

# The Effect of the Deep Analytical Reading Strategy on Improving Reading Comprehension Skills Among Tenth Basic-Grade Female Students in Jordan

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## Abstract

This study aimed to investigate the effectiveness of the in-depth analytical reading strategy in improving the reading comprehension skills of tenth-grade female students in Jordan. To achieve this, the researcher prepared a test consisting of (32) items, including (16) multiple-choice items, (15) essay items, and one rearrangement item, to measure their performance at the levels of reading comprehension: inferential, critical, appreciative, and creative. The study participants consisted of (62) tenth-grade female students in Jordan, from Al-Karama Basic Mixed School, selected using the convenience method in the second semester of the 2025/2026 academic year, and divided into two sections. One group, consisting of 31 female students, was randomly selected as the experimental group and taught using the deep analytical reading strategy. The other group, also consisting of 31 female students, was the control group and taught using the traditional strategy. The study results showed a statistically significant difference in the improvement of reading comprehension levels, both individually and collectively, between the performance of the two groups, favoring the experimental group. The study concluded with a recommendation to Arabic language teachers to train them on how to employ the deep analytical reading strategy to improve students' reading comprehension.

Keywords: strategy, deep analytical reading, reading comprehension.

### **Background and Significance of the Study:**

Language is a fundamental means of interaction and understanding between individuals. Through it, a person acquires the knowledge and experiences that help them integrate into their society and understand the world around them. It also contributes to building human relationships and influences the formation of an individual's personality and their perception of things.

Arabic language skills consist of listening, speaking, reading, and writing. These interconnected skills form an integrated linguistic system, as each skill is enhanced through its connection with the others. This necessitates adopting an integrated approach to language teaching to develop these skills comprehensively and effectively (Al-Tamimi & Yaqoub, 2015).

Despite the multiplicity of reading skills, the most important of these objectives is reading comprehension (Al-Bahha, 2005). Reading comprehension forms the core of the reading process, as it expands an individual's educational experiences and raises their cognitive levels, thus achieving the desired educational goals that seek to change the student's role in the learning process from that of a passive recipient to that of an active participant who remembers, connects, interprets, analyzes, critiques, or evaluates. Achieving successful reading comprehension requires that the student has developed a large number of skills and strategies for constructing meanings, making appropriate connections, and inferring the meanings conveyed by the text. This allows the student to move beyond the level of comprehension to a meta-comprehension level of the read text (Schmitt & Sha, 2009). In addition, meta-comprehension includes the ability to recognize failures in comprehension and to know the appropriate time to correct the deficiency that occurred in comprehension. Therefore, it is an important element for activating self-regulated learning processes (Al-Alwan, 2012). Reading comprehension is defined as a multidimensional thinking process based on the interaction between the reader, the text, and the context. It is a strategic process that enables the reader to extract meaning from the written text. It is also a complex process requiring the coordination of several interconnected and interacting sources of information (Shehata & Al-Najjar, 2011).

Ashour and Al-Hawamdeh (2003) indicated that reading comprehension does not begin with simply reading the text. Rather, it is preceded by a set of factors related to the reader, such as their prior experiences, knowledge, and reading proficiency level, in addition to their letter recognition and decoding skills. The researchers also emphasized the importance of preparing students before reading by providing them with introductory information about the material. This helps activate and organize their prior experiences, thus facilitating a more effective understanding and analysis of new meanings.

Abdul Latif and Al-Haddad (2004) divided reading comprehension into four main levels: the literal level, which focuses on understanding the apparent meanings and ideas in the text; the inferential level, which involves deducing implicit ideas; the evaluative level, which focuses on critical reading and assessing the written material; and the creative

level, which goes beyond the surface of the text to reading between the lines and developing ideas related to what has been read.

Reading comprehension is influenced by several factors, most notably the suitability of the text to the reader's level, their motivation to read, and their prior experiences, which help them infer, understand meanings, and critique the text. The method of presenting the text and teacher preparation also have an impact, especially when the focus is on a single skill and activities such as prediction, asking questions, summarizing, and connecting ideas are neglected. This negatively affects the overall level of comprehension among students (Al-Housani, 2021).

Consequently, educators have focused on finding effective strategies to enhance reading comprehension. One such strategy is deep analytical reading, which provides students with educational opportunities to achieve a profound understanding of the text. In this context, deep analytical reading is defined as a set of skills aimed at developing deep comprehension, identifying implicit and subtextual meanings, analyzing the text, summarizing it, and evaluating it (Hati et al., 2024: 292). This strategy is also defined as a set of methods through which students learn to understand, where they actively engage with the material, connect ideas to prior knowledge and experience, and establish and integrate relationships (Hamad, 2024: 87).

Analytical reading is a fundamental element of effective teaching, as it helps students understand complex texts, compare different perspectives, and develop critical thinking through methods such as guided discussions and interdisciplinary readings. It also contributes to promoting lifelong learning and building a knowledge base that supports academic success and active participation in society (Axmedjanova & Shomurodova, 2025). Due to the importance of analytical reading, many studies have been conducted; The study (Gebremariam & Weldeyohannes, 2025) sought to investigate the effect of critical reading strategies on improving reading comprehension skills and reading motivation among middle school students. This was done by analyzing a set of critical reading strategies such as pre-scanning, contextualizing the text, asking for clarification, retaining information, reflecting on values, summarizing main ideas, evaluating the author's arguments, and comparing relevant texts. The study was conducted in a high school in Jimka, Ethiopia, using a sample of ninth-grade students selected using a purposive and simple random sampling method. It relied on an experimental design that included pre- and post-tests of reading comprehension and a questionnaire to measure reading motivation. The results showed a statistically significant improvement in reading comprehension skills and reading motivation among the experimental group compared to the control group after the intervention. The results also showed a higher level of motivation among the experimental group, which confirms the effectiveness of critical reading strategies in enhancing reading comprehension and reading motivation among high school students.

Badawi's study (2025) expanded the identification of reading comprehension skills among primary school students in Libya, and the construction of a proposed strategy based on the linguistic analysis approach to develop reading comprehension skills among students, and revealing the effectiveness of the proposed strategy in developing those skills among them. Through the questions that the research seeks to answer, this research was based on the descriptive analytical method and the quasi-experimental method as they are suitable for the subject of the research and its objectives. The researcher prepared a list of the reading comprehension skills necessary for primary school students and a reading comprehension test to determine the availability of those skills among the students. The research tools were applied to a sample of (48) seventh-grade students in the experimental group, and (46) students in the control group in one of the schools of the Al-Bayda Education Monitoring in the eastern region of Libya. The results of the research proved: the existence of statistically significant differences between the mean scores of the experimental and control groups in the post-test performance of reading comprehension skills in favor of the experimental group, and the existence of statistically significant differences at the level of (0.01) in the pre-test and post-test for the experimental group in favor of the post-test. This highlights the significant impact of the proposed strategy, based on a linguistic analysis approach, on developing students' reading comprehension skills. The study recommended reducing the use of traditional methods and techniques in teaching reading comprehension skills and adopting strategies based on a linguistic analysis approach, which encourages students' active participation and practical application of language skills. A study by Rahmasari (2024) investigated the role of using critical reading strategies in developing reading comprehension among secondary school students. The primary objective was to examine how critical reading strategies affect students' reading comprehension abilities in the classroom. The study employed a quantitative approach to assess the impact of critical reading strategies on students' reading comprehension, along with a descriptive analysis of the application of these strategies and their effect on students' reading progress. A one-group design was used, in which participants underwent instructional sessions that included both traditional and critical reading strategies. The design included a pre-test, initial training using traditional strategies, followed by a post-test. The study population consisted of second-year students at SMA Negeri 15 Samarinda School, and the sample was selected using a random sampling method. The results showed that critical reading strategies led to a significant improvement in students' reading comprehension, with the average score rising from 24.83 on the pre-test to 66.67 on the post-test, reflecting a clear improvement in comprehension abilities. The study offers important insights into the effectiveness of critical reading strategies in enhancing reading comprehension skills among secondary school students in the classroom.

The study by Ghafar (2024) examined reading comprehension strategies both inside and outside the classroom, along with their underlying theoretical foundations. Reading

techniques include critical analysis and reflection on the structure and content of the text, aiming to expand vocabulary and help readers integrate new material with their prior knowledge. Secondary sources were used to collect data, such as books, academic journals, facts, reports, publications, and previous research and studies. The study relies on four main reading strategies: basic diversification strategies, cognitive techniques, socio-emotional strategies, and metacognitive approaches, to emphasize the educational value for the learner. The findings focus on reading strategies valued by teachers and students, those neglected, and how educational guidelines and assessment methods influence these practices to foster collaborative and innovative teaching and learning. The research results showed that all these techniques are used because they rely on visual recognition and cognitive patterns to enhance memory and comprehension, aiming to connect new information with prior knowledge, thus leading to conceptual transformation among learners.

Hock (2017) conducted a study in the United States to explore the impact of in-depth reading strategies on third-grade students' comprehension of basic reading. The study employed a case study methodology to investigate how rereading strategies, questioning the text, and annotating in the margins enhanced student comprehension. The sample consisted of students with varying reading abilities, including one student learning English as a second language. Data were collected through researcher observations, student notes, and monitoring of reading performance. The results showed that rereading significantly contributed to enhanced comprehension and vocabulary acquisition. Questioning the text helped students navigate different parts of the text and provide evidence for their answers, while annotating proved challenging due to students' limited metacognitive skills. The study concluded that in-depth reading strategies are developmental and should be used regularly to support students' understanding of complex texts.

Janus (2017) conducted a study in the United States that aimed to examine the impact of a deep reading approach on students' reading comprehension levels. The researcher used a mixed-methods approach to data collection, with a sample of 12 first-grade English students. Data was collected using pre- and post-tests, field observations, existing records, questionnaires, and summative interviews. The results showed that students' comprehension levels improved when they received deep reading training. Students with a negative attitude toward reading or who read less were more likely to experience difficulties with comprehension. The study confirmed that implementing a deep reading approach contributed to enhancing students' metacognitive awareness and improving their overall reading performance, indicating the ability of subject teachers to influence reading outcomes when using this approach in their classrooms.

The preceding review of some studies shows that they all emphasized the importance of rereading, asking questions, and interacting with texts as means to enhance

comprehension. These studies have also shown that teacher support and the organized implementation of strategies within classrooms play a key role in improving reading comprehension. Building on this, this study differs from previous studies in that it is situated within a new educational and cultural context, allowing for an assessment of the strategy's impact on understanding complex texts in a different learning environment.

### **The Problem of the Study**

The problem of this study lies in the need to employ effective teaching strategies that contribute to improving students' reading comprehension skills and increasing their motivation to read, especially at higher levels of comprehension such as inferential, appreciative, critical, and creative reading. The deep analytical reading strategy is one such strategy that relies on systematic steps to promote active understanding and interaction with texts, and contributes to developing reading comprehension skills (Zulfitriyani, 2021). Hence, this study aims to reveal the effect of employing this strategy among tenth-grade female students in Jordan.

### **Research Questions**

**This study sought to answer the following two questions:**

The first question states: "Is there a statistically significant difference ( $\alpha = 0.05$ ) between the mean scores of the study participants on the reading comprehension test items combined, attributable to the teaching strategy (traditional versus deep analytical reading)?" The second question asks, "Is there a statistically significant difference ( $\alpha = 0.05$ ) between the mean scores of the study participants on each reading comprehension skill individually, attributable to the teaching strategy (traditional versus in-depth analytical reading)?"

**Study Objectives: This study aims to achieve the following objectives:**

- 1- To reveal the effect of employing the in-depth analytical reading strategy on improving reading comprehension skills among tenth-grade female students.
- 2 To identify the effect of the in-depth analytical reading strategy, compared to the traditional strategy, on improving reading comprehension skills among tenth-grade female students.
- 3- To analyze the statistical differences in student performance at the reading comprehension levels (inferential, appreciative, critical, and creative) according to the teaching strategy (traditional versus in-depth analytical reading).

### **The Importance of the Study**

The importance of this study stems from its attempt to address a fundamental aspect of the educational process: improving reading comprehension skills among tenth-grade female students using a novel teaching strategy, such as the deep analytical reading strategy. The study's significance lies in the following aspects:

- Theoretical Importance: This study contributes to enriching the educational literature related to modern teaching strategies by highlighting the impact of the deep analytical reading strategy on improving students' reading comprehension skills. It offers a valuable contribution to the field of education by selecting a strategy that is rarely addressed in local and Arab contexts, thus enhancing the theoretical understanding of the levels of reading comprehension (inferential, appreciative, critical, and creative). Therefore; This study provides a theoretical framework that can serve as a foundation for future research focused on developing curricula and teaching strategies.

— Practical Significance: The study presents a practical model for implementing the in-depth analytical reading strategy in the classroom, enabling Arabic language teachers to adopt it as an effective tool for improving reading comprehension skills. The findings of this study may contribute to the development of teacher training programs by integrating modern teaching strategies that enhance learning outcomes. Furthermore, it may help improve the performance of Jordanian students in international assessments such as PISA by enhancing their reading comprehension skills. Finally, it may inspire curriculum developers to introduce innovative teaching strategies that improve academic achievement levels and support the achievement of national educational goals.

### **Study Scope and Limitations**

This study will be limited to the following:

- Subject matter: It will be limited to two reading lessons from two units of the Arabic language textbook for the tenth grade, second semester.
- Time frame: This study will be conducted during the second semester of the 2025/2026 academic year.
- Location: The current study will be conducted at Al-Karama Basic Mixed School in the Irbid district.
- Participants: This study was conducted with tenth-grade female students from Al-Karama Basic Mixed School in the Irbid district.
- Study limitations: The results of this study are determined by the conditions provided in selecting the study participants and its instruments. The results of this study are determined by the method that will be adopted in applying the study instruments. As for generalizing the results of this study, it remains dependent on the extent of the validity of the study participants' answers to the items of the study instruments, and the psychometric properties (validity and reliability) of the study instruments. Therefore, generalizing its results will be restricted to the validity of the two instruments used.

### **Study Terminology and Operational Definitions**

**Strategy:** A set of teaching procedures pre-selected by the teacher or instructional designer, planned for use during instruction to achieve the desired learning objectives with maximum effectiveness, within the available resources (Al-Mayahi, 2019: 17). For the purposes of this study, it is operationally defined as a set of organized teaching

procedures and steps used within the classroom to implement the steps of deep analytical reading. The aim is to develop reading comprehension skills among tenth-grade students by utilizing available educational resources and activities during the teaching process.

**Deep Analytical Reading:** A reading process based on analyzing and critiquing a text in terms of both form and content. This involves understanding structures and vocabulary, extracting explicit and implicit meanings, and connecting the text to the environment and life experiences (Abdul Samad, 1998).

**Reading comprehension:** A mental process in which the reader utilizes prior knowledge and the characteristics of the text to understand meanings, extract ideas and the relationships between them, organize them, and infer implicit meanings in accordance with the reading objective and context (Asr, 2005). In this study, it is measured using a test specifically designed for this purpose.

**Methodology and Procedures:** This chapter presents the study methodology, its participants, its instrument, methods for verifying its validity and reliability indicators, the equivalence of the two study groups, the implementation procedures, its variables, and the statistical treatments used in data analysis.

### **Study Methodology**

The current study followed the experimental method in its procedures according to the quasi-experimental design, based on the selection of two groups of tenth-grade students in Jordan, a control group that used the usual strategy in teaching its members, and an experimental group that used the deep analytical reading strategy, where the pre- and post-reading comprehension test was applied to the members of the two study groups.

### **Study Participants**

The study participants consisted of (62) female students from the tenth grade in Jordan, at Al-Karama Basic Mixed School. The pilot group was chosen from the same school, which consisted of (32) female students. Both schools are affiliated with the Directorate of Education of the First Irbid District, during the second semester of the 2025/2026 academic year. The school was chosen using the convenient method due to its proximity to the researcher's workplace and the availability of facilities and resources necessary for the study procedures. The study participants were randomly divided into two groups: one experimental group consisting of (31) female students, who were taught using the deep analytical reading strategy, and the other control group consisting of (31) female students, who were taught using the traditional method.

### **Study Instrument: Reading Comprehension Test**

**To achieve the objectives of the current study, an achievement test** was prepared consisting of (32) items, including (16) multiple-choice items, (15) essay items, and one rearrangement item. These items were distributed equally across the levels of reading comprehension (inferential, critical, appreciative, and creative), with eight items

allocated to each level. The researcher prepared the test according to the following steps (detail these steps):

- a. Analyzing the content of the "Spring Rose" unit to determine the levels of reading comprehension (inferential, critical, appreciative, and creative).
- b. Constructing the test specifications table, which consisted of (32) questions distributed across the levels of reading comprehension, with (8) questions per level, representing (0.25) questions for each level.

### **Validity of the Reading Comprehension Test**

To verify the validity of the test at its five levels, it was presented in its initial form, along with a list of the main levels and the behavioral indicators that indicate them, to a group of experts specializing in: Arabic language curricula and teaching methods, Arabic language and literature, and measurement and evaluation, at Jordanian universities, as well as Arabic language supervisors and teachers at the Ministry of Education, to give their opinions on the clarity of the test instructions, the suitability of the proposed topics for the tenth grade level in Jordan, the appropriateness of the diversity of those topics, the relationship of the behavioral indicators to the levels of reading comprehension, the suitability and accuracy of the marking criteria, and the accuracy of the answer key. In light of the opinions of the expert judges, the test was modified in terms of: correcting some linguistic formulations, deleting inappropriate vocabulary, adding some paragraphs, and modifying some behavioral indicators; The test and answer key were finalized, and the essay questions were graded according to a system designed to ensure objectivity and accuracy in scoring. Students' answers were graded by two examiners to guarantee the quality of the marking and ensure consistency. The researcher (as the first examiner) graded all the answer sheets for the objective questions, while the researcher and a specialized Arabic language teacher (as the second examiner) graded the essay questions. Specific answer keys, including performance indicators and rating levels for each question, were used to ensure consistency of standards between examiners and to maintain integrity and fairness in the grading process. The researcher developed the test's marking key and established criteria for grading the essay questions.

### **Reliability of the Reading Comprehension Test**

To verify the reliability of the test, it was administered to the pilot sample and administered again to them two weeks after the first application. The Pearson test reliability coefficient was estimated between the results of the two applications for each level of the reading comprehension test and for the test as a whole. The Cronbach's alpha internal consistency reliability coefficient was also estimated for each level of the reading comprehension test and for the test as a whole. Table (1) shows this.

**Table (1):**

**Retest reliability coefficients and internal consistency reliability coefficients for each level of the reading comprehension test and for the test as a whole**

| <b>Levels of reading comprehension</b> | <b>Retest reliability coefficient</b> | <b>Internal consistency stability coefficient</b> |
|----------------------------------------|---------------------------------------|---------------------------------------------------|
| <b>Deductive</b>                       | 0.91                                  | 0.94                                              |
| <b>Critic</b>                          | 0.87                                  | 0.91                                              |
| <b>Gourmet</b>                         | 0.82                                  | 0.89                                              |
| <b>Creative</b>                        | 0.80                                  | 0.86                                              |
| <b>Test items combined</b>             | <b>0.89</b>                           | <b>0.92</b>                                       |

Table (1) shows that the test-retest reliability coefficient for the entire test was (0.89), while the test-retest reliability coefficients for the reading comprehension levels ranged between (0.80) and (0.91), which are acceptable values for the purposes of this study. The test-retest internal consistency reliability coefficient for the entire test was (0.92), while the test-retest reliability coefficients for the reading comprehension levels ranged between (0.86) and (0.94), which are also acceptable values for this study. The difficulty and discrimination indices for the test items were also calculated, as shown in Table (2).

### **Test administration**

The pre-test and post-test were administered to the study participants, after instructing the students to answer all the test items, according to the instructions attached to the test.

### **Test Correction**

The test was corrected according to the answer key prepared in advance by the researcher and the Arabic language teacher, who was familiar with the study procedures. She assigned one mark for a correct answer and zero marks for a wrong answer to the test items. Thus, the total score for the test ranged between (0-32).

### **Equivalence of the two study groups on the pre-test reading comprehension**

To verify the equivalence of the two study groups on the pre-test, the arithmetic means and standard deviations of the pre-test performance of the study participants in reading comprehension were calculated, and a t-test for two independent samples was applied to determine the statistical significance of the apparent difference according to the group variable (control and experimental), and Table (3) shows this.

**Table (3): Results of the (t) test for two independent groups of the pre-test performance of the study participants in reading comprehension, according to the teaching strategy**

| The group   | arithmetic mean | Standard deviation | Value t | Degree of Freedom | Statistical significance |
|-------------|-----------------|--------------------|---------|-------------------|--------------------------|
| The officer | 16.32           | 2.22               | 0.378   | 60                | 0.707                    |
| empiricism  | 16.10           | 2.47               |         |                   |                          |

Looking at the results shown in Table (3), it is noted that the value of (t) for the group variable was (0.378) with a statistical significance of (0.707), which is greater than ( $\alpha = 0.05$ ), which indicates that there is no statistically significant difference in the performance of the two study groups (control and experimental) in the reading comprehension test; meaning that the two study groups are equivalent (experimental control) on the reading comprehension test. For further statistical control, use the analysis of covariance (ANCOVA) and the multiple covariance analysis (MANCOVA) after verifying their assumptions.

### Study Results and Discussion

This chapter presents the results of this study, which aimed to investigate the impact of the deep analytical reading strategy on improving reading comprehension skills among tenth-grade female students in Jordan. The study follows a structured methodology that includes presenting the research question, specifying the statistical method used, tabulating the data, and providing commentary.

The first research question asks: "Is there a statistically significant difference ( $\alpha = 0.05$ ) between the mean scores of the study participants across all reading comprehension levels, attributable to the teaching strategy (traditional versus deep analytical reading)?" This question led to the main null hypothesis, which states: "There is no statistically significant difference ( $\alpha = 0.05$ ) between the mean scores of the study participants' performance across all reading comprehension levels attributable to the teaching strategy (traditional and in-depth analytical reading)."

#### Table (6):

Means and standard deviations of the pre-test, post-test, and adjusted post-test performance of study participants in all levels of reading comprehension, according to the teaching strategy

| Teaching strategy | Tribal performance |                    | Post-performance |                    |                          |                |
|-------------------|--------------------|--------------------|------------------|--------------------|--------------------------|----------------|
|                   | arithmetic mean    | Standard deviation | arithmetic mean  | Standard deviation | Adjusted arithmetic mean | Standard error |
| Ordinary          | 16.32              | 2.22               | 18.11            | 2.37               | 18.03                    | 0.29           |

| Teaching strategy           | Tribal performance |                    | Post-performance |                    | Adjusted arithmetic mean | Standard error |
|-----------------------------|--------------------|--------------------|------------------|--------------------|--------------------------|----------------|
|                             | arithmetic mean    | Standard deviation | arithmetic mean  | Standard deviation |                          |                |
| In-depth analytical reading | 16.10              | 2.47               | 22.19            | 2.52               | 22.28                    | 0.29           |

Table (6) shows an apparent difference between the pre- and post-test means of the performance of the experimental group taught using the deep analytical reading strategy, and an apparent difference between the post-test means of the performance of the control and experimental groups. To determine the statistical significance of the post-test apparent differences according to the teaching strategy, after controlling for the pre-test differences in the performance of the two study groups at all levels of reading comprehension, a one-way ANOVA was used, as shown in Table (7).

**Table (7):**

**Results of the one-way ANOVA with arithmetic means of post-test performance of study participants on combined reading comprehension levels according to the teaching strategy**

| Source of variation     | Sum of squares | Degrees of Freedom | Average of squares | Value of F      | Statistical significance | Impact size  |
|-------------------------|----------------|--------------------|--------------------|-----------------|--------------------------|--------------|
| Pre-test (accompanying) | 202.820        | 1                  | 202.820            |                 |                          |              |
| Teaching strategy       | 280.260        | 1                  | 280.260            | <b>*105.742</b> | <b>0.000</b>             | <b>0.642</b> |
| The mistake             | 156.374        | 59                 | 2.650              |                 |                          |              |
| Adjusted total          | <b>617.294</b> | <b>61</b>          |                    |                 |                          |              |

**\* Statistically significant at ( $\alpha = 0.05$ )**

Looking at the results of the analysis of variance shown in Table (7), it is noted that the statistical significance value for the teaching strategy reached (0.000), which is less than ( $\alpha = 0.05$ ); this indicates the rejection of the main null hypothesis and the acceptance of the alternative hypothesis, which states: "There is a statistically significant difference at ( $\alpha = 0.05$ ) between the two arithmetic means of the study participants' performance in the combined levels of reading comprehension, attributable to the teaching strategy (normal and in-depth analytical reading)." From the arithmetic means shown in Table (6), it is clear that the statistically significant difference was in favor of the performance of the

experimental group who were taught using the in-depth analytical reading strategy, and the effect size was calculated to be (0.642), which is a (large) effect size (Cohen, 1988); This indicates that 64.2% of the variance (improvement) in the post-test performance of the study participants across all reading comprehension levels is attributable to the deep analytical reading strategy. This result demonstrates a substantial and practically significant impact of the deep analytical reading strategy on developing reading comprehension skills among the sample at various levels. Its effect was not limited to creating statistical differences between groups, but also reflected a genuine educational impact on developing learners' ability to deeply engage with texts, analyze them, and grasp their explicit and implicit meanings. The high effect size confirms that the deep analytical reading strategy contributed significantly to improving students' performance on the reading comprehension test, demonstrating its effectiveness in developing higher-order comprehension levels, including inferential, appreciative, critical, and creative understanding. Furthermore, the results indicate that this strategy explained a large proportion of the variance in students' scores, reinforcing its importance as an effective educational approach that contributes to enhancing reading learning outcomes and developing higher-order thinking skills related to understanding and analyzing texts. The researcher attributes this result to the fact that the deep analytical reading strategy is based on actively engaging learners in the learning process through analyzing texts, deconstructing main and sub-ideas, and connecting meanings to different contexts. It also involves stimulating prior knowledge and building new cognitive relationships that contribute to a deeper and more comprehensive understanding of the text.

Modern educational literature confirms that the deep analytical reading strategy transcends the superficial reception of symbols, constituting a crucial cognitive and emotional tool for developing reading comprehension. It acts as a dynamic engine that stimulates fundamental mental processes such as attention, activating working memory, and analytical thinking. Furthermore, it sharpens imagination and empathy, enabling learners to construct firm internal mental representations of texts and develop reflective thinking that is emotionally and cognitively aligned with the material read. This, in turn, becomes a strong foundation for holistic personal development (Udovychenko, 2025). In the same vein, educators point out that traditional reading skills, which focused on printed materials in their standardized form, are no longer sufficient. The contemporary knowledge revolution has fundamentally altered the reading environment, necessitating the development of students' analytical reading skills and empowering them to deconstruct and fully comprehend complex texts to meet the demands of our rapidly evolving era (Albis, 2025).

This is further evidenced by the higher mean score of the experimental group compared to the control group, along with a large effect size. This indicates that the improvement in reading comprehension was not a fleeting phenomenon or due to external factors, but

rather a direct result of implementing the deep analytical reading strategy and the learning environment it fostered, which is based on in-depth understanding, active participation, and meaning-making. This finding aligns with the study by Gebremariam & Weldeyohannes (2025), which confirmed the effectiveness of critical reading strategies in improving reading comprehension and motivation, and the study by Badawi (2025), which demonstrated the impact of linguistic analysis-based strategies on developing comprehension skills. This finding aligns with the study by Rahmasari (2024), which demonstrated a clear improvement in student performance after using critical reading strategies, and with the study by Ghafar (2024), which confirmed the role of analytical reading strategies in connecting new knowledge with prior experiences and achieving a deeper understanding of texts. This result also supports Rahmasari's (2024) study, which showed a significant improvement in students' average scores after using critical reading strategies. This supports your interpretation that the improvement in post-test performance among the experimental group was not accidental, but rather a direct result of employing in-depth strategies in processing the text.

The current study's findings are further supported by those of Ghafar's (2024) study, which demonstrated that analytical and critical reading strategies contribute to connecting new knowledge with prior experiences, leading to a conceptual shift among learners. This explains the significant effect size observed in the current study.

The second research question states: "Is there a statistically significant difference ( $\alpha = 0.05$ ) between the mean scores of the study participants at each level of reading comprehension individually, attributable to the teaching strategy (traditional versus in-depth analytical reading)?"

**This question led to the following null sub-hypotheses:**

- The first null sub-hypothesis states: "There is no statistically significant difference ( $\alpha = 0.05$ ) between the mean scores of the study participants at the reading comprehension (inferential) level individually, attributable to the teaching strategy (traditional versus in-depth analytical reading)."
- The second null sub-hypothesis states: "There is no statistically significant difference ( $\alpha = 0.05$ ) between the mean scores of the study participants' performance at the critical reading comprehension level, attributable to the teaching strategy (traditional versus in-depth analytical reading)."
- The third null sub-hypothesis states: "There is no statistically significant difference ( $\alpha = 0.05$ ) between the mean scores of the study participants' performance at the appreciative reading comprehension level, attributable to the teaching strategy (traditional versus in-depth analytical reading)."
- The fourth sub-null hypothesis states: "There is no statistically significant difference ( $\alpha = 0.05$ ) between the mean scores of the study participants' performance at the reading comprehension level (creative) attributable to the teaching strategy (traditional and in-depth analytical reading)."

To answer this question and verify its hypotheses, the means and standard deviations of the pre-test, post-test, and adjusted post-test performance of the study participants were

calculated for each level of reading comprehension (inferential, critical, appreciative, and creative) according to the teaching strategy. Table (8) illustrates these results.

**Table (8): Arithmetic means and standard deviations of the pre-test, post-test, and adjusted post-test performance of study participants at each level of reading comprehension, according to the teaching strategy.**

| Skill                          | Teaching Strategy       | Pre-test Mean | Pre-test SD | Post-test Mean | Post-test SD | Adjusted Post-test Mean | Standard Error |
|--------------------------------|-------------------------|---------------|-------------|----------------|--------------|-------------------------|----------------|
| <b>Inferential</b><br><b>1</b> | Traditional             | 4.23          | 1.18        | 4.94           | 1.09         | 4.88                    | 0.16           |
|                                | Deep Analytical Reading | 3.94          | 1.50        | 6.55           | 0.99         | 6.60                    | 0.16           |
| <b>Critical</b>                | Traditional             | 4.29          | 1.37        | 4.65           | 1.36         | 4.59                    | 0.14           |
|                                | Deep Analytical Reading | 4.13          | 1.20        | 5.77           | 0.80         | 5.83                    | 0.14           |
| <b>Aesthetic</b>               | Traditional             | 3.69          | 1.22        | 4.08           | 1.20         | 4.15                    | 0.14           |
|                                | Deep Analytical Reading | 3.85          | 1.31        | 4.97           | 1.14         | 4.90                    | 0.14           |
| <b>Creative</b>                | Traditional             | 4.11          | 1.40        | 4.45           | 1.46         | 4.49                    | 0.12           |
|                                | Deep Analytical Reading | 4.18          | 1.26        | 4.90           | 1.41         | 4.87                    | 0.12           |

Table (8) shows apparent differences between the pre- and post-test means of the performance of the experimental group taught using the deep analytical reading strategy, and apparent differences between the post-test means of the performance of the two study groups: the control and the experimental. To determine the statistical significance of the apparent post-test differences according to the teaching strategy, after controlling for differences in the pre-test means of the performance of the two study groups at each level of reading comprehension, a one-way multivariate analysis of variance (ANOVA) was used, as shown in Table (9).

**Table (9): Results of the one-way multivariate analysis of variance (ANOVA) with arithmetic means of the post-test performance of study participants at each level of reading comprehension according to the teaching strategy.**

| Source of Variation | Skill | Sum of Squares | df | Mean Square | F-value | Sig. | Effect Size |
|---------------------|-------|----------------|----|-------------|---------|------|-------------|
|---------------------|-------|----------------|----|-------------|---------|------|-------------|

|                                         |             |         |    |        |        |       |       |
|-----------------------------------------|-------------|---------|----|--------|--------|-------|-------|
| <b>Covariate (Pre-test Inferential)</b> | Inferential | 17.076  | 1  | 17.076 | —      | —     | —     |
|                                         | Critical    | 1.967   | 1  | 1.967  | —      | —     | —     |
|                                         | Aesthetic   | 0.639   | 1  | 0.639  | —      | —     | —     |
|                                         | Creative    | 0.256   | 1  | 0.256  | —      | —     | —     |
| <b>Covariate (Pre-test Critical)</b>    | Inferential | 0.109   | 1  | 0.109  | —      | —     | —     |
|                                         | Critical    | 37.223  | 1  | 37.223 | —      | —     | —     |
|                                         | Aesthetic   | 0.004   | 1  | 0.004  | —      | —     | —     |
|                                         | Creative    | 1.929   | 1  | 1.929  | —      | —     | —     |
| <b>Covariate (Pre-test Aesthetic)</b>   | Inferential | 2.383   | 1  | 2.383  | —      | —     | —     |
|                                         | Critical    | 3.426   | 1  | 3.426  | —      | —     | —     |
|                                         | Aesthetic   | 45.064  | 1  | 45.064 | —      | —     | —     |
|                                         | Creative    | 0.036   | 1  | 0.036  | —      | —     | —     |
| <b>Covariate (Pre-test Creative)</b>    | Inferential | 0.002   | 1  | 0.002  | —      | —     | —     |
|                                         | Critical    | 0.002   | 1  | 0.002  | —      | —     | —     |
|                                         | Aesthetic   | 0.955   | 1  | 0.955  | —      | —     | —     |
|                                         | Creative    | 93.556  | 1  | 93.556 | —      | —     | —     |
| <b>Teaching Strategy</b>                | Inferential | 44.678  | 1  | 44.678 | 53.816 | 0.000 | 0.490 |
|                                         | Critical    | 23.444  | 1  | 23.444 | 40.374 | 0.000 | 0.419 |
|                                         | Aesthetic   | 8.640   | 1  | 8.640  | 14.970 | 0.000 | 0.211 |
|                                         | Creative    | 2.219   | 1  | 2.219  | 4.691  | 0.035 | 0.077 |
| <b>Error</b>                            | Inferential | 46.491  | 56 | 0.830  | —      | —     | —     |
|                                         | Critical    | 32.517  | 56 | 0.581  | —      | —     | —     |
|                                         | Aesthetic   | 32.321  | 56 | 0.577  | —      | —     | —     |
|                                         | Creative    | 26.496  | 56 | 0.473  | —      | —     | —     |
| <b>Corrected Total</b>                  | Inferential | 105.871 | 61 | —      | —      | —     | —     |
|                                         | Critical    | 94.274  | 61 | —      | —      | —     | —     |
|                                         | Aesthetic   | 94.214  | 61 | —      | —      | —     | —     |
|                                         | Creative    | 126.548 | 61 | —      | —      | —     | —     |

\*Statistically significant at ( $\alpha = 0.05$ )

Looking at the results of the analysis of variance shown in Table (9), the following can be observed:

- The statistical significance value for Hotelling's Trace test according to the teaching strategy variable was (0.000), which is less than ( $\alpha = 0.05$ ). This indicates that there is at least a statistically significant difference in one of the reading comprehension levels attributable to the teaching strategy.
- The statistical significance value for the inferential level according to the teaching strategy was (0.000), which is less than ( $\alpha = 0.05$ ). This indicates the rejection of the first sub-null hypothesis and the acceptance of the alternative hypothesis, which states: "There is a statistically significant difference at ( $\alpha = 0.05$ ) between the two arithmetic means of the study participants' performance at the inferential reading comprehension level attributable to the teaching strategy." The arithmetic means shown in Table (8) indicate that the statistically significant difference favored the performance of the experimental group who were taught using the deep analytical reading strategy. The effect size for the inferential level was calculated to be (0.490), which is a large effect size (Cohen, 1988). This indicates that (49.0%) of the variance (improvement) in the post-test performance of the study participants at the inferential level is attributable to the deep analytical reading strategy.
- The statistical significance value for the interpretive level, according to the teaching strategy, was (0.000), which is less than ( $\alpha = 0.05$ ). This indicates the rejection of the second null sub-hypothesis and the acceptance of the alternative hypothesis, which states: "There is a statistically significant difference ( $\alpha = 0.05$ ) between the mean scores of the study participants' performance at the critical reading comprehension level, attributable to the teaching strategy." The mean scores shown in Table (8) reveal that the statistically significant difference favored the performance of the experimental group who were taught using the deep analytical reading strategy. The effect size for the critical reading level was calculated to be 0.419, a large effect size (Cohen, 1988). This indicates that 41.9% of the variance (improvement) in the post-test performance of the study participants at the critical reading level is attributable to the deep analytical reading strategy.
- The statistical significance value for the (appreciative) level according to the teaching strategy was (0.000), which is less than ( $\alpha = 0.05$ ); which indicates the rejection of the third sub-null hypothesis and the acceptance of the alternative, which states: "There is a statistically significant difference at ( $\alpha = 0.05$ ) between the two arithmetic means of the study participants' performance at the reading comprehension (appreciative) level, attributable to the teaching strategy." From the arithmetic means shown in Table (8), it is clear that the statistically significant difference was in favor of the performance of the experimental group who were taught according to the deep analytical reading strategy, and the effect size for the (appreciative) level was calculated, which amounted to (0.211),

which is a (large) effect size (Cohen, 1988). This indicates that 21.1% of the variance (improvement) in the post-test performance of the study participants at the (appreciative) level is attributable to the in-depth analytical reading strategy.

- The statistical significance value for the (creative) level, according to the teaching strategy, was (0.035), which is less than ( $\alpha = 0.05$ ). This indicates the rejection of the fourth null sub-hypothesis and acceptance of the alternative hypothesis, which states: "There is a statistically significant difference ( $\alpha = 0.05$ ) between the two arithmetic means of the study participants' performance at the (creative) reading comprehension level, attributable to the teaching strategy." The arithmetic means shown in Table (8) indicate that a statistically significant difference favored the performance of the experimental group who were taught using the deep analytical reading strategy. The effect size for the creative level was calculated at (0.077), which is a medium effect size (Cohen, 1988). This indicates that (7.7%) of the variance (improvement) in the post-test performance of the study participants at the creative level is attributable to the deep analytical reading strategy.

**Regarding the hypotheses, the study results show the following:**

A statistically significant difference favored the performance of the experimental group who were taught using the deep analytical reading strategy at the inferential level, with an effect size of (0.490). This difference is attributed to the deep analytical reading strategy, as the researcher observed that it contributed to developing the students' ability to infer implicit meanings and read between the lines.

Accordingly, the researcher attributes this positive result to the fact that the mechanisms of the in-depth analytical reading strategy have effectively contributed to improving students' performance. The integration of systematic text analysis and logical connections between data and probing questions gives students a deep awareness of the text's details and hidden relationships. This systematic approach has enabled them to move beyond superficial meanings and grasp implicit and unstated implications, which aligns perfectly with the characteristics and requirements of deductive reasoning. This clear and practical impact of the strategy demonstrates its tangible superiority in improving students' higher-order thinking skills and evidence-gathering abilities, especially when compared to traditional teaching methods that often focus on rote learning or superficial, direct interpretation without delving into the subtext. This result is consistent with the study by Gebremariam & Weldeyohannes (2025), which confirmed the effectiveness of critical reading strategies in improving reading comprehension, and the study by Badawi (2025), which demonstrated the impact of strategies based on linguistic analysis in developing comprehension skills. This also aligns with the study by Rahmasari (2024), which demonstrated improved reading comprehension among students after using critical reading strategies, and with the study by Ghafar (2024), which emphasized the importance of connecting new knowledge to prior experiences for deeper understanding.

Furthermore, it is supported by the studies by Hock (2017) and Janus (2017), which indicated that in-depth reading and analytical engagement with texts contribute to improved comprehension and the development of metacognitive awareness.

The statistically significant difference favored the performance of the experimental group taught using the "deep analytical reading" strategy, at the critical level, with an effect size of 0.419 attributed to the deep analytical reading strategy. This indicates a clear improvement in students' ability to judge and analyze texts. This result can be explained by the fact that the deep analytical reading strategy provided students with the opportunity to analyze texts, evaluate ideas, and distinguish between opinions and facts through dialogue, open-ended questions, and critical discussion of arguments and ideas. This contributed to developing their ability to judge and analyze texts, which was reflected in the large effect size at the critical level. This result is consistent with the study by Gebremariam & Weldeyohannes (2025), which confirmed the effectiveness of critical reading strategies in improving reading comprehension through argument evaluation and text analysis, and with the study by Badawi (2025), which demonstrated the impact of strategies based on linguistic analysis in developing comprehension skills and interaction with texts. It is also consistent with the study by Rahmasari (2024), which showed an improvement in reading comprehension as a result of using critical reading strategies, and with the study (Ghafar, 2024) emphasized the importance of critical analysis and linking new knowledge to prior experiences to achieve deeper understanding. This is further supported by the studies of (Hock, 2017) and (Janus, 2017), which indicated that in-depth reading and analytical engagement with texts contribute to developing critical thinking and improving reading comprehension.

The statistically significant difference favored the performance of the experimental group taught using the "deep analytical reading" strategy at the appreciative level, but with a relatively smaller effect size (0.211). This means that the strategy had a positive impact, but to a lesser degree compared to the previous two levels. This result can be explained by the fact that the deep analytical reading strategy contributed to improving the appreciative level by encouraging students to reflect on linguistic styles and the aesthetics of the text. However, the effect size was relatively small because appreciative skills require extensive reading experience and practice to develop more deeply. Educational literature confirms that the deep analytical reading strategy contributes to developing students' critical comprehension. The effectiveness of this strategy is evident in empowering students with higher-order analytical and critical thinking skills, such as distinguishing between facts and opinions, assessing the sufficiency of the evidence presented by the author, and identifying biases or inclinations embedded within the text. Ultimately, it fosters the ability to make independent, objective, and logically justified judgments about the ideas read, rather than accepting them as unquestionable truths (Gao, 2019).

This finding aligns with the studies of Gebremariam & Weldeyohannes (2025) and Rahmasari (2024), which confirmed the effectiveness of critical reading strategies in enhancing engagement with and comprehension of texts. It also supports the findings of Ghafar (2024), which highlighted the importance of analyzing and reflecting on text structure, and the studies of Hock (2017) and Janus (2017), which affirmed that in-depth reading contributes to enhanced engagement with texts and the gradual development of understanding.

- 1- The statistically significant difference favored the performance of the experimental group taught using the "deep analytical reading" strategy at the appreciative level. However, the effect size was moderate to low (0.077), attributed to the analytical reading strategy and being the weakest among the levels. This result can be interpreted as the deep analytical reading strategy contributing to improving students' creative level, although the effect size was relatively low because creative skills require more time, continuous practice, and a supportive learning environment to develop more deeply. This result is consistent with the studies by Gebremariam & Weldeyohannes (2025) and Rahmasari (2024), which confirmed the effectiveness of critical reading strategies in improving comprehension and interaction with texts, and with the study by Ghafar (2024), which indicated that analysis and linking experiences contribute more to building understanding than developing creativity. Furthermore, the studies by Hock (2017) and Janus (2017) supported the importance of in-depth reading in gradually improving comprehension and developing reading awareness.

### **Recommendations**

In light of the preceding findings, the study recommends the following:

- 1- Employing the in-depth analytical reading strategy in teaching Arabic, given its impact on developing students' various levels of reading comprehension.
- 2- Training Arabic language teachers in using strategies based on analysis, critique, and the posing of in-depth questions to enhance students' higher-order thinking skills.
- 3- Incorporating diverse reading tasks into classroom and extracurricular activities to develop inferential, critical, and creative levels, and to encourage students to engage deeply with texts.

## References

- 1- Abdul Latif Jumana and Al-Haddad, Abdul Karim (2004). The Impact of Prior Experience on Reading Comprehension in Arabic among Tenth-Grade Female Students. *Mu'tah Journal for Research and Studies - Humanities and Social Sciences Series*, 19(1), 95-132.
- 2- Al-Alwan, Ahmed. (2012). Metacognitive Level and its Relationship to Reading Achievement among University Students. *Journal of Educational and Psychological Sciences*, 13(4), 130-158.
- 3- Al-Bajja, Abd al-Fattah Hassan. (2005) *Teaching Methods of Arabic Language and Literature Skills*, 5th ed. University Book House.
- 4- Al-Housani, Afraa bint Ali. (2021). The Effectiveness of a Training Program Based on Differentiated Instruction in Acquiring Reading Comprehension Strategies, Creative Reading Skills, and a Positive Attitude Towards Reading among Ninth-Grade Students (Unpublished Master's Thesis). Sultan Qaboos University, Sultanate of Oman.
- 5- Al-Tamimi, Rafed and Yaqoub, Bilal. (2015). Language Skills and Their Development in Teaching Arabic. *Madad Al-Adab Journal*, (11), 266-297.
- 6- Ashour, Rateb, and Al-Hawamdeh, Muhammad (2003). *Methods of Teaching Arabic*. Dar Al-Masirah for Publishing and Distribution, Amman.
- 7- Badawi, Abdul-Maqsoud. (2025). The Effectiveness of a Proposed Strategy Based on the Linguistic Analysis Approach in Developing Reading Comprehension Skills among Basic Education Students in Libya. *Journal of the Faculty of Education, Science*, (18), 24-25.
- 8- Gao, Y. (2019). Analytical reading as an effective model for enhancing critical thinking. In Y. Zhang, I. Rumbal, R. Green, & T. Volodina (Eds.), *Proceedings of the 4th International Conference on Contemporary Education, Social Sciences and Humanities (ICCESSH 2019)* (Vol. 329, pp. 318–322). Atlantis Press.
- 9- Gebremariam, H. T., & Weldeyohannes, M. Z. (2025). Cultivating Students' Reading Skills: Inspiring Reading Comprehension and Motivation Through Critical Reading Strategies. *Sage Open*, 15(3), 21582440251367189.2080.
- 10- Ghafar, Z. (2024). A Critical analysis of reading comprehension tactics: Theoretical and educational implications. *International Journal of Higher Education Pedagogies*, 5(1), 31-43.
- 11- Hamad, Salwa (2024). The Impact of Deep Learning Strategies on Strategic Thinking, Life Effectiveness Skills and the Desire to Learn among Fifth-Grade Science Students in Mathematics. *Journal of the Association of Arab Universities for Education and Psychology*. University Damascus, Faculty of Education, 22(1), 82-111.

- 12- Hati, Asma, Shehata, Hassan Sayed and Daoud, Samira. (2022). The Effectiveness of Using the (R3SQ) Strategy in Developing In-Depth Reading among Primary School Students. *Journal of Education in the 21st Century for Educational and Psychological Studies*, 34, 285-319.
- 13- Hock, L. C. (2017). Comprehension through deep reading: Exploring strategies for third-grade students. master's thesis. Saint John Fisher College.
- 14- Janus, T. M. (2017). The impact of a close reading approach on the comprehension level of English I students. Doctoral Dissertation. University of South Carolina.
- 15- Rahmasari, A. P. (2024). Investigating the role of critical reading strategies in developing students' reading comprehension. *Journal of English Language Learning*, 8(1), 518-529.
- 16- Schmitt, M. C. (1990). A Questionnaire to Measure Children's Awareness of Strategic Reading Processes. *The Reading Teacher*, 43, 454-461.
- 17- Shomurodova, S. J., & Axmedjanova, F. D. (2025). Encouraging analytical reading skills among students. 3( 5 ) 2938-3803.