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**The Use of Storytelling Technique to Develop Learners' Mental
Imagery Ability in Reading Skill:
Case Study of Second Year Middle School Students of Al- Hai
Aljadid Middle School –Zeribet El-Oued, Biskra**

A Dissertation Submitted in Partial Fulfillment for the Requirement of Master Degree in
English

Option: Sciences of the Language.

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2016/2017

Dedication

In the name of Allah, most merciful, most compassionate

*To my mother **Chahla** and my father **Mokrani**, source of my happiness and success in life. May Allah bless them.*

*To my beloved sisters **Ilhem, Amal, Chaima and Hamida** for their unconditional support and encouragements to pursue my interests.*

*My friends **Hadjer, Mayada, Asma, Aziza** also owe special thanks for their memorable presence and support.*

Acknowledgments

First of all, thanks to ALLAH for all the strength and patience given to me to complete this modest work.

My sincere and deepest gratitude to my honorable supervisor "**Mr. BOULEGROUNE**" for his invaluable patience, guidance and encouragement.

I would like to thank the members of the jury **Madam AMRI** and **Mr. SMATTI** for their efforts to evaluate, review and polish this work.

Special thanks must be given to **Mr. Ibrahim Douida** for his help, support and facilitation.

I would like to thank my childhood middle school director **Mr. Ghilani Al Ayech** and all the teachers there for welcoming my work there and for their help; therefore, they are my partners in making a difference.

Finally, I would like to thank every person who has participated in the realization of this dissertation. To all those who believed in me and prayed for my success.

Abstract

The present study is an attempt to investigate and to shed light on the role of Storytelling technique in activating Mental Imagery ability as a way for better reading comprehension, at **Al-Hai Al-Jadid, in Zeribet El-Oued, Biskra**. It takes the form of a semi-experimental research since it deals with a new issue in the current context. Literary texts or more precisely Stories are considered the main trigger that can activate Mental Imagery power in a way or in other. Based on this, we hypothesized that if M.I is activated, the level of reading comprehension will increase. To enrich this study with valuable data, we designed an individual workshop with second year middle school at **Al-Hai Al-Jadid, in Zeribet El-Oued, Biskra**. The findings obtained from the workshop indicated that M.I ability could be activated through many ways to be used in reading comprehension. However, the most significant findings showed that S.T.T. is the direct way to complete this triangular relation. Therefore, we expect that by implementing S.T.T. a teaching technique, mental imagery will be activated and as a result, reading comprehension will increase.

المخلص

الدراسة الحالية هي محاولة لتسليط الضوء على دور تقنية السرد القصصي في تنشيط القدرة على التصور الذهني كطريق لفهم قرائي أفضل، في *متوسطة الحي الجديد بزربية الوادي ولاية بسكرة*. وهي تأخذ شكل بحث شبه تجريبي نظرا لأنها تعالج موضوعا لم يسبق تناوله من قبل. ان النصوص الأدبية او بمعنى أدق **القصص** تعد المثير الأساسي لتنشيط قوة التصور الذهني بطريقة أو بأخرى. استنادا على ما تم ذكره، افترضنا بأنه إذا ما نُشط التصور الذهني بنجاح، مستوى الفهم القرائي سيرتفع. ومن أجل إثراء هذه الدراسة بمعطيات قيمة، قمنا بتنظيم حلقة دراسية حرة فردية او ما يسمى بالبرنامج التدريبي مع تلاميذ السنة الثانية متوسطة من مؤسسة **الحي الجديد بزربية الوادي ولاية بسكرة**. النتائج المتحصل عليها من الحلقة الدراسية بينت بأن القدرة على التصور الذهني يمكن أن يتم تنشيطها بعدة طرق ليطم استعمالها في الفهم القرائي، لكنها بينت ان تقنية السرد القصصي هي الطريق المهم والمباشر لإكمال هذه العلاقة الثلاثية. ولذلك فإننا نتوقع انه بتطبيق تقنية السرد كمنهج تدريس، سيخلق القدرة على التصور الذهني وكنتيجة لهذا، الفهم القرائي سيتحسن.

List of Abbreviations

S.T: Storytelling

S.T.T: storytelling technique

MI: mental imagery

EFL: English as a foreign language

S: Student

%: Percent.

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General Introduction

1. Introduction: Background of the Study

The human mind is a complex phenomenon. It is a set of interconnected processes and powers, such as recognition, appreciation, emotions, attitudes, and imagination. The last aspect of imagination or in other words mental representation that was proposed to be essentially a memory retrieval process. It is the representation in a person's mind's eye of the surrounding world. This ability could be one of the fundamental abilities that allow us to achieve many works as planned future events, analyzing the past and learning. If we look, this ability has nothing new to add, but makes what hidden and ambiguous clear and explicit.

The common concern of researchers in this field is to see the extent mental imagery has become a part of cognitive science. In addition, mental imagery has been of interest to those concerned with its application in the domain of skill acquisition and learning (e.g., Selvadis et al., 2013).

However, it has been found in some EFL classes many difficulties when they are involved in the reading process, such as understanding information and events that need to be remembered. This takes a lot of time and effort, and by the end, students fail to comprehend because they are just providing the written or recorded texts as a raw material.

The teacher's storytelling technique is one of the teaching methods that may motivate students to read and improve their ability to use the mind to make meanings. In addition, stories can be a great tool to teach English in the narrative context and develop children's cognitive and language skill.

2. Statement of the problem

To teach English as a foreign language is not limited only to giving instructions to students about the linguistic and structural side of it, but also by engaging them in real communication situations, and this by helping them to understand sociocultural aspects. These sociocultural elements could be seen clearly in literary works, and this facilitates also cognitive processing when learning. According to Duff and Maley (1990), using literature in the classroom is very rich of styles, full of new vocabulary, deals with topics that are related to children's own experiences, all of that can create interaction and participation in the class.

Castro (2002, p. 52) reported on a study in Columbia said "listening to stories develops children's listening and concentration skills and their ability to receive and understand information expressed in words. Besides, with the stories children develop learning strategies such as listening for general meaning, predicting, guessing meaning and hypothesizing", and after that logically this will be a trigger to activate some inter-cognitive processes such as 'mind's eye picture building.

However, teaching English for kids using storytelling in Algerian schools seems to be strange, because a teacher teaches only with the same way they were trained to –teacher centered-, where a raw text, some language structures, and activities are given, in other words, the same routine every day. This situation affects the quality of English programs and value. Based on the literature, few studies such as Gonzalez (2010) have put a storytelling approach into practice, for real implementation as a teaching tool for young children. Therefore, the main objective of this study is to use storytelling to teach English to young learners in a more fun, meaningful, creative and cognitive way, such as the use of the mind's eye to visualize what they learn.

Unfortunately, the use of storytelling as a teaching approach in the context of Algeria is rare (if any). Consequently, in this study, the effectiveness of storytelling approach along with participants' sleepy cognitive abilities and hidden creativity in the class will be investigated.

This study, therefore, investigates the feasibility and applicability of storytelling as a teaching technique to activate learners' mental visualization with reference to the Algerian context among *'Al Hai Al-Jadid, Zeribet El-Oued middle school students*, and to examine its impact on reading comprehension skill.

3. Statement of the Purpose

This study investigates the feasibility and applicability of storytelling as a teaching technique as an effective tool to activate the learners' mental visualization with reference to the Algerian context among **Al Hai Aljadid- Zeribet El-Oued Middle school**, and to examine its impact on reading comprehension skill.

4. Objectives of the Study

This study aims to:

- Investigate the extent of the impact of storytelling strategy as a teaching method for activating the ability to create mental pictures.

- Find out whether students were taught EFL with the use of storytelling technique and imagery training and activities better than those taught with printed or recorded texts only during the reading process were.

5. Research Questions

To what extent does the use of storytelling technique contributes to the improvement of Algerian primary school pupils' reading skill?

This study is designed to answer this question through three sub-dividing questions:

1- How can storytelling, mental imagery and reading skill correlate together?

2- How can Algerian EFL teachers use storytelling technique as a tool for activating mental imagery ability middle schools?

3- What difference can storytelling, visualization make when reading with reference to the Algerian class?

6. Hypotheses

1-If EFL teachers undertake to implement storytelling, the working memory will be addressed.

2-If learners' mental imagery ability is activated; it will help them to gain a deeper understanding of the text.

7. Research Methodology

7.1. Method

We opted for a qualitative method of research in which we designed an individual workshop or what is called training program. This method has been chosen because the

topic is not known and it needs training first, in other words, conditioning students to visualize through stories.

7.2. Population and Sampling

In the present work, 35 second year middle school students chosen willingly to participate in this research. This sample of 35 students represents 33.65% of the whole population.

8. Research Tools

The main objective of this work is to test the applicability of mental imagery triggered by storytelling in developing reading comprehension ability; accordingly, we have chosen the semi-experimental method by designing a workshop.

9. Limitations

Although this study will attempt to be carefully prepared, the researcher is aware of its unavoidable limitations.

First, this work was conducted with second year middle school students; accordingly, this work is limited to middle school setting; that is different and under different conditions such as their age and cognitive abilities; accordingly, results cannot be generalized.

Second, instructors are inexperienced in using narrative storytelling as a teaching pedagogy; that is what will be difficult when presenting it the first time for the student.

10. Structure of the Study

Our research is divided into two main parts; the theoretical part, which includes two main chapters about our subject, and the practical empirical part which includes one chapter; the report of the workshop.

The first chapter will include two sections. The first will be devoted to storytelling technique, explaining its origins, definitions, and its significance in EFL teaching-learning process. The same section involves the relation between story and reading. The second section will be about mental imagery and include its definition, its neurological foundation, and its explanation. The same section tackles the relation between mental imagery and reading process.

The second chapter, we will shed light on the different views about reading skill. This chapter talks about the reading skill, its nature, definition, its type, strategies and reading comprehension.

The third chapter is devoted to fieldwork, in which data are extracted from the analysis of the training- sessions and presented in the form of a report. The data obtained from will be analyzed and interpreted to confirm or infirm our hypotheses.

Part One:

Theoretical Framework

Chapter One:

Storytelling and mental imagery

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Introduction

Storytelling is the oldest method of communication in the world, and it is the original form of teaching. For example, the lecture itself can be in a form of a narrative, or a story can be a solution to illustrate a key point.

People, throughout history, told stories in several ways, but for the same purpose of communication and education, because of its ability to create an immediate interaction between a teller and a hearer, that leads to a higher cognitive degree in students' responses. This technique, which has become a crucial tool in creating ideas and developing skills, was supported by many learning theories. In addition, many studies argue on the beneficial role of stories in teaching and learning. Even more, it seems that narrative storytelling and the criteria of brain-based meets together in learning and teaching of several levels, where storytelling appeals to different learning styles and many of intelligence spheres.

For that, storytelling has a great importance to the present study with relation to the mental processing in form of mental visualization. The researcher devoted this chapter to talk about two areas: the first presents storytelling as a strategy, as a concept and than research how storytelling as a teaching technique has an impact on educational development, and on reading skill through mental imagery. The second part is about mental imagery as a cognitive process, and as a way for educational reform.

Section One: Storytelling as a technique

1.1. Definitions of Storytelling

Modern educational theories have narrowed a variety of thoughts about the basic elements that constitutes a definition of storytelling. In education, generally, stories come in form of written or oral narratives, but among educational researchers often it is defined in specific and narrow terms.

The National Council of Teachers of English (NCTE) (n.d) defines storytelling as a process of building a relationship between a tale and one or more listeners with voice and gestures, through that voice and gestures the tellers begins to re-create mental images, then through the first responses of the audience; he will know the way he will direct his story. When dealing with stories each listener or teller composes his own story image derived from the used words, gestures and unique sounds. McDrury and Alterio (2003) gave a more thorough definition as they state that storytelling is “a uniquely human experience that enables us to convey, through the language of words, aspects of ourselves and others, and the world, real or imagined, that we inhabit”. This means that stories were created to help humans knowing the world, since it delivers history, cultures, beliefs and norms of the community.

Therefore, storytelling is more than a tool of entertainment or passing time, but it has become a way of communication and knowing the surrounding world and ourselves through the inherited stories from our ancestors.

1.2. History of Storytelling

First nations have passed a heritage of knowledge from one generation to the other through oral traditions, one of them storytelling; that is an old method used to teach cultures, beliefs, and history.

Historically, the basic aim of storytelling was to transmit culture and beliefs of previous generations to the next ones in order to save it from death and give it in young generations. Then, when it came to applying it in teaching, they found it beneficial if it will be in a formal and official setting but for the same purpose, “[...] teachings in the form of stories are an integral part of our identity as a people and a nation. If we lose these stories, we will do a disservice to our ancestors ...” (Hanna & Henry, 1995, p.201).

Pedagogically, starting with Sawyer, storytelling was only a spoken story, where the use of voice as an instrument with spoken language words. Sawyer’s storytelling experience was based on the ability of storyteller to be familiar with the story and bring it to his own imagination, and tell it with “The power to blow the breath of life into them.” Then, Sawyer and Shedlock (1915), named “Standard model” that was formed within the English speaking western traditions, where tellers were limited to world’s folklore because of its importance, have developed this model. In this sense, Kaystone said, “the regular use of folktales in library and school context provided the initial pattern for the evolution of storytelling as an organized activity [...]” (1998, p.4). This last model and even there were many other traditions, “The organized storytelling” influenced ideas and practices through stories in school libraries today, this evolution started from Canada, the United States than expanded to the other countries and regions.

The act of storytelling has played the two roles: as entertainment and as a teaching tool (Coulter, Michael, and Poynor 2007; Mc Donald and Crawford 2007). In teaching,

storytelling is a powerful way when it comes to clarifying a point in a lesson, to exemplify or exchange ideas based on prior knowledge. In addition, to engage creativity and critical thinking when asking questions during debate activates learners' imagination and curiosity.

Even though for many years narratives have intervened in the classroom as Rosen said, there is no original clear view that presents storytelling as an educational theory, but just started as a belief of teachers as being an important part of the curriculum, then it has been translated into practice (1988,p.164). In that case, storytelling was an optional learning act that differs in its uses and the aims behind that use. Kuyvenhoven (1995) conducted her MA to explore contemporary storytelling in Canada with three tellers who draw their stories from traditional oral narratives. By the end of in-depth research, she came up with three different relationships and views to stories: social, linguistic and geophysical contexts, and if storytelling is absent in learning; critical, intellectual and geophysical aspects will be missed too.

1.3. Essential Elements of a Story

Nothing is created in an arbitrary way, but according to a set of rules that helps in understanding things and how it is made. The same are stories, where the researcher looks for its rules to describe the elements that comprise the structure of an effective story.

One of the theories that gave a clear framework for S.T. was the socio-cultural view that argues on the importance of setting on learning and development, this is what is called in the *Vygotskian theory* 'The activity setting' where mental functioning occurs highly. In particular, the setting is the student's degree of freedom and motivation to explore (Brown & Reeve, 1985). Tharp and Gallimore (1988) have identified five main aspects of *the activity*

setting as mentioned in Alterio & McDrury (2003): *who, when, where, what* and *why*; *who* means people or animals in the story, more particularly who create constraints in the line of events, in other words whoever is important in the story. The *when* is concerned with the time frames of events that can be easy to deal with in a certain time of the day and difficult in another one within the same line, it is not only about focusing on the *what* but also about *why* such actions came as reactions.

Another categorization was given from a neural view, where it views those elements as a way to fulfill readers' needs to reach a clear understanding and sense making, Haven (my emphasis, 2014, p. 67) divided it into eight elements and describe it in that way:

A **character** that is of **interest** to the intended audience has a **goal** that is both important to that character (**motive**) and relevant to the audience. However, reaching that goal is blocked by some combination of **problems and conflicts** that create real risk and danger for the main character. Still, this main character **struggles** to overcome problems and conflicts, facing **risk and danger**, to achieve that important goal. This story then must be presented in sufficient relevant **detail** to make it seem real, vivid, and compelling.

That is to say, story elements are the pillars that build an effective story and making sense, to guide the readers' comprehension and flow of ideas without losing attention.

1.4. Seven Story Steps

When presenting a story, the teller should take into consideration that the content of the presented story needs to be oriented directly to the intended point.

According to Haven (2014), creating a purposeful story passes through a *seven-step process*. First, the teller needs to define his *Audience* and know everything about them, because a successful story is targeted to a specific audience who will process it in their minds according to their abilities. Second, *Theme*; "the central point or concept; the unifying idea" (Haven, p.143), or as he called 'Take-away message' means the teller should define the

message (s). Then, *metaphor* “ascribe tangible, specific, and vivid characteristics of some known concepts onto unknown or unknowable concepts in order to better understand the latter” (Haven, p.146). In addition, the narrator should know how to build a well-tied *Relevance* and *Context* of the story to attract the audience’s attention, and let them remember events indirectly because these two elements address the active memory directly. The fifth is to adjust for ‘Real-world’ constraints; that is to say, to see the effect of the limitations and conditions of the surrounding immediate world on the effectiveness of our story, then to compare how far our story that fits our ‘World’ from ‘Ideal story’. The other step is to develop a *Central character*; from this point, the teller begins shaping his story according to the plan of eight elements (p. 24). Finally, building the story elements around *Character* and *Metaphor*, after these steps, it is time to put this story together to be purposeful and influential.

After finishing the story, revision and edition should not stop, because during revising maybe some new ideas or modifications may occur, but if the path stops as soon as the story finishes all the energy and passion that the teller gone through will be destroyed.

1.5. Storytelling as a Technique for Teaching

Teachers during the nineteenth century believed that teaching English as a foreign language (EFL) is only a matter of linguistic mastery, and this was proved through the teaching theories that have appeared that time (Grammar Translation Method (GTM), Structuralist approach). But since the 1980s literature has entered the realm of EFL to change the way of teaching language totally; from teaching correct linguistic structures to improving communicative competence, and presenting “[a] springboard for the development of critical

thinking and aesthetic appreciation” (Bretz,1990,p. 335-338) and develop students’ cultural awareness. The idea of using literary works in EFL has attracted the interest of many teachers, for that reason many studies and writings were conducted advocating the integration of literary works or more precisely stories in the curriculum, like those of Cook (1994), Shanahan (1997), Kramersch (1993) and Liddicoat & Crozet (2000).

Nowadays, teaching is no more concerned with giving key principles of language, but it became less structured and less directive form of training and teaching. Instructional storytelling is increasing in frequency (Janassen & Hernandez-Serano, 2002).

Story facilitates instruction directly by presenting verbal, structural or linguistic means, and indirectly by triggering mental construction of the presented events. Labov (1972) defines a narrative “As one method of recapitulating past experiences by matching a verbal sequence of clauses to the sequence of events” (p.359 - 60). Using a story to present semantic structures may act as attention-focusing mechanisms (Gerrig, 1993) “that aids in inquiry, decision-making, and learning” (Andrews, Hull, & Denahue, 2009, p.7). Moreover, focusing mechanisms includes plots (O’Brien & Myers, 1987), problems (Merrill, 2002) and contextualized situations (Salas, Wilson, Priest, & Guthrie, 2006). The purpose of stories shifted from a tool of entertainment to an instructional use, where there are four instructional methods embedded in a story structure:

1- *Case-based instruction*: where the problem and the solution are fixed, the learner was positioned as an outside observer related to specific situations in the past (Barnes, Christensen, & Hansen, 1994). The learners are exposed to concrete events as it happened with unknown outcomes (Wieviorka, 1992).

2- *Narrative-based instruction*: as the previous one -problem and solution are fixed-, but the learner is positioned within the narrator’s context (Cobley, 2001), the main purpose

of narrative is to engage students emotionally with sense of humour, this multifunctional presentation made this method different from others (Martin, 1986). It is not compulsory to present real happened events like ‘case-based’ (Chatman, 1978).

3- *Scenario-based instruction*: the problem characterized by fixed solution criteria and the learner is positioned in an interactive, real-time experience to create the possibility of many solutions (Salas, Wilson, Priest, & Guthrie, 2006).

4- *Problem-based instruction*: here the problem is not well designed and the parameters of the solution still unknown (Hmelo-Silver, 2004), the learner as a director of the activities, the problem is used to understand declarative and abstract knowledge, in a context to improve transfer to practice (Andrews, Hull, & Donahue, 2009).

Andrews, Hull, & Donahue (2009) explained one of the advantages of grouping those methods under storytelling is to make the relationship between storytelling and the process of mind, where the mind encounters with a procession of contextually ordered stimuli, then applying that information about events existing in the real world.

To sum up, stories serve multiple functions in the classroom: attract students’ interest, aid the flow of ideas during lectures, making materials memorable, help students to get rid of anxiety and building good relations between teachers and students and students themselves (C. Green, 2004).

1.6. Strategies of Telling Stories

There are many ways of telling stories, as there are too many types of tellers, each teller have his own way; for example, one story can be heard in different manners. However, not anyone can tell a story: before telling a story, one should learn how to tell and should be aware of the difference between *recitation* and *telling*. As M. Fox Eudes (2006) explained,

poems for instance, should be recited word for word without any change, but stories have fixed points (plot) that should be respected, but the way of telling or presenting details is the teller's concern to modify it the way it suits him, by adding the touch of creativity when changing: words, character, and setting. However, the teller should be aware when changing to keep the main points not to change them radically.

In his article titled "Storytelling and the Art of Teaching" (1995), Pedersen mentioned that the storytelling presentation is a matter of *what to tell*, not *how to tell*. In that sense, he presented a process of seven '07' strategies to present a story. The first, *to start on the right foot*, that means before starting telling the teller should present the character, setting and background comments on new vocabulary or cultural components in that story. Second, *be your best self*, by being natural and spontaneous as much as possible to reach a high level of creativity. Then, *concentrate on your voice*, and be able to control it to express different tones, this will put the audience in the right context to live the story. In addition, *maintain eye contact*, for both reasons:

- 1- To attract audiences' attention.

- 2- To assess their understanding through their feedback of eye movement or facial expressions.

Moreover, *the teller should help with hand and body*. In other words, he uses body language whenever he thinks that it can illustrate more such a point. Furthermore, *using props (puppets, shells, sticks)*, can help to present a character in a story if presented in the beginning, and it addresses directly children's imagination and creativity. The last one, *the teller should pay attention to physical setting*, and the surrounding sphere that helps them to be involved in the story and to trigger their imagination.

To read a story means to read the author's words as they are in that book or novel, but whenever it is decided to be a teaching tool, the teacher knows that this story was written by someone who does not know his learners' level and what kind of texts suits them. A good teacher is able to add, omit or edit the story's expressions the way he views it; in other words, the teacher as a teller know the process of telling step by step.

1.7. Introducing Stories in the Classroom

When deciding to use stories in class, teachers should not shock students directly by presenting something they have never been exposed to, but first, try to ask them first if they even know what a story is or for what as Davis (2007) said. Then, explain to them that stories firstly are formed in our heads not written form directly; after that, they ask them what kind of stories they prefer to read or listen to, to get them thinking in their minds on a story just by giving the main topic. For example, today's story will turn around a princess, and then we ask first questions: what does a princess do? How does she look like? Those questions will help them to construct a series of pictures that will be later gathered in one story. After presenting the story and making its basic elements clear, the teacher needs to design class activities that of course work on the development of their skills.

The first way that can be used called *storyboards* that are visual aids to tell a story in fun way, made-up of pictures and words. The second is *performance narrative* since storytelling is an oral art, the teacher should get this class master language and play with it when speaking through giving them an opportunity to take responsibility of having a turn in a section of the story.

The other one is '*word games*' which "can be used as a starter exercises to get the class thinking about language and accustomed to speaking" (Davies, 2007, p. 44). There are many word games:

1) - One -word game: where "each person is allowed to say one word and that word must move the story forward (ibid, 45).

2) - Tripling: this can be used with older children, where the focus is on language and meaning of the words chosen, for example, the teacher say *the dog run, leapt, bounded across the field*, then move on the next person the circle of telling will continue and in some points a tripling sentence can be included. These exercises can reinforce students implicitly to think about the story and the language meaning at the same time as they are speaking.

When introducing classroom to storytelling, it is better to know which strategy to use and what exercises. Using this set of exercises will make students confident when expressing themselves and ideas, learn to communicate individually or in-group and develop a sense of creativity and breaking the routine.

1.8. Planning a Story-Based Lesson

Once a teacher chooses to present his lesson in a form of a story, he needs to prepare how it is going to be introduced to his class. Storytelling passes through three stages: pre-storytelling, presenting the story and post- storytelling stage:

1.8.1. Pre-storytelling stage

This stage helps students to understand the story where “it involves raising their interest and motivation to hear the story so that their attention will be focused. It also involves setting the scene and creating the context for the story so that the children can use their existing knowledge and experiences to better understanding and associate with the story”(Ioannou. G and Dolores, R. n.d).

Then, the teacher needs to introduce the new vocabulary that they will face in the story; In other words, the structure and the lexis needed to understand the content of the story.

In this stage, teachers may write *the title of the story* and ask his students to deduce or imagine what the story will be about. Alternatively, ask them to visualize some parts of the story that may appear from the title (setting, events). To make this stage successful some relevant props can be used; for example, with young children puppets and dolls related to the story and set the scene maybe introduced.

1.8.2. While S.T stage

When actual telling starts, students need a suitable setting to feel comfortable during the S.T task, so that to direct their concentration only on comprehension.

This stage requires from the teacher to deepen comprehension, encourage participation using a set of pauses when telling, and ask the students to imagine or predict what comes next. That is to say, the main goal here is to develop students’ imagination, prediction, and concentration.

1.8.3. Post S.T stage

After listening to the story comes post-listening activities to make sure that students have understood the story and to improve their cooperation in communication through talking with classmates and listening to their experiences after listening to the story, those activities depends on the curricular aims and the teacher's goals that he wants to achieve. He can use:

- *Comprehension questions*: to determine their story comprehension.

e.g., where does the story takes place?

- *True/false questions*: to see to what extent they were concentrating by giving extracts from the story.

e.g., the king has decided to visit Wales:

True

False

- *Multiple-choice questions*: indirect questions to assess learners' understanding and concentration.

e.g., the story takes place in:

England

Scotland

Ireland

- *The story mapping*: to discuss orally the story structure (setting, character, problems).

- *Discuss the main theme or moral lesson activity*: to see their different interpretations that can be affected by their prior knowledge and life experiences.

- *Retell the story*: this tends to develop learners' speaking abilities by asking them to retell the story in their own words with their personal style so that they are given the chance to be storytellers.

To guide the learners when trying to retell a story the teacher may provide them with the following questions to direct them:

- Who were the characters?
- What happened in the story?
- When/where the story takes place.

- *Dramatization*: it is to act the story in collaboration with other students to develop their creativity and oral fluency.

1.9. The Selection of Appropriate Short Stories

One of the pillars of a successful story-based lesson built upon the choice of a story; either to use authentic original stories to the target language or an adapted story to the language of learners.

A set of points a teacher should take into consideration when selecting a story because being able to select a story means being able to discriminate and evaluate what meets the learners' needs and what do not. Pedersen (1995) gave a set of conditions and points:

- *Read, read, read:* to say a ‘story’ means many tellers and writers, so the teller (teacher) should read many versions of the same story because “wide reading gives authority to your telling” (p.2).

- *Choose stories you like:* if the teacher chooses stories where he feels comfortable when telling it, it will be more meaningful and simple in terms of structure to his students’ level, and S. T. process will be more effective.

- *Choose stories appropriate for your learner:* in other words, stories they like to listen and walk with their age and cognitive levels such as fairytales and folks.

- *Choose stories with a simple structure:* in terms of theme, style, plot, and character to facilitate comprehension.

- *Choose stories with a positive value:* psychologists prefer to be far from violence, fear hatred and to integrate implicitly the good face of human nature such: joy, humor, love when telling a story.

- *Study the stories background:* analyze its social, historical and religious background in the origin city; if they are universal, it is acceptable, if the content does not go with the context, he needs to choose another.

- *Test your selection:* through the positive or negative reactions of the audience, the teller may evaluate his success in choosing.

Georgiou and Verdugo gave some other points in their paper that teachers should take into consideration when selecting a story, according to the students’ level. The chosen story should have:

- *A clear storyline:* as Pederson (1995) called it ‘simple story structure’.

- *Plenty of repetition:* it is the natural repetition in the story; it is “helpful in that it offers the child more opportunities to hear the language and view the language in action in various contexts” (p.6).

- *Opportunities for participation:* where during the telling process some pauses should be created to keep students engaged and to maintain their attention and make sure that they are understanding what is said. Some opportunities can be created by guessing or visualizing what is next, discussing pictures’ content.

- *Helpful illustrations:* if story listeners (learners) are provided with more clarifications and easy contextual information, they will enjoy the story more and understand it better.

- *Appropriate linguistic level:* teachers should select stories with a language that fits his learners’ level, where it has been proven that students need to know 75% of the vocabulary in the story for better understanding. Moreover, the other part they have not understood can be supported with visual aids, body language, and facial expressions.

From all what have been mentioned, to teach with stories is not an easy task, and the selection of them is not a random selection, but under a set of conditions. That differs according to the aimed level whether pre-primary, young primary or older primary ones. It is the teacher’s responsibility to make the successful choice of stories; natural language, simple structure, easy syntax and word repetition.

1.10. Reasons of Using S.T as a Teaching Tool

Storytelling is a powerful and enduring means of communication and an ideal teaching and learning tool. In addition, to use it in the field of education has many reasons:

- “Oral stories direct the expression of a literary and cultural heritage, and through them, that heritage is appreciated understood and kept alive”. (Pederson, 1995, p. 2), that is to say through stories we can protect our cultures and pass it through generations.

- Stories have an important role on FLA (foreign language acquisition), where it gives individuals opportunities to express their values, feelings, and dreams.

- Stories in EFL classroom can serve many functions “including sparking students’ interest aiding the flow of lectures, making material memorable, overcoming students’ anxiety and building rapport between the instructor and the student or among students themselves” (Green. M, 2004).

- Authenticity and motivation:* according to Baker & Green (1977), S.T gives insights on other cultures and societies, and it prevents students from getting bored from the lesson. Stories open a door of enjoyment, wonder, and dreams. Storytelling brings to the listener-heightened awareness, sense of wonder, of mystery, of reverence for life. This nurturing of the spirit comes first, it is the primary purpose of storytelling, and all other uses and effects are secondary (cited in Pedersen, 1995, p.2).

- Develop students’ listening skills:* where it gives them a chance to listen to language in context.

- Source of motivation:* where it helps students to develop a positive attitude towards FLL and encourage them to take part in the process and incorporate any topic in a story form, also made information and topic memorable (Miskiewicz, 2004)

- Meaning:* stories present language in a context where students find it easy to extract meaning and understand the whole story.

•*Communication*: S.T. is a mean of communication in everyday life if the listener and the teller are good language users as Garvie sees it. As Malkina stated that Storytelling is an experience: This is both life experience and linguistic experience. The story mirrors the surrounding world and constructs a reality of its own, meeting the cognitive, psychological and emotional needs of a child (1995, p. 38).

•*Cultural literacy*: stories can be one of the tools for children to create a new image of the world and making meaning of it by acquiring a cultural experience in context. Where the unique identity of each culture is closely tied to its language. In all cultures, occupational and domestic skills, games, lore, moral and religious values are passed orally from generation to generation (Cadaval, 1996).

•*Exercise the imagination*: if they can live the story, they will be more creative when learning.

•Link students' imagination and fantasy with their real world.

•Allow the teacher to revise certain language aspects indirectly without reinforcement or guidance.

S.T. is the original form of teaching, where still societies is the only form of teaching in, and this because of its double-sided benefit: for the art of teaching where all aspects of language can be presented in a unique way, and for the learner by teaching them in a motivating, interesting and low anxiety context.

1.11. The Role of Stories in Developing Reading

Stories can be a facilitating aid for teachers to teach the four skills to all levels. Murdock (2002) indicates, "Short stories can, if selected and exploited appropriately,

provide quality text content which will greatly enhance ELT courses for learners at intermediate levels of proficiency” (p. 9). To him, stories can be a beneficial tool in learning when it is used in activities: such as discussions and dialogue make.

Stories can be a way to develop learners’ literacy and reading comprehension, this skill can be developed through the frequent listening to stories, and this will motivate them and let them interested and curious to read more books. Through intensive listening, learners will gradually acquire confidence in reading the written word.

Apart from frequent listening, another way to build a relation between S.T. and reading is the active engagement that is to say if the student takes part in the story through participation, they will develop a *sense of story* (make sense of the text and derive meaning from a story). When the teacher is telling the story students may participate by giving ideas, guessing what is next, ask questions and at the same time they concentrate and watch the teller (teacher in this case) how he uses language intonation, body language. After that, students try to retell the story based on what they gained after the telling process. The better they perform S.T. the more sense of story is increased. Therefore, they will be motivated to get in touch with other literary works to live another experience of knowing other ideas, feeling some fun, but indirectly they are developing other skills and language aspects.

S.T. can be an effective technique for developing reading skills if it is well organized. Comprehension can be fulfilled is the process is able to attract the students’ attention, thus will lead to the development of active engagement, a sense of story as a result.

1.12. The Contribution of Stories to Developing Mental Picture Building Process

S.T. has been defined as being a process, in which a person (teller) uses vocalization, narrative structure and mental imagery-building pictures in mind, communicates with the audience who also use mental imagery, and communicates back to the teller primarily via body language and facial expressions. The communication cycle is ongoing, and in the process, a ‘story’ is created (Roney, 1996).

He converted those words to the following diagram:

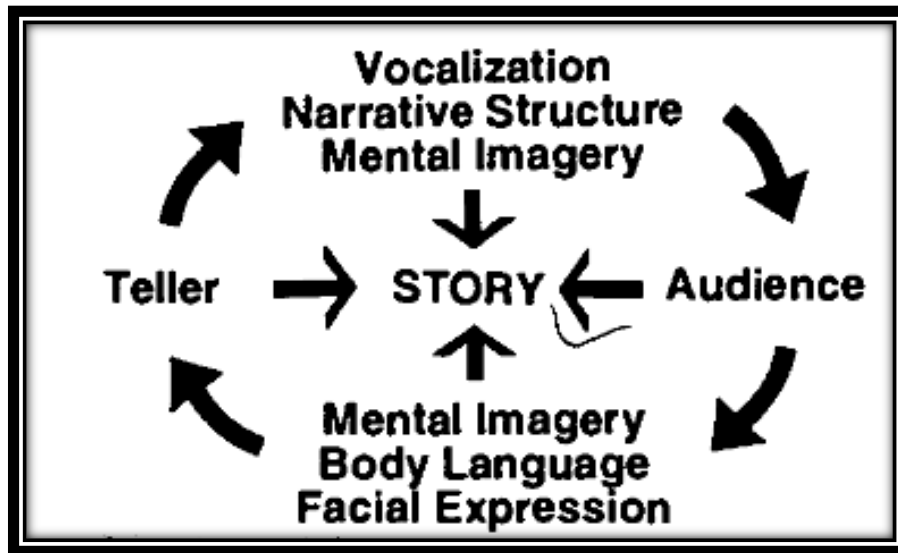


Figure1. The communication cycle during the S.T process. (In Roney.R.C. (1996)- Storytelling in the classroom).

S.T plays two roles: as a mean of communication and as an art where the teller presents the story orally and the audience (listeners) create mental images then retell it in their own way, this is the second role ‘creating creativity’.

S.T. addresses the mind directly, where it is an act of joining both brains hemispheres: the one of logic, narrative framework (left side), the other (right) of symbolic language, creativity, imaginative truths. This union proves that stories’ influence is direct to

the brain that leads by the end getting a mental image, if this last was clear enough, it will encourage and motivate learners to fix the linguistic image too.

Weiss (2000) believes that the learning experiences are easy to store and recall if associated with emotions that are evoked by stories that is to say: S.T. can activate the cognitive parts of the brain to store new information.

Conclusion

S.T. has been proved to be a successful strategy in the field of teaching and learning a foreign language, where it provides both life and linguistic experience and it can go far with learners and reach some areas that regular teaching curriculum may not visit. That is why when designing textbooks teachers should take into consideration to include it as a way to facilitate language acquisition in a more vivid, active, powerful and creative way.

Section Two: Mental imagery

Introduction

Over the past period, interest in the study of the brain and mental images has been renewed. After an obvious agreement that human beings think in either sentences or pictures, in recent years '*pictorial theory*' has received most of the attention; saying that the source of ideas is not logic but in form of mental images from unconscious inspection.

The field of M.I. has a long history with relevance to experimental psychology, where many researchers carried out studies on it. After experimental psychology came academic psychology that has added the field in teaching through learners' natural abilities.

To answer the question of what is M. I. and the theoretical, practical problems that are raised by its existence; this section is devoted to discuss some relevant literature that has been examined. Then, it will discussing in a specific cognitive problem in which MI is involved, that is "*Education*".

2. 1. Definition of Mental Imagery

To define MI is not only a matter of describing certain elements of its forms, but it is a matter of covering all the concepts under its umbrella. To reach a full understanding of the concept some examples on it can be examined.

According to Sadoski & Pavio (2001), it is a kind of internal representations of external scenes. They use mental codes that include senses of modalities of visual, auditory, haptic (touch), gustatory (taste) and olfactory (smell) (Sadoski & Pavio, 2001, p.45). In

addition, Winograd & Bridge (1980) acknowledged the tactile, kinesthetic and organic imagery (internal sensations: fear, thirst, fatigue).

Over years, and after long debates among researchers such as (Paivio, 1986; Piaget & Inhelder, 1971), the simplest definition of MI is that ability to build mental pictures of objects and events that are not present in front of the eye that can later affect comprehension. This process has an important role in both memorizing and understanding concepts, through its dynamic processing of information; this is what made it described as “*Mental-blackboard*”, or a *personal movie screen* that helps in solving problems of both verbal and non-verbal tasks in a dynamic way.

From a constructivist view, learning is an active act or what is referred to “*Meaning making experience*”, where meaning is build-up from the collaboration of prior with newly acquired knowledge of individuals. Within the field of psychology, constructivists were concerned with how mental representations are constructed (Ashcraft, 1989). In education, they have rejected the idea of guided skills instruction and turned to the active role of the learner in the educational process. Thus, both perspectives believe in the role of MI in learning.

Although MI has been defined in many ways in psychology and education, they agree on the idea of forming internal sensations of objects and events. For them, they refer to mental images as “*picture in mind*”; Sadoski & Paivio (2001) stated that if there is a *mind’s eye*, there is a *mind’s ear*, and other senses of the mind. Sadoski & Paivio (2001) claimed, “Imagery pervades all aspects of our mental lives, including what we experience when we read and write” (p.11), that is to say, MI is not limited to what really happened physically, but what we have experienced from sensations and memories (of sounds, sight, touch) and stories.

2.2. Neurological Foundations of M. I.

M.I. has passed through a long history to reach what is now; its development can be summarized in the following chronological order:

1- It has been seen as shameful and wrong rather than a tool to improve performance; for example in the Old Testament imagery was related to evil and the devil (Woplin, Shorr, Krneger, 1982).

2- Before the behaviorist revolution, imagery was seen as an irrational (illegal) pursuit of mystic (internal) powers.

3- In the late nineteenth century, imagery becomes more acceptable when European psychologists started using it in their therapeutic techniques.

4- From the first half of the twentieth century to the 1960's imagery was a dormant subject, with no interest at the same time other disciplines began to be explored, that later helped imagery to be an area of interest again.

5- Imagery received attention from many areas of psychology; one of these areas was *education*, more specifically imagery on reading and comprehension, where studies were conducted in 1970's and 1980.

6- Some of those studies found that many measures of visual imagery were related to reading comprehension (S.A.Long, Winograd & Bridge, 1989; Sadoski, 1983).

7- Other studies found improvements in comprehension or story recollection (Pressley, 1976).

8- More recent evidence stipulates that MI training can lead to better text recall and comprehension has been achieved (Glenberg et al., 2004).

The role of imagery in general psychology and education is very important, many studies are designed and researchers are working to reach its value and realize it in all aspects of our daily life and fields of work.

2.3. The Fact of the Existence of Pictures in the Brain

Famous thinkers (Dr. Grandin 2006, Paivio 1996, Einstein) believe that their ideas appeared in mental pictures, not in logic. However, this is not what really happens, because only neither language nor mental pictures are sufficient to reflect what human thoughts carry in content.

Pylyshyn (2003) argue that the difference between pictorial and other forms of reasoning is what thoughts are about, rather than the form they take. There is a difference between *how something looks* and *what does it means*. There is something special about the format of our thoughts' content; if we try to *see with the mind's eye*, means that an internal eye watches an internal picture –mental picturing-. In fact, the phenomena of MI have nothing to do with the format of the image as the word reflect, but with how people understand things: imagining considers what things would look like if you really see it.

Neuroscience proposed that to have a mental picture is to have two-dimensional moving pictures onto the visual cortex as follow: When physical or visual patterns are presented to the eye, a HOMEOGRAPHIC (continuously deformed and changed) mapping of RETINAL activity occurs in visual cortex (Tootell et al., 1982).

After a long debate between clinical psychologists and neuroscientists, some people concluded that images are displayed in visual cortex (VC) during MI, so most of the visual information are displayed in VC to be interpreted.

Cortical images occur in both vision and imagery, the difference is that cortical is caused by light on retinal while imagery by Top-down projections from cognitive systems (Kosslyn, 1994).

The same question was a controversy between *pictorial*s, which supposes that mental representations of imagery are in form of pictures, and *descriptonalism* that is a popular view believes that mental representations of imagery are in form of symbols, like those of Mathematics or computer.

Block (1983) mentioned that '*the picture-in-head*' theory of images argued the idea that our mental images often seem to be pictured in head. This was because the experiments and introspections with its judgment, "of course, my mental image of my daughter is pictorial; it looks just like this photograph of my daughter; I carry one in my wallet and the other in my head." Therefore, if one says that his mental image looks like a picture he means that his mental experience is like the one he gets on looking at the picture.

To conclude, in neuroscience the term '*picture*' does not mean what people normally means by the word, but the picture in the head is not even perceived at all, things that function as pictorial under cognitive system of representation rather than the human system.

2.4. Theories and Sources of MI

A. *Dual-coding theory*

DTC is a combination of empirical studies that tends to understand cognitive and pragmatic processes because of "individual and common concrete experiences" (Sadoski & Paivio, 2001, p.7).

It is a combination of verbal and non-verbal cognition in a '*unified framework*', and this is the basis of MI (non-verbal/imaginal) with language (verbal).

Paivio assumes that two distinct *coding systems of mental representations* with a make-up cognitive process in reading and writing (2001, p.43). One deals with the basic units of language (logogens) and the other with the basic units of non-verbal activities (imagens). The internal connection between these two systems becomes later the cognitive process that occurs during reading and writing.

DTC suggests that comprehension and meaning come from the activation of mental representations. Sadoski & Paivio (2001) believe that "imagery provides an inner context contributes to meaning" (p.70). In addition, this theory explains that the verbal system deals with printed, spoken and written language, but non-verbal are more holistic (for example images). It processes information of non-verbal events and objects including sounds, tastes, smells and emotional experiences.

The importance of these two sub-systems (verbal/non-verbal):

- It helps to explain how readers' process verbal materials while the non-verbal come randomly.
- Words create images and images evoke words (Sadoski et al., 1991).

B. Cognitive development theory

Piaget (1970, as stated in Miller 2007) stated that the knowledge the child gains from various sensory-motor experiences provides the basis for the development of basic thought, which in turn establishes the child's capacity to learn and use language. The child first starts to display the development of his primary thoughts and language skills by using symbols, drawings, primary speech and writing abilities, to represent concrete objects and

experiences. The child is dependent on cues to associate an object with an appropriate symbol.

As child's development proceeds, he becomes less dependent on context and cues, and start to think about abstract concepts and reason about objects even, they are not present in front of his eyes; this type of reasoning is dependent on the ability to retrieve prior knowledge from memory and apply it to current thought process.

Piaget & Inhelder (1971) argued that the dominant educational techniques that are verbal are insufficient for the child's developmental needs because his early prior knowledge is based on the non-verbal information.

These units of non-verbal information are referred to as '*mental images*' that includes auditory, tactile, kinetic, visual and olfactory information.

For that and for better learning, children should be active participants in the mental evaluation and manipulation of non-verbal imagery that has to be integrated with verbal knowledge before using it as a language development tool.

C. *Schema theory*

- Its origin is Greek, plural 'schemata', means form or figure.
- For Immanuel Kant, the notion of a *schema* is the way of relating percepts to concepts. For him, schemas are structures of imagination, which is the mental faculty of all judgments among which representations' synthesis (sensory, percepts, concepts, images) into concepts.
- The Schema is "a cognitive representation comprising a generalization over perceived similarities among instances of usage" (Kemmer & Barlow, 2000).

- Schemata refer to the prior knowledge, experience, concepts and beliefs that come to the listeners when listening to any text as well as reading one (El-Deen, 2009, p.12).

- The principle of schema leads to two modes of information processing; bottom-up processing and top-down:

- a. Bottom-up processing:* it is activated by new incoming data. Schemata are hierarchically formed, from the most specific at the bottom to the most general at the top. It acknowledges that listening is a process of decoding words, from smallest meaningful units to complete texts. The reader makes use of his words, syntax, and grammar to work on form in bottom-up processing (Rubbin, 1994, p.210). This process is closely related to the reader's linguistic knowledge.

- b. Top-down processing:* it is the use of background knowledge in comprehending the meaning of a message. The system makes general predictions based on “a higher level, general schemata, and then searches the input for information to fit into these practically satisfied, higher order schemata” (Abo Skhela, 2010, p.29). In reading, the reader constructs the meaning of the writer employing new input as clues. In this process of construction, the reader uses prior knowledge of the context and situation within which reading occurs to understand what is read. Besides, although the reader can trigger a schema, he might not have the correct one addressed by the writer, and relying only on top-down process may lead to comprehension failure.

In addition to these two, there is another one, which is *Interactive processing theory*; it overcomes the disadvantages of bottom-up and top-down processing, where it was agreed that both top-down and bottom-up reading processing should be combined to enhance reading comprehension.

Individuals have schemata for everything, even before coming to school. They develop schemata for what they experience. Schemata affect both information interpretation and comprehension, these schemata change as new information is received.

As stated by Rumelhart (1980);

Schemata can represent knowledge at all levels from ideologies and cultural truths to knowledge about the meaning of a particular word to knowledge about what patterns of excitations are associated with what letters of the alphabet. We have schemata to represent all levels of our experience at all levels of abstraction. Finally, our schemata are our knowledge. All of our genetic knowledge is embedded in schemata (p. 41).

The importance of schema theory to reading comprehension lies on the way readers use their schemata.

Readers fail to make sense of text because they lack an appropriate schema, mainly that related to the text's context rather than linguistic or formal properties; this missing schema referred to as '*content schema*', which refers to the familiarity of the subject matter of the text; it includes an understanding of all elements needed to interpret the text. One important element is the cultural one that can affect the type of reading, the purpose and the expected level of textual engagement. As a result, one's cultural orientation is the dominant responsible for shaping reading habits, but readers may fail if their cultural schema is different from what the text proposed. Carrell & Eisterhold (1983) said, "One of the most obvious reasons why a particular content schema may fail to exist for a reader is that the schema is culturally specific and is not part of a particular reader's cultural background" (p.80).

According to Carrell (1981), the text must activate in the reader all of the appropriate cognitive schemata in order to be comprehended, this can be done through pre-reading activities as indicated by Koh (1986).

2.5. The Role of M.I in Educational Reform

M.I is powerful ability where it can change the educational bath. First, Through MI teachers can train students to relax and overcome stressful situations and visualize themselves performing success by working in a relaxing atmosphere, and by MI activities interactive learning situations can be created, where students are active participants. In addition, Visualization can be used to gain confidence in using FL and to shift from the limits of passive learners who obey the teachers' rules. Then, when mental images are constructed, prior knowledge is activated causing more vivid representations of stored knowledge. Moreover, if children are trained to build MI, they will show development in making predictions, inferencing and remembering what they read. In addition, when guiding students to visualize is an engaging and enjoyable way to trigger comprehension and retention. Finally, learning to create brain movies may help students to make sense of complex modification subject matter and see characters, events, and settings in stories.

• Paivio (1985) described MI by the purpose it serves to the individual; he gave four purposes, which are presented in **Table 1**. MI can serve:

- 1- Motivational purpose: that is associated with physiological and emotional responses of the individuals; those responses are serving the motivational aspect of imagery.
- 2- Rehearsing motor skills where individuals are serving the cognitive general aspects of imagery.

		Imagery purpose	
		Motivational function	cognitive function
Imagery purpose	General function	Imagery to increase physiological arousal and positive or negative emotions	Imagery of general strategies
	Specific function	Imagery of responses to goal or goal oriented behaviors	Imagery of specific motor skills

Table1. The division of imagery depending on the purpose it serves (adapted from Paivio 1985).

2.6. Types of MI

Mental images are representations that appear in our minds about experiences. There are seven (07) types of images: visual, auditory, olfactory, gustatory, tactile, kinesthetic and organic. All work together to form clear mental images of what we read.

1) *Visual*: it appeals the sense of sight, and it takes the largest part of the mental image. We may have mental images of someone's appearance to the eye.

e.g., the deep blue hues of twilight were reflected in the still water; the slight glint of moon light peeked through the clouds just enough to make out the silhouette of a passing ship.

The reader can imagine a still, ocean scene at twilight as if they were standing on the edge of the water themselves.

2) *Auditory*: it describes specific sounds that are happening in the story. One can imagine a friend's voice or a song rhythm or it could appear in form of *ONOMATOPOEIA*: 'Cacaw!', 'Splash!', 'Bang!' that describe sounds people familiar with.

3) *Olfactory*: it describes a particular odor; for example, describing the perfume of flower in a garden, where the author wants you to be able to smell the scent coming off the pages.

4) *Gustatory*: it pertains the sense of taste.

e.g., John ate a sweet, sugary chocolate cupcake.

This description maybe will lead the reader to feel the taste of the cake.

5) *Tactile*: it has to do with the sense of touch. The smooth underside of a snake, rough texture of a tree, anything we can touch can be described through imagery.

6) *Kinesthetic*: this deals with movements or actions of objects or people.

e.g., the birds flapped their wings in excitement.

7) *Organic*: it is the most difficult form to write, where it deals with creating a specific emotion within the reader: feel sad, happy, and fearful all are effective organic imagery.

A story cannot be without imagery. To tell a story is to evoke emotions, setting the scene or describing a character. Without this magic literary device, readers will not go to the other world of the story; they will leave staring at words on a page.

2.7. MI as A Strategy for Improving Comprehension and Reading

Comprehension

Researchers have looked for the links between reading and imagery in order to know how readers create understanding. They found that reading is a multidimensional process, where the *reader* is actively involved with his entire prior knowledge, imagery and experiences, the *text* with its content, concreteness, vividness and conventions plus the readers' situation.

Encouraging children to visualize parts of the story in their minds is an effective way to help them comprehend what they are reading. Using '*mind movies*' may clarify information it can be done with any genre, and include any of the five senses.

Visualizing can lead to learning; making connections between multiple texts and building an awareness of the way we see the words and the world.

Researches with typically developing children, poor comprehenders and poor readers have shown that the use of MI helps comprehension of stories (Pressley, 1976).

Representing ideas in a text with visual images might aid the integration of story events and ideas and facilitate the construction of a *meaning-based representation* of a text (Linden & Wittrock, 1981).

Sensory images also may change reading from passive process to an active one. In addition, MI help to make something you read concrete in your mind, as Gary Paulsen said "If books could have more, give more, be more, show more, they would still need readers who bring to them sound, smell, and light and all the rest that can not be in book. The book need you".

Conclusion

Cognitive neuroscience has made impressive progress in the illustration of the nature, function and neural basis of mental imagery (Kosslyn, 2010). Where scientists believe that we may experience the real world and imaginary actions in similar ways and imagery cannot make you perform beyond your capabilities, but it can help to reach your potential using all five senses, to be fully immersed in the mental image to the point you feel as it is really happening. That is to say, mental images are like an internal movie scenes, if you watch the repeatedly your subconscious mind will accept them as a reality. They will affect thinking and behavior, and the more those images are positive the easiest you attract success, rather than those of bad situations and problems. To conclude, MI is a door for another world where success is guaranteed if people are eager to transfer those images to the real world.

Chapter Two:

Reading and Reading Comprehension

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Introduction

Reading is one of the four necessary language skills for second or foreign language learners (ESL/ EFL) in their level of success and development. It is an extraordinary task where a set of components must be mastered. Consider what is needed to read a short story: the words contain phonemes and morphemes, sentences have specific stylistic features and propositions, and to reach a deep comprehension of sentences requires knowledge about the smallest components.

As students progress through school, teachers ask them to read their courses with increasingly complex information, and to succeed in learning depends on their ability to understand and use these data.

That is why it is important to study the reading process and understand what happens to readers when they receive messages from a written text. The passive role of readers become an active one in 1970.

This chapter defines the terms reading, explain its types and process, state its strategies and review the reading comprehension process.

1. Definition of Reading (Nature)

Reading was defined from different point of view:

1) - Anderson et al. (1985) defined reading as the process of making meaning from written texts.

2) - Wixson, Peters, Weber, and Roobar (1987), reading involves:

The readers' prior knowledge.

The text information.

The reading context.

3- Reading is an interaction between reader and text to extract meaning, for that purpose; there are many types of knowledge:

Linguistic or systematic knowledge (bottom-up).

Schematic knowledge.

4) - Goodman (1988): "Reading is a psycholinguistic guessing game".

Reading is a complex visual cognitive process of extracting meaning from written texts thorough information processing with relation to existing experiences or "schemata" to build up on it new knowledge that is called "reading through inference"

(Read and guess the meaning) it can be true or false depends on the readers' prior knowledge.

Reading can be *text driven* (the text is interesting). *Task driven* (the text is read because of the academic task that the learner faces) or *purpose driven* (the text is a step towards a purpose).

The process of reading is mainly characterized by "reading dynamics" that is reading develop in time and is evaluated by the achieved level of the competence.

The process of reading can be viewed:

- a) - *purpose*: what makes the process necessary for the reader.
- b) - *strategy*: are the chosen techniques to describe the process, there are three:
 1. Skimming: reading for the general content.
 2. Scanning: reading for details.
 3. Critique: read to assess the extent of the truth of the written text.

As a result using these strategies, a “predictable outcome” is achieved such as general ideas, detailed information or personal opinions (Forrester, 1996, p.161)

The process of reading can be as Forrester (1996) classified:

- a). *text-oriented*: view the text as the source of information.
- b). *Reader- oriented*: is the process of eliciting readers’ responses.

While interacting with the text to create meaning, the reader is viewed as an information processor or resource of studies by “schema theory “(prior knowledge in the learners’ mind), which is not only a storage of data but organized knowledge (Farly, 1995, p .193).

When reading, schemata can include:

- 1) .concepts: familiar words to the reader.
- 2). Facts: happened events to the reader.
- 3). Images: mental pictures in the reader’s mind.
- 4). Language: it is the known knowledge about the language components.
- 5). Assumptions: readers’ opinions and points of view.
- 6). Emotions: due reader’s emotional past, he can recognize what is meant.

This means that the reading process is related at first with schema, which is an active phenomenon in the reader’s mind, containing the scope of the questions a reader may ask, and answers a reader can give.

2. Types of Reading

“Reading ability can be improved by teaching how to read for particular purposes”.
(Anderson. 2000, p.397).

Reading in different ways in different professional and educational settings is decided by the daily needs depending on the context and purposes. These different goals necessitate the reader to be engaged in many types of reading.

2.1. Intensive reading

It is related to any development in language learning under the guidance of the teacher. It is the basic stone to explain language difficulties such as structures and meanings, and for extending knowledge of lexis and idioms. Intensive reading requires a higher level of understanding in order to refine study skills, vocabulary, sentence structures and provide socio-cultural insights that is why it is generally at a slower speed.

2.2. Extensive reading

This kind of readings develops at the student’s own pace with relation to his abilities. The selected materials to be read will be at a lower level of difficulty, where language is simple with frequent words than intensive reading, extensive reading aims to train students to read directly and fluently in the target language (TL) for pleasure without teacher’s guidance. Extensive reading materials are familiar in structures and new vocabulary will be included slowly and implicitly in a way they can deduce meaning through context, by making guesses at the meaning of unfamiliar items.

Materials consist of:

short stories, plays, articles from newspapers and magazines, in a specific style contains a certain amount of repetitions and simple structures, it means reading in order to gain a general understanding of what is read. It intends to develop good reading habits, build a lexical luggage, increase comprehension and supply students with relevant socio-Cultural materials.

3. Reading Skills

If reading itself is a skill, then it is possible to break it into sub-skills for the purpose of teaching and testing. A reading skill can be defined as “a cognitive ability which a person is able to use when interacting with a text” (Urquhart and Weir, 1998, p.88).

There are many skills taxonomies; some based on speculations of researchers others on empirical grounds. Urquhart and Weir (1998, p.90) gave a selection of some taxonomies as follows:

1) - Davies (1968):

- Identifying word meaning.
- Drawing inferences.
- Identifying writer’s techniques and recognizing the mood of the passage.
- Finding answers to questions.

2) - Lunzer et al. (1979):

- Word meaning.
- Words in context.
- Literal comprehension.
- drawing inferences from a single string.

- drawing inferences from multiple strings.
- Interpretation of metaphor.
- Finding main ideas.
- Forming judgments.

3) - Munby (1987):

- Recognizing the script of language.
- Deducing meaning.
- Understanding explicit information.
- Understanding information when not stated explicitly.
- Understanding conceptual meaning.
- Understanding the communicative value of sentences.
- Understanding relations with the sentence.
- Understanding relations between parts of a text through lexical cohesion devices.
- Interpreting text by going outside it.
- Recognizing indicators in discourse.
- Distinguishing the main idea from detail.
- Extracting the main points to summarize.
- Basic inference skills = give example from the book.
- Skimming to locate specifically located information.

The pedagogical value of all these lists of skills is that they make it possible to diagnose the reader's problems, with the view of identifying remediation (Alderson, 2000, p.11).

Urquhart (1998) proposed a set of criteria for ranking those skills:

1) *-Logical implication:* all the items should be logically ordered in a form of claim, where one component in the system can logically be considered to presuppose all the components below it.

2) *-Pragmatic implication:* if the reader use one skill he is assumed to have the other ones.

3) *- Developmental:* the system of reading progress in a chronological scale where some skills are acquired earlier than others.

4) *-Discourse level:* a skill ordered with respect to the size or level of discourse level it relates to (linguistic, cultural).

Since those skills were arranged in a hierarchy of implicational scales, the assertion that the reading sub-skills are related to each other in a way that before we can use higher order skills, we have to master lower skills may be validated.

4. Effective Strategies for Reading Comprehension

There are many strategies for reading comprehension:

a) – *Activating and using background knowledge:*

The reader activate his background knowledge to use it as a way to comprehend what is read, this knowledge is a combination of personal experiences, with their concepts for how written text work: word recognition, word meaning, print concepts and how text is formed (Anderson & Pearson, 1984).

Cognitive scientists believe that good readers are able to relate their prior knowledge to the new knowledge they face in a text, they activate their schema when they start

reading, the first representation -schema- affect the way of comprehension and reaction to the text (Pichert & Anderson, 1977).

b) - Generating and asking questions:

When reading, readers ask themselves questions about the text, this assists them to combine information, recognize main ideas and summarize information. Asking appropriate questions helps successful readers to concentrate only on the important information of a text (Wood, Woloshyn, & Willoughby, 1995).

c) - Making inferences:

In written texts, writers do not give everything about a topic, place, personality or events; instead, they give hints or information that readers can use when reading by making inferences that integrate the information of the text with their previous knowledge. Being able to infer and make meaning is an important factor for readers' successful reading (Anderson & Pearson, 1984).

d) - Predicting:

Readers may get meaning through making guesses, by applying forecasting based on their previous knowledge and the new one to obtain meaning from what they read. Before reading, readers may apply what they already know about the writer to guess what a text will be about. During reading, readers can predict what is next or opinion will be presented to support discussion.

e) - Summarizing:

When reading, readers combine information in a text to build in their own words what the text is about, and this helps them to remember rapidly. Effective summarizing

of narrative text includes things such as relating events in a storyline or recognizing the elements that stimulate characters' activities and conduct (Honing, Diamond, & Gutlohn, 2000).

f) - Visualizing:

Readers can build mental images of a text for better comprehension; readers who can form mental pictures can remember what they read better than those who do not image (Pressley, 1976). Visualizing is very important when it comes to reading narratives, where through visualizing places, events or personalities, readers can easily understand.

5. Reading Comprehension

Comprehension is the “essence of reading” (Durkin, 1993)

Reading comprehension is a complex process of making meaning from text. It aims at understanding what is described in the text rather than extracting meaning from isolated words or sentences.

When trying to understand text information, children developmental models, or representations of meaning during the process according to Kintsch (1998), when a reader is reading a text, there are three created levels of mental representation:

a) - The surface component: it is when the words and sentences are encoded in the mental representation without the meaning.

b) - The text-based: it indicates the meaning of the text from the text itself without any newly added parts, in pure text-based the reader applies his previous knowledge to build a perfect and well consistent mental representation.

c)- *Situation model*: it combines the text-based and the readers' knowledge, the difference is text-based the required knowledge is general to decode the text in general, while in situation-model the needed knowledge is more specific according to the content of the text.

5.1. Reading Comprehension and Storytelling

Reading is not a single skill but a mixture of skills that aims to enable learners to gain an understanding of the world to develop interest and to solve their problem. However, if reading is seen as a block stone it cannot be processed correctly or in an enjoyable way rather than an educational obligation. Using storytelling aloud as a selected technique can be a powerful factor to motivate students to read and improve their reading comprehension and gain the pleasure of reading.

The importance of S.T.T in reading has been proved in the results of over 75 years of educational research (Wood, 1994). As it was believed that storytelling is the foundation of literacy development and reading aloud lead to the relation between the printed word and meaning.

S.T may help students who enter school lacking a certain level of literacy or lack of reading skills: it can help them to avoid problems like poor vocabulary and comprehension, and it can take directly to success.

In addition, telling stories to students help them to develop background knowledge in many sides: build vocabulary, become more familiar with language structures and develop an understanding of the reading process.

5.2. Reading Comprehension and Schema Theory

Aloqaili (2012) stated:

According to schema theory, there are no definitive or final conclusions that can be reached by the text. That is, schema theory deals with the reading comprehension as an interactive process between readers' prior knowledge and the text being read. Sometimes a reader may end up with a different understanding, based on his or her total previous experiences: their richness or paucity. Therefore, a reader with a rich background will comprehend better than one who has a poorer background. In short, schema theory believes in open text or context, the interpretation is relative. (p. 36).

This to say in brief, schemata has the major influence on new views of reading and reading comprehension.

5.3. Reading Comprehension & MI

Comprehension is the cognitive activity where a person uses cognitive efforts such as reasoning and elements from prior knowledge to create a mental model. Reading comprehension is a special form of comprehension that is related to the comprehension of a text-based material. The mental model helps the reader to understand the meaning and to make inferences about information that is indirectly related to the immediate context.

Successful reading comprehension depends on the learners' ability to decode meaning's complexity and maintain a mental model of the text, to proof it is coherent and contains information that is relevant to what is being (Smith, 2012).

MI seems to be related to efficient learning and remembering, it can be a critical bridge moving the reader from a novice to experienced comprehender.

Pressley (1977), in a review of literature, concluded that MI instructions were more facilitative for listening and reading comprehension.

Conclusion

Reading is a two-side process: the ability to decode what one is reading. Successful second language reading depends on the reader processing a critical mass of knowledge; linguistic knowledge, schemata and background knowledge assumptions. Moreover, in order to be a successful reader, one must be able to see beyond decoding words to forming links between what word is read, what the author intent and what schemata they have. In 2000, The National reading panel (N R P) published a comprehensive overview of thirty years of research on reading comprehension, where it states,

“A reader read a text to understand what is read, to construct memory representations of what is understood, and to put this understanding to use”. In addition, MI is one such strategy that the *N R P* believes could be a beneficial way for students who have comprehension deficits (NICNHD, 2000), where creating mental images helps readers to recall information and to become more emotionally involved when reading by using visual, auditory and other sensory input to give words meaning (Zimmerman & Hutchins, 2008).

Part two:

The Practical Part

Chapter Three

THE REPORT

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1. Executive summary

The train-the students program entitled *Creative minds* on developing mental imagery through storytelling is a way of facilitating comprehension when reading, which has been approved by many researchers in the field of education based on previous cognitive and neuroscience foundations.

The main objective of this training is to find a solution to reading comprehension obstacles through exploiting a non-used powerful area in the human brain. The program consists of two phases, the theoretical phase and the practical one. The students are expected to be able to use what they have received and apply it easily.

The long-term expected results of the workshop is to provide students with another tool to decode texts and to get rid of comprehension difficulties, more than that to provide them with a different ocular to see life and solve problems in a more intelligent way, as to visualize what will happen before happening through planning in mind in advance.

During the workshop, 35 students of the mentioned middle school second year level were trained on the technique. The training consists of the following seven sessions plus the final evaluation:

- Mental imagery as a notion.
- Gustatory MI.
- Tactile MI.
- Olfactory MI.
- Visual MI.
- Auditory MI.

- Organic MI.
- The final evaluation.

The workshop covered various stories from the universal collection of the *Fairy tales of the brothers Grimm* by *Jacob & Wilhelm Grimm*, such as “Hansel & Gretel, Little red riding hood and Thumbelina”. The participants were provided hands-on practice as active participants on the use of MI as a comprehension strategy.

The following materials were used:

- Printed stories.
- Video stories.
- Data show.
- Colours.
- Answer sheets.
- Realia (perfume, chocolate, silk...).
- Printed pictures.

On the last day of the workshop, a written test was conducted for the participants to assess their understanding and ability to use the presented subject.

Overall, the training of students program was successfully conducted in close co-operation with administration and teachers of *AL HAI AL JADID MIDDLE SCHOOL, ZERIBET-EL-OUED, BISKRA.*

2. Background

A remarkable percentage of children have reading problems, where most of them cannot read. Yet one of the main objectives of education is to develop learners' ability to communicate effectively. Children are failing to read because they are not taught reading as it should be before that, we may say that poor methodology is one of the causes that lead to students' reading failure. After having looked into the English course book curriculum of middle school level, it has been noted that reading methodology is either ignored totally or rarely taught within English course.

As seen and known about educational curriculum, teachers do not encourage students' creativity to find a way that can help them to understand better as creating mental pictures in their minds. They are also not encouraged to build relations between their life experiences, five senses and information in the reading text creatively. We find only teacher-centered class, which make the mission of transmitting what is reading comprehension more difficult, while it could be made easy, meaningful and vivid if students are given an active role and encouraged to use their mental imagery.

Therefore, this research was carried out to find possible ways of activating mental imagery ability when reading in middle school. This study seeks to determine role of storytelling as a trigger to develop MI on students' performance in reading comprehension in middle school in *ZERIBRT AL OUED, BISKRA*.

3. Objectives

The main objective of this training workshop was to liberate their sleepy cognitive abilities through narratives in order to develop and scaffold their reading comprehension skills. The workshop further aimed the following:

- Engage subconscious mind in the learning process.
- Give students an active role in the process.
- Show them how can they extract information from text and integrate it with prior knowledge and life experience to get the meaning.
- Provide students with an extra decoding skill to facilitate their text comprehension.
- Increase students' abilities to make connections, inferences, predictions and commit their senses of the story to memorize than retell or recall again.
- Make reading process rather than passive skill.
- See the other uses of S.T besides entertainment.
- Show students that from each sense we have two aspects; one concrete and one cognitive or abstract.

4. Expected results of the workshop

The expected result of the training program is to enhance students' reading comprehension by using narratives to address mental imagery. The workshop was in a

smooth manner without affecting their formal learning and without causing any extra burden to the students.

The training of the students is expected to result in the following:

- Lessening the pressure of memorization on the students' brain.
- Increase awareness regarding the miraculous abilities of the brain.
- Add entertainment and vividness to learning.
- Shift the class from teacher-centered to student-centered.
- Make use of mental picturing in other fields.

5. Participants

The workshop was well attended. 35 participants present 33, 65% of the overall number of 104 students of second year middle school level, 20 males and 15 females. They were invited by the administration and given the program. The participants had received a theoretical and a practical background on the subject.

6. Methodology

The training program used the *Training approach* on inspiring creative minds of students. In this workshop, 35 students were trained. This 11-day workshop covered both theoretical and practical aspects of activating MI for better reading comprehension using S.T technique. There were times for practice held to have hands on facilitating and transmitting the idea well.

For that, the training was carried out using a number of methods that were combined:

- **Video display & Pictures presentation:** where stories' videos were shown with some characters and elements' pictures. This enabled the participants to understand the story more and to make them be part of it.
- **Experience sharing:** participants were encouraged to share their experiences to answer some questions, and as a trainer, some personal anecdotes were used to exemplify.

7. Content of the sessions

The workshop addressed this critical question: How can S.T technique be used to activate MI for better reading comprehension.

The workshop was divided into 08 sessions as mentioned before. Each session had its own unique timing and module allocated, the modules and timing were adjusted according to the needed data and abilities of the participants.

The sessions

7.1. Session one: *what is MI?* (Introductory session)

This session introduced the participants to:

- The workshop's title *Creative minds* and its purpose.
- An introduction to the human mind machine.
- The fundamentals of MI.

How is the human brain formed?

This was an introductory part, to show students that a human brain is a small machine but a set of complex mechanisms. Where its role is not limited only to thinking and storing data but more. There are two divisions of the brain: *left side* for words, numbers, logic, analysis, ordering, and lists. *The right* one for coordination, colors, imagination, daydreams, dimensions, arts and melodies. These were explained with the drawing and explanation in *IBRAHIM AL FAKI* book *Memory & Memorization* (p. 23).

They knew that there are limits for the human brain, where we cannot imagine the amount of intelligence and creativity in the mind's structure. These abilities are not available to be seen by everyone, but only for those who believe *in* their brain's value.

What is MI?

In defining MI, the term has to be simplified by making the difference first between "imagination" and "imagery". Simplifying the terminology, a set of examples and personal experiences were cited.

In simple words and for the purpose of this study, MI can be defined as the conscious or subconscious creation of images in the mind, which differ from one to the other. These mental images can be created in the absence of the relevant stimuli. They involve the use of multiple sensory modalities, including auditory, visual, olfactory and tactile. Unlike “imagination” that is a free conscious process that is thinking about non-real objects it can be based on real ones, but far from the pure truth, where we can imagine whatever come to mind; for example a top-down house the roof on the floor. Moreover, it is easy to imagine, we just collect a set of signs, colors, ideas and forms to get an imaginary idea that may not happen like legends.

Participants were engaged in a discussion on the differences between the concepts and many of them shared their views on. After having acknowledged these opinions, the difference between the two words was clearly clarified.

Then, the ‘06’ kinds of MI were introduced in a simple way to their level with exemplification.

The Purpose of MI:

- Store and restore data in more vivid and fun way.
- Facilitate text comprehension by building pictures to characters, places and events.
- Develop creativity and creative thinking.
- Help in memorization.

Are we all able to build mental pictures?

This question was answered by mentioning some exception cases in which mental senses could not be used like:

- An organic deficit in the brain, exactly in the responsible area for MI.
- The scientific and logical thinking of the person.

However, even there some exceptions, this ability could be activated through training and practice.

Do we all have the same mental picture?

The last step in this session focused on the reasons that make individuals' mental pictures different.

- Family.
- Friends.
- Society.
- Psychological status.
- Environment.
- Study or work specialty.

Students gave all these reasons and others during debate.

By the end of the session, and since this was the first lesson, it was devoted only to providing theoretical information than some notes and questions of students were received to build upon it the next lesson.

7.2. Session Two: what is MI? (Practice)

This session was to assess level of understanding of MI concepts. Participants were asked seven (07) questions to be answered in written form, to avoid lack of oral expression.

Using descriptive statistics to summarize open-ended responses, the results were as follows: (total number = 35)

Question	Can answer			Need hint	Unable to answer
1	27			05	03
2	28			07	/
3	25			05	05
4	34			/	01
5	32			/	03
6	Yes	no	exception	/	02
	23	09	01		
7	yes		no	/	02
	02		31		

Table.2. Summary of the statistics of the open-ended questions responses.

Summary of the actual results:

- 77% successfully defined MI (question 1), based on the given ideas in the first session; 14% needed small help that was exemplification and hints from previous session; 8% were unable to recall the given information or at least their own ideas.

- 80 % were able to describe the mechanism used when start imagining from the first time the question was asked (question 2), 20% were able to answer only after explaining and reformulating the question.

- For (question 3) 71% gave short definitions based on given definitions; 14 % were shown some drawings and flying ideas to answer; the other 14 % did not get the correct definition.

- In the (question 4) 97 % listed not only the five kinds but also the sixth (6) MI kind that was predicted to be forgotten and difficult to understand; one student was absent.

- 91 % gave many reasons that make us use MI (question 5), which challenged the researcher's expectations; 8 % did not answer even though they were helped and given.

- 65% answered "YES" (question 6); 25 % said "NO" with explanations. And one exception answer "YES/NO" with the proof that there are people who have no memories (so no prior knowledge to build upon it), lose memory or ALZHEIMER; 5 % gave wrong answers far from the question.

- For the last question 5 % "YES", 88% "NO" with explanation, the last 5 % gave non-relevant answers.

These results suggest that the notion of MI was effectively transmitted to students; also, their creative responses and active participation prove the extent of their eagerness to what is next.

7.3. Session three: Gustatory MI (tasting with mind's tongue)

The session started with marking down attendances and distribution of numbered answer sheets. Then students were given some chocolate and sweets to be a prior knowledge later.

After reviewing how many kinds of MI, the researcher started explaining the first one (Gustatory), which was defined as the ability of the reader to taste what words taste through the writer's description of what taste things have, such as: sweet, bitter, tasty.

The second stage of the lesson was practice, where a short story was chosen to be told, which Hansel & Gretel is from the universal collection of the *Brothers Grimm fairy-tales*.

The students were asked to close their eyes to live the story, the teller told the story normally until he reached the part of the witch's house that was modified to be:

... The brother and his sister walked through the forest for hours and becoming very hungry. Suddenly they came upon a strange cottage. A cottage made of sweets! They were amazed to see walls made of biscuits, covered with melted chocolate, a door made of cookies, windows of transparent sugar and a roof embedded with icing and candy. They ran to the house and began to eat...

In the second stage, students were asked to answer a set of questions to test their understanding. The results as follow:

✓ **Question 1:** Before I gave you the chocolate, how did you imagine it in your words?

- 91% described it the way that give words taste; where only 5 % did not answer; one was absent.

e.g., some of their images (**S = Student**)

S20. It is a sweet cake with small pieces of strawberry.

S15. It is a chocolate bar inside it melted caramel.

S23. Its taste is charming.

S1. It is in form of heart cake half white chocolate the other black, with some honey.

✓ **Question 2:** Give examples about tasting in mind.

- 94 % gave examples; one did not; one was absent.

e.g., some of their examples:

S1. I went home yesterday, I found my mother have cooked a cake of chocolate and cacao, on the face white sugar and inside it a lot of vanilla cream.

S9. The best season is summer, because I eat ice cream of lemon, it is sour, with pieces of chocolate.

✓ **Question 3:** What the passage made you taste?

- 94 % expressed and drawn what they taste and how they felt when living the event; one did not answer; and one is absent.

e.g.,

S30. I have tasted well the pieces of chocolate, because I like it so much.

✓ **Question 4:** How the story become after applying MI.

- 94 % successfully describe their feeling and the difference; one did not; one was absent.

e.g.,

S30. It becomes as it real and I am one of the characters eating sweets, because I felt the taste.

S4. It became active.

S22. I have understand it better than when I read it alone in the book.

S29. I felt as I am living the story.

S6. A lot of suspense and full of life.

From the collected answers, the results proof that students have successfully acquired or activated their cognitive tongue and can use it to know what words taste henceforth.

7.4. Session four: Tactile MI (touch with mind's hands)

The usual routine of marking attendees and answer sheet distribution. Then students were given a piece of silk to touch.

The researcher start explaining the second mental sense (Touch), defining it simply as the ability of the writer through words to evoke the reader's sense of touching non-present subjects ,e.g., soft, smooth, harsh, sharp.

For the practical part, the storyteller (the researcher in this case) chosen the short story of "THUMBELINA" from the same collection of *Brothers Grimm*.

The story was told while students were closing eyes; it was told normally only the parts that evoke *touch* was somehow expended to explain the sense well. The modified parts are:

... And as though by magic, the flower opened, inside sat a tiny beautiful girl, with long silky hair, pure smooth skin.

... Then one night, as she lay fast asleep in her walnut shell, a large sticky disgusting frog hopped through a hole in the windowpane.

... But other dangers lay ahead. A large beetle snatched *Thumbelina* with his strong harsh feet and took her away to his home at the top of a leafy tree.

... The mole invited *Thumbelina* and the field mouse to visit him but... to their surprise and horror they came upon a beautiful swallow, with smooth colored feather. It looked dead. Mole nudged it with his foot with pointed claws.

Following the same process, the second stage was assessing students' understanding by asking those questions:

✓ **Question 1:** What is tactile MI?

- 71% clearly defined the concept, 28 % did not get it.

The conventional definition was; Tactile MI is to touch non-present object, we feel its touch relying on the mentioned characteristics about it.

✓ **Question 2:** How to make it.

- 80% were able to describe the way they touch with mind.

e.g.,

S12.I close my eyes and try to imagine the touch through the used words.

S30.With deep imagination of the meaning of words.

S9.To touch things in our mind we need to understand the words and relate it to our information.

✓ **Question 3:** Give your personal examples on tactile MI.

- 97% gave many examples that reflect their understanding.

e.g.,

S23. My friend gave me a soft handkerchief as gift.

S32. My mother gave me a cake it was very hot.

✓ **Question 4:** what the passage made you feel?

- 100% were able to touch the objects, and when they were asked why they have said that the used words helped them, and most of the described things they know previously.

e.g.,

S32.The feather of the bird is soft the frog is like glue.

✓ **Question 5:** What tactile imagery can add to the story?

- All the students gave their own impressions on the new story.

e.g.,

S12.Become as if is real, and I am within the events.

S4.The inactive objects become more expressive and spirited.

From the obtained results, and students' positive feedback, the tactile MI is successfully activated.

7.5. Session five: Olfactory MI (be able to smell with mind's nose)

The first stage as usual after marking attendees is to trigger their previous knowledge or to build new one if there is none. For that purpose, the researcher brought students some “**Jasmine flowers**” and “**perfume**” to smell.

To reach the goal of the session, the story of “**LITTLE RED RIDING HOOD**” was chosen as a model. The teller told it a way that emphasizes on the parts that touch the sense of smell, as follow:

... one day, her mummy was cooking a delicious cake with strong smell of vanilla...

... However, she was soon to forget her mother's wise words, once she smelled the attractive odor of ripe strawberries...

... Suddenly, she saw some large daisies in the grass with a very sweet-smelling and strong perfume...

The usual stage is to assess if the students really absorbed the idea the responses were as follow:

✓ **Question 1:** what is olfactory imagery?

- 88% defined it successfully, two gave unclear answers, and two were absent.

e.g.,

S20. It is to smell something and it is not present.

S29. We smell things with words it is good or bad.

✓ **Question 2:** Give examples on olfactory MI.

- 94% gave very innocent examples; two were absent.

e.g.,

S14. Yesterday, I found my mother preparing a cake, I smelled: eggs, vanilla and some fruits.

S15. one day, we went to the restaurant and I liked only the odor of roasted chicken, and fried potatoes, it is delicious.

✓ **Question 3:** what the passage made you smell?

- 94% were able to describe freely and to add in a creative way; two were absent.

e.g.,

S15. I have smelled: cake (sweet), strawberry (sour) and so fresh.

S12. I have smelled well the flowers because I know many kinds of it.

Based on the obtained data, the mission of activating mental or cognitive nose was successfully done.

7.6. Session six: Visual MI (seeing with the mind's eye)

In this session all students were present only two. After marking them and giving their answer sheets according to their card's numbers, the lesson start.


The sense of this session is visualizing the research explained it simply as the ability to see images of things, faces or anything else when it is absent. The authors show sight by describing the way certain objects look, such as their size, shape, color etc.

To activate the ability and using what is near to their cognitive level the research returned to the story of "THUMBELINA" and modifying some parts to work the needed sense, those parts were as follow:

... she then went to visit a witch, who gave a magic small grain, it was yellow as gold. She planted it in a flowerpot.

... the grain had turned into a level, rather like a tulip.

... the flower opened in full blossom. Inside sat a tiny girl, no bigger than a thumb... for a bed she had a walnut shell, violet petals for her mattress and a rose petal blanket.

 **Remark:** If we concentrate, everything in the story we visualize, because sight is the easiest sense, without using much description, only narrative path can affect the brain, and build in it a chain of events that become as a film from one to the other and if one slide is missing, the comprehension process is interrupted.

Then, for the sake of assessing their understanding, and to make sure that the mental sense is successfully activated three '03' questions were given:

✓ **Question 1:** Give examples that can make me see it in my mind.

- 91% clearly and without any help gave very expressive examples.

e.g.,

S14. I went to the zoo, and I saw a big, frightening lion.

S27. My friend is short; she had long hair, big black eyes and white skin.

✓ **Question 2:** what can you see in the passages?

- 94% gave vent to their mental films to work (means that they were able to collect the visualized images and scenes in a complete form.

e.g.,

S27. A short princess, long hair, big eyes.

S30. Beautiful girl, green frog, ugly rat.

✓ **Question 3:** What is the difference between reading words and their mental projection concept in mind?

- All the present students felt the difference before and after visualizing.

e.g.,

S15. The story become full of colors and like cartoon.

By the end of the session, with full agreement and general observation, they are able to see in and with their minds' eye with full understanding.

7.7. Session seven: Auditory MI (hearing with the mind's ear)

In this session all students were present, only one, they were given their answer sheets.

The researcher explained the session's sense *Auditory MI*, defining it as hearing sounds through words, where the author intends to make his reader live the scene, like whistle, rustling, whispers and shouts.

Trying to use this cognitive sense as practice, the previously used short story "LITTLE RED RIDDING HOOD" was retold. No edition was needed, because all sounds are known without detailed description, the sounds are:

- **The tender voice of the mother.**
- **Little red riding hood innocent voice.**
- **The gruff voice of the wolf.**
- **The grandma's voice.**

To make sure of students' decision saying that they do not need much explanation, two questions were asked:

✓ **Questions 1:** Can you make me hear some sounds and voices in your examples.

- 94% gave full expressive examples (two were absent).

e.g.,

S28. I like winter, to hear rainfall and thunder.

S19. When we entered the zoo, I have heard the voice of lion, elephant, duck, and chimpanzee like in television.

✓ **Question 2:** Does your understanding of the story differ after hearing sounds?

- All the present participants felt the difference (94%).

e.g.,

S20. I can understand well when I relate the story sounds with sounds I know.

S33. When we add sounds to the story in our minds it is like a film and become like reality to understand.

Gaining these results, this affirm that the participants now have a good working mind's ears.

In the last remaining 20 minutes, and not to make things complicated, the researcher tried to give only a brief fleeting look on the sixth type of *Organic MI*, defining it as the ability of the author using his words to make the reader feel the event, e.g., happiness, sadness, anger.

However, surprisingly, the students shown non-expectable reaction by giving definitions and examples on that sense without having much details on it.

S8. It is to feel the emotion of another person, with word reading.

e.g., my friend is very sad, because her mother is ill.

7.8. Session eight: The final evaluation (Test)

This last session was the final one of the unit and it was devoted to be an assessment to investigate the outcomes and feedback after participating in this workshop. The assessment was only “03” simple open questions to capture participants’ own understanding of the intended main objective of the training program, which is activating the cognitive power of MI.

If looking at those questions, it is not really new or complex ones, but only used as warming-up or summary for all what was presented during the whole training. The responses were so positive reflecting the amount of understanding the work, and show their eagerness and acceptability for using new techniques.

➤ The statistics can be summarized as follow:

- Unbelievably, 97% answered fully the first question (what is sensory imagery?).
- For question two also, 97% were able to explain how sensory imagery help them when reading.

e.g., all students were able to describe how MI is beneficial for them:

S23. MI help me in reading comprehension, and make things like reality, and the story become beautiful and full of suspense.

S20. Make the text easy.

S12. MI make ideas connected and real.

S27. MI transfer difficult words to animated ones.

S8. The story becomes real as if I am living it.

- The third '03' questions was to test if they really had understood the technique, can take a debate on and deduce some ideas not only rewrite the memorized definitions. Surprisingly, they gave full answers that helped the researcher in adding new ideas, even though they are not experts or have large experiences about the subject.

✓ **Question 3:** Do we all have the same sensory images when we read? Why?

- 94% said "NO"; one "YES"; one was absent.

e.g.,

- NO :(33 students)

S23. Because everyone visualize the way he knows things. **e.g.,** I smell Jasmine and my friend Lily, if you say for example I gave her a flower.

S9. Everyone have his own way of imagination.

S4. Everyone have his own mental abilities.

-YES :(1 student)

S21. Yes, because we are born with the same abilities.

After answering, a time was devoted to express freely some comments and view about the workshop objectives and its main subject, how it looks for them, how to exploit it further. Their answers reflect brilliant ideas that maybe was absent for the researcher. Some examples can be mentioned:

S21. MI help in exams, and in remembering forgotten things.

S13. MI help in stabilizing things in mind, and in creative thinking. It is amazing.

S25. It helps in developing stories and understanding texts easily.

S30. MI is not only in stories, but it can be used to visualize songs and drawings.

e.g., I can use it in the exams if the question is to draw a map, so I see it in my mind first.

S29. Help us in comprehension and in memorizing lessons in active way.

S1. I was not reading stories because it is boring and I cannot understand, but now I will read many stories like our teacher (the researcher) taught us (do not read words but watch images).

- This student gave a really expressive example:
 - The teacher ask the student how many members in **SOUMMAM's SUMMIT.**
 - The student remembered the picture he saw in the book than he gave the right answer.
 - The teacher was amazed how he gets the answer easily.
 - The student said that he saw himself in the summit than count them in his mind since he know the members.

- He draw the following picture to explain his example:

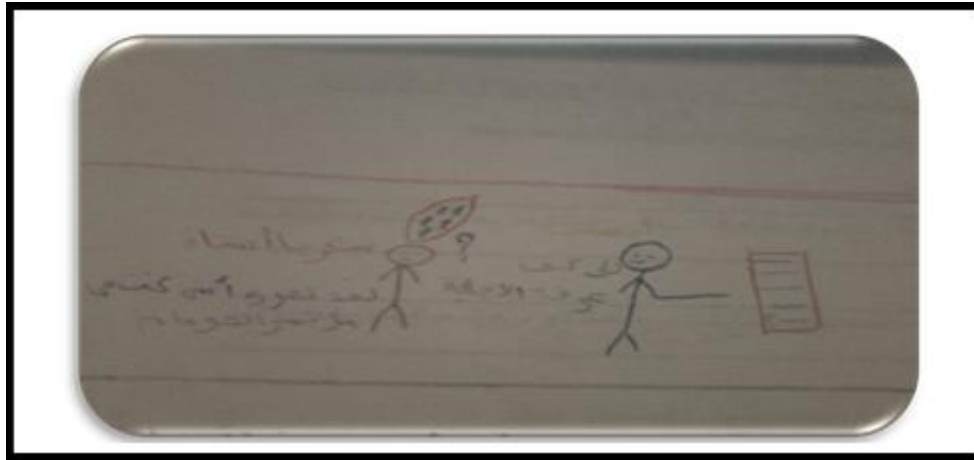


Fig.2. A student's representation when he is asked to tell how many members in the Soummam's Summit.

Than by the end of the test, students were given colors as a chance to discharge their suppression by trying to represent something related to the topic they were trained on.

Here are some of their drawings followed with small explanation interpreted from their oral answers when asked what is that, to written ones (only key points):

➤ S13.



Fig.3. A mental representation of a cake.

This is what I see in my mind when I hear or read the word “**cake**”, and I taste it, it is sweet.

➤ S4.



Fig.4. A mental representation of a student when she hear the world fairy.

I see this character in my mind when I read the word “**fairy**”

➤ S19.



Fig.5. A mental representation for the good smell.

This is the symbol of the adjective **“beautiful smell”** in my mind.

➤ S12.



Fig.6. Visual and tactile imagery as presented by a student.

This contains **“visual & tactile imagery”**: beautiful bird with smooth feather.

Discussion

The results of our research show that the students who participated in the workshop demonstrated a better understanding of the stories using MI compared with their previous level of understanding in dry reading. Their responses and participation reflect a clear understanding of the aimed subject, greater attention paid to the gradual development and the correct use of keywords. Data were collected and analyzed in a descriptive rather than statistical framework. The results obtained proves that students yielded good results and level of comprehension, also their motivation and eagerness towards this new notion for them. Primarily reflected in their active responses and pure creativity shown when retelling the stories using the new technique (**MI**).

The most frequent and strong appearing remark is the students' potential power that was blow up in their very active participation, this assure and reflect how students' strong powers are passive without giving them a chance to exploit it, one of the reasons that may lead to the evaporation of these abilities is the teaching methods where students are not given -at least- a small limited power to add their touch to the lesson. This lead gradually to killing their internal abilities and start obeying teacher's method, which necessitate in the first place passive participants who came just to receive information.

All the aforementioned results of this research reflect students' productivity, motivation and a greater degree of activity. The effectiveness of MI technique in reading comprehension was confirmed by the many asked questions during the whole training, where their answers proved that students when using MI while considering a text (a story in that case) acquire greater knowledge and large vision on the content than before.

The advantages of combining art (narratives) and science (MI) has the potential to inspire new styles of learning. It is necessary to find creative ways for students to evolve and

keep a lasting sense of curiosity concerning scientific discoveries. Employing several senses in children contributes to acquiring greater knowledge in terms of both quantity and quality. Art culture offers extensive knowledge of different techniques, which help children in psycho-motor development. It also creates the potential to combine biology and art. In this way, students develop skills that are permanent and that becomes more complex over time (Gurnon et al., 2013).

Conclusion

Based on the obtained results, it can be concluded that integrating MI as a teaching technique encourages greater students' involvement. When deciding to implement it especially within young classes, a narrative will be the ideal aid to activate that cognitive ability, results in the higher motivation of students, and consequently in greater efficiency of teaching time. Thus, provides better development concerning students' reading comprehension level.

In this study, MI is considered as a didactic technique, and the results may encourage other teachers to use, and plan to introduce it in their classes even for a limited time of the lesson.

The conclusion is that if we try to motivate students to learn –more precisely to read- and engage them intellectually, that will affect their creativity in terms of their ability to express their ideas freely and to describe the world the way they see in their minds, not the way are obliged to follow. This will happen if they are given an active role and a free space to work on.

Recommendations

For the purpose of this study, the researcher gives the key relations between the use of narratives to develop MI, and those to reach better reading comprehension. The researcher decides to give the main steps to activate this cognitive ability according to students' level. As far as this study is concerned, the researcher gives the needed explanation followed by the detailed process for future teachers to use it in order to create an active classroom who give the right to students to participate and move:

It is true that the teacher plays a vital role in learning, but the high authorities and institutions' role also should not be aside, because they have hands in decision-making, curriculum design and this may affect the teachers and teaching methods as well as students' performance. What the teacher should do when deciding to activate students' MI:

- The teacher should draw their learner' attention to the importance of the human mind, how it is a very beneficial machine if we want to use.
- The teacher should encourage students to use their mind freely as they want.
- The teacher should encourage them to read a lot especially literature because it is full of figurative language needed to trigger MI.
- The teacher should give students space to express their opinions and present their ideas, to make them feel as if their role is so important for the lesson.
- The teacher should involve and engage students in sharing ideas with their classmates.
- The teacher has to think how to put the new technique within his teaching method and the type of activities such as group work, workshops, and take into consideration

the dynamics will be used with isolated cases. In addition, what materials to use that can go with their level comprehension and cognitive levels.

Despite the undeniable responsibility on the teacher's part, the educational institution namely *Curriculum designers* should fill the other part of the class. The researcher in this study mentions some suggestions for them to develop teaching methods through integrating what is missed in the curriculum:

- When planning a curriculum, they should give a space for students' role to express their hidden abilities and creativity.
- Build the curriculum after making students' needs analysis.
- The lesson should be multi-dimensional respecting all learners' styles and get the lessons out of the traditional method of teaching where just presenting inflexible language structures, and put it into practice, communication and learners' needs and abilities.

We can conclude that for developing a certain ability like MI is not an easy task, it is true that S.T can help and reading comprehension will appear but not from nothing unless the two participants in the learning process cooperate; the teacher and the responsible institution plus the learner as a receiver. Both parties should play their roles to succeed in the mission in order to: 1). get better performance of students. 2). Updating the teaching method. 3). Give both teacher and learner active roles in the class.

General Conclusion

Our research work tended to identify the power of S.T as a technique to activate MI or what is called *Sensory details* on reading comprehension; it has also aimed to clarify the relationship between the literary language of stories and its impact on neural processes. We have raised three questions that have been answered at the end of this investigation; which are “how S.T, MI, and reading skill correlate together?”, and “how can Algerian EFL teachers use S.T as a tool for activating MI ability in Middle schools?”, final one “what difference S.T, visualization-MI- make when reading -with reference to the Algerian class-?”. These questions led us to formulate two hypotheses; “if EFL teachers undertake to implement S.T, the working memory will be addressed”, and “if learners’ MI ability is activated; it will help them to gain a deeper understanding of the text”. In order to test those hypotheses, we have made an individual workshop with second year middle school and after its analysis, we have mainly concluded that the author to create an image in the head he combines the five senses plus the figurative language found in literary works (short stories as in the study). This could provide students with an easy way for comprehension, but not only reading it could be reflected on their performance in many sides. After that, we have analyzed the workshop’s results and found that MI is a workable strategy, but if students, with the help of their teacher, and with more practice, they will develop gradually and perform positively. At the end, those results cannot overstep this sample, and cannot be overgeneralized to the whole population because of many barriers such: the exception case and the differences in cognitive levels.

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Appendix B: The Answer Sheets

Student N°

The real size: 21 cm*8 cm.

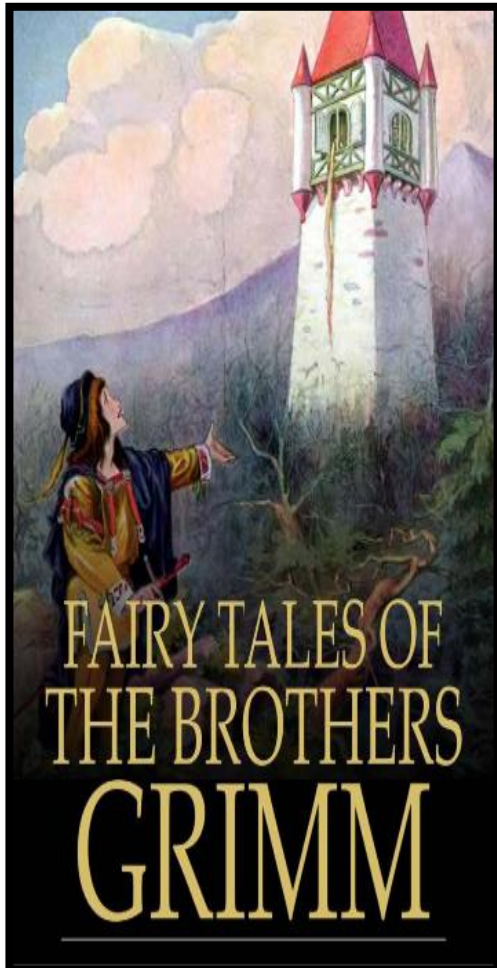
Appendix C: The Students' List

The student	The card's number
Laabdi Aymen	01
Laabdi Zied	02
Laabdi Mohamed	03
Berghiss Hadil	04
Beremdan Rawnak	05
Brik Haithem	06
Ben Dahman Aya	07
Ben Aissa Nour Al Houda	08
Ben Mabrouk Lina	09
Ben Mazouz Rafiq	10
Boussarya Abd Al Bassit	11
Telli Abd Al Hafidh	12
Hadji Amel	13
Hwili Nour Al Houda	14
Khadraoui Ilyass	15
Dandouga Bilal	16
Zarouali Aissa	17
Zrizira Ihab	18

Saadoudi Hadil	19
Slimani Chaima	20
Slimani Dhia Din	21
Sadki Abd Al Karim	22
Abbassi Ishak	23
Athmani Amina	24
Ounali Yasser	25
Ghribi Ikram	26
Koshad Doaa	27
Laamri Abd Salam	28
Msabel Chamsa	29
Messei Rania	30
Mansouri Kossai	31
Moussi Ikhlass	32
Maymoun Ayoub	33
Hoam Djamel	34
Ounjli Haithem	35

Remark: the students' names were taken after having authorization from the administration and from their parents.

Appendix D: The Cover Page of the Chosen Collection (Grimm's Fairies)



*

Fairy Tales of the Brothers Grimm
From a 1826 edition.

ISBN 978-1-877527-91-3

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Appendix E: The Final Test Template

Unit of Study: Sensory Images

End of unit assessment:

Name: _____ Date: _____

We just completed our unit on using sensory image while we read:

1. What is a sensory image?

2. How does making sensory images help you when you read?

3. Do we all have the same sensory images when we read? Why?

Appendix F: The Followed agenda

Workshop agenda

Title:

Target Audience:

Length:

Workshop Goal

Learning Objectives:

Description:

Modules and Timing

Time	Module	Description
Total:		

Evaluation Process:

Handouts, Materials, Supplies:

Appendix G: The followed template to organize

A WORKBOOK ON

DESIGNING SUCCESSFUL WORKSHOPS



Yvonne Steinert, Ph.D. & Marie-Noel Ouellet, B.A.
Faculty Development Office,
Faculty of Medicine, McGill University



INTRODUCTION

This workbook on *Designing Successful Workshops* will introduce you to the design and implementation of successful workshops in your own setting/s.

The **goal of this workbook** is to describe a number of principles and strategies that can be used to make workshops more effective. The effectiveness of a workshop leads to two outcomes: “demonstrable learning or skill development and change or improvement in practice”. (1) We hope that this workbook will help you to develop workshops with this level of effectiveness.

Definition of ‘Workshop’: A workshop has been defined as “a usually brief, intensive educational program for a relatively small group of people in a given field that emphasizes participation in problem solving efforts”. (2) Traditionally, this educational method provides learners with an opportunity to exchange information, practice skills and receive feedback, and when properly designed, is a time- and cost-efficient method of actively involving participants in the learning process. (3) Workshops are popular because of their inherent flexibility and promotion of principles of experiential and adult learning. (4) They can also be adapted to diverse settings in order to facilitate knowledge acquisition, attitudinal change or skill development.

How to use the workbook

We recommend that you complete the entire workbook as topics, or steps, are integrated. The workbook will guide you through the following process:

- 1- Defining a Topic & Identifying the Target Audience
- 2- Conducting a Needs Assessment
- 3- Defining Workshop Goals and Objectives
- 4- Deciding on Time Frame and Number of Participants
- 5- Defining and Designing Workshop Content
- 6- Matching Teaching Methods to Content and Objectives
- 7- Choosing Teaching and Learning Resources
- 8- Designing a Workshop Program/Agenda
- 9- Designing the Workshop Evaluation
- 10- Fine-Tuning the Workshop Plan
- 11- Recruiting and Preparing Workshop Faculty
- 12- Determining Locale and Workshop Budget
- 13- Deciding on Marketing Strategies
- 14- Finalizing Administrative Details
- 15- Conducting the Workshop

Appendix H: The Lesson Plan Format

The step	the content
Introduction	-Definition. -Examples.
Body	
Activities	

Appendix I: The Used Realia:



-1-



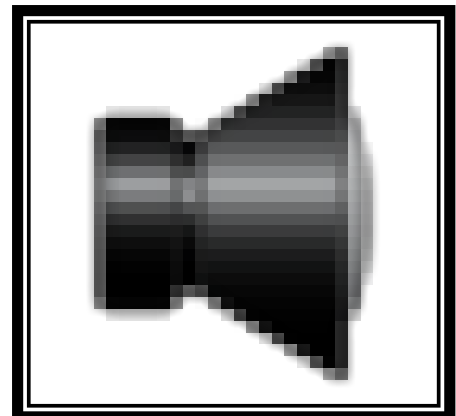
-2-



-3-



- 4 -



-5-

- 1-** Soft and harsh textile: for tactile imagery session.
- 2-** Perfume: for olfactory imagery session.
- 3-** Sweets and chocolate bars: for gustatory imagery session.
- 4-** Some images: for visual imagery session.
- 5-** Some audios and recording were played in auditory imagery session.

Appendix G: the authorization for the work

الجمهورية الجزائرية الديمقراطية الشعبية
وزارة التعليم العالي والبحث العلمي

جامعة محمد خيضر - بسكرة -
كلية الآداب واللغات
قسم الآداب واللغات الأجنبية
شعبة الإنجليزية
الرقم 289/ش.ا. 2016/1

Université Mohamed Khider
-Biskra -
Faculté des lettres et Langues
Département des langues
étrangères
Filière d'anglais

إلى السيد/ مدير متوسطة الحي الجديد
زربية الواد.

الموضوع: طلب تصريح لإجراء تريض

بشرفي أن أتمس من سيادتكم تمكين الطالب (ة) المذكور (ة) اسمه (أ) أسفله من إجراء تريض مع الطلبة و الأساتذة مع العلم أن هذا الطالب (ة) في السنة الثانية ماستر وبحاجة إلى هذا التريض.

الطالب (ة) المعني (ة): بوخالفة ليندة تحت رقم تسجيل : 12/5036593

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بسكرة في: 13 نوفمبر 2016

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مسؤول الشعبة

رأيت مدير لدراسة
موافق وحقا للقد انبني العجارية لمقتول
الرادح في: 16-11-16