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***Mediated Teaching of Metacognitive Reading Strategies for Blind Learners***

***Case Study: Blind Learners in White Cane Association –Ghardaia-***

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***Dedication***

* **To my great mother.**
* **To the soul of my dear grandfather.**
* **To everyone who believed in my abilities and supported me.**
* **To everyone who smiled at me in difficult moments*.***
* **To all those who participated in the study and helped to facilitate the research process.**

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***Abstract***

The present research work attempts to investigate the effects of mediated teaching of metacognitive reading strategies on the performance of first language blind learners' reading comprehension in the White Cane association in Ghardaia- Algeria. Six blind learners from middle level second year were invited to participate in this study. In order to explore the result, this study opted planning, monitoring and evaluating strategies. In addition, technology as audio tool for mediation. Data were collected through several instruments: classroom observation, pre-test and posttest, questionnaire and interview. The findings reveal that mediated teaching of metacognitive reading strategies advance first language blind learners’ reading comprehension. It opens up prospects for learning new skills, such as problem-solving skill, and mediated teaching of such strategies makes it easier for the blind student to receive knowledge and stored it in the right place in mind for a longer period. Moreover, it facilitates the teaching process through the independence of the students in comprehending the text. Thus, teaching classes do not take too long. At the teacher’s level, before training session, there was a lack of teacher training, they had little knowledge and skills to treat blind students while teaching reading as it should. This indicates the lack of awareness about metacognitive reading strategies. Finally, this study has potential implications, for teacher to take accurate training on teaching the blind students. For curriculum designers to include the same content of the regular textbook in manner that is appropriate and suitable for the blind. For society to help the blind learner to gain self-confidence. Eventually, this study proposed to study the same subject on different sample that is from university where blind learners are merged with society.

**Key Words:** Mediated Teaching, Metacognitive Reading Strategies, Reading Comprehension, Blind Learners, First Language Learners.

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***General Introduction***

**Introduction:**

**1. The Background of Research:**

Reading is one of the four basic learning skills. It is considered the solid ground upon which students build their mental competencies. In other words, it is a mental process where the reader tries to perceive the written text, understands it and assimilates its contents, making it a communicative process with the writer. As claimed by Shihab (2011), “Reading is a sophisticated activity, which includes psychological, linguistic, and sociological aspects.”(p.209). Reading carries a lot in its folds, as it is divided into two types: silent reading and oral reading. The former created many skills where the reader chooses an appropriate title for the text or defines the ideas of the text and divides them into primary and secondary. As for the second type skills, the reader takes out the letters from their exits and sticks to the stop signs and so on. Consequently, some strategies help to improve and increase the efficiency and effectiveness of reading including metacognitive reading strategies. According to Flavell (1979), metacognition involves one’s knowledge about his thinking processes and products, active monitoring, and regulation of cognitive processing activities. The American psychologist John Flavell was the first to define metacognition. While some psychologists trace its historical back to the ancient Greek era when Socrates said, “know yourself”. They argued that Flavell brought the concept into the field of education because it has to do with the process. Consequently, in the field of reading, metacognitive reading strategies refers to those practices that make learners aware of their thinking.

In relation with the previous definitions, the well-known process, teaching, occurs in different ways that seek to achieve several goals. Mediated teaching is one of the methods of education that means information transmitted via intermediate mechanisms such as audio or video tape or telephone transmission. Mediated teaching as a replacement to teaching only, Heinich (1968) said, “this process of incorporating mediated instruction into curriculum planning and development for classroom implementation is identified as instructional technology. The latter is an applied science.” (p.146). Recently, the concept Mediated Teaching has been associated with education problems and learning difficulties. According to the global statistics, World Health Organization (WHO) has reported the percentage of blind people in the world, as their number reaches nearly 39 million from 285 million of people with visual impairment. Including children, every minute a child turns into a blind person.

In principle, the human’s rights follow the existence of the person in the universe as a human being. Therefore, blind people have a point of view, too. In the field of learning and teaching, blind learners require special care and completely qualify rather than normal learners. Their distinct differences call for teaching them in a variety of ways such as mediated teaching. Educating the blind people has a long history that includes several methods, as it took centuries to become clear and easy-to-use methodologies and to gain the social value. From the distant past to our present, the visually impaired person has been gradually accepted in society and among societies, as it has gone through three stages, the first of which is indifference or complete separation, the second, compassion and humanity, and the third, self- reliance and social inclusion. For example, in India, blind people are considered as atonement for past sins. As a transition to a second stage, the concept of philanthropy began to spread as they were convinced that the visually impaired could be intellectually capable and could lead an orderly life. This transformation is a turning point from ignoring the blind people to integrating them into society. Despite that, wealthy people got attention first. In 1784 in Paris, Valentin Houy opened the first charitable educational institute for blind people in the name of *L'Institution Nationale des Jeunes Aveugles* (The National Foundation for the young Blind). Valentin conducted several experiments with different shapes and sizes of raised Roman letters to teach students to read with displaying their talents in art and music. While in 1791 England - Liverpool opened the first school for the blind The New England Asylum for the Blind. After thirty-eight years (38), it was incorporated into the United States of America to become under the supervision of Perkins and Samuel Gridley Howe. Its emphasis was placed on the psychological aspect. The duo of its supervisors belief that blind children should not suffer from a lack of self-esteem, so they worked to promote independence and self- reliance among his students. In 1840, The Bengal Military Orphan Asylum, Calcutta, adopted the Lucas reading system “a form of embossed text or tactile alphabet system using a sort of “stenographic shorthand” with arbitrarily chosen symbols.” The Lucas system sign was one of the first shorthand systems for the blind to be invented and was in use before Braille; a system of touch reading and writing for blind persons. (Sylvester, 2020). The first institution adopts the Braille system was the Missouri Institute for the Blind in the United States of America, in 1860. According to Lowenfeld (1956), he classified the major historical events for blind people into three different stages that are mentioned previously. The table (1) below clarifies those events. (Zheng, X, 2014, p.10).

|  |  |  |  |
| --- | --- | --- | --- |
| **Trend of Education for Blind People** | **Time** | **Place** | **Event** |
|  | 1785 | Paris | Establishment of the world first school for blind people (Lowenfeld, 1956). |
| Segregated or Residential Schools (Lowenfeld, 1956) | 1790 | England | The first school for the blind in England (Taylor, & Taylor, 1960) |
| 1793 | Scotland | The first school for the blind in Scotland (Taylor& Taylor, 1960). |
|  | 1893 | Britain | French (2007) Britain issued the Elementary Education (Blind and Deaf Children) Act to guarantee compulsory education for blind and deaf children (French, 2007). |
|  | 1900 | Chicago | The first „braille class‟ in a public school was set up in Chicago (Lowenfeld, 1956). |
|  | 1900s | Britain | Education was provided to blind pupils with extra special educational needs or impairments, and in segregated institutions (French, 2007). |
| Study with Sighted Peers (Argyropoulos & Stamouli, 2006) | 1960 | Western Europe | 14 Western European Countries providing compulsory education to blind children (Higgins & Ballard, 1999). |
|  | 1980 | Hungary | A kindergarten department was opened to receive visually impaired or blind children (Kovács, 2002). |
|  | 1989 | Greece | The first attempt of integrating visually impaired or blind student into mainstream primary school in Greece (Argyropoulos & Stamouli, 2006). |

**Table 1.** The Major Historical Events for Education of Blind People.

**2. Statement of Purpose:**

The aim of this research is crucial and multidimensional due to six main considerations. Firstly is giving importance to the students with special needs by trying to rehabilitate them in society as a support. Those people are normal like any human being else but some of them have been isolated themselves because of society’s view. As a secondary goal is to somehow prove to them that they are a source of interest to the researchers. Praat & Keil (2003) mentioned, “People may not consider their impairment substantially affects their every activity if they are well supported.”(p.44). Secondly is helping to identify the reality of a category of people with special needs and to reveal some aspects of their weaknesses. Thirdly is attempting to remove the barrier that separates the visually impaired student from the others (raising the thread of separation). In addition, paying attention and giving importance to blind’s point of view. Fourthly is the awareness of the consequence of the different method of teaching the blind and the diversity in it. Fifthly, contributing to open and expand the gateway for researchers to conduct more studies in educational stages that similar to this study. Sixthly, it may be a source of inspiration for curriculum designers and refresh their minds to work on integrating and including reading comprehension skills in special curricula for people with special needs through appropriate activities.

**3. Statement of Problem:**

Choosing a successful methodology and suitable strategy for providing information to a blind student is extremely important. In fact, in Algeria- Ghardaia, the category of the visually impaired is a marginalized group in some sense, as these students receive a less intensive care to be educated like any other students who are not blind. Especially the process of reading, for it is the speculum through which blind learners see, but they receive less instruction in the procedures of reading comprehension. While the professors of the White Cane Foundation in Ghardaia note that mediated teaching does not differ much from ordinary teaching, this indicates their lack of awareness about the nature of mediated teaching. Therefore, it is important for teachers to pay attention to the display of reading comprehension procedures and to follow the appropriate method for their display. Moreover, it is vital that the teachers understand the extent to which the presented methodology and strategies affect the blind student’s interaction with the text, which produces more effective and independent awareness. It is possible mediated teaching of metacognitive reading strategies serves and meets the needs of blind students in this regard.

**4. Motivations:**

The background of the researcher that is well represented in the environment, in which she grew up, was the first motive for choosing the title of the research. The idea of ​​the topic has occupied the researcher's mind since the age of 15, as the twin brothers, childhood friends, influenced her. This resulted in the writer's enthusiasm to write about the topic and share it with readers. It considered the first reason behind select “Mediated Teaching of Metacognitive Reading Strategies for Blind Learners” as a topic of the research is the researcher's interest and personal preferences for such a category. Moreover, tendencies to study their case and deal with them. Secondly, the topic includes a social issue, as the researcher hit two birds with one stone, which means that this topic corrects the society’s view of these people and pushes them to pay attention to those people, especially in academic aspects. As it will add benefits to scientific affairs such as reconsidering their programs and their books. Thirdly, the writer's abilities to elaborate and cover the topic for several aspects and she has sufficient knowledge about the topic made it a motive.

**5. Research Questions:**

To achieve the aim of the research, the main research questions are formulated as follow:

1- What are the effects of mediated teaching of metacognitive reading strategies on blind first language learners’ reading comprehension?

Sub-questions:

\*To what extent do teachers of blind first language learners comprehend the way that metacognitive reading strategies are used?

2- Does mediated teaching facilitates the teaching process for teachers; in addition, does it gain time?

**6. Research Hypotheses:**

Metacognitive strategies for reading affects blind students’ reading comprehension depending on how they are used which will improve the speed of understanding and analysis and create a strong relationship between the reader and writer.

-Teachers of blind learners, as they have received training before, are aware of what facilitates the information delivery and dissemination process to their students.

Mediated teaching facilitates the process of teaching; since it is one of the types of teaching that simplify teaching materials.

-Every easy makes time.

**7. Structure of Reasearch:**

This dissertation branched into three chapters. It started with a general introduction to the topic that is permeated by questions, hypothesizes, motivations and limitations that are related to this research. In addition. It contains the definition of keywords. The first chapter, review of literature, it carries the studies of some researchers, i.e. identifying the key researchers, ideas, theories, and the most significant findings that is with relation to the topic. It consists three parts: the first deals with an overview about mediated teaching and learning. The second tackles metacognitive reading strategies and the last is around blind people and comprehensive education. The second chapter, methodology, deals with the adopted methods, data collection, data analysis, research setting as well as reliability and validity. The third chapter is devoted to discuss and prove the results that are obtained from the pre- test, the post-test and the instruments.

**8. Limitations of the study:**

This study has potential limitations. Thus, the empirical results reported herein should be considered in the light of those limitations. The effect estimates in present study are based on observational study. They are therefore subject to biases and confounding that may have influence this study estimates. However, the etiological effects of mediated teaching of metacognitive reading strategies were estimated from several valid instruments. The study estimates may be conservative.

1- Insufficient sample size for statistical measurements. Since only six students are part of the study. Due to this obstacle, the study was obliged to conduct several tools of collecting data to include all possibilities as much as possible.

2- The experiment space is narrow. The association classes are too close which affected the concentration of the students from time to time due to the noise of the neighboring halls.

3- Time constraints proved to be a condition to limit the present study. Although the mediated teaching task is largely completed, more time for exercises and application of metacognitive reading strategies would be very desirable to get used to the strategies and deal with them more easily.

4- This study is limited in that it focusses on the effects of mediated teaching of metacognitive reading strategies in enhancing reading comprehension for blind students, but it does not expand this study in other language skills (speaking, writing and listening).

**9. Definition of Terms:**

**A- Key Terms:**

Mediated teaching – Metacognition - Metacognitive strategies – Blindness; blind, visual impairment.

**B- Definitions of Key Terms:**

This section provides meanings of the main concepts and terms that used in this dissertation. Researchers have previously discussed the use of the above-mentioned terms and how to succeed in using them in their exact contexts. As it is shown under some terms, there are several other similar concepts where researchers were keen to specify the context of each of them.

*\*****Mediated teaching****:* in the content areas, it is also known as mediated instruction which defined by philosophy as instructors/teachers are responsible for promoting interaction between the student and the textbook information and for enabling the students’ comprehension processes that define successful reading of expository material.

***\*Meta-cognition:*** Meta means after or behind, and cognition means the act or process of knowing perception. (Dictionary, M. W. (2002). Merriam-Webster.)

***\*Metacognitive strategies:*** refers to methods used to help students understand the way they learn; in other words, it means processes designed for students to ‘think’ about their ‘thinking’. (Inclusive schools network, 2015)

***\*Blindness:*** The term blindness falls under the tree of terms created by the World Health Organization (WHO), which represents the categories of the visual function. It refers to eyes’ condition that is irreversible blindness, and eyes' condition that have light perception but are still less than 3/60in the better eye.

The two scholars Praat and keil (2003) pointed to the large number of terminology and their classification in particular, with their placement in the correct context refers to that terms are used differently by specialists besides the case of choosing the exact general term is unsettled. In this dissertation, the concept “blind” refers to means people (learners) who are very blind where the concept “visually impaired” refers to mean people who possess residual sight. Overall, they have been used each one of them to express their literal meaning.

***Chapter One***

***Review of Literature***

**Introduction:**

This chapter contains different and varied opinions and definitions of several researchers and specialists regarding mediated teaching, metacognitive reading strategies, and some things related to the blind student in the field of education. In addition, it highlights the intended strategies. It simply revolves around reviews on some previous studies with the same topic.

**1. Mediated Teaching and Learning:**

A constructive approach mediated teaching and learning it has a wide range as if it is a sea without beach. It has been used since the past few years in order to help students with special needs to achieve satisfactory and high results in their education.

According to HIRSCH, J. (2007) Mediated teaching and learning frees the teacher to walk around the room, to observe and encourage the students as the work collaboratively to solve problems. That is what made a teacher creates a social atmosphere that helps increase the extent of student’s learning. In the same vein, Russian Psychologist, Lev Vygotsky (1978), believes that when a mediator or a caring grow- up, who engages with students in their zone of proximal development (ZPD), create a social environment and work in it, they learn best and stylish. He said ZPD is “the distance between the actual developmental level as determined by independent problem solving, and the level of potential development determined through problem solving under adult guidance or in collaboration with more capable peers.” (P86). (As cited in Media and Information Literacy in Higher Education). Mediated teaching leads the students with special needs to believe and trust on themselves, also begin to take responsibility for their education. As there will be more engagement and less disruption.

**1.1 Mediated Instruction:**

Mediated instruction is considered as a teacher’s procedure for guiding students in the course of a particular task. The concept of procedurally mediated instruction concludes as follows: overlap, supervision and guidance by the teacher to students in order to make them able to leverage their previous knowledge and guide them on how to link it to what is offered to them (Davis, 2016). That process occurs in a social manner.

**1.2 Mediated Instruction Procedure:**

Mediated instruction can be divided into three stages, which are before, during and after the operation.

1/ Before Stage: It occurs when the content is presented. By some strategies such as brainstorming, reviving previous knowledge and predicting about the provided content, the mediator’s role reflected. Here some examples:

\*Firstly, a mediator asks some questions that lead to a compilation of ideas about a presented content, in a student’s mind.

\*Secondly, a teacher cites similar examples of what he gave students to facilitate the revival of knowledge.

\*Thirdly, an instructor offers some hints and signals that a student can predict what is going to be taught.

2/ During Stage: while studying content, a student can use as these strategies; investigating on understanding and retention of derived ideas. A teacher will help in that by creating some purpose questions to be answered and a project/ creative work through which ideas are confirmed.

3/After Stage: at the end of teaching, a teacher helps the students to emphasize understanding, install information and then apply it.

**1.3 Mediated Learning:**

“Mediated learning is the subtle social interaction between teacher and learner in the enrichment of the student's learning experience. Both theorists take a strong sociological approach to the development of intelligence and cognition.” (Presseisen & Kozulin, 1992. p.42)**.** “Recognizing the importance of mediated learning could cause the teacher's role to move from provider of knowledge to learning facilitator, as the student becomes self-regulated, independent, and creative.” (ibid)

**2. Metacognitive Reading Strategies:**

**2.1 Reading:**

Reading is defined as “an activity of perceiving a written text in order to understand its contents.” (Richards & Schmidt 2013, p.443). In addition, reading is an active and interactive activity to reproduce the world to bear in mind that reading is not an invariant skill. (Nunan, 1989, p.33) as cited in JAFAR, T. N. (2012) doctoral thesis. The process of reading is contains a text and a reader to obtain a message through written text, and build the meaning grounded on a reader’s previous knowledge. Furthermore, reading is considered as it composed of four elements; those are the text, the reader, fluency, and strategies. Grabe (2008) stated “…reading combines many cognitive processes working together at the same time.” (P.15). Therefore, it has several models.

**2.1.1 Models of reading process:**

A model is a theoretical elaboration, an informed representation that allows stimulating the functioning of complex processes. Specifically, Davies (1995) considered that an information-processing model of ‘reading’ is an attempt to visualize the theoretical assumptions about the nature of this activity; mainly what happens in the eyes and the brain of the reader who is reading graphic display.

Browne (1998) argued that there are three main models of the process of reading which are bottom-up, top-down and interactive.

**a) - Bottom-up Model:**

According to him, bottom-up model describes reading as a process that starts with the learner’s knowledge of letters, sounds and words and how these words are formed to make sentences. It is called part to whole model because it goes from partial to whole knowledge. Moreover, the model is considered so effective in the early childhood.

**b) - Top-down Model:**

Top-down model is known as inside-out model and whole to part model, also. Browne (1998) explain that, “This model suggests that readers begin to read by drawing on what they know about the structure and the meaningfulness of language, the structure of stories and other genres and their knowledge of the world to predict the general meaning and specific words in context.” As it encourages guessing is border and realistic. (As cited in IJELS journal Vol- 2 issue-3, may- june, 2017).

**c) - Interactive Model:**

The compensatory model; Interactive model was proposed by Stonefish (1988) arguing that the two first above models; the bottom-up and the top-down should go hand in hand because it gathers both their features.

The diagram explains how a bottom-up processor treats text information bit by starting from the first (letters) up to the last step (text). A top- downer, conversely, begins from the final stair (text) down to the first (letters). Both of them, however, should respect the direction of the arrow. While a reader processing text in an interactive fashion, is not obliged by such path of action. He /she is allowed to handle the text taking as a starting point any step in the stairway.

TEXT

IDEA UNITS

PARAGRAPHS

SENTENCES

WORDS

LETTERS

Top-down process

Bottom-up process

**Figure 1.** The Schematic of Interactive Model

**2.1.2 Types of reading process:**

The reader adopts various behaviors and passes through them during reading activity. Scanning, Skimming, Extensive reading, Intensive reading are categorized on the report of the speed and concentration which, in their turn, are dictated by the purpose the reader has in mind when approaching a piece of writing.

**a)- Scanning:**

A reading technique is done by looking at the most important details of a text in a quick manner. It allowed readers to locate ‘specific information’ like names, dates, places, statistics, or facts that are usually noticeable in a text. In addition, it skips a large section or part of a text. Wallace (1980) stated, “Scanning is a quick unfocused reading...” (p.27). Nutall (1996) stated that scanning means glancing rapidly through a text search for specific piece of information. According to Abdulhadi. S (2019), Scanning involves three steps:

\*Determine what keywords to look for.

\*Look quickly through the text for those words.

\*Read the sentences around them to see if they provide the information being sought.

**b) - Skimming:**

Skimming is a quick selective reading to get the gist of selection. It is quick eyes moving over the material locating the main idea. Grabe (1999) affirmed that it is a speed type of reading which focuses on the main idea or general overview of a text Moreover, it compels readers to find the topic sentence which summarizes the whole text itself. The reader does not give much attention to small details present in a text. According Liao (2011), skimming is a reading technique in which the readers read the passage to get the main ideas. In other hand, according to Motai & Boone (1988), what improves skimming strategy is that teacher demands from the learners to read a text in restricted time to extract the main idea.

**c) - Intensive Reading:**

Intensive reading is the contrast of extensive reading. It is requires readers to read and familiarize even the smallest details of the text. That reading is applied when there is a specific task given and an output expected from the learners. Harmer (2007) views intensive reading is concentrated and less relaxed type.

**d) - Extensive Reading:**

It tends to provides broad and general understanding. It is about getting the core of reading material without focusing on details. Grabe (2012) stated extensive reading is the process of reading longer easer texts for an extended period without a breakdown of comprehension, feeling overwhelmed, or the need to take breaks.

**2.2 Reading Comprehension:**

According to Olson and Diller (1982), what is meant by reading comprehension is a term used to identify those skills needed to understand and apply information contained in a written material. (p.42)

In the same vein, Harris and Sipay (1980) said that reading comprehension ability is taught to be a set of generalized knowledge acquisition skills that permits people to acquire and exhibit information gained because of reading of reading printed language. There is even a sense that views reading as a process of giving meaning to visual symbols (Oka, 1983 p.11). (as cited in the Journal of English Language Teaching (Vol. 2, No. 2).

Based on the definitions above, the researcher concludes that reading is sounding out the words and paying attention to the words. Reading comprehension is about thinking, understanding, and concentrating. It is a critical aspect of learner success in school, also.

Jeanne S.Chall (1979) provide in his book “stages of reading development” five Phases of reading skills growth as shown here:

**Stage 0 –** From birth to first grade many children learn the left to right progression and order of reading , identification of letters of the alphabet, how to write their names.

**Stage 1** (grades 1–2) - Learn to sound out words.

**Stage 2** (grades 2–3) - Retrieve individual words and develop mechanical skills to read. At this stage, reading is still not used for learning.

**Stage 3** (grades 4–8) –Children become increasingly able to obtain new information from print. They start to read to learn rather than learn to read. In stage 3, children still have difficulty understanding the various perspectives within the same story.

**Stage 4** (high school) – Children develop the ability to understand material written from different perspectives and discuss.

**2.3 Metacognition:**

Some linguists and researchers said that reading means meaning and to get meaning from reading it requires some strategies whether traditional like read aloud or modern like silent reading. Therefore, whatever reading strategies teacher bring into the classroom one set is evident that reading strategies are incomplete without teaching metacognitive reading strategies. Metacognition is “thinking about thinking” (Flavell, 1979, p.906) or “cognitions about cognitions” due to it is one-step ahead of cognition. In other words, in cognition, learners’ understanding is on a surface level. The main tool is summarizing. The process does not require delving into the text. Whereas, in metacognition, the student critically analyze the text and their understanding is on a deep level. As metacognition has become a fashionable word, it seems the meaning is assumed. According to Bonds & Peach (1992), it is also defined as the person’s knowledge of his own cognitive system, his thinking about his own thought, his awareness of mental activities, his control, his evaluation and his follow-up. (p.56). Metacognition is particularly important in learning and teaching as it directly affects many factors such as gaining, understanding, remembering, critical thinking and problem solving. Consequently, it accumulates the thinking process of the reader. If readers do not develop and use their metacognitive skills, they do not have the opportunity to plan their learning, to observe their progress, to revise what they have acquired, and to focus on new knowledge to be learned. (O’ Malley & Chamot, 1990, p.8)

Metacognition is divided into two categories: knowledge about cognition and regulation of cognition. Knowledge about cognition focuses on one’s awareness and appraisal of one’s cognitive process, while regulation of cognition takes into account self-regulation and strategies leading to the achievement of self-regulation (Baker & Brown, 1984).

Metacognition

Knowledge of Cognition

Regulation of Cognition

The « What » aspect of cognition

Planning Activities

The « How » aspect of cognition

Monitoring Activities

Procedural Knowledge

The « When/Why » aspects of cognition

Evaluating Activities

Conditional Knowledge

**Figure 2.** The Taxonomy of Metacognition

**2.3.1 Metacognition versus Cognition:**

Truthfully, many researchers admit that it is not easy to describe what makes the two concepts different, as what is considered cognitive in one context and metacognition in the other**.** Metacognition usually precedes a cognitive activity because the letter helps a person to engage in a variety of mental processes in order to make sense of world around him. Metacognition goes a step further; it deals with the active control of cognitive processes. Metacognition is often defined as thinking about thinking. It allows us to complete a given task well through planning, monitoring, evaluating and comprehending. While, cognition is defined as all mental process and abilities in which people engage on a daily basis such as memory, learning, problem solving, evaluation, reasoning and decision making.

According to Schraw (2001), while metacognition is necessary to understand how a task will be performed, cognition is required to fulfill a task. Senemoglu (2005) argued that while cognition means being aware of and understanding something, metacognition is being aware of and knowing how one learns in addition to learning and understanding something. (as cited in Literature Review on Metacognition and its Measurement by Ahmet Oguz Akturk and Ismail Sahin).

Metacognitive Strategies

Monitoring

Evaluating

Planning

As a result of the orientation

Cognitive Strategies

Summarizing

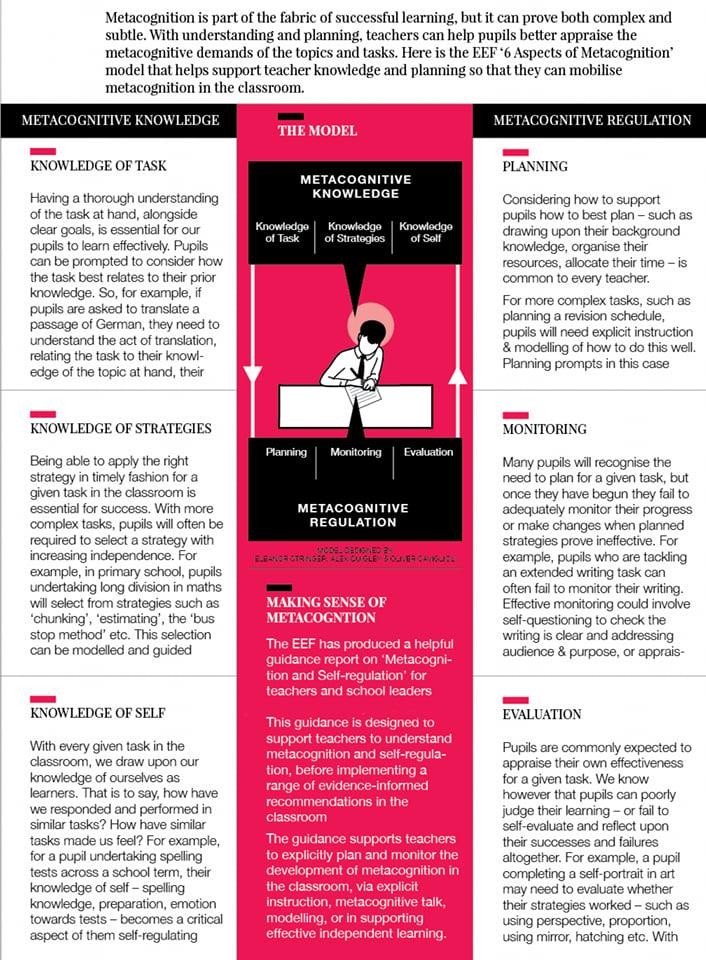
Conceptual Map

**Figure 3.** The relationship between metacognition and cognition

**2.3.2 Metacognitive Strategies:**

According to the ‘international journal of progressive education, volume 15 number , 2019, metacognitive strategies are “strategies used by the person before, during, and after reading to make the reader aware of his or her own reading process.” Metacognitive awareness is key in proficient reading i.e. it is necessary that students follow those steps: planning, monitoring, and evaluation. In detail, planning; at this stage learners explore their background knowledge due to preview the text through skimming i.e. having a glance on main ideas. Other than this, teacher can ask some probing questions. “The planning phase is a study draft in the intellectual sense, it is a mental preparation.” (Cemiloglu & Ogur, 2016, p.134). Monitoring, at this stage, learners self-check their comprehension through monitoring text by asking questions like ‘what the author is trying to say?’ and ‘What is the theme of the story?’ Moreover, ‘what is the moral of the tale?’

The strategies that are used during reading to understand what the reader read, the use of the prior knowledge and its relation to the subject, predicting the text about the execution, clarifying text, set the read speed, marking, highlighting or underlying important places in the text, taking notes, animation in your mind, and using text structure information (Baydi, 2001). Evaluating, at this stage learners come to know how well they have understand the text. There are several ways for evaluation such as the reader can have group discussion after reading the text or the teacher can ask them to write a short critical analysis of the text. It is the stage where the results appear.



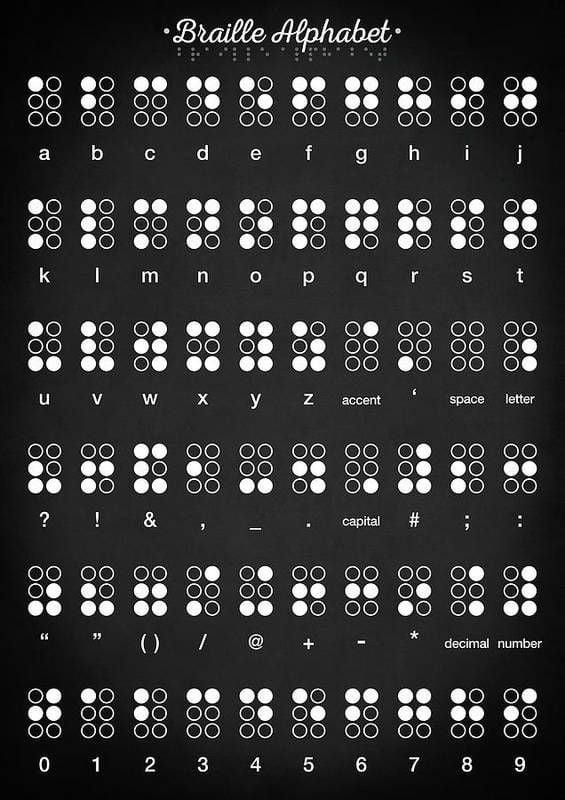
**Figure 4.** The six aspects of metacognition model by Eleanor Stringer et al

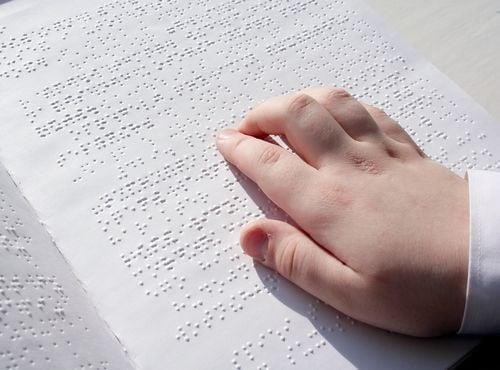
**2.3.3 Metacognitive Reading Strategies in Reading Comprehension:**

Some researchers believe that reading comprehension is a multifaceted process. Maki and Berry (1984) expressed the importance of text comprehension by using the term ‘Metacomprehension’ synonymous with the term metacognition. Furthermore, many researchers hold the view that the text cannot be well comprehend without the reader's use of metacognitive strategies. Therefore, to get a good understanding of the text, the reader must call upon conscious and deliberate strategies. Consciously or unconsciously, factors like past experience, beliefs, and competence may affect these strategies. In the manner of Flavell (1979), reading whether in L1 or L2 is “cognitive enterprise” which happened in part the interaction between the text, the reader, and the context in which reading takes place.).Iwai in (Meniado 2016, p.19) believes that metacognition is most important in reading comprehension in expansion of some linguistic, cognitive, and social skills. Metacognition is a strategy about one’s consciousness in reading comprehension processing in reading or thinking process. It is a strategy that is planned, discussed, instructed, and forward-oriented to know the level or progress in cognitive task. (ibid). From the definitions above, the correlation between metacognitive reading strategies and reading comprehension is metacognitive strategies drive the process of reading easer and well organized in a very smooth way.

**3. Blind People and Comprehensive Education (reading):**

Reading is the suitable method that serves the mind and adorns the memory. It is the most way to see the world clearly for a visual impaired person. Braille and Print Reading are mediums used to define words to those persons and to know what is written. Braille is a system of embossed or raised dots that can be read with tips of the fingers.





**Figure 5.** Braille Model

Print Reading mostly fits learners with partial sight. It can be in the form of large print books or magnifying devices. Nowadays, what is called Assistive Technology does its job for the visually impaired to the fullest, as it facilitates the learning process for them. Even if the three processes (visual, auditory, and tactile) can serve to give us access to information, each one works in a different way, and therefore the capacity to comprehend the information might depend on the channel through which it reaches us. Therefore, Lamden affirms that Braille reading is a complex task that involves inter sensory perception and multimodal neurological processing. Moreover, tasks of linguistic decoding and comprehension skills. (García, L. G. 2004, July)

The process of reading a letter by letter and then a word by a word with storing words in memory in addition to merging the perceptive with information that was previously stored requires a longer time. This what distinguishing Braille reading from others. Pring and Painter argue that “people who read Braille must place more stress on processing aimed decoding the tactile stimuli than on comprehend the texts.” (ibid)

|  |  |
| --- | --- |
| Type | Description |
| Partially Sighted | Have difficulties in seeing and reading information and require special  assistance with learning and reading. |
| Low Vision | Be impossible to read at normal distances, have to use supportive tools  to read and see in the environment. |
| Legally Blind | Have a vision less than 20/200 and a limited range of vision, cannot see  things clearly whether it is near or far. |
| Totally Blind | Have no vision, be unable to process images and learn through non  visual resources, including Braille. |

**Table 2.** Categories of Visual Impairment

**4. Review of Previous Studies:**

*Metacognitive and Mediated Learning in Visually Impaired* by Athiro KP and Chacko L; *The International Journal of Indian Psychology* (2020), in their research study, students have been examined at their school. Besides, the educators were interviews at their workplace. The researchers used purposive sampling technique to identify the participant in their study. The process of making sense out of the data were through semi structured interview and observation. At the end, it came with a result that the visually impaired student functions adequately with the assistance of their mediators. The metacognitive reading strategies that are used help the child to understood effectively and reach out their knowledge which fosters and ameliorates their performance in learning.

Zayer, S. A & Al-Hachimi, J, M. D (2020) examined the effect of mediated instruction strategy on developing skills of creative reading for 5th year students of scientific branch.. After their study, they conclude that M.I.T strategy contributed to the development of students' creative reading skills. In addition to the activity and interaction of the students with that strategy which led to an active session (lesson) away from the monotony prevailing in the traditional method. (As citied in the Journal of art, literature, humanities and social sciences, volume 51).

Erwin R.W.J (1993) have experienced in his research Growth in Critical Reading and Evaluation of Arguments among Non-proficient College Readers, measures of reading comprehension, critical reading, and evaluation of arguments that were administrated before and after instruction. Findings indicated that subjects achieved significantly higher in reading comprehension, critical reading, but not in evaluation of arguments. The result of the study was the experimental group outperformed the control group.

Chouat, C. (2009) under her dissertation; metacognitively-oriented reading strategies instruction for fostering comprehension selected guessing word meaning from its context and / or morphology, detecting main ideas and finding their supporting details as strategies to examine their effects on first year LMD students’ reading comprehension in the department of English at the university of Mentouri - Consatntine. In the research methodology, Chahrazed created a questionnaire to collect data concerning how much the students make use of comprehension strategies in the reading text. The result showed that the participants have improved in both reading comprehension overall scores and instructed individual strategies.

**Conclusion:**

As seen, this chapter deals with the variables with an overview of each of them by inference by mentioning views of several researchers. The purpose of this review was to present the different directions of the two variables of this research. In addition to this, it helps the reader to understand the different aspects posed by the current study on mediated teaching of metacognitive reading strategies for bind learners. Despite the above-mentioned inferences, no study has so far provided empirical support for blind students, i.e. teaching them these strategies through mediated teaching method. Therefore, the present work aims to explore the effects of these strategies that will present through mediation to blind learners on their reading comprehension in the next chapter.

***CHAPTER TWO Research Methodology***

**Introduction:**

This chapter presents the adopted method to scrutinize the effects of mediated teaching of metacognitive reading strategies on first language blind people comprehension. In addition, it confirms or refutes the above-suggested hypotheses. This chapter contains five parts: Design, participants and setting, tools and data collection, data analysis, validity and reliability.

**1-Design:**

The current study is focuses on the assumption that mediated teaching of metacognitive reading strategies is of assistance for learners in meliorating their reading comprehension. To examine this main hypothesis, a fieldwork is organized and held through four (4) periods. At the beginning, the experiment is carried out following the pre-test and post-test design. Thus, first, the text studied without metacognitive reading strategies. Second, teaches the strategies without mediation. Third, teaches the strategies with mediation. Finally, the text studied with the strategies immediately. Next, the interview is designed to be with teachers in order to elicit the extent they accommodate the way that metacognitive reading strategies are used. Then, a questionnaire is administered in an attempt to explore if mediated teaching helps the students to learn faster, as a second hypothesis. At the end, the findings are statistically analyzed.

**2- Setting and Participants:**

**2.1- Association Overview:**

The workplace of the present study was at the White Cane association that is a state association for the blind and visually impaired person that founded on Febrary5, 2002. It is located on Adaud Street in Ghardaia municipality.

The goals of the white Cane foundation are:

1. Inclusion of the blind in the social milieu.
2. Public awareness of the issues and concerns of the blind.
3. Coordination with other associations in and out of the country.
4. Coordination with the media to raise awareness among blind people and civil society.
5. Establishing knowledge and cooperation among the blind.
6. Teaching reading and writing in Braille to spread knowledge and culture among the blind.

Since the establishment of the institution to this day, it has achieved many achievements, including:

1. Conclusion of agreements with certain institutions;

* Agreement with the State Office for Literacy in Ghardaia.
* Agreement with the vocational training center for the physically disabled in Dounia- Laghouat.

1. Establishing a branch of the association in Qarara.
2. Establishing a section for teaching Braille and basic materials for both genders and all ages.
3. Assisting the blind in the extraction of its official documents.
4. Preparation of children for inclusion in formal educational institutions and in society.
5. Educating and training the blind on automated media and technology.
6. Allocating classes for blind women in handicrafts, creativity and sports.
7. Organizing exhibitions for the association's activities.
8. Assisting university students in completing their research related to the association's activities.
9. Celebrating national and international days for people with special needs:

(January 4; World Braille Day/ March 14; National Day of People with Special Needs/ October 15; International White Cane Day/ December 03; International Day of People with Special Needs.)

Foundation officials pointed out their ambition to create a school for young blind people in the state and to form branches of the association in all districts of the state. In addition to that, providing education and employment for all blind people and setting up an investment project for the association. Those in charge of the association are planning to establish a recreational and sports club for people with special needs. Moreover, to work on concluding meetings between associations of the disabled in the state.

**2.2- Participants:**

The participants in the present study was selected out from the 2MS class at the white Cane association, Ghardaia – Algeria, during the academic year 2021/2022. The sample consists of six (6) students: two females – four males. They form the actual sample of the study, which has been present more or less, throughout the different stages of the experiment. Their ages range from 11 to 15 years old. The students was come from different regions of Ghardaia with approximately the same educational background.

The reason behind choosing those learners as a sample of the present study is that are the suitable required category and the one. For middle education, not secondary education because it is preferable to exploit early stages of education to execute mediated teaching of metacognitive reading strategies. Learners are more likely to respond and grasp better what, how, when and why these strategies are utilized (Baker and Brown, 2002, p. 375)

|  |  |  |
| --- | --- | --- |
| Gender | Number | Percentage |
| Males  Females | 4  2 | 66.67%  33.33% |
| Total | 6 | 100% |

**Table 3.** Participant’s Profile “a”

**Figure 6.** Genders

The high percentage of males in the institution is due to the living environment and the culture of the community, as the male has the priority to receive education first.

Male turnout for the institution is also because they are considered as the first labor force in society, other than woman, they interested on learning handcraft.

The World Health Organization (WHO) created a set of classifications of visual impairment such as near-normal vision, moderate low vision, severe low vision, legally blind, profound low vision, near total blindness and total blindness.

The table below shows the degree of vision among the participants.

|  |  |  |
| --- | --- | --- |
| Name | Age | Degree of blindness |
| Mehdi | 11 | Totally blind |
| Younes | 15 | Near total blind |
| Ibrahim | 13 | Near total blind |
| Maria | 12 | Totally blind |
| Omar | 14 | Totally blind |
| Safa | 12 | Totally blind |

**Table 4.** Participant’s profile “b”

**Figure 7.** Blindness Degree

**3. Data Collection: Instruments:**

The present study based on three (03) main different methods in order to collect data and to answer the foretasted research questions. Through the pre- test – post-test, classroom observation, questionnaires and interview. Quantitative and qualitative data were collected to make the findings logical and to understand the phenomenon from other outlook in its natural setting (classroom).

**3.1. The Pre-test – posttest:**

**3.1.1- pre-test:**

This pilot study adopted the pre-test with a view to assessing the understanding of reading without continuously mediating between the student and the information. In this move, in an observant manner, students were asked to read an academic text in the first language (Arabic) appropriate to their level to ensure that the problem was not the language. The text “Spring Day” was from the academic school textbook. Page 132. It was followed by six (06) questions that required consideration of the text to be answered within two hours. The stages of the session (See the appendix C).

**3.1.2- Session of metacognitive reading strategies:**

**Part one: normal teaching**

The metacognitive reading strategies were introduced to the students through the researcher with the assistance of material teacher. Then small clippings were distributed, each containing questions for the categories of the strategies. The first category included planning questions, the second category related to observation questions, and the third and last category included evaluation questions. These strategies were applied to the same text was studied in the pre-test.

**Part two: mediated teaching**

The same strategies were taught in a mediation method between the information and the student. Their teacher used technology: audio clip (edutainment). Moreover, she stopped at each strategy to accompany the awareness of the students.

**3.1.3 Posttest:**

It comes after the session of metacognitive reading strategies directly. It takes two hours. As the pre-test, this test applied on a text from the same academic school textbook in order to guarantee the level of language. The text “Meanings of Eid”. (p.112) followed by six main questions. The first category’s questions, two questions, tackle planning techniques only. The second category, two questions, monitoring techniques and the last category, two questions, contains evaluating techniques. This posttest will permit the analytical deferential study of reading comprehension level. In addition, it is essential in confirming or neglecting the role of mediated teaching of metacognitive reading strategies in affecting reading comprehension of blind students.

**3.2. Questionnaire:**

The current study relied on the use of a closed questionnaire that contains 18 questions divided into two parts, the first contains questions related to metacognitive reading strategies, and the second contains questions related to mediated-teaching. Its purpose is to survey the participants' actual situation regarding the effect of mediated teaching of metacognitive reading strategies on their reading comprehension. (See appendix A)

**3.3. Interview:**

The researcher in this study directed an interview to the teachers of blind students, so that they were interviewed individually in the workplace, and they were asked questions related to proving the second hypothesis or canceling it.

**4- Data Analysis:**

The researcher compared and constructed the data revealed from the pre-test through observation with the information obtained from the post-test. The aim is to explore the extent to which mediated teaching of metacognitive reading strategies affects a blind student’s comprehension. The pretest aspires to discover the extent result of participant on reading comprehension after teaching without mediating. Furthermore, it deduce the most developed reading strategies. While the post-test aims to measure the progress of reading comprehension after acquiring metacognitive reading strategies by mediated teaching method.

The six questionnaires were collected and coded. To facilitate the analysis, the results were converted to numerical data. Precisely, the correct answer will be manipulated of 100% with support of Excel 2013 Software Program.

The researcher did not have experience with Excel but she attempted to learn how to exploit it only from watching some videos on YouTube website ([www.youtube.com](http://www.youtube.com)). The description of the quantitative data, emerging from the questionnaire, was supported sequentially by the analysis of the qualitative data obtained from classroom observation and individual interviews to increase the quality of the research.

The different teachers’ responses to the close interview compared in order to analyse them and extract the natural difference because of gender difference.

All the three sources of data are supposed to meet the same objectives of this research. As long as the three tools have dealt with common themes: mediated teaching, metacognitive reading strategies and blind learners’ reading comprehension.

After presenting the results from the pre-test/post-test (classroom observation), each questionnaire item and interview findings are supposed to answer the research questions from different perspectives.

After the data analysis, the results were discussed in light of the reviewed literature to bridge the gap between people with special needs and education. The discussion may result in providing recommendations not only for teacher but also for curriculum designer to increase the quality of learning and teaching in the country.

**5- Validity and Reliability:**

Validity and Reliability are two of the vertebrae of the research’s backbone. Cohen et al (2005) declared, “Data validity might be improved through careful sampling, appropriate instrumentation and appropriate treatments of the data”. Validity can be seen as the core of any form of assessment that is trustworthy and accurate (Bond, 2003, p. 179). Validity. Based on these declarations, the present study made sure to choose the suitable category that can represent the whole population, at first level. Second, the study made sure to work on comprehension tests in order to create an adequate data.

Biggman (2005) defined reliability as “is to use data collection techniques that you consider available and to apply a suitable means of analyzing your collected data” p.100. Therefore, both texts that are used their source is academic to insure it suits the level of the participants. Moreover, the tools such as Excel 2013 software and mathematic operations are based in this study for statistical calculation that grant unbiased research.

**Conclusion:**

This chapter presented the methodology that was applied to investigate the effects of mediated teaching of metacognitive reading strategies in enhancing reading comprehension. It explained the tools chosen for collecting data from respondents, also. In addition, it discussed the validity and reliability of this study.

***CHAPTER THREE***

***Result and Discussion***

**Introduction:**

This chapter provides an analysis of the results obtained from both tests i.e. the pre-test and posttests. In addition, it analyses the results of the questionnaire and the interview. Then, it explains the difference between the results of the tests. Ultimately, critically compares the results of this study with the results of previous study.

**1. The Pre-test:**

**1.1 Text Comprehension**

In this test, a text is presented to the students followed by six questions related to the text. The aim of these questions is to discover the extent to which students comprehend the reading text. The results reported that 50% out of 100% responded correctly to the first and second questions (See figure.8). The percentage of students’ comprehension of the text was based on some of the strategies used by the students, such as predicting and skimming strategies. These results indicate that students are not aware of the use of metacognitive reading strategies.

**Figure 8.** Pre-test Text Comprehension

**1.2 Strategies:**

Students who were successful in understanding the text, such predicting and skimming were the strategies adopted by them to answer the first and second text questions correctly. The two girls answered correctly using predicting strategy and two out of four of boys based on predicting, one of them answered correctly and the others were close to. The result is 66.67% of the students get the techniques. About gender division, 100% of females succeeded in using the predicting and skimming strategies and the half of percentage concerning males 50%. To answer the remaining questions of the text, the students moved around the text by navigating from top-down and bottom-up with the percentage 100%. While 33.33% they did not get the correct answers to some questions.

**Figure 9.** The Use of Predicting and Skimming & Bottom up and Top down

It is concluded that from the above percentages, it may that 100% of girls succeed to answer the questions through mastering skimming technique as the 50% of boys failed to master this technique.

**2. Mediated Teaching of Metacognitive Reading Strategies:**

In this session, the strategies were taught through three stages, each stage included a strategy. At the end, the conclusion was drawn, which is that 66.67% of the students fully understood the lesson, females 50% and Males 75%. Through the questionnaire, the results show that 83.33% of students agree mediated teaching is helpful to them. (See p. 45)

**2.1 Planning:**

Text passages are presented to the participant, after drafting an internal monologue, followed by two questions that the student must ask himself. The first question is “Through the title of the text, do I feel confident that I will be able to understand the text? May I know what this text is about? ”. The results show that 100% of male adopted the planning strategy successfully and 50% of girls adopted it.

**2.2 Monitoring:**

While reading, the readers required to think about their thinking and ask their self “Do I understand what I just read? If not, then what strategies can I use?”

The results show that majority of the students succeeded to think about their thinking with 75% of males and 100% of females. That is to mean students started easily to digest the information provided.

**2.3 Evaluating:**

This stage shows that females are the most successful in asking themselves to evaluate their thinking. At the same time, they answered the questions: “what have I previously read that is similar to this text? What questions do I still have on the subject? ”. By 100% of females, comprehend the strategy and 50% of males comprehend.

**Figure 10**. The Use of Metacognitive Reading Strategies

As a result of the above numbers, most of the students benefited from mediated teaching method. They understood how to use metacognitive reading strategies.

**3. Post-test:**

**3.1 . Text Comprehension:**

This post-test was conducted to test the effectiveness of mediated teaching of metacognitive reading strategies on blind students' comprehension of the text. This is done by discussing the text and making sure that the students observe whether or not they used the strategies in a timely manner and whether they answered the questions with correct answers or not. The process took place and the results indicated that the text comprehension rate increased very high. In detail, five out of six of learners succeeded in using the strategies correctly, while answering all the questions of the text with correct, varied, and intelligent answers, i.e., 83.33%. The remaining percentage 16.67% is due to the reason the student possesses participation phobia.

**Figure 11.** Post-test Text Comprehension

This relative circle shows the noticeable development of the students’ reading comprehension.

**3.2. Strategies:**

After mediated teaching of metacognitive reading strategies session, of course, the use of these strategies will emerge in the post-test, namely planning, monitoring and evaluation.

**3.2.1. Planning:**

The first two questions after the text are related to the title of the text and the general idea. Five out of six students reached the correct use of the strategy and answered the two questions easily, as 2/2 of the girls and 3/4 of the boys. That is, 100% for girls and 75% for boys, and the total percentage is 83.33%.

**3.2.2. Monitoring:**

Concerning the second two questions are related to explaining the terms and giving a basic idea for each paragraph, it is necessary to follow the monitoring approach to answer them. The students were able with 83.33% to reach the ability to monitor their thoughts. In detail, 50% of females and 100% boys.

**3.2.3. Evaluating:**

The third part of the questions related to providing another title for the text and what is the meaning of the text in general. The entire students with 100% for both genders were able to answer them after using the evaluation strategy.

**Figure 12.** The Use of Metacognitive Reading Strategies

Compared to the pre- test, the bar charts above shows the extent to which students comprehend and understand the use of metacognitive strategies while reading. Where most of the columns that express the strategies converge to the full percentage i.e. 100%.

**4. Questionnaire:**

Several conclusions relevant to the present study can be drawn from the blind students’ responses to the questionnaire.

**4.1. First Section: Mediated Teaching:**

This part contained nine questions that the first four questions are related to whether blind students need help regarding reading or not. When asked the first question, in their opinion, do they often need help with their studies? 83.33% of the students answered with “yes” and 16.66% answered with “no”. While the second question was about if, they have difficulty in learning and absorbing text. With 50% of them said “yes” and other 50% said “no”. Concerning independence, students where asked if they consider themselves independence students in learning or not. With 33.33% of them said “no” and 66.66% of them confirmed with saying “yes”. The entire sample with 100% reported that they feel comfortable when the teacher directs them.

These percentages are conclude that mediated teaching is applicable to the blind students without problems or resorting to complications.

**Figure 13.** The Applicability of Mediated Teaching to Solve the Blind Students Gap

In the other hand, the five questions are concerning with the effects of mediated teaching on the blind students’ reading comprehension. When asked the fifth question in the questionnaire, if mediated teaching blocks the blind students’ creative side, 50% of them approve with “yes” and the rest category was have another perspective that they approve with “no”. Whilst the fifth question, in their opinion, if mediated teaching enhances their level of education. The result was 66.66% of the sample agree with and 33.33% disagree with. As far as, the entire sample answered the seventh question, if mediated teaching develop teamwork methodology, 100% with “yes”. What if mediated teaching motivates them to learn as eight question was answered by the participants with 83.33% “yes” it does. On the other hand, “no” it does not with 16.66% of them. To question nine, whether mediated teaching achieve neutrality and equality among students or not, 66.66% of the learners answered positively. While, 33.33% their answer was negative.

From the percentage above, the result shows that the majority of the sample agree that mediated teaching has what to do to ameliorate their reading comprehension.

**Figure 14.** The Effects of Mediated Teaching on Blind Learners’ Reading Comprehension

**4.2 Second Section: Metacognitive Reading Strategies:**

The second part of the questionnaire was form of nine questions related to metacognitive reading strategies. Precisely, about blind students' perceptions of using the strategies. Through the first and the second questions, it confirmed that these strategies were not taught in the institution by 100% of the students. Thus, all the students discovered the difference between using strategies and not using them. Regarding the third question, the results shows that five out six of the sample think those strategies are suitable for all the types of the text. While, 66.67% of the students answered with “yes” and 33.33% of them said “no”. While two out of six they confirm that applying the strategies on the text is a hard practice according to them. As a result, the percentage of those who said “no” to the next question that dealt with the difficulty dealing with the text was 50%. The result of the sixth and the seventh questions is that 83.33% for those who said “yes” the strategies help to cement the ideas into the mind. Moreover, 100% of the students agree that the strategies develop thinking and problem-solving skills. The findings of the eighth and the ninth questions showed the majority of the participants were agree that the strategies facilitates the process of reception the ideas of the text by 83.33%. The same percentage was for the last question that presented the student acceptance of the strategies with intention to continue to use them.

**Figure 15.** The Perception of Blind Students of Using Metacognitive Reading Strategies

The blue color in the columns above expressed the positive answers of the questionnaire’ questions. Therefore, the information of the bar charts indicates high rates of positive perception for the use of metacognitive reading strategies.

**5. Interview:**

The research relied on the interview directed to the professors to answer one of the research sub-questions, which is the extent to which teachers comprehend the metacognitive strategies for reading are used. The teacher’s sample included both sexes due to the diversity of the studied case. When conducting a one-on-one interview, both teachers reported that in general, somehow, they routinely teach blind students by mediation, but they did not bother to teach these strategies. Instead, students are taught other strategies such as prediction and guessing, in the box. In addition, summarizing, skimming, scanning, etc.

After the experiment, and after the two teachers looked at the strategies, they gained a thought on these new strategies used for them. Which prompted one of them to say that the experience removed the curtain from him and illuminated part of his mind, and the other stated that she is ready to change his method of teaching and resort to these strategies to relieve her of the burden of communicating information.

From the above observations, it is concluded that the teachers did not have the slightest idea about metacognitive reading strategies. The response of the students in the department on the day of the experiment was a proof for teachers to ensure the effectiveness of the impact of the strategies on the student’s mind positively; in addition, it pushes the student to rely on himself. Moreover, the speed of their response to the questions presented to them is a reason for shortening the duration of the lesson. The professor noticed this leap and commented on it that with the use of the strategies by mediated teaching, they can work on putting up home exercises in the department, where before the experiment was usually postponed home training assignments and this is for excess time.

**Discussion of Findings:**

In order to evaluate and investigate the effects of mediated teaching of metacognitive reading strategies for blind people on their reading comprehension, the study adopts a deferential analysis of the tests before and after reading session. It is vital to criticize the results and compare between the tests to assess the participants’ progress. For this reason, gradually, the comparison covers the pre- test then the post-test. The percentage difference in students’ comprehending of the text between the first and second test (before mediated teaching and after mediated teaching) is 50%, as half of the students faced difficulties in answering the questions of the text correctly in the first test. As a result, the majority succeeded in doing well in the second test.

Concerning the strategies, the blind students in the first test were based on predicting and skimming strategies i.e. the lack of awareness on metacognitive reding strategies. While in the second test, the percentage of using those strategies reached 100%.

**Figure 16.** The Comparison between pre-test and Post-test

Regarding the questionnaires responses, from numerical statistics it is concluded that: from the first part, mediated teaching enhances the intellectual creativity of the blind student by enhancing his educational level. Moreover, this method of teaching works to create teamwork and participation, thus it contributes to the development of the way of thinking. As another effect, most students enjoy equality among themselves, where there is the neutrality from the teacher. From the second part, it agreed that metacognitive reading strategies can be suitable for all types of texts and are easy to use in terms of organization other than other strategies. Furthermore, by getting used to them, the student can adapt to them. Metacognitive reading strategies contributes to consolidating the ideas in the mind, develop problem- solving skill and simplify ideas and make them accessible.

Overall, mediated teaching of metacognitive reading strategies facilitated the reading comprehension for blind learners. Where it positively affected the way they answered the text questions.

This study obtained through an interview with teachers of blind students the following results:

1- The extent teachers of blind first language learners assimilate the way that metacognitive reading strategies are used rose from nothingness to proficiency.

2- Mediated teaching facilitates the process of transmitting the information to blind learners.

3- By mediated teaching, learners rapidly acquire the information and easily their minds receive it. Therefore, the sessions do not take long.

**Conclusion:**

Although this research used several different instruments to reach the above-mentioned results. This does not aim to generalize these results in every place and time and for all categories, but attention falls to this category of society and a demand is directed to take care of their education programs.

***General Conclusion***

**General Introduction:**

Reading and metacognitive reading are two branches rich in differences, separated by the development of the student's level of comprehending the text, especially the blind student. Accordingly, a controversy arises about the extent of the effect of mediated teaching of metacognitive reading strategies to blind student in the practical environment.

The concern behind this research is the gap of the difficulty of educating the blind learners and their marginalization instead of finding a solution for them. With a modest attempt, this practical research aims to shed light on the appropriate teaching method for teaching blind students to read, being one of the basics. In addition, to provide them with the power of independence to understand the text. Therefore, this will facilitate the teaching process for teachers in one way or another. Furthermore, the crux of the subject of this work is the investigation of the effects of mediated teaching of metacognitive reding strategies on the mind of the student to comprehend the text.

The applied side of this research used as sample middle second year students from the White Cane Foundation in Ghardaia, Algeria. The results proved the first hypothesis through the findings of the instruments. The quantitative data from the questionnaire shows that mediated teaching of metacognitive reading strategies contributes very effectively on learners’ reading comprehension. First, it gives students new other skills such as problem- solving skill. Second, it makes the process of receiving information easy and improve the quality of comprehension. Third, it creates teamwork atmosphere. While, the qualitative data from the interviews and classroom observation shows that after the post- test the extent to which teachers accommodate the way that metacognitive reading strategies are used is very high. Thus, the hypothesis of the sub-question of the first question is negated. Concerning the third hypothesis is valid through the result of the questions in the interview. The data shows that mediated teaching facilitate the teaching process for teachers and it provides time for other practices.

Eventually, this research presents and opens other areas for proposals that are hypotheses for some other researches, for example studying the subject and targeting a sample of the university level because of merging the blind student with students who are not blind.

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**Appendix (A):** Questionnaire

جامعة غرداية

استبيان خاص بمذكرة التخرج

تخصص لغة الانجليزية

العمر..............  الجنس .................

ا) -التدريس بوساطة نعم لا

1-في نظرك، هل أنت بحاجة للمساعدة في الكثير من الأحيان في دراستك

2-هل تواجه صعوبة في التعلم واستيعاب النص

3-هل تصف نفسك بطالب مستقل تعتمد على نفسك في الدراسة

4-هل تشعر بالأريحية عندما يوجهك الأستاذ

هل التدريس بوساطة يغطي جانبك الإبداعي-5

6-بعد التجربة، هل تعتقد أن التدريس بوساطة يضاعف مستواك التعليمي

7-هل يعمل التدريس بوساطة على تنمية العمل الجماعي

8-هل التدريس بوساطة يمنحك دافعا للتعلم أكثر

9-هل التدريس بوساطة يعمل على تحقيق الحيادية والمساواة بين الطلاب

ب) -استراتيجيات القراءة ما وراء المعرفية نعم لا

1-هل سبق ودرست استراتيجيات القراءة ما وراء المعرفية في الجمعية

2-هل شعرت بالفرق بين استعمال الاستراتيجيات وعدم استعمالها

3-هل تعتقد أن الاستراتيجيات تناسب جميع أنواع النصوص

4-هل تطبيق الاستراتيجيات على النص أخد منك وقت طويلا

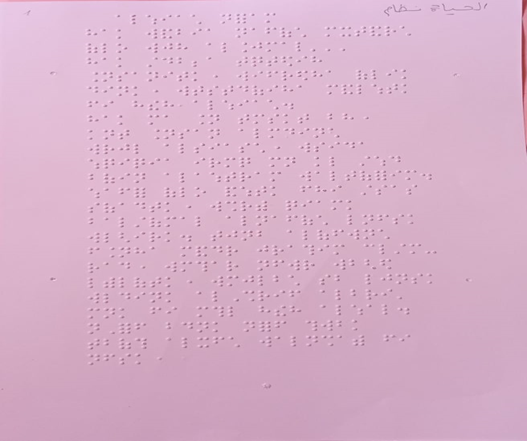
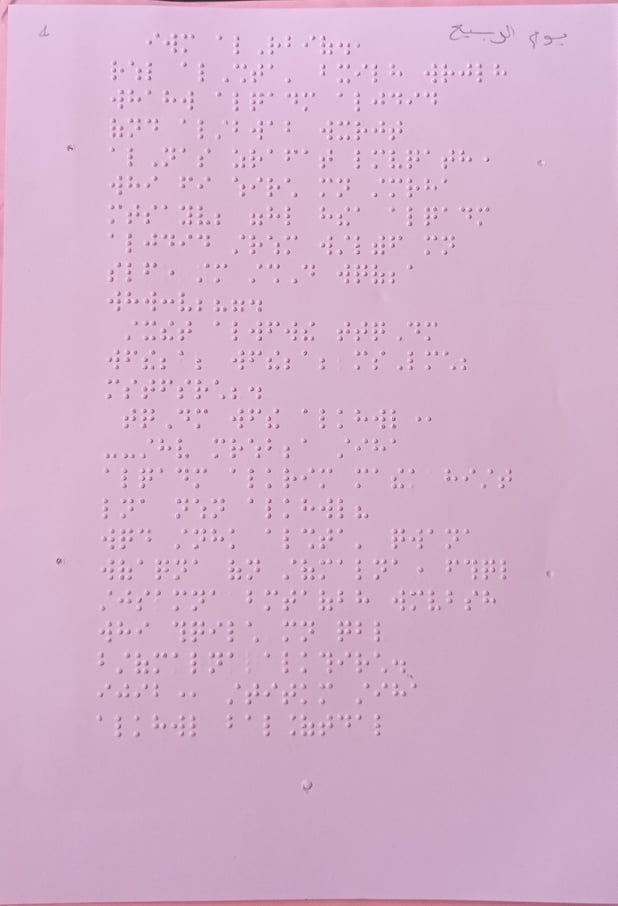
5-هل واجهت صعوبة في التعامل مع النص باستعمال الاستراتيجيات

6-هل تعاملك مع الاستراتيجيات يساعد في ترسيخ أفكار النص المقروء في ذهنك

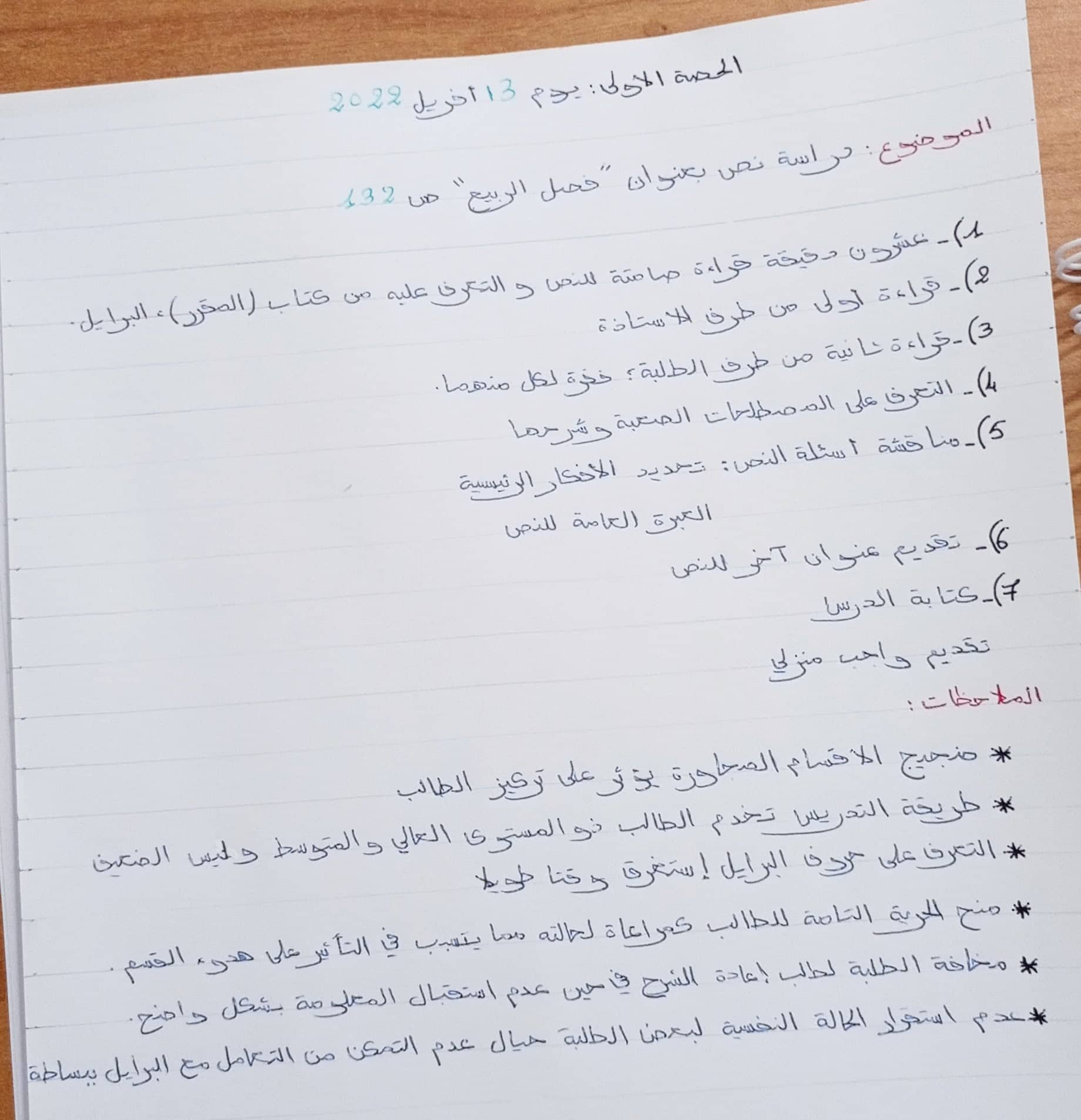
7-هل الاستراتيجيات تساعد في تنمية التفكير ومهارة حل المشكلات

8-هل المعلومات الدراسية تصبح أسهل وأكثر وضوحا مع الاستراتيجيات

9-هل ستستمر باستعمال الاستراتيجيات من الآن فصاعدا

**Appendix (B):** Models of texts that are used in pre-test and post test 

**Appendix (C):** The pre-test (Classroom Observation)



**Summary in Arabic:**

تعد القراءة من أهم المهارات التي تساعد الطالب الكفيف على التعرف بالعالم الخارجي. وبالتالي فإن استخدام طريقة فعالة لتعليم القراءة يصبح أمرا لابد منه. يقترح هذا العمل طريقة التدريس الوسيط لاستراتيجيات ما وراء المعرفة للقراءة، حيث تهدف إلى إنتاج قراء فعالين ومستقلين. الهدف من هذا العمل هو اختبار التأثير الذي يفترض أن يكون إيجابي لهذه المنهجية على مستوى الفهم الذي سيحققه دارسو اللغة الأولى من قسم السنة الثانية متوسط في مؤسسة العصا البيضاء غرداية – الجزائر.

يضمن التدريس الوسيط لاستراتيجيات ما وراء المعرفة للقراءة سهولة إيصال المعلومة للطالب الكفيف، حيث يسهل عليه عملية التعرف على المقروء بشكل جيد. للتحقق من هذه الفرضية، أجريت تجربة متعددة المراحل على عينة تتكون من ستة طلبة. في البداية، قام الباحث بحضور حصة ملاحظة للتقييم وللحكم على حالة ومستوى الفهم لدى الفئة المختارة. بعد ذلك، تم اطلاعهم على ماهية التدريس الوسيط وماهية الاستراتيجيات ما وراء المعرفة للقراءة عن طريق التطبيق الفعلي للطريقة المقترحة. تاليا، تم تدريب الطلبة من خلال تطبيق الاستراتيجيات على بعض نصوص الكتاب المدرسي. بعد ذلك خضعوا للتقييم مرة أخرى.

أكدت النتائج أن النتائج التي تم الحصول عليها قد أثبت فرضية التدريس بوساطة للاستراتيجيات المقدمة في هذا العمل البحثي مفيدة. لذلك فإن أهم الأثار التربوية الناتجة أنه يمكن اعتماد هذه الطريقة لتعليم القراءة للطالب الكفيف ومساعدة طلابنا على التطور إلى طلبة ديناميكيين وفعالين.

**الكلمات المفتاحية:** التدريس بوساطة، استراتيجيات القراءة ما وراء المعرفية، فهم النص، المتعلمين المكفوفين، متعلمي اللغة الأولى.

**Summary in French :**

La lecture est l’une des plus importantes compétences qui aide l’élève aveugle à découvrir le monde extérieur. Donc l’utilisation d’une méthode efficace pour lire s’avère primordiale et nécessaire. Ce travail propose une méthodologie d’enseignement intermédiaire des stratégies qui vont au-delà de la simple connaissance de la lecture, car elle tend à produire des lectures efficaces et indépendantes. L’objectif de ce travail est de tester l’effet, Supposé positif, de cette méthodologie au niveau de la compréhension réalisée par les apprenants de la 1ére langue, en classe de 2eme Année Moyenne, à l’établissement du bâton blanc à Ghardaïa, en Algérie.

L’enseignement intermédiaire garantit l’application des stratégies métacognitives de la lecture, la facilité de la transmission de l’information à l’étudiant non-voyant et un accès facile à la lecture. Partant de cette hypothèse, et pour la vérifier, on a réalisé une expérience sur un échantillon composé de six élèves. Au départ, le chercheur a assisté à une séance d’observation en vue d’évoluer et de juger l’état et le niveau de compréhension chez ce groupe. Ensuite, on a expliqué à ces apprenants la signification de cet enseignement intermédiaire et les stratégies métacognitives de la lecture par le biais de la pratique de cette méthode proposée. Les élèves ont été entrainés sur quelque texte du manuel scolaire et ont été évolués pour la deuxième fois.

En analysant les résultats, on constate que ces stratégies d’enseignement intermédiaires sont très bénéfiques aux apprenants c’est pourquoi on peut les utiliser afin d’apprendre la lecture aux élève aveugles, et pour les aider à progresser et à être dynamiques et efficaces.

**Les Mots Clé :** Enseignement intermédiaire, Stratégies de lecture métacognitives, Compréhension de l’écrit, Apprenants aveugles, Apprenants de la première langue.