66(4), 373-378.
- Woolfolk, A. (2004). Educational psychology. 9th Edition. Pearson Education

### Appendices

### **Appendix 1: Pre-test and Post-test**



# KASDI MERBH UNIVERITY –OUARGLA FACULTY OF LETTERS AND LANGUAGES DEPARTMENT OF LETTERS AND ENGLISH LANGUAGE

Master in Applied Linguistics and ESP

Pre-test and Post-test for master study (2015-2016)

Gender:..... Age:..... class:....

# Giants

How would you like it -? Supposing that you were a snail, And your eyes grew out on threads, Gentle, and small, and frail -If an enormous creature, Reaching almost up to the distant skies, Leaned down, and with his great finger touched Your eyes Just for the fun Of seeing you snatch them suddenly in And cower, quivering back Into your pitiful shell, so brittle and thin? Would you think it was fun then? Would you think it was fun? And how would you like it, Supposing you were a frog, An emerald scraps with a pale, trembling throat In a cool and shadowed bog, If a tremendous monster, Tall, tall, so that his head seemed lost in the mist, Leaned over, and clutched you up in his great fist Just for the joy Of watching you jump, scramble, tumble, fall, In graceless, shivering dread, Back into the trampled reeds that were grown so tall? Would you think it a joy then? Would you think it a joy?

By Lydia Pender

# Read the text then answer the questions

 What does the 'giant' do to frighten the snail?
 What does the 'giant' do to frighten the frog?
 What does the 'giant' do to frighten the frog?
 Gentle, and small, and frail Which part of the snail do these words describe?
 Gentle, and small, and frail How do these words make the reader feel about the snail?
 What is the main message of the poem? Tick the right one.
 People can learn a lot from holding small creatures.

- People should think about how their actions affect others.
- People are much bigger than frogs and snails.
- People should overcome their fear of nature.

### **Appendix 2. Student's Questionnaire**

Master in Applied Linguistics and ESP

Questionnaire for master study (2015-2016)

Gender... Age...

You are kindly asked to help us by answering the following questions concerning your experience in reading comprehension. This is not a test so there is no "right" or "wrong" answer and you do not have to write your name on it. We are interested in your personal opinion. Please give your answers honesty as only this will guarantee the success of the investigation.

class...

# Please circle what suits you best.

1. How long have yo	ou been studying English?		
a. for 7 years	b. for 8 years	c. for 9 years	d. other
2. Were you taught i	reading comprehension in t	the middle school?	
Yes	no		
3. Were you taught i	reading comprehension in t	the secondary school?	
Yes	no		
4. Have you been ta	ught reading comprehensic	on at university?	
Yes	no		
5. Reading is an imp	oortant skill for university s	students	
a-Yes	b-somewhat	c- no	
6. I enjoy reading in	my mother tongue. (Arabi	c)	
a-Yes	b-somewhat	c- no	
7. I enjoy reading in	foreign languages, especia	ally English.	
a-Yes	b-somewhat	c- no	

8. I do not comprehend what I read because of a lack of previous knowledge about the subject.						
a-Yes	b-somewhat	c- no				
9. How would you see the first reading of the text?						
a-Easy	b-Very easy	c- Difficult				
10. How would you see the second reading of the text?						
a-Easy	b-Very easy	c- Difficult				
11. How would you rate the 2 <sup>nd</sup> reading?						
a-Easy	b-Very easy	c- Difficult				
12. Do you think the presentation (warm-up) before the 2 <sup>nd</sup> reading has been useful?						
a-Useful	b-Very useful	c-Somewhat useful	d-Not at all helpful			
13. Before starting reading you prefer that your teacher uses.						

	a- Media	b- asking questions	c- debate and discussion	d- prediction
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Thank you

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# ملخص الدراسة

تهدف هذه الدراسة إلى إظهار أثر تفعيل المعرفة السابقة في فهم القراءة لدى طلاب السنة الثانية ليسانس بقسم الإنجليزية - جامعة قاصدي مرباح ورقلة. تعالج هذه الدراسة مشاكل الفهم لدى الطلبة الذين لم يتم تفعيل معارفهم السابقة. جُمعت البيانات من خلال إجراء اختبار على أربعين طالبا ثم أُتبع هذا الإختبار بإستبيان لكي تكون الدراسة شاملة. إ تبعت الدراسة الطريقة الوصفية في تحليل و تفسير النتائج و البيانات. بينت هذه الدراسة أن الطلبة الذين يتم تفعيل معارفهم السابقة يجدون سهولة في فهم نصوص التي تعطى لهم. وتوصي الدراسة الأساتذة بأن يأخذوا بعين الإعتبار تفعيل المعرفة السابقة لدى الطلبة قبل بداية حصة القراءة داخل القسم.

**كليات هامة** : المعرفة السابقة، تفعيل المعرفة السابقة، القراءة ، فهم القراءة.