A Cognitive Thinking Integrated Strategy to Develop EFL Creative Reading Skills of Secondary Stage Students

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بحث مشتق من الرسالة الخاصة بالباحثة

The Effectiveness of Paired Reading Strategy in Developing EFL Vocabulary Learning among Primary School Pupils

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Abstract

The purpose of this study was to investigate the effect of a cognitive thinking strategy on promoting EFL secondary students' creative reading skills. The quasi-experimental design was adopted and a pre-posttest was utilized to compare the participants' creative reading skills. Sixty four EFL secondary students were randomly assigned to experimental (n=32) and control (n=32) groups. Creative reading skills which integrated in this research were fluency, flexibility, originality and elaboration. Each skill included some sub-skills. The researcher prepared a creative reading skills checklist to determine the appropriate creative reading skills for secondary stage students, a pre-posttest to enhance students' comprehension, and a rubric to correct it. The results of the posttest indicated that the cognitive thinking strategy has a positive and significant influence on secondary students' creative reading skills. Preliminary experimental results indicated that the proposed cognitive thinking strategy could be useful in developing creative reading skills.

Key words: Creative Reading Skills – Cognitive Thinking Strategy.

Introduction:

One of the most important goals of learning a foreign language is teaching reading. The expectations for readers have been widened. The higher levels of reading became essential in preparing EFL secondary stage students, to be literate at the levels required for the 21st century. The advanced technologies of today demand a new level of reading among secondary stage students who will use them. Reading has a significant role in learning a foreign language. In addition, at advanced levels in a foreign language, the ability to read the written language at a reasonable rate and with good comprehension has long been recognized to be as important as oral skills.

Nevertheless, Anderson (1999) claim that "to many EFL readers, reading is a suffocatingly slow process." One dimension of creative teaching is creative reading which includes a new educational role; creative rather than traditional and opened to the world rather than closed to itself. Creative reading motivates the reader's curiosity, inquiry, wonder, questioning, and solving problems to challenge the future difficulties and facilitates the creative development. So, it develops his critical skill to evaluate the text, his recognition to the missing information, his comprehension to the hidden causes of divergence, and his intelligent inductions. All these skills are needed in such a global age of super technical and informative revolution. (Abdel-Monem,1996).

Reading, though often perceived as passive and receptive, is a creative activity in itself, and frequently an important element in other creative processes. It encourages connections and provides stimulus. It links to other types of cultural expression and other art forms. It helps

young people explore the world and enriches them educationally and emotionally. (Demos, 2004).

The significance of learning strategies, as stated by O'Mally and Chamot (1994), "stems from the observation that learning is an active and dynamic process in which learners approach new tasks strategically, analyze task requirement, apply various mental processes appropriate to the task and reflect on the success of their attainment." Furthermore, students who use different learning strategies will transfer the use of strategies to similar tasks and become more independent and confident learners. In addition, students become more motivated as they begin to understand the relationship between their use of strategies and success in learning English. O'Mally and Chamot (1990) argue that successful language learners make use of different types of learning strategies. However, being able to use the most appropriate strategies does not always come by itself; students need guidance.

Moreover, VanDuzer (1999) argues that "using appropriate strategies for various reading tasks increases comprehension, but acquiring an array of strategies is a long and difficult process. Nevertheless, such strategies as skimming for the main idea, scanning for specific information, predicting what a text is about or what will happen next, and making use of the context and illustrations to discover word meanings are critical for EFL learners beyond the beginning level." In addition, Peterson (1986) claims that "low achieving students can successfully be taught a variety of cognitive strategies", such as self-questioning, summarizing, etc. and "compensatory education should give greater emphasis to their development."

Likewise, Lubelska (1991) argues that "despite years of practice in reading, many learners find difficulty in making sense of texts they want to read. Several writers have suggested that one of the reasons for this failure to interpret the writer's cohesive signals as intended and so to understand correctly the functional value of individual sentences and thus their relationship to each other and the whole." Moreover, Oxford (1990) asserts that "strategies are especially important for language learning because they are tools for active and self-directed involvement, which is essential for developing communicative competence. Appropriate language learning strategies result in improved proficiency and greater self-confidence." The cognitive theory asserts that the learners are builders of their own knowledge, therefore, teaching should be constructed on this basis. Furthermore, successful learners apply different strategies more often and more effectively than less successful ones.

Moreover, early research studies on adult education reported that adult learners initiate and organize their own learning tasks. In addition, one of the main purposes of cognitive reading strategies is to create a strategic reader who should have the knowledge about the right strategies for acquiring new knowledge.

Furthermore, Weisberg (1988) confirmed that cognitive reading strategies require greater reader interaction with written texts and in depth processing such as generating questions, making summaries, or semantic maps. These strategies are more helpful than simply rereading as a fix-it strategy. Weisberg suggested also that semantic mapping provides greater benefit because these maps help readers differentiate

important ideas or information from unimportant one and comprehend relationship among ideas. Additionally, because these maps make concepts and relations between concepts more visible, semantic maps may prevent cognitive overload.

Research studies that have been conducted to investigate the cognitive strategies that students use is based on an information processing view of learning and teaching higher-order thinking skills that has evolved from theory and research in the field of cognitive psychology. In this concept, learning takes place when students actively respond to instruction by manipulating or processing information (Anderson, 1981). This perspective suggests that differences in academic performance may be related to the use of higher-order cognitive strategies (Winne, 1985) and that strategy use by more "expert" learners can be identified and taught to more "novice" learners.(Rubin,1981). The cognitive approach also implies that students need to apply cognitive strategies in order to learn (Winne, 1985). Research studies, consequently, have been directed toward the definition and description of these strategies (Oxford, 1990; O'Mally and Chamot 1990).

In practice, the cognitive reading strategy approach does not focus on teaching students to use a specific series of steps. Rather, the emphasis is on providing them with guides that support their efforts. Semantic mapping, getting the idea quickly, guessing the meaning of unfamiliar words, looking for markers of cohesion, predicting what the reading passages contain or predict next incidents, note-making, are guides. Generating questions and answering them are such a guide. A certain procedure for developing a summary is a guide. These guides, which are

presented to the students to help them develop a specific strategy, are major components of cognitive strategy instruction.

Creative reading skills in some detail:

First: Fluency

The ability to call the largest number of appropriate responses to the problem or an incentive in a specific period of time, (Ibrahim, 2005). It can also be described as the mental skill that is used to generate thought flowing freely in the light of a number of related ideas. However, from student's point of view, fluency is the skill that makes student's ideas flow freely in order to get plenty of ideas in the possible quickest time, (Saadeh, 2011).

Gattami (2001) believes that fluency includes multiple thoughts that could be recalled or the speed to recall uses and synonyms and benefits of specific things, flow of thoughts and easy production of them, e.g. to ask student as much as he can say of a synonym of a word, or to mention the different uses of a textbook. On the other hand, Abdulaziz (2006) cites that fluency means prepared thinking, the ability to recall a large number of suitable thoughts in a specific time, or the ability to produce several verbal thoughts for a problem.

Fluency plays an important role in the individual's creative thinking. It is determined by the number of responses and their speed, the ability to recall stored information. Therefore, fluency is a process of remembering and recalling of information or experiences and concepts of what we have studied. It is considered very important especially to the children, because other abilities such as flexibility and originality depend on it. Fluency is the basis for the other abilities, (Mosa & Salama, 2004).

Based on all these ideas, the researcher believes that fluency is a mental ability that produces a large number of thoughts, solutions, responses and alternatives in verbal performance. It is also the individual's ability to produce a large number of ideas, alternatives, synonyms, solutions or responses to a specific incentive.

To expand more on this issue, scientists and researchers cite different types of fluency:

A) **Verbal Fluency:** It refers to the individual's ability to produce the largest possible number of words which have specific features. It means quick thinking in producing words in a specific shape, (Al-Huweidi, 2002).

B) **Fluency of Meanings or Intellectual Fluency:** It is the ability to give the greatest number of ideas in the specified time, regardless of their level, type or degree of Novelty, (Al-Suleiti, 2006).

C) **Fluency shapes:** They are concerned with providing some simple additions to certain forms to create real charts and the ability of quick drawing of examples and modifications.

D) **Fluency Connectivity:** It requires recalling the largest number of things that are characterized with specific features for comparison. Single meaning words which is considered divergent production of synonyms, e.g. cite as much as you can as a synonym of the word (prisoner).

E) **Expressive Fluency:** It is the ability to provide graphical images, and the formulation of ideas in words e.g. to give the student four letters and ask him to make a lot of sentences, (Abu Jado, 2004).

Second: Flexibility:

It is the change of mental ability to cope with changing attitudes; the individual is flexible to diversity of ideas. Flexibility changes according to the situation; it reverses mental inertia that leads to the adoption of specific patterns of thoughts to face different and unspecific situations, (Al-Mashrafi, 2005). As for measuring flexibility, it could be measured in more than one way e.g. one can limit different types and images produced by the person, (Hanora, 1997).

From the previous definitions, the researcher concludes that flexibility is the ability to deal with the different situations freely and to make the necessary change according to the situation without hesitation.

As for the types of flexibility, Mosa (2000) sites two types:

1- **Spontaneous Flexibility** which refers to the speed of producing appropriate responses to the problem or exotic situation, a response characterized by diversity and none typical; it is an ability or skill to produce the largest number of ideas freely and spontaneously without pressure or guidance.
2- **Adaptive Flexibility** which refers to the ability of the individual to change to the mental direction to face changing problems, it indicates mental adaptation, flexible person makes up with different situations and circumstances".

Based on the above mentioned ideas, the researcher treats flexibility is the ability to reach a new or suitable solution to a problem, or to face a new situation with many alternatives. Thus, flexibility relies on the qualitative characteristics of the responses, and it is measured by diversity and difference in the response.

Third: Originality:

It refers to the individual's ability to produce authentic ideas that are characterized by novelty, uniqueness and originality. It is original if it is not a repetition of other's ideas. The idea should be unusual, far sighted, far linked and useful to the society. This skill is based on the assumption that a person with a genuine creative thinking never repeat the ideas of the others, his ideas are new to him and to those around him, (Ibrahim, 1979).

Originality differs from fluency, flexibility and sensitivity to problems in these points:

1- Originality does not indicate the quantity of the ideas of the individual as in fluency but depends on the value, type and the quality of ideas.
2- Originality does not refer to the individual alienated from repeating his ideas as in flexibility but refers to a version to repeat what others have found out.
3- Originality does not require environment evaluation for self-criticism so a creative thinker completes his work accurately and this distinguishes it from sensitivity to problems, (Abd-Allah, 2003).

So the researcher concludes that originality is unique in that new ideas are created by the thinker. These ideas are clear ones and not a repetition of the other's ideas. Thus, degree of creativity can be judged through originality.

Fourth: Elaboration:

It is the skill of expanding, widening, or additional details to give new, but different and accurate explanations to an idea. Ibrahim (2005) sees elaboration as the ability to give new details to an idea or to make unique contributions that help to develop an idea, enrich and achieve it. Similarly, Mahmoud (2008) asserts that elaboration indicates the learner's ability to add new things to a certain idea, and access to supplemental proposal that leads to new additions. Whereas, Torrance (1966) mentions in his researches of creativity that young students are more creative as they tend to give more and unnecessary addition to their drawings and stories, sited in (Zaitoun, 1987).

Elaboration also means the ability to integrate different parts accurately in a single unit, and be the basis for the construction of the given information, so that they form an intellectual pattern to become more detailed, and to make the different parts in an integrated format that includes the rest of parts, (AbdElhadi & Abu Hashesh, 2003). Thus, Elaboration skill includes access to complementary assumptions leading to a new increase in the space of experience and to achieve new developments from the learner's experience, (Qattami, 2001).

Based on this, the researcher concludes that elaboration skill means the ability to add new details, clarifications, elements, components of shapes, to provide more examples or explaining an ambiguous matter.

Sternberg (1998) explains, “if our schools want to encourage creativity and the display of creative intelligence, they need to include in their assignments and tests at least some opportunity for creative thought,”

The Boston Pilot Schools Network, have developed a helpful framework for thinking about assessment and accountability. Their system relies on the following principles:

- Provide multiple ways of assessing student competency in meaningful ways.
- Eliminate secrecy so that all students, families, and the public understand what students should know and be able to do.
- Develop the assessment system by those working most closely with students.
- Embed good assessment in curriculum and instruction that engages students in work that has a public purpose.
- Help students become independent, self-reliant, and thoughtful learners through good assessment.
- Promote reflective practice in teachers through good assessment (pilot schools network, 2000)

One dimension of creative teaching is creative reading which includes a new educational role; creative rather than traditional and opened to the world rather than closed to itself. Creative reading motivates the reader's curiosity, inquiry, wonder, questioning, and solving problems to challenge the future difficulties and facilitate the creative development. So, it develops his critical skill to evaluate the text, his recognition to the missing information, his comprehension to the hidden causes of divergence, and his intelligent inductions. All these skills are needed in such a global age of super technical and informative revolution. (Abdel-Monem, 1996).

Cognitive theory of learning:

The theoretical underpinnings of language learning strategies come from the cognitive theory of learning. Thus, this section outlines the general guidelines of the cognitive theory of learning: strategies of skill acquisition; episodic versus semantic memory; declarative versus procedural knowledge; short-term versus long-term memory.

Cognitive strategies are useful tools in assisting students with learning problems. The term "cognitive strategies" in its simplest form is the use of the mind (cognition) to solve a problem or complete a task. Cognitive strategies may also be referred to as procedural facilitators (Bereiter & Scardamalia, 1987), procedural prompts (Rosenshine, 1997) or scaffolds (Palincsar & Brown, 1984). A related term is metacognition, the self-reflection or "thinking about thinking" necessary for students to learn effectively (Baker, Gersten, & Scanlon, 2002).

A cognitive strategy serves to support the learner as he or she develops internal procedures that enable him/her to perform tasks that are complex (Rosenshine, 1997). Reading is an area where cognitive strategies are important. A self-questioning strategy can help students understand what they read. Rosenshine states that the act of creating questions does not lead directly to comprehension. Instead, students search the text and combine information as they generate questions; then they comprehend what they have read.

Jerome Bruner, believing learning is dependent on how information is structured, organized and conceptualized, proposed a cognitive learning model that emphasizes the acquisition, organization (structure), understanding and transfer of knowledge, focusing on “how”

to learn, rather than "what" to learn. He purported that stimulus input received is actively perceived and interpreted in an organized fashion, using expectations developed from prior experiences. Cognitivists were interested not only in the results that learning produces, but in the thought processes along the way. (Vey, 2005)

The following are some general assumptions of cognitive theory (Cunia, 2007):

1- Some learning processes are unique to human beings.
2- Cognitive processes can be studied.
3- Objective, systematic observations of human behavior should be the focus of scientific inquiry; however, inferences about unobservable mental processes can often be drawn from such behavior.
4- Individuals are actively involved in the learning process.
5- Learning involves the formation of mental associations that are not necessarily reflected in overt behavior changes.
6- Knowledge is organized.
7- Learning is a process of relating new information to previously learned information.

Resnick and collins (1994) confirmed that the cognitive theory of learning stresses:

- the active role of the learners during learning,
- teaching must be arranged for students to construct knowledge by themselves,
- there should be "didactic" teaching (e.g. direct teaching),

- successful language learners apply effective strategies more often and more effectively than less successful learners and
- thinking is enabled by tools that share the load with learners. These tools enable the learners to perceive and think in a way they could not manage unassisted.

Findings from cognitive psychologists' studies proved the effectiveness of language learning strategies training on creative reading and problem solving (e.g. Chipman, Segal, and Glaser 1985; Dansereau1985). These studies formulate the language learning strategies in a theoretical model that contains metacognitive, cognitive, social affective strategies.

Cognitive psychology provides the most prolific and development perspective on the sources of individual creativity (Adams, 2005). Cognitive strategies are classified as practicing, receiving and sending massages, analyzing, and creating structure for the input and output, such as reasoning, analyzing, summarizing, and practicing (Oxford, 1990).

Wong-Filmore (1985) recognized differences in the rate and level of second (foreign) language learning. She referred these differences to the involvement of cognitive processes that are important to language learners.

Spolsky (1985) presented a model of second (foreign) language learning cognitive processes. He suggested, three types of conditions that apply second (foreign) language learning:

- Necessary conditions, (e.g. motivation, practice opportunities) ;

- Gradient conditions(e.g. the greater or lesser degree to which a learner actively seeks out interactions with native speakers of the target language or the greater or lesser degree to which a learner can fine tune a learning strategy to a specific task);
- Typicality conditions, such as taking of making language mistakes.

Weinstein and Mayer (1986) argued that in cognitive psychology, new information is acquired through a four-stage encoding process.

- **Selection**: learners focus on specific information and transfer that information into the working memory.
- **Acquisition**: learners actively transfer information from working memory into long-term memory for permanent storage.
- **Construction**: learners actively build internal connection between ideas contained in working memory. The information in long-term memory can be used to enrich the learner's understanding or retention of the new ideas by providing related information into which new information can be organized.
- **Integration**: the learner actively searches for prior knowledge in long-term memory and transfers this knowledge to working memory.

Background of the problem:

Reading is an important language skill because of being a main basis in teaching and learning processes. The concept of literacy has developed and its objectives and functions have been widened to focus on higher thought, which led to the emergence of multiple types of reading

including the creative. Recommendations of the ninth Conference of the Egyptian society for reading and knowledge focused on guiding reading to creativity as it is the main key to change, and that creative reading skill is one of the most important types of reading that achieves conscious understanding of reading and opens up perspectives for English vocabulary acquisition, analysis and reasoning skills acquisition, and linking between past and new experiences.

There are two basic arguments to support the interest in this topic. The first is that it is not enough for the 21st century learners to know how to read, to write and to solve problems. Nowadays, the arousal of new and increasing technologies and the variety of informative resources demand world citizens to be able to solve problems from a critical perspective, that is, because learners of all ages are exposed to vast amounts of information in which discrete and objective classification is required. Moreover, technology has allowed the individual to have several modes of communication with others, which burdens students to develop effective communication skills, implying a necessity to be cognitively skillful to code and decode messages under various situations and in different languages.

The second reason towards the interest in the development of creative reading is the necessity of creative thinking processes in all academic fields. Pineda (2004) supports this view by stating that "the role of language educators should not be limited to the teaching of language features exclusively. It also entails becoming agents of change,

which means encouraging learners to actively reflect on current concerns" (p. 47).

Today's world, which is based on a globalized perspective, presents to the learners the necessity of growing integrally, that is because on the one hand, students should be competent to interact effectively with all the current information and the sources that provide such information.

Statement of the problem:

The level of creative reading skills among secondary stage students is low. To the researcher's best knowledge, there is a scarcely body of research done to improve creative reading skills for secondary stage students. Giving the apparent usefulness of the cognitive reading strategies, there is a need to provide a cognitive reading strategies based program for secondary stage students to improve their creative reading skills and their use of cognitive reading strategies. Hence, this study sought to answer the following questions:

What is the effect of a cognitive thinking integrated strategy on developing second year secondary students' creative reading skills?

This main question could be subdivided into the following questions:

1- What are the creative reading skills that are necessary for the second grade of secondary students?
2- How far do those students master creative reading?

Purpose of the study:

The present study aimed to achieve the following purposes:

1- Developing secondary school EFL students' creative reading skills.

2- Investigating the utility of a cognitive based program in developing EFL students' creative reading skills.

Significance of the study:

This study was significant as it might:

- help in determining the creative reading skills appropriate for secondary school students.
- help in drawing curriculum designers attention to utilize activities concerning promoting the creative reading skills of secondary school students.
- help in raising EFL teachers 'awareness of the importance of training students to creative reading skills.
- help in opening new horizons for the development of other reading skills.
- help in employing cognitive thinking strategies in the development of language skills.

So it has been noticed that the creative reading skills seek to develop the learner from a recipient reader to a productive one, by looking deeply into the implications of ideas and meanings contained in the reading materials.

Sample of the study:

The Participants were 64 female students selected from second year secondary students at Al Horreya Secondary School for Girls. Students were randomly assigned into two groups: one experimental group (n=32), and one control group (n=32). The study adopted the quasi-experimental group design.

Research Instruments:

The following instruments were designed by the researcher:

a) A checklist of the creative reading sub-skills.
b) A creative reading test.
c) A rubric for correcting the test.

Hypotheses of the study:

1- There is a statistically significant difference between the mean scores of the experimental and control groups in the pre and post administration of creative reading skills test, in favor of the post administration.

2- There is a statistically significant difference between the mean scores of the experimental group in the pre and post creative reading test, in favor of the post results.

3- There is not a statistically significant difference between the mean scores of the experimental group in the post administration and the follow-up administration of the creative reading test.

Procedures of the study:

In order to achieve the aims of the study, the following procedures were adopted:

1- Making a comprehensive review of literature and previous studies relevant to the study variables; creative reading skills and cognitive thinking based strategy.

2- Preparing a list of the creative reading skills and submitting it to jury members of specialists in TEFL methods and linguists to obtain their views.

3- Putting a design of the cognitive strategy, comprising the approach, the activities, the instructor role, the student activities and the expected procedures that will be carried in class.
4- Preparing the study instruments, which will include a checklist of the creative reading sub-skills, a creative reading test and a rubric for correcting the test.
5- Selecting the research participants from the second year students of the secondary stage at Al Horreya Secondary School for Girls.
6- Determining the study material, beforehand, including some reading texts.
7- Conducting the empirical work (experiment) on the basis of two groups system.
8- Conducting (the test, the checklist and the rubric) as the first step.
9- Administrating the post-test will be afterwards.
10- Administrating the proper statistical analysis of the obtained results in both (the pre and the posttest) to measure the utility of the cognitive strategy to develop the secondary students' creative reading skills.
11- Providing the study results, recommendations, and suggestions for further studies.

Delimitations of the study:

The present study was delimited to:

1- Creative reading and its four main skills: reading fluency, reading flexibility, reading originality and reading elaboration.
2- The cognitive thinking based strategy.
3- EFL secondary students, second year, Al Horreya secondary school.

Findings of the Study:

The findings are presented in the light of the hypotheses validation.

Hypothesis (1):

The first hypothesis is: "There is a statistically significant difference between the mean scores of the experimental and control groups in the pre and post administration of creative reading skills test, in favor of the post administration." For validating this hypothesis, the mean scores of the experimental and control groups in the post administration of the test were compared and t-values for independent groups were calculated as indicated in table (4.1):

Table (4.1) Results of the t-values of the experimental and control groups in the post administration of the creative reading test

N1=N2 =32

	Experimental group		Control group		t-values	η^2
	Mean	Std. Deviation	Mean	Std. Deviation		
Fluency	13.73	1.03	6.97	3.05	11.89**	0.70
Flexibility	9.19	1.15	3.28	1.42	**18.30	0.84
Originality	24.41	2.05	9.59	3.62	20.16**	0.87
Elaboration	4.16	0.81	3.47	0.84	3.33**	0.15
Total	51.48	2.90	23.31	5.68	24.99**	0.91

** (0.01) level of significance

Table (4.1) shows that there are statistically significant differences at 0.01 between the means of scores of the experimental and the control groups in the post administration of the creative reading test, in favor of the experimental group. These differences may be attributed to the effect of the experimental treatment exemplified in the cognitive thinking strategy the experimental group received.

The values of η^2 (0.70، 0.84 ، 0.87 ، ، 0.15 0.91) showed that (70% ، 84% ،87% ، 15% ، 91 %) can be explained from the differences between the scores of the four sub-skills and the total score, and this indicates the effect of the treatment on the experimental group. So the first hypothesis was validated.

Hypothesis (2):

The second hypothesis is: "There is a statistically significant difference between the mean scores of the experimental group in the pre and post creative reading test, in favor of the post results." For validating this hypothesis, the mean scores of the experimental group in the pre and post administrations were compared and t-values for paired samples were calculated as illustrated in table (4.2):

Table (4.2) t-values of the experimental group pre and post creative reading skills test results

N = 32

	Pre test		Post test		t-values	η^2
	Mean	Std. Deviation	Mean	Std. Deviation		
Fluency	6.89	2.65	13.73	1.03	**15.35	0.88
Flexibility	3.70	1.78	9.19	1.15	15.31**	0.88
Originality	1.94	1.50	24.41	2.05	**51.08	0.99
Elaboration	2.47	0.57	4.16	0.81	11.11**	0.80
Total	15.00	3.86	51.48	2.90	50.82**	0.99

** (0.01) level of significance

Table (4.2) indicates that there are statistically significant differences at (0.01) between the means of scores of the pre and post creative reading skills test results of the experimental group in favor of the post-test results.

The values of η^2 (0.88، 0.88، 0.99، 0.80، 0.99) showed that (88،% 88 ،%99%، 80% ،0.99%) can be explained from the differences between the scores of the four sub-skills and the total one, and this indicates the effect of the treatment on the experimental group. So the second hypothesis was validated.

Hypothesis (3):

The Third hypothesis is: "There is not a statistically significant difference between the mean scores of the experimental group in the post administration and the follow-up administration of the creative reading test."

Table (4.3) Differences between the means of scores of the experimental group in the post and follow up creative reading skills results

N=32

	Post measurement		Follow up measurement		t-values	η^2
	Mean	Std. Deviation	Mean	Std. Deviation		
Fluency	13.73	1.03	13.75	1.06	0.57	0.57
Flexibility	9.19	1.15	9.22	1.14	1.44	0.16
Originality	24.41	2.05	24.42	1.97	0.33	0.75
Elaboration	4.16	0.81	4.19	0.77	1.44	0.16
Total	51.48	2.90	51.58	2.79	1.65	0.11

** (0.01) level of significance

Table (4.3) shows that there are not statistically significant differences between the means of scores of the post and follow-up administrations of the creative reading test of the experimental group in the scores of the four sub-skills and the total score. So, this hypothesis was validated.

Discussion of Findings:

The pre-test means of scores indicated that both the experimental and control groups were homogeneous. There was no significant differences between the means of scores of the experimental and control groups in EFL creative reading skills test. The major purpose of this study was to investigate whether the use of the cognitive thinking strategy has any effect on the promotion of the participants' creative reading skills. The results of the present study indicated that the cognitive thinking strategy positively and significantly influenced their creative reading skills.

The researcher sees that cognitive thinking is having new, unusual ideas and innovative thoughts, ability to put things together in a new image. It means to think in a different way that is like thinking outside the box. Cognitive thinking calls for taking risks and stepping past what we know. Thus, creativity is a mental activity that leads to original production, and includes new solutions to ideas, problems and curricula. Finally, cognitive thinking can be described as a process of sensing difficulties, gaps in information, missing elements, something oblique, making new guesses and formulating hypotheses about these deficiencies; evaluating and testing these guesses and hypotheses; revising and retesting them and finally communicating the results.

The post-test results revealed that there was a statistically significant differences between the means of scores of the experimental and control groups in the EFL creative reading skills. Therefore, it can be argued that the cognitive thinking strategy proved to be statistically and educationally significant in developing the participants' creative reading fluency, flexibility, originality and elaboration skills.

The participants fluency skill developed as they were able to derive the objectives of a reading text, generate new words from the spelling of given words, generate new words related semantically to given words, suggest new titles to the text, relate between the elements of the reading text and others and suggest other alternatives of some words in the reading text.

Their flexibility skill also developed as they were able to put the incidents of a story in the correct order as these incidents happened, produce questions about information not mentioned directly in the text, give evidences about the information of the reading text, deduce characteristics of objects and expressing opinions, predict what will happen next, view the text from another aspect, use the reading text information in situations and realize the missing elements in the reading text.

The participants originality skills developed as they were able to summarize the idea of the reading text, reformulate the reading text in another way, predict the results of a specific situation, suggest ideas not mentioned in the reading text, give unusual reasons for an incident, give new strange names to the characters of the story and predict unusual endings to the story.

Their elaboration skills developed as they were able to write a paragraph using a required list of words, add adjectives or figures of speech to an existing passage, add story details to a basic story map, add setting details to enhance a literary work and compose an illustrated character study.

Conclusion:

- The findings of the present study confirmed the effect of the cognitive thinking as a strategy for enhancing second stage students' EFL creative reading skills.
- The cognitive thinking strategy can be used to provide supplementary instruction to help the learners overcome the problems of creative reading.
- There is a need for a communicative and collaborative environment, which is based on interaction between the teacher and students and among peers for giving students a sense of confidence.
- Considering students' individual differences and learning styles while using Cognitive Thinking Strategy, is essential.

Recommendations of the present study:

Based on the results of the present study and the delivered conclusion, the following recommendations should be taken into consideration:

1- Teachers should emphasize the development of the students' creative reading skills in early educational stages in order to develop throughout the following stages to prevent any possible creative reading difficulties the students may face.

2- It is necessary to devote more time in English language teaching to teaching creative reading skills.

3- Lecturers of English should teach the students how to use the cognitive thinking in reading texts in order to help them overcome any difficulties they face.

4- The major implication of the present study for EFL instructors is to integrate cognitive thinking in their classes on a regular basis as

classroom courses. In so doing, teachers are in a better position to not only enhance learners' creative reading skills but also monitor their weaknesses in reasoning, enriching the curriculum with cognitive thinking that enhances students' creative reading skills.

5- Supplying schools with different materials for employing cognitive thinking strategy like short stories is really needed.
6- Preparing and distributing instructional materials that increase teachers' awareness concerning the significance of cognitive thinking and necessity of its training for promoting students' creative reading skills should be targeted.
7- Conducting workshops that aim at familiarizing teachers to how to apply cognitive thinking in their classes should be considered.
8- Adapting modern classroom activities that enhance students' participation and interaction should be considered.
9- Students should be provided with authentic and real learning situations that might help in developing their creative reading skills.

Suggestions for further studies:

The following areas of research can be suggested for further studies:

1- Using cognitive thinking strategies with students' reading comprehension.
2- Using cognitive thinking strategies with students' writing, speaking or listening skills.
3- Using cognitive thinking strategies with EFL language skills among prep school students.
4- Using higher Order thinking strategies with creative reading skills.

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ملخـــص الدراســـة

إستراتيجية التفكير المعرفي لتنمية مهارات القراءة الإبداعية لطلاب المرحلة الثانوية في اللغة الإنجليزية

استهدفت الدراسه الحاليه البحث في تنميه مهارات القراءه الابداعيه باستخدام استراتيجيه التفكير المعرفي لدي طلاب الصف الثاني الثانوي حيث شارك في البحث ٦٤ طالبه قسموا الي ٣٢ كمجموعه ضابطه و ٣٢ كمجموعه تجريبيه من مدرسه الحريه الثانويه للبنات محافظه الشرقيه. طبق اختبار القراءه الابداعيه علي الطالبات قبليا و بعديا. أشارت نتائج الدراسه الي تحسن مستوي الطلاب المشاركين في المجموعه التجريبيه بعد دراستهم لمهارات القراءه الابداعيه.