

# برنامج قائم على إستراتيجية التصور الذهني لتنمية الفهم القرائي في اللغة الإنجليزية لطلبة المدارس الثانوية في دولة فلسطين

## *A Mental -Imagery Strategy -Based Program in Developing Palestinian Secondary School Students' Reading Comprehension*

د. منى محمد زهير السويسي(\*)

### ملخص:

هدفت الدراسة الحالية إلى تقصي أثر البرنامج القائم على إستراتيجية التصور الذهني لتنمية مهارات الفهم القرائي لدى طلاب المدارس الثانوية الفلسطينية. اعتمدت الدراسة على التصميم شبه التجريبي. وكانت المشاركات في الدراسة (ستون) من طالبات الصف الأول الثانوي بمدرسة صلاح خلف الثانوية للبنات في غزة للعام الدراسي (2022/2023). وقد تم تقسيمهن إلى مجموعتين تجريبية/ضابطة. وكانت أدوات الدراسة كالتالي: قائمة لمهارات الفهم القرائي واختبار لمهارات الفهم القرائي. وقد تم تطبيق الاختبار على المجموعتين (قبلي/بعدي) لمعرفة تأثير البرنامج ثم معالجة البيانات التي تم الحصول عليها إحصائياً من خلال برنامج SPSS. وقد توصلت النتائج إلى وجود فرق ذي دلالة إحصائية بين متوسطي درجات المجموعة التجريبية والمجموعة الضابطة في التطبيق البعدي للاختبار، كذلك وجود فرق ذي دلالة إحصائية بين متوسطي درجات العينة بالمجموعة التجريبية في التطبيقين القبلي والبعدي لصالح التطبيق البعدي. ومن ثم فإن البرنامج القائم على إستراتيجية التصور الذهني كان له أثر إيجابي في تنمية مهارات الفهم القرائي لدى طالبات الصف الأول في مدرسة صلاح خلف الثانوية للبنات بغزة. واختتمت الدراسة بتقديم عدة توصيات نابعة من نتائجها.

### **Abstract:**

*The present study aimed to investigate the effect of a Mental –Imagery Strategy–Based Program to Develop Palestinian Secondary School Students' Reading Comprehension skills. The study adopted a quasi-experimental design. The participants of the study*

(\*) دكتوراه في التربية (تخصص مناهج وطرق تدريس اللغة الإنجليزية)، دولة فلسطين، قسم بحوث ودراسات التربية، معهد البحوث والدراسات العربية، جمهورية مصر العربية.

*were sixty-first year students of Salah Khalaf Secondary School for girls in Gaza in the academic year (2022/2023). The instruments to collect data were a reading comprehension skills checklist and a pre-post reading comprehension skills test. The data obtained were statistically treated through the SPSS program. The findings of the study revealed that the program based on the Mental –imagery strategy had a positive effect on developing first-year students of Salah Khalaf Secondary School for girls in Gaza reading comprehension skills. Based on the findings of the study, a set of recommendations were presented.*

الكلمات الدالّة

[إستراتيجية التصور الذهني - مهارات الفهم القرائي - طلاب المرحلة الثانوية - غزة، فلسطين]



### ***Introduction:***

Language is one of the most prominent human phenomena and the most obvious humankind characteristic. Language is a means of conveying ideas to others, and it is undoubtedly a vital means of verbal communication.

Language is a means of conveying ideas to others through speaking, writing, listening, and reading. In all ages, reading was and remains a means of learning and obtaining information, (Kabilan, and Bacon, 2009). In the past thirty years, many studies confirmed that reading comprehension strategies can be useful for students to become good readers and improve their reading comprehension (Spruce, 2015; & Huang, 2011).

In Palestine, learning English is a prerequisite for admission to many university majors and one of the requirements of the labor market. Palestinian students are not different from other students in many countries, particularly in facing reading challenges. Among the most prominent problems facing English language teaching in Gaza is that teachers follow teaching methods that often lead to limited student' activity, understanding, and interaction. Therefore, teachers must focus their attention on the students and their participation in an atmosphere of vigor and vitality that leads to freedom from traditionalism. Studies by Bunyan (2003), Al-Harbi (2011), and Manna (2008) emphasized that the most prominent causes of academic delay in many subjects are the dependence of teachers on traditional teaching methods, a matter which depends on memorization and lecturing in the learning process and that most teachers' activities revolve around the teacher and neglect students.

Reading plays a very important role in our lives. It is so much a part of everyday living that one can hardly imagine a life without it. In the age of the Internet and information technologies, reading retains its importance as an essential skill for learners of any language (Alderson, 1984). Reading is amongst the most crucial determinants in developing an individual's vision that shapes his or her personality and makes him or her closer to other individuals. Reading makes individuals truly free and protects them from ignorance and false beliefs. Skills in reading enable individuals to benefit from educational activities and to participate fully in the social and economic activities in which they take part.

Reading comprehension is considered one of the most important goals of the reading process, but a few researchers have found that students are weak in reading comprehension skills. For example, Qasim and Mazrouei (2009) identified the manifestations of this weakness in the following: "The students' weakness in determining the main title of the topic, the shortcomings in determining the details of the topic, the low conclusion of the main idea of the paragraph, the weakness in the conclusion of the writer's goal, the inability to distinguish between fact and opinion, and the lack of distinction between what is related to the topic and what is not related to it". This weakness in the understanding of reading leads undoubtedly to low academic achievement in English.

### ***Mental-Imagery:***

Mental imagery is one of the most important processes that are built upon information representation in the cognitive system; it is a familiar aspect of most people's everyday experiences. Despite the familiarity of the experience, the precise meaning of the expression 'mental imagery' is remarkably hard to pin down. When talking about visual and verbal imagery, coding, and construction of visual and verbal images, it is necessary to refer to the theory of Paivio, known as the Dual-code theory. This theory briefly refers to the mechanisms of coding in the brain, consisting of two components, namely the visual and verbal components.

Research via (F-MRI) also indicated that mental imagery occurs in neural connections in the brain. The left half of the brain is concerned with coding and generating mental images based on categories, while the right half is better at encoding specific examples. Mental Imagery was defined as an ability to represent events and stimuli.

### ***Pedagogical Features of Mental Imagery:***

Eisner (2011) pointed to the following features of images that support their value in the classroom:

**A-Images Are Multi-Sensory:** Mental imageries are multimodal or multi-sensory; images can evoke all the body's senses: i.e. they can be formed in any sensory modality. We tend to think about images as being visual, but images can also be auditory. In fact, images can take shape in any sensory modality that operates in an individual.

**B-Images Evoke Emotion and Imagination:** Images often go hand in hand with other tools of the imagination. So, for example, curricular content shaped in ways that evoke emotion and imagination (e.g., the story form) also tends to evoke images in the mind. The image, the story form, and other tools of the imagination are powerful tools for cultural cohesion and identity.

**C-Images Evoke Relationships:** In Eisner's words, images are "simply a fancy way of saying that images like the flag offer an immediate presentation of a meaningful configuration" (p. 32). If one is part of the culture in which that "image" has meaning, then one can "get it" at once" when one sees an image (p. 32). Images express meaning over time. They evoke meaning that is dynamic, developing over time and through experience; they can be recalled, and shaped by new knowledge and emotion. Images are also synchronic, as they can evoke multiple relationships.

**D-Images Are Recalled and Created:** Finally, Eisner (2011) notes at least two kinds of images: recalled images and imaginative images. The former are those we evoke from memory (e.g., an airplane), and the latter are those that we create by combining knowledge (e.g., a new form of transportation altogether).

Several studies such as those conducted by Proved the positive effect of using mental imagery as a strategy to develop students various language skills, particularly while reading various types of texts such as stories.

### ***Types of Mental-imagery:***

According to Pylyshyn et al. (2002) mental images can be classified according by many researchers into different types.

**The rationale of the problem:** The researcher in her capacity as an instructor the English language at al Quds Open University in the Gaza Strip noticed the following:

- Weak reading comprehension and low student achievement in English.
- English teachers complain at the secondary level that some students can decipher written words, but they are unable to understand what they read.
- Teacher's weak knowledge of modern teaching methods and strategies.

The current research problem occupies a special place in the researcher's view that stems from her experience in teaching, and through working as a field supervisor for the Practicum course for fourth-level students majoring in English, at Al-Quds Open University. This allowed her to conduct a short interview with some English language secondary teachers (N=10). The researcher asked them about the student's level of reading comprehension in the secondary stage. Eight of the teachers (80%) reported that students had a noticeable weakness in their reading comprehension skills, although many students can decode, and read letters, words, and sentences, which led to a negative perception among some English language teachers towards their students.

Furthermore, the researcher conducted a pilot study in the academic year (2022) for a sample of Palestinian secondary school students (20 students) based on a reading comprehension skill to test their reading performance. Results revealed they were unable to Identify the main idea, evaluate the suitability of the text title, interpret data from photos, and read for detailed information, The results of reading comprehension skills pilot tests indicated that 65% of them committed errors in identifying the main idea; 63% in Evaluating the suitability of the text title; 55% Interpreting data from photos and 75% reading for detailed information, respectively.

The reason for students' weakness may be due to the teaching methods used. This prompted the researcher to search for ways to address this weakness, and via up-to-date teaching methods to improve Gazan students' reading comprehension skills.

***Statement of the problem:***

The problem of this study is that Gazan secondary students have poor reading comprehension skills. Therefore, the researcher used a program based on the mental imagery strategy in developing reading comprehension levels among secondary students because this strategy' as shown by the literature and previous studies, has proven to be effective in improving students' understanding, acquisition of knowledge, developing their performance, diverse thinking skills, and positive attitudes towards different academic subjects.

**The Study Questions:** This study sought to answer the following main question:

"What is the effect of using a program based- on mental imagery strategy in improving reading comprehension skills of Palestinian secondary school students?"

In answering this main question, the following sub-questions were also answered:

1. What are the reading comprehension skills targeted for developing' Palestinian secondary school students' reading comprehension?
2. What are the features of a program based on a mental imagery strategy that might help develop EFL secondary students' reading comprehension skills?
3. To what extent are participants satisfied with the proposed program?

***Study Aim:***

This study aims to develop the reading comprehension skills of secondary school students in the Gaza Strip through a program based on mental imagery.

### ***The study hypotheses:***

Based on the review of the literature and the relevant studies, the following hypotheses were tested:

1- There is a statistically significant difference at level 0.05 between the mean scores of the experimental and the control groups in the post-administration of the reading comprehension test as a whole, in favor of the experimental group.

2- There will be statistically significant differences at the level 0.05 between the mean scores of the experimental group and the control group in the post-reading comprehension levels, in favor of the experimental group post-test.

3- There is a statistically significant difference at level 0.05 between the mean scores of the experimental group in their performance in the pre/ post administrations of the reading comprehension skills test in favor of the post-administration.

4- There would be a statistically significant difference at the level 0.05 between the mean scores of the experimental group in the pre/post reading comprehension sub-skills for each level (literal-deductive-critical and evaluative), in favor of the post-test results.

5- The **Mental –Imagery Strategy –Program** has a positive effect on the experimental group's reading comprehension test.

**Significance of the study:** The study might be significant for the following:

- **Students:** the current study could help students to overcome the problem of reading comprehension, through the strategies used to develop their reading comprehension skills.

- **Curriculum designers:** this study is expected to benefit the authors of the curriculum by its contribution to directing their attention to the level of reading comprehension and what is required in the development of English language books through designing appropriate exercises and questions.

- **Trainers and coaches:** they could provide training programs for English teachers, on the strategy of mental imagery.

- **Supervisors**, inform English language teachers to use this strategy in teaching.

- **Teachers**: could develop their teaching skills and make use of this strategy to develop their students' various language skills, particularly reading.

### ***Delimitations:***

The present research was delimited to:

- Two intact groups of Palestinian secondary school students in Gaza.

- The following reading comprehension skill levels that are approved by the jury members: Literal, Inferential. Deductive and Critical.

- Some units of the student's book of the Palestinian secondary school English Language textbook in Gaza.

- The first semester of the academic year 2022/2023.

### ***Review of Literature:***

#### **Reading Comprehension:**

Reading comprehension is the act of understanding and interpreting the information within a text (NRP, 2006). Harris and Sipay (2009) defined reading comprehension as a complex process involving high-level cognitive skills. It is not a purely passive receptive process but an active one in which the reader brings general knowledge and specific knowledge in the area discussed by the iter to understand the written material.

To Sheng (2010), reading comprehension is the understanding of the meaning of the written material and covers the conscious strategies that lead to understanding. The process of reading deals with language form; while comprehension, the product, deals with language content". He added that "comprehension is a process of negotiating understanding between the reader and the writer".

Rubin (2003) defined comprehension as the ability to get the



meaning of something that cannot be observed or measured directly. Meanwhile, according to Klingner (2007). "Reading comprehension is the process of constructing meaning by coordinating several complex processes that include word reading, word and word knowledge, and fluency". Allan & Bruton (1998) defined reading as a complex process of making meaning from a text, for a variety of purposes and in a wide range of contexts. Grabe & Stoller (2002) defined reading as the ability to draw meaning from the printed page and interpret the information appropriately.

Understanding the reading process is an essential prerequisite before developing any reading program. A review of the literature shows that there have been three main perspectives of reading: Bottom-up, Top-down, and interactive models. These three models are based on reading activity that necessarily involves two elements: the text and the reader.

**1- Bottom-up models:** Reading is a bottom-up process, text-based processing, decoding, or, more specifically, an identification process. In this process, the learner decodes meaning from the printed paper; s/he first recognizes linguistic signals such as words, letters, morphemes, and grammatical clues and uses such data to infer meanings. That is why this process is considered a guessing game or a puzzle-solving process.

**2- Top-down models:** Top-down models emphasize the knowledge that a reader brings to the text. The reader is an active participant in the reading process. He strives to get meaning through his previous knowledge. In this process, the learner brings background information to decide what something is. This process is called a strategy-based approach. Goodman (1995) stated that top-down models emphasize the importance of higher processes such as the reader's prior knowledge in controlling the reading process

**3- Interactive model:** Neither the bottom-up nor the top-down model is an adequate explanation of the reading process. The two views are complementary, not contradictory. So, the interactive models present the two views together. Thus, comprehending a text requires the interaction of both top-down and bottom-up processing; the interaction of the reader and the text; the interaction of both lower-level processing skills and higher-level comprehension skills.

Research has shown that efficient second language reading requires

a combination of top-down and bottom-up processing modes operating interactively. Top-down processing is the making of predictions about the text based on prior knowledge, and then checking the text for confirmation or refutation of those predictions. Bottom-up processing is decoding individual linguistic units and building textual meaning from the smallest units of the largest, and then modifying pre-existing background knowledge and current predictions based on information encountered in the text.

Many factors affect reading comprehension such as the background knowledge that is relevant to what readers are reading, the strategies they use, and their attitude toward reading. Abu-Hadid (2003) mentioned the most important factors that affect reading comprehension, are as follows:

### **1- Vocabulary:**

Since vocabulary represents all the meaningful words, it is considered the path to every comprehension, thus there is direct and integrated connection between vocabulary and comprehension. Anderson (1999) showed the vocabulary and comprehension relationship in three points:

- Vocabulary knowledge facilitates reading comprehension.
- Vocabulary knowledge is reflective of the aptitude of comprehension ability.
- Vocabulary knowledge reflects general knowledge which affects comprehension.

### **2- Prior Knowledge:**

This indicates that as the reader reads, he is building up not only his habit of reading but above all, he is establishing his overall knowledge. This shows the reader's background knowledge and the present information he is reading. It also involves the reader's cultural, social, and linguistic knowledge and in turn, comprehension is positively affected.

### **3- Students' Reading Attitudes:**

Attitudes strongly influence motivation and affect achievement in reading. Students who see themselves as readers who have positive

attitudes toward reading. They are motivated to read, and they read for a variety of purposes (e.g. for enjoyment, to obtain new information, to gain an understanding of issues, to learn about themselves). These students also set goals for their reading and are engaged with texts. In short, they are more likely to read.

#### **4- Mental Ability:**

The researchers noticed a clear connection between the student's mental ability and their level of comprehension. Yet it is amazing that there is great enthusiasm for reading among low achievers that cannot be found in higher achievers.

#### **5- Fluency:**

Comprehension is also affected by the reader's speed in reading. It is clearly understood that one reads faster when he/she is completely living what is being read, the reader proceeds from one point to another curiously. Nothing hinders his flow of reading, even one or more vague words cannot affect his enjoyment. The reader now is concerned only with the overall content; therefore, a slow reader can not feel such pleasure as he is concerned with the literal meaning of what is read and not the message the author wants to convey. The faster the reader is reading the author's mind and not the printed symbols help to remember more events rather than memorizing meaningless individual words.

Fast reading refers to the skimming process to quickly get to the main topic.

Anderson (1999) showed that the skimming strategy is effective in not only speedy reading but also improves reading comprehension.

*The reading rate:*

- 180 words per minute for average level.
- 200 wpm for full comprehension.
- 300 WPM for L1 speakers of English.

#### **6- Time Truly Engaged in Reading:**

Stanovich (1986) found that students who can read generally read more. As they read, they become better readers, improve their vocabularies, and enhance their knowledge of the language structure.

However, there is a caution: “Not all students automatically improve their reading just because we give them time to read. If students are reading difficult books, if they do not understand what they read if no one is monitoring their progress, not many changes. In many classrooms, students are staring at books they cannot and do not read where sustained silent/independent reading is largely a waste of time.

### ***Effective Comprehension Strategy:***

Duke and Pearson (2002) are of the opinion that "Comprehension instruction is best when it focuses on a few well-taught, well-learned strategies." Teachers are often unsure which of the many comprehension strategies will make difference.

Comprehension is an ability to get the meaning of something that cannot be observed directly (Rubin, 1994). Comprehension involves thinking, and as there are various levels in the hierarchy of thinking, so are various levels of comprehension. Below is a selection of some of the trials to classify reading skills. Davis (1968) cited in Alderson, (1984, 8-9) defined eight skills, as:

- Recalling word meanings.
- Drawing inferences about the meaning of a word in context.
- Finding answers to questions.
- Weaving together ideas in the content.
- Drawing inferences from content.
- Recognizing a writer’s purpose.
- Identifying a writer’s technique.
- Following the structure of a passage.

Dawson (1986) classified reading comprehension skills into three main divisions:

**1- Literal skills** refer to the process of getting the direct and literal meaning of words, some of these skills are identifying word meaning, determining the meaning of the word in the context, understanding the relation within the sentence and understanding explicitly stated information.

**2- Inferential skills** refer to the process of getting meaning that does not exist directly in the text like making generalizations, identifying the author's aim and reaching a conclusion.

**3- Evaluative comprehension** requires the reader to move beyond the text to consider what they think and believe in relation to the message in the text. It is at this point that readers/viewers are required to justify their opinions, argue for a particular viewpoint, critically analyses the content and determine the position of the author. Often there is no right or wrong answer but rather justification for thinking in a particular way.

Teaching reading comprehension skills is affected by many factors. Teachers should keep in mind two questions concerning how to teach reading comprehension. These questions are, "What strategies should teachers teach?" and "How should teachers teach these strategies?" (Lenz 2007).

### ***1- Strategic teachers:***

Strategic teachers are active readers who use a repertoire of comprehension strategies before, during, and after interacting with texts. Lenz (2007) stated that "the before-reading strategies could include previewing headings, surveying` pictures, brainstorming, skimming, reading introductions and summaries, creating a pre-reading outline, predicting and making predictions that need to be confirmed about what they think they will learn, assessing prior knowledge and learning difficult vocabulary and structure.

The after-reading phase of the process occurs when the reader finishes reading the written text. The reader takes time to think about what he knew before reading the written text and what s/he has learned or what connections s/he has made during the reading and then s/he links information together to build new ones. Lenz (2007) assured that the after-reading phase helps readers respond to text, make connections, evaluate various aspects of the text, and create a final summary of what they have been taught.

Johnson et al (2007) set distinct cognitive and metacognitive behaviors among students with good versus poor reading skills:

**Table (1) Comparison between good and poor readers**

	<b>Good or mature readers</b>	<b>Poor or immature readers</b>
<b>Before reading</b>	<ul style="list-style-type: none"> <li>- activate prior knowledge</li> <li>- understand task and set purpose</li> <li>- choose appropriate strategies</li> </ul>	<ul style="list-style-type: none"> <li>- Start reading without preparation.</li> <li>- read without knowing why.</li> <li>- read without considering how to approach the material</li> </ul>
<b>During reading</b>	<ul style="list-style-type: none"> <li>- focus attention</li> <li>- anticipate and predict</li> <li>- use fix-up strategies when lack of understanding occurs</li> <li>- use contextual analysis to understand new terms</li> <li>- use text structure to assist comprehension</li> <li>- organize and integrate new information</li> <li>- self-monitor comprehension by:               <ul style="list-style-type: none"> <li>- knowing comprehension is occurring.</li> <li>- knowing what is being understood</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- are easily distracted</li> <li>- read to get done</li> <li>- do not recognize important vocabulary.</li> <li>- do not know what to do when lack of understanding occurs.</li> <li>- do not see any organization</li> <li>- add on, rather than integrate, new information</li> <li>- do not realize they do not understand.</li> </ul>
<b>After reading</b>	<ul style="list-style-type: none"> <li>- reflect on what was read</li> <li>- feel success is a result of effort</li> <li>- summarize major ideas</li> <li>- seek additional information from outside sources.</li> </ul>	<ul style="list-style-type: none"> <li>- stop reading and thinking</li> <li>- feel success is a result of luck</li> </ul>

Fluent readers often use several comprehension strategies to get meaning from a text as they read. Research indicates that good readers of all ages engage in conscious, active comprehension strategies before, during, and after reading (Pressley & Wharton-McDonald, 1997). Before reading, for instance, they may define their goals for reading and consider what they already know about a topic and the structure of a text. During reading, they typically activate relevant prior knowledge, make connections among important ideas, construct and test hypotheses, paraphrase key points, and try to resolve any comprehension difficulties that arise. After reading, they may reread or skim the passage, summarize it, or take notes. N. R. P (2000) indicated the following strategies,

## **2- Cooperative learning:**

Cooperative learning is a strategy that maximizes student engagement, reduces class tensions, and promotes student learning. Typically, students work in groups of four. If you plan to use cooperative learning frequently in classes, consider arranging your classroom to facilitate learning in small groups.

The following are examples of how students can work cooperatively to learn more about a narrative work of literature:

- Each group uses a plot diagram to locate and summarize a stage of plot development.
- Groups convince brief conferences with the teacher to ensure their answers are correct.
- Students reassemble into new groups comprising one "expert" from each of the previous groups.
- These new groups pool their expertise to fill out every stage of the plot diagram.

The session concludes with a class discussion of the text.

### ***3- Graphic Organizers and Story Structure:***

Graphic organizers, which provide a visual map for the reader, can be placed next to the text as learners read in groups or individually, aloud or silently. They are particularly useful in helping readers to understand the structure of a text. Following are descriptions of three types of organizers.

***Comparison/Contrast:*** These organizers can help students consider the similarities and differences between stories, plots, themes, and characters.

***Hierarchy Diagram:*** This graphic organizer can assist students who are reading informational texts of all kinds, whether related to language arts or to other content areas. The hierarchy diagram offers the opportunity to apply literary terms to the reading, make connections between the parts of a concept, or analyze the author's craft.

***Matrix Diagram:*** This organizer is effective in representing comparisons and contrasts.

### ***4- Question Answering:***

The typical approach to question answering is to answer comprehension questions upon completion of the selection, but questions can be a part of a reading lesson at many points. Previewing questions can help students focus their reading. Partners can take turns using story stems to quiz one another on the reading.

Answering questions of their own before, during, or after reading, helps students actively engage with a text, check their comprehension, and construct memory representations.

### **5- Question Generating:**

Generating or asking questions about a text helps students clarify their thinking and better understand what they are reading. Students can write questions about the story as a post-reading exercise. These questions can then be integrated into formal tests or informal questioning games. You might want to suggest that students generate questions by adapting sentences from the text. Students can also generate questions to identify their own uncertainties about the text. They can then try to answer these questions by consulting you or other students. Generating questions of their own before, during, or after reading help students actively engage with a text, check their comprehension, and construct memory representations

### **6- Summarizing:**

Summarizing involves identifying the main idea in a paragraph or composing a concise statement of the central concepts. Summarizing helps readers to focus on main ideas or other key skill concepts that have been taught and to disregard less relevant ones. It may encourage deeper engagement with a text and encourage students to reread as they construct a summary (Kamil2004).

### **7- Multiple Strategies:**

This strategy addresses individual learning styles by having students use different media such as text, images, or video to analyze or comment on a work of literature. For example, readers can follow a procedure like this one:

Begin analyzing a story by using a worksheet listing the elements to be identified.

- Use word processors and instructional software to create and fill in graphic organizers with clip art and fields of text.

- Refer to worksheets for definitions to be added to electronic graphic organizers.



If students have access to video cameras and editing software, they can also create videos that offer commentary on a literary work.

Studies like those by Bakuuro, (2018), Al-Harbi (2008), Manna (2008), and indicated an obvious decline in students' understanding and vocabulary used in English courses at intermediate schools, and the level of students' reading comprehension skills was uneven, and gradually decreased when they moved towards more advanced skills. There were many difficulties facing students in reading skills, as the course did not observe the steps of teaching reading and the lack of students reading.

Hamdan (2014) examined the effectiveness of the KWL-Plus strategy on the performance of Jordanian tenth-grade male students in reading comprehension. The participants were selected from a private school and a public school. They were divided into an experimental group and a control group (25 students from each school). The instrument used was a pre-post-reading comprehension test and was analyzed by using a t-test, and covariance. The findings indicated that the experimental group of the public school scored higher on the reading comprehension post-tests than their peers did in the control group. The researcher concluded that the strategy was effective in improving reading comprehension performance and recommended that the strategy should be integrated into the English curriculum of Jordanian schools.

Gifford (2014) examined the effects of graphic organizers (story maps, concepts maps, and cognitive maps) paired with technology (iPads and Google Drive) on reading comprehension for students with learning disabilities in grade 8 between the ages of 13-15 in a middle school in southern New Jersey participated in this study (n = 8). The study used two measurement materials, a 10-question quiz and a student survey. Students were measured on their reading comprehension while reading an article from Scope Magazine and using the Popplet app on an iPad (Popplet only used during the intervention phase). The results indicated that students' reading comprehension scores were increased by using the graphic organizer paired with technology. Exposure to graphic organizers paired with technology enhanced student reading comprehension.

Moreover, Jude (2012) examined students' attainment in the literal level of reading comprehension under reading for exact meaning, for information and for gist in a text. The instrument was a reading

comprehension test. Results indicated that the mean score of students in reading for exact meaning was higher than that of reading for information and gist. It was recommended among others that learners should consciously be taught how to develop their literal reading comprehension to encourage the acquisition of other comprehension levels.

Green (2013) investigated the effects of an inferential reading comprehension intervention program implemented in a public school. Improvement was noted in the ability to answer inferential comprehension questions after reading a passage and in standardized reading comprehension test performance. No change was noted on a receptive vocabulary control measure. These results lend preliminary support to the effectiveness of this intervention approach.

Educators have sought to overcome the difficulties and problems in language teaching and reading comprehension. In recent years, they have linked classroom teaching with emerging theories about how students learn (Coppins,2011).In searching for strategies to develop reading comprehension skills, Mental Imagery is found to be one of the important processes to build upon information representation in the cognitive system of humans.

### ***Mental Imagery:***

Mental Imagery is defined as an ability to represent events and stimuli, while others supposed that mental imagery expresses the individual's experience of events fairly like the perception of faces, events or scenes, but the difference between them is that objects in mental imagery do not exist before the senses.

Mental images are classified by researchers Al-Momani,(2018) & Kosslyn, Thompson, & Ganis, (2006). Pylyshyn, (2002). into different types:

- **Visual Imagery:** It evokes the characteristics of the shape such as: circle, square, triangle, height, width, and depth.
- **Auditory Imagery:** It distinguishes the characteristics of the sound in its intensity and strength.
- **Kinesthetic Imagery:** The characteristics of the texture, such as softness, roughness, hardness, and scalability.

• **Gustatory Imagery:** It evokes the characteristics related to taste, such as sweetness, salinity, bitterness, and acidity.

• **Olfactory Imagery:** it evokes characteristics related to odors, whether, harmful or attractive or others.

Mental imagery is one of the most important processes that are built upon information representation in the cognitive system; it is a familiar aspect of most people's everyday experiences. Despite the familiarity of the experience, the precise meaning of the expression 'mental imagery' is remarkably hard to pin down. When talking about visual and verbal imagery, coding, and construction of visual and verbal images, it is necessary to refer to the theory of Paivio, known as the Dual-code theory. This theory briefly refers to the mechanisms of coding in the brain, consisting of two components, namely the visual and verbal components. Paivio's theory also suggests that Dual coding is also concerned with coding concepts (Blajenkova, et al (2006).

Mental imagery affects the perception of different situations, experiences, and events, as it constitutes the main part of the cognition process. Therefore, it affects the process of reading comprehension related to the ability to absorb texts and to understand the different relationships between events. Reading comprehension is a mere understanding of the facts contained in the written symbols, but is seen as a mental activity of multiple dimensions that involves the formation of mental images identical to the image. A recent study confirmed this that reading comprehension is a cognitive process based on understanding the meaning of the word, sentence and paragraph, the realization of linguistic objects and visualizing it in a mental way to indicate what is stated in the text (Aoun 2014).

In addition, reading comprehension has a special psychological nature that indicates that it is an active process involving various mental functions (recall, analysis, criticism, and conclusion). As in problem-solving, it develops over age from the basic learning stage because they develop the ability to use visual symbols during cognitive development. Also, mental imagery skills involve using different tools including meanings, words, and numbers, including memories, signs, expressions, gestures, and maps. Therefore, one of the most important mental activities that are indispensable for reading comprehension is mental

imagery. It is indispensable to read to understand texts about the perception of events and processes and represent the images that pass through them. The ability of mental imagery is necessary to represent the form of words; and letters, the text enriches and prepares a basic building block in its components. (Thomas, 2003).

Aoun and Attar (2014) asserted that mental imagery is used to develop learning skills. The use of mental imagery also helps in the success of learning motor skills, so there is a positive relationship between mental Imagery and acquisition of new skills. It also helps students to understand, recognize the symbols in different ways (visual, auditory and others), make them meaningful and link them to the cognitive content of the individual. Reading comprehension is the basis of the reading process, and there is no reading value without it. Reading comprehension was defined as the process of quoting the explicit or implicit meaning of written or spoken material, the main interest of the reader is to narrow the gap between his previous knowledge and text information, and it was believed that reading comprehension is a complex process, involving linking the information revealed by the text with the reader's previous experiences.

Abdel-Bari (2009) sought to discover the effectiveness of the mental imagery strategy in developing reading comprehension skills for preparatory stage students, and the study revealed that there were statistically significant differences at the level (0.01) between the average grades of the second preparatory grade students in each sub - skill separately of reading comprehension skills in favor of the experimental group.

Suggate, and Lenhard, (2022) conducted three studies measuring adults' reading and imagery performance. In Study 1, the mental imagery skills of 155 adults were measured using two established self-report measures, namely the Plymouth Sensory Imagery Questionnaire (Psi-Q) and the Spontaneous Use of Imagery Scale (SUIS), and a novel imagery comparison task. In Study 2 ( $n = 452$ ), a control for speeded processing replaced the SUIS. In Study 3 ( $n = 236$ ), they added a measure of reading speed. Findings indicated that the objective measurement of mental imagery was associated with reading performance, whereas self-report measures were not. Further, reading comprehension was linked more strongly to mental imagery than reading speed did. Findings

demonstrated, for the first time, that mental imagery processes are intrinsically linked with reading performance.

Several other studies have proven effective in developing and improving the reader's understanding, such as those of Jenkins, (2009), Cohen, and Johnson. (2011). Based on what these studies have indicated about the effectiveness of the mental imagery strategy in developing students' reading for understanding, and closely connected to the importance of the subject reading in the 10th grade in Gaza, this study focused on examining the development of the three levels of reading comprehension: literal (the literal knowledge of sentences and words), deductive (quick reading to identify text meanings), and critical (the ability of the reader to practice the skills of criticizing comparable texts) for 10th-grade Palestinian students using a teaching program based on a mental- imagery strategy.

The current study benefited from this part that the researcher adopted and used the interactive model of reading comprehension. Students used their ability to decode to read and comprehend the material presented to them in the cooperative strategy along with their background knowledge and previous experience. The material presented in that strategy is based on the student's knowledge and experience of the world.

### ***Method:***

**Design:** The researcher adopted the control-group quasi-experimental design where two intact classes were randomly assigned to an experimental group and a control group.

**The participants:** The participants were two intact classes (N=60) of the first year of Salah Khalaf Secondary School for girls in Gaza in the academic year (2022/2023). They were randomly assigned into an experimental (30) group and a control (30) group. It was assumed that the participants formed a homogenous group as they were chosen randomly. So, they were expected to have a lot in common and would not differ much regarding the quality of experience or their age. Besides, they have almost the same Socioeconomic status. Furthermore, Participants were administered the pre-posttest before the intervention to establish whether they were having the same level or not. Results are reported in Table (2) below.

**Table (2) t-test result of comparing the pre-reading comprehension test of both groups**

Group	N	Mean	Std. Deviation	Std. Error Mean	df	t-test	Sig. (2-tailed)
Experimental	30	11.80	1.47	0.27	58	1.33	0.19
Control	30	11.37	1.00	0.18			

Table (2) above shows that there was no significant difference between the pre-test mean scores of the experimental and the control groups, t- being (1.33). This shows homogeneity between the two groups. That is to say, the two groups were at almost the same level of performance in reading comprehension skills before the intervention. Thus, any variance between the two groups that might happen after the experiment could be attributed to the effect of the experiment.

**Instruments:**

The following three instruments were used:

- a- A checklist of comprehension skills.
- b - A pre-post test of reading comprehension skills.
- c- A Rubric for correcting the reading comprehension skills test.
- d- A satisfaction questionnaire

**Results:**

The results of this study are reported in terms of the study hypotheses.

**Hypothesis 1:**

Hypothesis one states: "There would be a statistically significant difference at the level 0.05 between the mean scores of the experimental group and the control group in the post-reading comprehension test results, in favor of the experimental group".

**Table (3) Comparing both groups post overall reading comprehension skills results**

Group	N	Mean Scores	Standard Deviation	t-value	df
Control	30	15.73	3.1	0.87**	58
Experimental	30	16.40	2.7		

\*\* Significant at the level 0.01.

Table (3) indicates that there is a statistically significant difference between both groups in favor of the experimental group in the post-administration of the reading comprehension test results, the t-value being (0.89). It is significant at (0,01) level. So, the first hypothesis was verified.

### ***Hypothesis 2:***

Hypothesis 2 states: There will be statistically significant differences at the level 0.05 between the mean scores of the experimental group and the control group in the post-reading comprehension levels, in favor of the experimental group post-test. Table 3 below indicates these results.

***Table (4) Comparing both groups post overall reading comprehension skill levels***

Levels of reading comprehension	Group	No	Mean	Std. Deviation	t	Sig. (2-tailed)
1- Literal level	Experimental	30	11.10	0,803	32,72	0.01
	Control	30	5.50	0,509		
2- Deductive level	Experimental	30	11.80	1,472	14.532	0.01
	Control	30	6.53	1,332		
3- Critical and evaluative level	Experimental	30	11.37	0,999	22.409	0.01
	Control	30	5.77	0,935		

Table (4) indicates that there is a statistically significant difference between the mean scores of the experimental group with its three levels and those of the control group with its three levels in favor of the experimental group. The calculated t-values indicate that the students of the experimental group improved, as it is 33.46. It is significant at (., 01) level. The mean scores of the experimental group in each level were higher than those of the control group. As a result, the total mean scores of the experimental group were higher than those of the control group, as it ranged from 17.80 to 34.27. According to these results, it can be concluded that the fourth hypothesis was accepted.

### ***Hypothesis 3:***

t was hypothesized that" There is a statistically significant difference at level 0,05 between the mean scores of the experimental group in the pre-post-test administrations of the overall reading Comprehension- test in favor of the post-test results. Table (5) shows the result.

**Table (5) Comparing the pre/post results of the experimental group overall reading comprehension skills test**

The Group	N	Std. error Mean	Mean	Std. Deviation	Compared mean	df	t- value
The experimental group pre-test	30	22	14.2	1.34	21.68	58	55.52**
The experimental group post-test	30	25	35.9	1.51			

\*\* Significant at the level 0.01

Table (5) indicates that there is a statistically significant difference between the pre/post administrations of the reading comprehension test to the experimental group, the t-value being (55.52)., which is significant at (.01) level. Therefore, the second hypothesis was accepted.

#### **Hypothesis 4:**

Hypothesis 3 states: ' There will be statistically significant differences at the level 0.05 between the mean scores of the experimental group in the pre-post-test of the reading comprehension levels, in favor of the post-test.' These results are shown in Table (6) below.

**Table (6) Comparing the pre/ post results of the experimental group reading comprehension skills level test.**

Levels of reading comprehension	Test	No	Mean	Std. Deviation	Differences Between both administrations	t	Sig. (2-tailed)
1- Literal level	Pre	30	5.47	0,571	5,63	0,254	001
	Post	30	11.10	0,803			
2- Deductive level	Pre	30	7.30	1,725	4,50	9,798	001
	Post	30	11.80	1,472			
3- Critical and evaluative level	Pre	30	5.47	0,571	5,90	24,937	001
	Post	30	11.37	0,999			

#### **Hypothesis 5:**

The Mental –Imagery Strategy –Program has a positive effect on the experimental group reading comprehension skills. Cohen's (1988) equation was used to verify this hypothesis as shown in (table 7).



**Table (7) Results of Cohen's Equation comparing the pre-post administrations of the experimental group reading comprehension test**

The Group	N	Std. error Mean	Mean	Std. Deviation	Compared mean	df	t-value	Cohen's value
The experimental group Pre-test	30	0.22	14.2	1.34	21.68	29	55.52	19.04
The experimental group Post-test	30	0.25	35.9	1.51				

As indicated in Table (7), the final value of Cohen's equation for the experimental group, comparing its pre- to the post-results in the reading comprehension skills test is (19.04). Based on that, there is a positive effect of The Mental –Imagery Strategy –Based Program reading comprehension skills. Therefore, the fifth hypothesis was accepted.

### **Discussion and interpretation of results:**

**Concerning the development of EFL reading comprehension skills:** Results showed that the experimental group improved their performance on the post-reading comprehension test results compared to the pretest.

This could be attributed to their use of the Mental –Imagery Strategy –which might have increased their motivation to read acceptable passages participants were using multi-sensory strategies as well: auditory, visual, tactile, and kinesthetic. They were interested in reading comprehension about related topics to their syllabi.

The results of the present study showed that the experimental group outperformed the control group in the post-administration of the reading comprehension skills test as a whole. The statistical results showed that there was a statistically significant difference between the mean scores of the experimental group in the performance of the post-test compared to the pre- administration, favoring the post administrations (Tables (8-12). The mean scores of the experimental group in the test are higher than those of the control one. Providing participants with a variety of activities through which connection to human emotion and imagination, the ability to evoke multiple kinds of relationships, and images that are recalled and created, and dividing the roles among participants to improve reading comprehension skills, allowed them to interact with each other and to react to the material presented to them.

The Mental –Imagery Strategy–Based Program has a positive effect on the experimental group’s reading comprehension skills. In the present study, the students created a cooperative environment in which less emphasis was placed on transmitting information from the teacher and more on them. They achieved significant improvements in the three reading comprehension levels (literal- deductive –critical and evaluation) together with their and sub- skills as follows:

1- It was noticed that the experimental group could think aloud to express their thoughts and pose questions when their comprehension was hindered. Furthermore, the instructor asked them some questions to lead them smoothly to correct answers. These questions encouraged them to think about the writer's purpose, and the main points and helped them to extract the most important information in the text.

2- This strategy enabled students to scan the reading text during reading guess the meaning of new words and find the synonyms and antonyms of some words.

3- Students were motivated to create mental images in their minds and transform them into real representations to fully understand what they read. This strategy provided them with opportunities to try out their ideas, sort out what has been learned, develop a deeper understanding, and formulate new questions, so they could form personal opinions about the text and suggest various titles for the passages.

4- The results of the present study supported using Mental –Imagery Strategy, this helps in the comprehension process through reading contexts. In the Mental –Imagery Strategy environment, there are interactions and communications between a teacher and participants and between participants with each other. This interaction generates confidence and interest in reading more effectively than the regular one.

On the other hand, the control group was taught regularly, so they were not active, and they did not receive any new activities. The teacher just gave information and instruction whereas in the experimental group, the participants were taught using the Mental –Imagery Strategy.

During the experimentation, it was noticed that the participants had a positive attitude toward reading comprehension. For participants, the reading comprehension activities changed the way they felt about reading

comprehension, gave participants reading topics related to their lessons, increased their motivation and involvement, and improved their reading comprehension performance. Participants read with greater attention and satisfaction because they were reading about topics that engaged and interested them. Moreover, this gave the participants more commitment to the task, and they felt a greater sense of ownership.

Moreover, the results of the present study lent support to many researchers such as those of (Aoun 2014; Kocaarslan 2016; Mohamed 2021). Such studies confirmed that there is a positive relationship between using this strategy and developing reading skills among different levels of students. The present study matches those studies' results in that:

- The strategy was useful for improving reading comprehension skills for the three levels (literal- Deductive –critical and evaluation)
- The strategy was a valuable one in activating the participants' schemata and introducing them to the main point of the text and this fostered comprehension.
- Teaching reading through this strategy facilitated the participants' understanding of the content of the text. They became more active in learning to read. They showed their engagement in the discussion and active participation in the learning process by giving some opinions and asking for more information they did not know. They enjoyed being active in the process itself.

The results of the current study represented in the post-administration of the EFL reading comprehension skills test results proved that the program had a positive effect in improving the EFL reading comprehension skills of the experimental group students with their three levels (literal –deductive –critical and evaluation). Moreover, the significant difference that was found in the post-administration results may be due to exposing the experimental group students to the program. These results were consistent with those of the other studies which pointed out that a program based on mental imagery strategy was effective in developing English language skills in general and EFL reading comprehension skills in particular.

The statistical results of the third hypothesis revealed that there was a statistically significant difference between the mean scores of the experimental group with its three levels;(literal –deductive - critical and evaluation) and those of the control with its three levels; (literal – deductive - critical and evaluation) in their performance on the post-administration of the EFL reading comprehension skills test in favor of the experimental group. The experimental group students outperformed the control group students on the post-administration of the EFL reading test as a whole and its levels where the t-values were significant at levels 0.01.

Hence, the significant difference between the experimental and control groups shown on the post-administration results of the EFL reading comprehension skills test was due to exposing the experimental group students to the mental-based- program, unlike the control group students who continued studying using regular instruction. The mental-imagery-based- program contained various activities that helped the experimental group students to practice reading comprehension skills and interact effectively.

On the other hand, the statistical results of the fourth hypothesis revealed that there was a statistically significant difference between the mean scores of the experimental group with its three levels: (literal – deductive - critical, and evaluation) on the pre and post-administration of the EFL reading comprehension skills test in favor of the post-administration. The EFL experimental group students' reading comprehension skills witnessed a remarkable improvement in the post-administration of the EFL reading comprehension skills test as a whole and its levels where the t-value was significant in all skills and sub-skills.

Thus, the EFL experimental group student's reading comprehension skills were improved as a result of their participation in the mental-imagery-based program. During the implementation of the program, it was noticed that the experimental group students with their different levels of reading comprehension proficiency had a positive attitude towards the targeted EFL reading comprehension skills. For students, the reading comprehension activities changed the way they thought about comprehending English and helped them to become more interactive during the groups' discussions and showed their contribution and

participation in the learning process. Furthermore, giving students reading comprehension topics related to their lessons increased their motivation and involvement as well as improved their comprehension performance.

The results of the fifth hypothesis were consistent with those of the other studies that were conducted by Sadoski and Paivio 2011; Wang and et al 2015; Devil and Sia 2020).

Finally, the statistical results of the fifth hypothesis proved that the mental-imagery strategy-based - program had a large effect on improving the EFL experimental group students' reading comprehension skills and their levels. The significant difference between the mean scores of the pre and post-administrations of the EFL reading comprehension skills test was in favor of the post-administration results as the experimental group students showed more improvement in their literal, deductive, critical, and evaluation sub-skills. This could be because the students used their full potential and abilities during the implementation of the program. Moreover, their motivation towards learning was increased and developed and that appeared on their faces and performance. Therefore, the program not only affected the students' achievement but also created a stimulating learning environment.

To sum up, the current study proved that the mental-imagery strategy based- program was effective in developing the EFL first the Palestinian secondary school students reading comprehension skills. The significant improvements could be attributed to several causes related to the nature of Mental –Imagery Strategy; Motivating participants to:

- Represent reality through multisensory mental images or mental representations of perceived or remembered objects,
- Use multi-sensory nature; Auditory, Auditory, Tactile and Kinesthetic
- Use the connection to human emotion and imagination,
- Use the ability to evoke multiple kinds of relationships.
- Use images that are recalled and created,
- Able to achieve desired outcomes or goals. Participants are given opportunities to share their ideas and opinions. (Rosenberg& Lisa 2015)

### ***Challenges and Obstacles Met by the Researcher:***

During the experiment, the researcher met some challenges and difficulties that she was able to overcome. Among these difficulties or challenges:

1- There was neither time nor facilities enough to teach more than this number of students because the researcher might have needed another teacher to help her. This was impossible because the researcher did not train other teachers on teaching the target program because it was not included as an aim of the present study.

2- The disruption or the weakness of the Internet. Moreover, the researcher had to buy a mobile Wi-Fi router to supply the program with faster internet access.

3- The students' low level of English. This made a big problem in finishing their tasks on time. The researcher had to give extra explanations of grammar and vocabulary in addition to providing them with a guide for giving 'oral presentations.

4- Writing online was a great difficulty for participants, especially low achievers. Therefore, the researcher reminded them to use their online dictionary.

5- The researcher faced some problems such as the Internet connection and the old computers that used to be there in the labs without any maintenance.

6- Some students do not appreciate the importance of class and time. The researcher was able to overcome this by giving these students some activities that attract their attention and occupy their time.

### ***Conclusion:***

Based on the results of the present study, the following Conclusions were reached:

1- Results of the study proved the utility of Mental –Imagery Strategy – based program.

2- Mental- Imagery strategy improves students' ability to extract specific ideas (information), the ability for gist and detail, using context

to predict, the ability to guess the meaning of unknown words, ability to identify points of view, and express a wide range of questions forms, the ability to locate the main idea and supporting details, sequencing events of the text or story, answering literal and recall questions, skimming and scanning, drawing inferences and conclusions, rearranging ideas discussed in the text, the implied meaning, comparing, and contrasting, differentiating between facts and opinions, evaluating concepts, and interpreting content materials.

3- Mental- Imagery strategy provides students with the ability to control their behavior; they are more active, aware of their thought processes, motivated, and like working in groups.

4- In addition to the previous benefits of the Mental- Imagery strategy, it could be concluded that through practicing this strategy participants gained awareness of their reading comprehension skills. They were allowed to practice their skills, monitor their thoughts, improve their communication skills, and evaluate their performance.

5- Mental- Imagery strategies facilitate students 'reading tasks, enhance reading comprehension skills, and develop them as well.

6- The teacher could create lesson plans based on the interests and inquiries of the students and their needs.

7- Teaching reading comprehension through the Mental- Imagery strategy fostered understanding the content of the text. The experimental group became more active in learning reading comprehension. They showed their contribution to the discussion and participated well in the teaching and learning process by giving some opinions and asking for some information they did not know. They enjoyed participating in the lesson.

8- Giving students positive feedback through the reading process by the teacher improves their reading tasks.

Working in groups in some sessions is an opportunity to encourage weak students to participate positively in different activities. Also, the maps were sometimes designed collaboratively in class and therefore enhanced the sense of cooperation among learner

***Recommendations:***

1- In light of the current study results and conclusions, the following points would be recommended:

2- It is necessary to devote more effort to teaching reading comprehension activities as these are the basis of thinking and learning.

3- EFL reading syllabi should be redesigned while taking into consideration the importance of developing EFL students' reading comprehension skills.

4- EFL teachers have to provide students at different levels with equal opportunities to read in a good way.

5- EFL teachers should use various reading strategies to help their students read in a good manner.

6- Reading comprehension has been highlighted as a key learning area; therefore, there is a need for EFL educators to be trained to the most modern pedagogical practices.

7- EFL teachers should emphasize the importance of developing students' reading skills in the early educational stages to be easily developed later in the following stages.

8- The Mental- imagery strategy should be used in the teaching of English reading comprehension texts as the use of the adopted ones led students to deep levels of comprehension and engagement in reading comprehension and also made it more enjoyable and interesting.

9- To attract the students' attention to read different topics, some extracurricular activities should be introduced into the course schedule. This should lead to strong positive feelings about reading and create an encouraging circle in which poor readers become good ones.

10- Curriculum designers and implementers should assess all reading comprehension and learning resource materials to be selected and prescribed for schools and choose those that include topics that interest and are relevant to young and adults' lives and their practical world.

11- EFL instructors should integrate strategies into their EFL classes to improve reading comprehension skills.



12- Teachers should actively encourage learners to employ successful strategies and ways of coping when they do not understand everything

***Suggestions for further research:***

Considering the study findings and results, the following are suggested for further research:

1- Further research would be needed to examine the relation of Mental- Imagery strategy to other language skills such as listening, speaking, and writing.

2- More studies are needed to provide effective strategies for developing reading comprehension skills.

3- Replicating the experimental treatment with a larger sample of students from a more representative sector of the population to identify reading comprehension skills to help curriculum designers integrate the appropriate texts in their textbooks.

4- The present study opens a new dimension of research by introducing the Mental- Imagery strategy as an effective technique to develop reading comprehension skills.

5- Further studies are needed to design many training programs for pre- and in-service English language teachers to help them develop their students' reading comprehension skills.

6- Improving reading skills using different technological tools such as Moodle, online programs, or YouTube channels.



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## ضوابط النشر في المجلة

### مقدمة:

ترحب مجلة معهد البحوث والدراسات التربوية العربية العلمية المُحكَّمة بنشر الإسهامات العلمية للأكاديميين وأساتذة الجامعات والباحثين المتخصصين في المجالات والتخصصات التربوية المتعددة مثل: أصول التربية، والتخطيط التربوي، والإدارة التربوية، والتربية المقارنة، والمناهج وطرق التدريس، وعلم النفس التربوي، والتربية الخاصة، والصحة النفسية، وتكنولوجيا التعليم. وتقبل البحوث والدراسات باللُّغة العربية واللُّغات الأجنبية شريطة أن تدرج المادة العلمية المقدَّمة ضمن مجالات اهتمام المجلة، وأن تقدم إضافة علمية أصيلة في موضوع الدراسة، على أن يستوفي الموضوع المقدم للمجلة شروط البحث العلمي من حيث سلامة المنهج، وتسلسل الأفكار، والرجوع إلى الأدبيات ذات الصلة، ودقة التوثيق، وسلامة اللُّغة وتدقيقها، مع نبذ التحيزات بمختلف أنماطها وأشكالها، وعدم الإساءة إلى الأديان أو الثقافات، ويتم كل هذا وفق القواعد الإدارية والفنية التالية:

### أولاً- القواعد الإدارية:

- 1- تنشر مجلة البحوث والدراسات التربوية العربية البحوث للسادة أعضاء هيئة التدريس بالجامعات المصرية والعربية والدولية وغيرها، والباحثين في الجامعات والمعاهد العلمية والمراكز والهيئات البحثية والأكاديمية ذات الصلة.
- 2- تنشر البحوث العلمية بأسبقية ورودها للمجلة بعد استيفائها الإجراءات الخاصة بالتحكيم العلمي المعتمدة.
- 3- يقدم الباحث ثلاث نسخ من كل بحث (الأصل + صورتين + أسطوانة إلكترونية) إلى سكرتير تحرير المجلة، ومعها رسوم التحكيم، كما يمكن إرسال الأبحاث بريدًا على العنوان التالي: هيئة تحرير مجلة البحوث والدراسات التربوية العربية - معهد البحوث والدراسات العربية - 1 شارع اتحاد المحامين العرب (الطلّبات سابقًا) - جاردن سيتي - القاهرة - جمهورية مصر العربية - ص.ب. 229، أو إلكترونيًا على البريد الإلكتروني للمجلة [rsdept@iarsedu.net](mailto:rsdept@iarsedu.net)، وتورد رسوم التحكيم في حساب المعهد بالبنك الأهلي المصري.
- 4- كل ما ينشر في أعداد المجلة يعبر عن رأي صاحبه، ولا يعبر بالضرورة عن رأي هيئة التحرير أو الهيئة العلمية والاستشارية للمجلة.
- 5- تقوم هيئة التحرير باختيار مُحكِّم من بين الأساتذة والمتخصصين في مجال كل دراسة ليقوم

- بتحكيم البحث المقدم للنشر، وتحديد مدى صلاحيته للنشر وفقاً لنموذج التحكيم المُحكّم من قِبَل وحدة المكتبة الرقمية بالمجلس الأعلى للجامعات المصرية.
- 6- تنشر المجلة بحوث الأساتذة الدكاترة من داخل المعهد وخارجه بدون تحكيم.
- 7- تنشر المجلة البحوث المستلة من رسائل الماجستير والدكتوراه التي يمنحها المعهد في فترة إصدار المجلة.
- 8- كل ما ينشر في المجلة لا يجوز نشره بأية طريقة في أي مكان آخر إلا بموافقة كتابية من مدير التحرير.
- 9- يقدم الباحث تعهداً موقفاً منه، ومن جميع الباحثين المشاركين - إن وجدوا - يفيد بأن البحث لم يسبق نشره في أي وعاء ورقي أو إلكتروني، وأنه غير مقدم للنشر في أية جهة أخرى حتى تنتهي إجراءات تحكيمه ثم نشره في المجلة، وأن البحث ليس جزءاً من كتاب منشور، وأنه يمكن للمجلة نشره إلكترونياً وفق نموذج التعهد بنشر بحث المخصص لذلك.
- 10- تخضع البحوث المقدمة إلى المجلة للتحكيم السري من قِبَل أعضاء لجنة تحكيم تختارهم المجلة؛ لذا يراعى ألا يظهر اسم الباحث داخل بحثه، ويقتصر ظهوره على صفحة العنوان فقط، ويخطر الباحث بنتيجة التحكيم خلال 3 أشهر من إبلاغه بقبول بحثه من قِبَل هيئة التحرير.
- 11- يلتزم الباحث بإجراء التعديلات المقترحة من المحكمين على بحثه وفق التقارير المرسله إليه، وموافاة المجلة بنسخة معدلة في مدة لا تتجاوز خمسة عشر يوماً.
- 12- تحتفظ المجلة بحق إجراء تعديلات في الصياغة التحريرية للمادة المقدمة، حسب مقتضيات النشر، على ألا تؤثر هذه التعديلات في محتوى النص.
- 13- تحتفظ هيئة التحرير بحق عدم إبداء أسباب رفض نشر البحث، ويجوز أن يزود الباحث بالملاحظات والمقترحات التي يمكن أن يفيد منها في إعادة النظر ببحثه.
- 14- يقدم كل صاحب بحث معروض على المجلة سيرته الذاتية التي تتضمن بياناته الشخصية (المؤهلات العلمية، والتسلسل الدراسي، ومقر العمل، والدرجة الوظيفية، والإنتاج العلمي، والعنوان البريدي والإلكتروني، ورقم التليفون).
- 15- في حال الموافقة بشكل نهائي على النشر، تؤول حقوق النشر كافة تلقائياً إلى المجلة، ويصبح البحث بعد قبوله للنشر حقاً لمجلة المعهد، ولا يجوز النقل عنه إلا بالإشارة إلى مجلة المعهد.
- 16- يلتزم الباحث بعدم إرسال بحثه لأية جهة أخرى للنشر حتى يصله رد المجلة خلال ثلاثة أشهر.

## ثانياً- القواعد الفنية:

- 1- يراعى أن يكون البحث خالياً من الأخطاء النحوية واللغوية والإملائية والطباعية، وأن تكون كتابة البحث والمراجع والكتب والرسائل طبقاً للقواعد العلمية المتفق عليها.
- 2- البحوث باللُّغة العربية: يكتب البحث بخط Simplified Arabic بحجم (14)، وتكتب العناوين بحجم (16)، على أن تكون مواصفات الصفحة (حجم الورقة B5)، والهوامش يمين ويسار وأعلى الصفحة 2.5سم، وأسفل الصفحة 2سم، كما يراعى أيضاً الضبط والدقة في كتابة الجداول والأشكال، وأن تكون واضحة ومختصرة.
- 3- البحوث باللُّغة الأجنبية: يكتب البحث بخط Time New Roman بحجم (14)، وتكتب العناوين بحجم (16)، وبهوامش حجم الواحد منها (3.25سم يمين ويسار الصفحة)، (3.5سم أعلى وأسفل الصفحة)، وتترك مسافة مفردة بين السطور، كما يراعى أيضاً الضبط والدقة في كتابة الجداول والأشكال، وأن تكون واضحة ومختصرة.
- 4- تستخدم الأرقام العربية 1، 2، 3... في جميع ثنايا البحث، ويكون ترقيم صفحات البحث في منتصف أسفل كل صفحة.
- 5- لا تزيد كلمات ملخص البحث عن (200) مائتي كلمة، ويشترط في البحث المقدم باللُّغة الإنجليزية أن يُدرج فيه ملخص باللُّغة العربية.
- 6- يكتب البحث على وجه واحد، وتُسلسل الهوامش داخل المتن أو في أسفل كل صفحة على حدة، وتدرج الرسوم البيانية والأشكال التوضيحية في النص، وتكون الرسوم والأشكال باللونين الأبيض والأسود، وترقم ترقيماً متسلسلاً، وتكتب أسماؤها والملاحظات التوضيحية أسفلها، وتدرج الجداول في النص، وترقم ترقيماً متسلسلاً، وتكتب أسماؤها أعلاها، وتكتب الملاحظات التوضيحية أسفل الجدول، أما قائمة المصادر والمراجع فتوضع في نهاية البحث مرتبة ترتيباً ألفبائياً.
- 7- في حالة نشر البحث، يمنح الباحث نسخة مجانية من المجلة.
- 8- يرفق الباحث الأداة التي استخدمها في البحث إذا طلبها المحكمون.

## ثالثاً- الرسوم المقررة لتحكيم ونشر البحوث والدراسات والبحوث المستتلة من رسائل الماجستير والدكتوراه:

- 1- تنشر دراسات الأساتذة الدكاترة من داخل المعهد وخارجه بدون رسوم نشر.
- 2- يدفع الباحثون من داخل وخارج المعهد رسوم تحكيم ورسوم نشر حسب القواعد المالية المطبقة وقت تقديم البحوث لهيئة التحرير.





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1 شارع اتحاد المحامين العرب (الطلمبات سابقًا) - جاردن سيتي - القاهرة  
ص.ب: 229 - برقيًا: إيرياليا - ت: 27951648 - 27922679 - ف: 27962543  
P.O. BOX 229 - Cairo IREALEA, Cairo  
Phone : 27951648 - 27922679 - FAX : 27962543  
موقع المعهد على شبكة الإنترنت: [www.iarsedu.net](http://www.iarsedu.net)  
الموقع الإلكتروني للمجلة: <https://madaa.journals.ekb.eg/journal/metrics>  
البريد الإلكتروني للمجلة: [rsdept@iarsedu.net](mailto:rsdept@iarsedu.net)

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