| RESEARCH ARTICLE

The Effect of Using the Metacognitive Learning Cycle Strategy in Developing Reading Comprehension in the Arabic Language Subject for Ninth Grade Students

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| ABSTRACT

The study aimed to identify "the effect of using the metacognitive learning cycle strategy in developing reading comprehension in the Arabic language subject for ninth-grade students." The study adopted the experimental method and the quasi-experimental design, where a reading comprehension test was prepared, consisting of (17) items. The study sample consisted of (50) students who were chosen intentionally. The results of the study showed that there was a statistically significant effect on the study sample's scores in the reading comprehension test according to the teaching method (metacognitive learning course strategy for teaching the Arabic language, regular), and the differences were in favor of those who were exposed to For the strategy of the metacognitive learning course for teaching the Arabic language compared to individuals using the traditional method, the researcher recommends preparing a guide for the Arabic language teacher regarding reading comprehension skills and methods for developing them.

| KEYWORDS

Learning cycle, metacognitive, reading comprehension.

| ARTICLE INFORMATION

1. Introduction

Our current era is witnessing tremendous technological development and an information revolution that has included all of human life, which has posed a challenge to the educational system with the necessity of reforming it and absorbing the huge amount of knowledge, employing it and benefiting from it by preparing scientific and educational cadres who take their effective role in development in all its dimensions.

In light of these developments, it has become necessary for education to provide more educational systems and emphasize the scientific growth of individuals to keep pace with the requirements of the modern era (Al-Gharib and Iqbal, 2006: 5). This calls for developing a new philosophy for developing education, aiming to reconsider the way learners think from the early stages. From their age, it does not mean what the learners learn. What really means is that they learn how to think. Thus, the basic message of the curriculum becomes the conduct of education through attention to its contents and teaching and learning methods with the aim of developing the learner's creative energies and moving out of the culture of receiving information to constructing information, processing it, and transforming it into knowledge. Cognition consists of discovering relationships and phenomena, enabling him to move from the stage of knowledge to beyond knowledge. Metacognition consists of contemplating knowledge, delving deeper into its understanding and interpretation, exploring the dimensions of the phenomenon, and inferring its hidden dimensions through living systems of research and investigation (Al-Jundi and Sadiq 2001, 363).

Many experts in scientific education and teaching the Arabic language have emphasized that the main goal of teaching the Arabic language is to teach learners how to think, and many countries of the world have adopted this goal due to its importance and effectiveness (Shehab, 2000, 65), which indicates that teaching the Arabic language must It should not be limited to teaching content to learners only, but it must also include training the learner to employ different thinking processes to transform the knowledge presented to him into meaning and behavior that the learner can control by applying metacognitive strategies (Al-Jundi and Sadiq, 2001, 365).

The processes of scientific research and education at the beginning of the twenty-first century called for improving the process of teaching the Arabic language, and this can only be achieved through reading comprehension of science, as the individual's need for reading comprehension increases with the knowledge revolution prevailing in the world, and with the intellectual and cognitive production produced by printing presses at enormous rates daily. (Abdul-Bari, 2009: 2).

Educators have called for the necessity of training students in the skill of reading comprehension, in addition to paying attention to reading speed, so that students can be immersed in everything produced by printing presses. It is one of the reading skills that should be taken care of and developed among students because it is a skill that greatly benefits the individual in his academic and practical life (Al-Awamleh, 2004: 15).

Because of the importance of reading comprehension, the Ministry of Education paid attention to the need for the student to understand the general meaning and the detailed and implicit meaning of the context and to provide him with the basic linguistic skills of reading, speaking, and listening (Ministry of Education, 2009: 3). It represents the cornerstone of reading, as it helps the reader to correctly understand what it entails. What is read consists of apparent or hidden meanings (Ashour and Al-Hawamdeh, 2007: 13).

2. Study Problem
Reading is important for accessing the written word, and this is essential for building cognitive structures. Reading comprehension is also a critical skill in which students need to excel, as it helps them understand textbooks, take notes, and answer questions on tests. Low academic achievement represents an educational problem. A major problem that hinders human growth and development. From the experience of researchers in the educational field, they have noticed that students rely heavily on rote memorization without understanding the material, which leads to forgetfulness and the inability to retrieve information. This issue was confirmed by the study of (Al-Qadi 2011) and (Allawi). 2013). Accordingly, the research problem can be determined by answering the following question:

- What is the effect of using the metacognitive learning cycle strategy in developing reading comprehension in the Arabic language subject among ninth-grade students in Jordan?

2.1. Study questions
To achieve the objectives of the study, its questions were formulated as follows:

The first question: Are there statistically significant differences at the significance level (a=0.05) between the averages of the control and experimental groups in developing reading comprehension attributable to the teaching method (metacognitive learning course strategy for teaching the Arabic language, the usual method)?

2.2 The importance of studying
The importance of the study stems from the importance of the topic, which is represented by the effect of using the metacognitive learning cycle strategy in developing reading comprehension in the Arabic language subject for ninth grade students. This importance is represented in two aspects:

2.3 From a theoretical standpoint, the following:
-    Positive influence in the educational and academic fields and the development of educational institutions.
-    Enhancing the language skills of ninth-grade students with the strategies discussed in the study that develop their reading comprehension.

2.4 The importance of the study from an applied perspective is as follows:
- The study provides a theoretical framework for the importance of applying the metacognitive learning cycle strategy and the necessity of using and employing it in developing reading comprehension in the Arabic language.

- The results of this study will benefit Arabic language curriculum designers and developers in building lessons in accordance with the requirements of the metacognitive learning course strategy with teachers' guides.

3. The limits of the study:
- **Human limits:** ninth grade students in Jordan.

- spatial boundaries: The study was limited to Yarqa Boys School, affiliated with the Directorate of Education in Al-Salt Governorate.

- **Time limits**: The study was implemented during the second semester of the 2022-2023 academic year.

- **Objective limits**: Using the metacognitive learning cycle strategy to develop reading comprehension in the Arabic language subject among ninth grade students in Jordan.

4. Study limitations:
Study limitations: The generalizability of the study results is determined in light of the validity and reliability of the tools, as well as the objectivity of the respondents.

5. Terminology of study:
The study includes a number of terms that can be defined as follows:

- **Metacognitive learning cycle strategy**: A model that combines metacognitive strategies with the learning cycle, which is a translation of some cognitive constructivist ideas. Its most important feature is that it allows the teacher and learner to express their ideas in a cooperative manner and discuss them while training the learners on questions in all stages of the cycle: exploration presentation. Concept, concept application, concept evaluation (Jabr, 2010: 76)

- **Procedural definition**: A teaching-learning strategy that combines the learning cycle with metacognitive strategies to develop awareness of thinking for students in the experimental group. Self-questioning and the use of thinking records and student notebooks were relied upon to stimulate metacognition among students. Various activities are carried out in small groups by following a sheet of paper. Work on teaching content topics under research.

- **Reading comprehension**: (a multi-dimensional thinking process that enables the reader to extract meaning from the written text and requires activation and coordination of a number of information with mutual relationships) (Shehata, 2003: 232)

- **Procedural definition**: This final image represents the culmination of processes involving the analysis of symbols and illustrations, comprehension of details, extraction of key concepts, discernment of relationships, identification of central ideas, utilization of quantitative data within the research domains, and ultimately, the attainment of meaning as demonstrated by accurate responses to reading comprehension test items. This image serves as a means to evaluate the academic performance of students within the research sample.

6. Theoretical framework:
6.1 Metacognitive learning cycle strategy:
Metacognitive learning strategies are one of the basic influences of metacognitive skills. Developing these strategies leads to improving their performance in learning their academic subjects because they play an important role in developing the processes of remembering and understanding, increasing awareness and understanding of the learning process, and discovering multiple skills, which allows the transfer of Its impact on new learning situations (Al-Maliki, 2011). Metacognitive strategies represent behaviors that learners undertake to plan, organize, and evaluate their learning, and include directed attention, self-evaluation, organization, setting goals and objectives, and having opportunities to practice (Singhal, 2011).

The strategy of the metacognitive learning cycle was defined as: "a strategy that combines metacognitive strategies with Piaget's theory of cognitive development and emphasizes the interaction between the teacher and the learner during the educational situation" (Hossam El-Din, 2002, 159).

It is also defined as a set of procedures that the learner undertakes under the guidance of the teacher to be fully aware of his thinking processes and their management before, during and after practicing the educational activities or the problem he is about to solve so that he becomes more confident in himself in carrying out any task and more interactive with others. (Al-Sarhan, 2020)

One of the most important modern educational trends that are receiving wide popularity and increasing attention in contemporary educational and teaching thinking is the constructivist theory that calls for the idea of teaching for understanding and placing the student as the center of the educational process. The student is an active and positive learner, while the teacher is a coach and leader of the learning process. The theory confirms that learning occurs in light of a social life context that requires providing an appropriate educational environment for it (Qatami, 2013), and from the thought of constructivism emerged a group of teaching methods and strategies, including the learning cycle strategy, which was founded on some basic principles and assumptions of Piaget's theory (Abdel Salam, 2001). (Qarni, 2013; Al-Kubaisi and Hassoun, 2014)

6.2 Reading comprehension:

Reading is a complex and dynamic process that includes processing words, concepts, information, and ideas that are related to the reader's experiences and knowledge, in addition to the interaction between the text and the background knowledge, experiences, and expectations of the reader. Teaching reading includes developing students' abilities to interact with language and construct meaning from written text, as well as enhancing attention and skills. Strategic treatment. Thorndike refers to reading as a process of thinking, meaning that reading is not just a simple process of decoding words but rather a complex mental activity that includes many cognitive processes. These cognitive processes include reading, which involves acquiring new knowledge and information from the text, and readers often have emotional reactions to the text. What they read may influence their understanding and interpretation of the text and make judgments about it, such as evaluating the quality of writing or the author's credibility. Readers analyze the text to determine its structure, main ideas, and supporting details. They may compose a mental summary or synthesis of the text, integrating its main ideas and information. Reading often involves solving problems, such as understanding difficult or unfamiliar vocabulary or interpreting complex concepts. Readers make decisions about what to read and how to read and interpret it to make inferences based on information presented in the text. Draw inferences not explicitly stated. Organize and compare data. Organize and compare information. From the text to better understand its meaning, identify relationships between ideas in the text and evaluate their importance. In addition to these cognitive processes, reading includes attention, abstraction, generalization, understanding, focus, and measurement, which are important aspects of the reading process and contribute to increasing the ability to construct meaning from the text. (Ashour and Miqdadi, 2019).

Reading comprehension is one of the important reading skills, as it is the cornerstone of reading. Rather, it is its important goal and the process of understanding weak meanings and generating them from various sources through direct observation of phenomena, reading, watching symbols, animated films, observations, or discussions, regardless of the source. The process of understanding includes extracting new information and integrating it with what was previously known with the intention of generating new meaning (Marzano, 2006, 12).

7. Previous studies:

Sharab et al. (2022) conducted a study that aimed to identify the effect of two metacognitive strategies on developing some life skills among kindergarten children. The study sample consisted of (60) male and female kindergarteners in the city of Al-Arish in North Sinai Governorate. The life skills scale was applied to them, and a program was based on metacognitive strategies for developing some life skills. The results of the study found that there were statistically significant differences between each of the average scores. of the experimental group and the control group in the post-application of the kindergarten life skills scale in favor of the experimental group, and there were no statistically significant differences between the average scores of the experimental group in the post- and follow-up measurements.

Al-Sarhan (2021) conducted a study that aimed to identify the impact of the metacognitive learning course strategy on the acquisition of scientific concepts according to the attitude towards science among sixth grade female students in science. The study followed the quasi-experimental approach, and the study sample consisted of (45) female grade students. The sixth basic, the study used two tools: a test for the acquisition of scientific concepts and a measure of the attitude towards science. The results of the study found that there were statistically significant differences in the degree of acquisition of scientific concepts between the two groups of the study due to the teaching strategy (metacognitive learning cycle strategy, the usual method). In favor of the experimental group, it also showed that there were no statistically significant differences in the degree of acquisition of scientific concepts among female students due to the level of attitude toward science (high, low), as well as the absence of a significant difference in the interaction between teaching strategy and attitude toward science.

Muhammad (2021) conducted a study that aimed to identify the effectiveness of using the developed metacognitive learning cycle strategy in acquiring rhetorical concepts for first-year secondary school students. The study followed the experimental approach based on a quasi-experimental design, where research tools were prepared, which consisted of identifying the rhetorical concepts necessary for first-year students. The first secondary school constructed a test of rhetorical concepts using the two experimental treatment tools (the teacher's guide and the student's worksheets) in light of the developed metacognitive learning cycle strategy. The results of the study determined the effectiveness of using the developed metacognitive learning cycle strategy in acquiring rhetorical concepts for first-year secondary school students.

Bakri (2021) conducted a study that aimed to determine the effectiveness of a program based on the use of metacognitive strategies in developing reading comprehension. The study sample consisted of (26) students. The study followed the quasi-experimental approach, and to achieve the objectives of the study, an achievement test was prepared to measure reading comprehension skills. The results of the study concluded that using a proposed program based on metacognitive strategies had a positive impact on developing reading comprehension among seventh grade students with learning difficulties in favor of the experimental group.

Qasim (2021) conducted a study aimed at investigating the effect of using a metacognitive learning course on acquiring scientific concepts in light of the learning styles of seventh-grade female students. To achieve the objectives of the study, a quasi-experimental design with a pre-post design was used for unequal groups, and the study sample consisted of (64) female students, and two tools were used: a test for the acquisition of scientific concepts and the modified Kolb and McCarthy list of learning styles. The results of the study showed that there were statistically significant differences in the degree of acquisition of scientific concepts between the experimental and control groups in favor of the experimental group that was taught in the metacognitive learning course, as it showed There are also no statistically significant differences in the degree of acquisition of scientific concepts among seventh-grade female students due to the learning style (convergent, assimilation, divergent, adaptive). It also showed that there is no statistically significant effect in the acquisition of scientific concepts among seventh-grade female students due to the interaction between... Teaching strategy and learning style.

It is noted from the review of previous studies that they revolve around the use of the metacognitive learning cycle strategy and its impact on several variables. It also varied in terms of its treatment of acquiring grammatical concepts and reflective thinking, such as the study of Muhammad (2021), and the development of reading comprehension, such as the study of Al-Bakri (2021).

The study benefited from previous studies in preparing its theoretical framework, selecting the study sample, its methodology, and developing its tools, in addition to discussing the results and interpreting them, and also benefited from its results, recommendations, and the statistical methods that were used, and learned the suitability of the descriptive approach to the current study.

This study was distinguished by being one of the few studies - to the researcher's knowledge - that examined the effect of using the metacognitive learning cycle strategy in developing reading comprehension in the Arabic language subject for ninth grade students.

7.1 Study Approach:
To achieve the objectives of the study, the researchers used the experimental approach and quasi-experimental design to suit the purposes of the study. The reading comprehension test was also used to obtain data directly from a group of individuals.

7.2 Study population and sample:
The study sample consisted of (86) ninth grade students at Yarqa Basic School for Boys in the first semester of the 2023/2024 academic year. She was intentionally chosen for the work of the researcher and assisted the school principal and its teachers, which facilitated the procedures for implementing and following up the study.

To achieve the purposes of the study, the type of group was chosen randomly by lottery, and two groups were chosen from the ninth grade, consisting of (86) students, with one of them representing the experimental group that was studied. With the strategy of the metacognitive learning course, which consisted of (25) students, and the control group, which studied using the method the regular study consisted of (25) students, the researcher verified the equality of the groups by applying the two study tools beforehand to the groups. Table (1) shows the distribution of the study individuals among the groups. Study hours:

Table (1)

Table of distribution of study individuals into study groups (control and experimental)

the group	The way I studied	Number of sample members
Experimental group	Metacognitive learning cycle strategy	25
Control group	The usual method	25
the total		50

7.3 Study tool:
To reveal the effect of using the metacognitive learning cycle strategy in developing reading comprehension in the Arabic language subject among ninth-grade students, data for the study was collected using the following tools:

- **The first tool** reading comprehension test

The test aimed to measure the effect of using the metacognitive learning cycle strategy in developing reading comprehension and achievement in the Arabic language subject among ninth grade students. It was built by referring to the study units prescribed for the Arabic language study for the ninth grade in Jordan during the academic year 202-2023. 4, and after reviewing the theoretical literature and previous studies, such as the study of Abdullah (2015), and in light of the educational outcomes and review of the objectives of teaching reading comprehension in the Arabic language, the test was prepared.

The process of preparing the test took place according to the following stages:

1. **Determine the goal of the test**: to measure the extent to which students acquire reading comprehension skills in the Arabic language subject.

2. **Content analysis:** This consists of determining the study units to which the test was administered, then analyzing the educational content and determining the behavioral objectives included in the unit.

3. **Identifying reading comprehension skills in the test**: I identified three main skills for acquiring reading comprehension in this test, which are:

- **Skill**: accuracy in reading.

- **Skill:** understanding the meaning.

- Skill: reading fluently.

4. **Formulating the test questions**: Based on the specifications table, the reading comprehension test questions were formulated, numbering seventeen questions from the essay tests for each concept so that they cover the aspects of each of the three skills. In formulating the questions, consideration was given to ease of language, clarity of expressions, and suitability to the level of the students. The number of questions in the final test was (17).

Validity of the reading comprehension test

The validity of the test was verified in two ways:

Validity of the content: The objectives of the unit, the content analysis, the specifications table, the test items, its instructions, and the answer form were presented to (12) specialized arbitrators. In the field of curricula and teaching methods in the field of the Arabic language and in the field of educational measurement and evaluation in Jordanian universities, in addition to A group of teachers and educational supervisors to study the Arabic language in the Ministry of Education, and the arbitrators were asked to express their opinions and observations according to the following standards: A:

1. The extent to which the questions are appropriate for the educational objectives.

2. The suitability of the test questions to measure the axis for which they were developed.

3. The clarity and soundness of the wording of the items and their suitability to measure what they were designed to measure.

4. Expressing opinions and comments on the questions and making any amendments, such as deleting, adding, or rephrasing the paragraphs and making them appropriate to the topic.

5. The suitability between the level of the question and the ability level of ninth grade students.

Construct validity: By calculating the extent to which each dimension of the test relates to the overall score of the test items and to the sub-domain of reading comprehension skills, the test in its final form consists of (17) questions and to ensure the correctness of The construct validity of the reading comprehension scale was applied to a survey sample of (30) students from a community The study was out of its sample, and the Pearson correlation coefficient was calculated between the scores of each item of the scale, the domain to which it belongs, and the total score.

7.4 Reliability of the reading comprehension test

The reliability of the test was extracted by applying it to a survey sample from the study population and out of its sample consisting of (30) female students in the ninth grade and re-applying it to them after a week had passed. Determine and then extract the two reliability coefficients for the scale using the Kuder-Richardson equation (KR - 20). The reliability of the scale was calculated. The total test value was (0.81); This value is an indicator of the stability of the test, and the degree of difficulty was calculated for each paragraph of the test. These scores ranged between (0.36 - 0.87), and according to the discrimination coefficient for each paragraph of the test items, the discrimination coefficients for the test items ranged between (0.27-0.73).

7.5 Presentation and discussion of results:

Results related to the answer to the first question: Are there statistically significant differences at the significance level (a=0.05) between the averages of the control and experimental groups in developing reading comprehension due to the teaching method (metacognitive learning course strategy for teaching the Arabic language, the usual method)?

To answer this question, I calculated the arithmetic means, standard deviations, and adjusted arithmetic mean of the study sample's scores in the reading comprehension test in the pre- and post-measurements according to the teaching method (metacognitive learning course strategy for teaching the Arabic language, standard), as in Table No. (2):

Table (2)
Arithmetic means, standard deviations, and adjusted arithmetic mean of the study sample's scores in the reading comprehension test as a whole for the pre- and post-measurements according to the teaching method (metacognitive learning course strategy for teaching the Arabic language, regular)

Teaching method	the number	Pre-measurement		Dimensional measurement		Adjusted arithmetic mean	Standard error
		Arithmetic mean	standard deviation	Arithmetic mean	standard deviation		
Metacognitive learning cycle strategy for teaching the Arabic language	25	10.40	2.901	19.96	2.731	19.819	.732
Ordinary	25	9.24	4.711	16.16	4.506	16.301	.732

It is clear from Table (2) that there are apparent differences between the arithmetic means and the adjusted arithmetic mean of the study sample's scores in the reading comprehension test in the pre- and post-measurements according to the teaching method (metacognitive learning course strategy for teaching the Arabic language, regular) and to determine whether these apparent differences are significant. Statistically, one way ANCOVA was used for the post-measurement of the reading comprehension test as a whole according to the teaching method (metacognitive learning course strategy for teaching the Arabic language, standard) after determining the effect of their pre-measurement. Below is a presentation of these results, as shown in Table (3).

Table (3)
The results of the one-way ANCOVA for the post-measurement of the study sample's scores in the reading comprehension test according to the teaching method (metacognitive learning course strategy for teaching the Arabic language, standard) after neutralizing the effect of their pre-measurement.

Source of variance	Sum of squares	Degrees of freedom	Mean sum of squares	value F	Significance level	Eta square η2
Pre-measurement	43.347	1	43.347	3.270	.077	.065
Teaching method	151.259	1	151.259	11.412	.001	.195
The error	622.973	47	13.255			
Total	846.820	49				

It is clear from Table (3) that there are statistically significant differences at the level of significance (a = 0.05) in the scores of the study sample in the reading comprehension test according to the teaching method (metacognitive learning course strategy for teaching the Arabic language, standard). The value of (F) reached (11.412) with a statistical significance of (0.001), which is a statistically significant value, and the differences were in favor of those who were exposed to the metacognitive learning course strategy for teaching the Arabic language compared to individuals with the usual method.

It is also clear from Table (3) that the effect size of the teaching method was large. The Eta square value (η2) explained (19.5%) of the explained (predicted) variance in the dependent variable, which is the reading comprehension test.

The researcher believes that the method of teaching the metacognitive learning cycle strategy has a role in developing reading comprehension. This is because the method of teaching the metacognitive learning cycle strategy makes students learn better by including activities that encourage deep, analytical and creative thinking, and this is done through a variety of educational methods, which promote higher thinking processes such as analysis, evaluation, application, planning, and design.

In terms of developing reading comprehension, this strategy can be very effective. For example, teachers can include reading activities that stimulate students to think deeply about texts, such as group discussions about reading topics, writing analytical essays, and conducting self-research. Using these methods, Students' understanding of texts is enhanced at a deeper level, helping them develop literal reading and critical thinking skills.

This result is consistent with the study of Al-Bakri (2021), which aimed to determine the effectiveness of a program based on the use of metacognitive strategies in developing reading comprehension, and the study of Robillos et al. (Robillos et al., 2022).

In light of the results of the study, the researchers recommend the following:

1. Preparing a science teacher's guide to reading comprehension skills and methods for developing them.

2. Developing the Arabic language curriculum so that it is directly linked to reading comprehension skills

3. Holding training courses and workshops for Arabic language teachers to train them in using reading comprehension skills.

8. Conclusion
8.1 Aim of the Study:
The aim of the study is to investigate the effect of utilizing the metacognitive learning cycle strategy on enhancing reading comprehension skills in the Arabic language subject among ninth-grade students. The focus is on exploring how this specific instructional approach impacts students' ability to comprehend and analyze Arabic texts effectively.

8.2 Most Prominent Result of the Study:
The most prominent result of the study indicates a significant improvement in the reading comprehension abilities of ninth-grade students in the Arabic language subject when exposed to the metacognitive learning cycle strategy. Students who engaged with this approach demonstrated enhanced skills in understanding, interpreting, and critically evaluating Arabic texts, showcasing a positive impact on their overall comprehension proficiency.

8.3 Most Important Limitation for Conducting the Study:
One of the most important limitations of conducting the study may be related to the sample size and diversity of participants. Limited access to a diverse group of ninth-grade students in terms of academic backgrounds, language proficiency levels, and learning styles could potentially impact the generalizability of the study results. Additionally, factors such as time constraints, resource availability, and external influences on the learning environment may have influenced the study outcomes.

8.4 Suggestions for Future Research or Practical Applications:
Based on the study results, several suggestions for future research or practical applications can be proposed:

1. Longitudinal Studies: Conduct longitudinal studies to assess the sustained impact of the metacognitive learning cycle strategy on reading comprehension skills over an extended period.

2. Comparative Analysis: Compare the effectiveness of the metacognitive learning cycle strategy with other instructional approaches to identify the most beneficial method for enhancing reading comprehension in the Arabic language subject.

3. Teacher Training: Provide professional development opportunities for educators to integrate metacognitive strategies effectively into their teaching practices, promoting student engagement and comprehension.

4. Curriculum Development: Incorporate metacognitive learning principles into the Arabic language curriculum for ninth-grade students to foster critical thinking, analytical skills, and deep comprehension of textual content.

5. Technology Integration: Explore the use of educational technology tools and digital resources to support the implementation of metacognitive strategies in Arabic language instruction, offering interactive and personalized learning experiences for students.

By addressing these suggestions in future research endeavors or practical applications, educators and policymakers can further enhance the effectiveness of instructional strategies like the metacognitive learning cycle in developing reading comprehension skills among ninth-grade students in the Arabic language subject, ultimately fostering a more engaging and enriching learning environment.

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References

[1] Al-Gharib, Z and Iqbal B, (2006). *Educational Technology (Future View)*, 1st edition, Dar Al-Kitab Al-Hadith, Cairo.

[2] Al-Jundi, A and Al-Sadiq M (2001). The effectiveness of using metacognitive strategies in acquiring science and developing innovative thinking among second-year middle school students with different mental capacities, research presented to the Fifth Scientific Conference on Scientific Education for Citizenship, *Egyptian Society for Scientific Education, One, July* 29-August 1.

[3] Abdel-Bari, M S (2009). The effectiveness of the mental visualization strategy in developing reading comprehension skills for middle school students, Studies in Curricula and Teaching Methods, Egyptian Association for Curricula and Teaching Methods, Faculty of Education, Ain Shams University, No. 145.

[4] Al-Awamleh, H (2004). Skills for Teaching Reading and Writing to Children, Wael Printing and Publishing House, Amman, Jordan.

[5] Ashour, R Q, and Al-Hawamdeh, M F (2007*). Methods of Teaching the Arabic Language between Theory and Practice*, 2nd edition, Dar Al-Maysara Amman for Publishing and Distribution, Amman.

[6] Al-Qadi, T A J (2011). The effectiveness of the guided reading method in achieving reading comprehension of the biology subject among secondary school female students, Master's thesis (unpublished), Ibn al-Haytham College of Education.

[7] Al-Sarhan, W A (2020). The impact of the metacognitive learning course strategy on the acquisition of scientific concepts according to the attitude towards science among sixth grade female students. (A magister message that is not published). Al-Bayt University, Mafraq

[8] Abdel S, M (2001). Modern trends in teaching science, College of Education. Cairo: Dar Al-Fikr Al-Arabi.

[9] Ashour, R Q and Miqdadi, M F (2019). Reading and writing skills, teaching methods and strategies. Amman: Dar Al Masirah for Publishing, Distribution and Printing.

[10] Al-Sarhan, W (2021). The impact of the metacognitive learning course strategy on the acquisition of scientific concepts according to the attitude towards science among sixth grade female students. (A magister message that is not published). Al-Bayt University, College of Educational Sciences, Jordan.

[11] Bakri, S A M. (2021). A program based on metacognitive strategies to develop reading comprehension among seventh grade students with learning difficulties in the United Arab Emirates. *Journal of Special Education and Rehabilitation,* 12, 41, 289-340.

[12] Hossam E, L (2002). The impact of the metacognitive learning cycle and the regular learning cycle on the acquisition and processes of science and the persistence of the learning impact for fourth-grade primary school students, Studies in Curriculum and Teaching Methods, No. 81.

[13] Jabr, Y S (2010). The effect of employing a metacognitive strategy on developing concepts and visual thinking skills in science among tenth grade students, Master's thesis, Islamic University, Gaza.

[14] Ministry of Education, Secondary School System (1985). 1968, Ministry of Education Press, Baghdad.

[15] Muhammad, D S (2021). The effectiveness of the developed metacognitive learning cycle strategy in acquiring rhetorical concepts among first-year secondary school students. *Journal of Research in Education and Psychology*, 36(2), 203-25

[16] Shehab, M A R (2007). A unit containing S.T.S.E issues in the content of the science curriculum for the ninth grade and its impact on developing concepts and scientific thinking among female students, unpublished master's thesis, Islamic University, Gaza, Palestine.

[17] Shehata, H (1993). Teaching the Arabic Language between Theory and Practice, 2nd edition, Egyptian Lebanese Publishing House.

[18] Sharab, N A R A, Al-Baridi, M I, and Musabah, S S D. (2022). The effect of using metacognitive strategies on developing some life skills among kindergarten children. *College of Education Journal*, 10(32), 382-427.