



كلية التربية

كلية معتمدة من الهيئة القومية لضمان جودة التعليم

إدارة: البحوث والنشر العلمي (المجلة العلمية)

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**The Effect of Using A program Based on Some Critical
Thinking Strategies on Developing Reading Skills of
1st Year English Majors at Minia Faculty of Education**

By

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ABSTRACT

The present study was conducted to investigate the effect of using a critical thinking strategies based program on developing reading skills of first year English majors at the Faculty of Education. A pre-post control group research design was used to achieve the research objectives. Sixty students were randomly divided into two groups: the treatment and the non treatment groups. The treatment group students were trained in a critical thinking strategies based program to enhance their reading and skills. The content used was based on some selected reading texts. The non treatment group students were taught the same reading texts through the conventional method of teaching. Tools of the study included needs assessment questionnaires to determine the sub skills of reading that were most needed by first year English majors and the difficulties they faced when studying the reading course, a training program in reading skills, a pre-post test in Reading comprehension, the English Proficiency Exam for Egypt (EPEE). Analysis of data obtained by students (using t-test) revealed that the treatment group significantly surpassed the non treatment one in the post performance of the Reading test. Discussion of these findings, recommendations and suggestions for further research are presented.

Key words: Reading Comprehension- critical thinking strategies

ملخص البحث

حاولت الدراسة الحالية معرفه اثر تدرب طلاب الفرقة الأولى شعبه اللغة الانجليزية بكلية التربية جامعة المنيا على مهارات القراءة على أدائهم في هذه المهارات من خلال برنامج تدريبي قائم على بعض استراتيجيات التفكير الناقد. استخدمت الدراسة المنهج شبه التجريبي لتحقيق أهداف البحث. اشترك في التدريب ستون طالبا وطالبة تم تقسيمهم إلى مجموعتين ضابطة وتجريبية بواقع ثلاثون طالبا وطالبة في كل مجموعة. تم تدريب المجموعة التجريبية باستخدام البرنامج التدريبي القائم على استراتيجيات التفكير الناقد. بينما استخدمت الطريقة المعتادة في تدريب أفراد المجموعة الضابطة. واشتملت أدوات الدراسة على استبيانات واختبار في الفهم القرائي واختبار الكفاءة اللغوية والبرنامج التدريبي. وقد تبين من تحليل النتائج تفوق المجموعة التجريبية على المجموعة الضابطة في اختبار القراءة البعدى. وقد تم عرض النتائج ومناقشتها. كما اشتملت الدراسة على أهم التوصيات والمقترحات لبحوث مستقبلية.

Introduction:

Critical thinking is not an easy concept to define as it can mean quite different things to different people in different contexts and cultures. Despite this fact, Halvorsen (2005) believes that ESL/ EFL instructors can greatly benefit both themselves and their students by attempting to understand and incorporate some of its key elements into their classrooms.

Critical thinking is cited as an important issue in education today. Attention is focused on good thinking as an important element of life success (Huitt, 1998; Thomas and Smoot, 1994). “Perhaps most importantly in today’s information age, thinking skills are viewed as crucial for educated persons to cope with a rapidly changing world. Many educators believe that specific knowledge will not be as important to tomorrow’s workers and citizens as the ability to learn and make sense of new information” (Gough, 1991).

The ability to engage in careful, reflective thought is viewed in education as paramount. Teaching students to become skilled thinkers is a goal of education. Students must be able to acquire and process information since the world is changing so quickly. Some studies clarify that students exhibit an insufficient level of skill in critical or creative thinking. In his review of research on critical thinking, Norris (1985) surmises that students’ critical thinking abilities are not widespread. Most students do not score well on tests that measure ability to recognize assumptions, evaluate controversy, and scrutinize inferences.

Thus, students' performances on measures of higher-order thinking ability reveal a critical need for students to develop the skills and attitudes of effective thinking. Furthermore, another reason that supports the need for thinking skills instruction is the fact that educators appear to be in general agreement that it is possible to increase students' creative and critical thinking capacities through instruction and practice. Presseisen (1986) asserts that the basic premise is that students can learn to think better if schools teach them how to think. Adu-Febiri (2002) agrees that thinking can be learned.

For a variety of reasons, (Fok, 2002) mentions that some teachers believe that critical thinking cannot be taught, and some think that it does not need to be taught deliberately explicitly. Although some teachers support the idea of teaching students critical thinking abilities, they feel that they don't have the capacity or confidence to do it. In addition, contextual constraints such as those imposed by exam-oriented cultures and the heavy emphasis placed on the rote learning of facts and information to excel on tests may exert a harmful effect on the students' overall development including their development of creative and critical thinking abilities

Students are not likely to develop these complex skills or to improve their critical thinking abilities if educators fail to establish definite expectations and measure those expectations with some type of assessment. Assessments (e.g. , tests, demonstrations, exercises, panel discussions) that target higher-level thinking skills could more than likely lead teachers to teach content, according to Redfield and Rousseau

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(1981), to perform at those levels. Students not only need to know an enormous amount of facts, concepts, and principles, they also must be able to effectively think about this knowledge in a variety of increasingly, complex ways. If test items are used that only require lower-level thinking skills such as knowledge and comprehension, students will not develop and use their higher-order skills even if instructional methods that employ these skills are implemented. Individuals do not do what is expected, only what is inspected.

Carr (1990) states that though critical thinking has been listed as core area to be cultivated and assessed in higher education for decades, critical thinking instruction still needs to be carried out more systematically and explicitly in college classrooms so that the students' employability can be enhanced.

Don and Bob (2001) declare that educators are generally in agreement that students need to increase their problem solving and critical thinking skills. They need more than the ability to be better observers, and must know how to apply everything they already know and feel, to evaluate their own thinking, and especially to change their behavior as a result of thinking critically.

Swot (2008) points out that critical thinking is important at the university. In general students who develop critical thinking skills are more able to: achieve better marks. become less dependent on teachers and text books ,create knowledge, challenge and change the structures in society which only benefit particular groups.

Van Gelder (2005:42) points out that human beings are not critical by nature- that " critical thinking is a highly contrived activity". Halx and Reybold (2005) identify further noteworthy considerations; one is the fact that instructors themselves may tend to resist critical thinking because they fear touching on controversial subjects as it may negatively influence their evaluations or even their potential for tenure. Another challenge is that some faculty are concerned with the development of critical thinking skills simply requires more time and energy than when they'd normally have to expand.

Regardless of these challenges, Astleitner (2002) points out that it is truly imperative that educational institutions improve the status of critical thinking skills in learners because critical thinking skills correlate so strongly with achievement. Nosich (2014: 67) reinforces that idea and identifies critical thinking as central to all genuine learning. He states that for lifelong learning to occur, it is necessary to teach for critical thinking and to teach it in a way that is " all pervasive in classes, systematic within a discipline, and focused always on what is central and most transferable"

1. Critical Thinking and Reading:

Fitzpatrick (1994) asserts that "critical thinking is not encouraged or expected in many classrooms today". Students must not only pick up new vocabulary items and understand grammatical points, they must be able to question the text and evaluate the idea expressed. This means that teachers should ensure that their students learn to read critically. They must be aware of how one begins to read and how one becomes an effective and critical reader.

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In a research conducted on proficient readers, seven common strategies that good readers use to comprehend text were identified:

- 1- Making connections to text, the world, and oneself,
- 2- Questioning as one reads.
- 3- Using mental imagery to make a movie in one's mind,
- 4- Determining importance.
- 5- Inferring
- 6- Retelling and synthesized , and
- 7- Employing fix – up strategies to correct and monitor meaning.

According to classroom' teachers of Poway unified school district (2008), the following critical thinking strategies are suggested :

1 - Summarizing :-

The ability to take a piece of text and sum it up in a sentence or short paragraph. This helps readers to better understand what they read.

2-Visualizing :-

As students read they create pictures and mental images in their minds. These images and pictures allow theM to clarify and make meaning of the text.

3-Questioning :-

Questioning is a strategy emphasizing student - generated questions as opposed to teacher – generated questions as a way to support reader engagement with the text before , during and after reading. Questioning promotes critical thinking skills – depending on how a question is asked, the student may use various critical thinking skills such as interpretation, analysis and recognition of assumption to form a conclusion

4. Inference:-

An inference is the ability to connect what is in the text with what is in the mind to create an educated guess .

5-Synthesis:-

Synthesizing involves merging new information with existing knowledge to create an original idea, see a new perspective, or form a new line of thinking to achieve insight.

6-Predicting :-

Predicting means to make a guess about what happens next . We anticipate how our world will be , by understanding and interpreting the evidence presented to us.

7-Determining Importance :-

Readers of nonfiction have to decide and remember what is important in the text they read if they are going to learn anything from them".

Background of the problem

Students joining Faculty of Education are expected to become a part of the academic community entering into the teaching profession. However, many students join college unable to meet the expectations of the academic community. The inability of many students to read may be the most important problem. Not only do students have difficulty selecting author's major points of view, but they are also unable to "synthesize and restructure" ideas. Besides, their lack of ability is a lack of interest in reading.

As a teacher of English, the researcher found that students mostly lack the critical thinking skills which are considered necessary for the development of reading, skills that are consequently needed in higher education.

In an attempt to shed light on the actual practices used in teaching reading to first year English majors at Faculty of Education , Minia university; and to verify the problem, the researcher developed questionnaires that were directed to seven (EFL) and (TEFL) staff members to identify the major reading skills that are mostly needed by first year English majors. and-major critical thinking strategies that are important to develop reading skills. To further clarify the problem, the researcher could obtain students' scores in reading tests. Students' scores showed clearly their low level in reading.

This state of affairs was more emphasized by reviewing the literature. Most authors and research workers such as (Abd Allah 2004 and Mohamed 2009) emphasize that traditional language programs regarding reading, writing, and thinking skills are a means of language study more than as a means of obtaining information and communicating ideas.

- Furthermore, the researcher conducted an informal interview with seven (TEFL) staff members who assured that students lack reading skills and they are in bad need of being trained to use them better.

EFL staff members specialized in teaching the reading course were informally interviewed. They asserted that reading skills, though needed by college students, are rarely practiced in connection with critical thinking skills. Students only answer direct questions and write their answers.

This led the researcher to try to investigate the effect of using a program based on some critical thinking strategies on developing reading skills of first year English Majors at Minia University, Faculty of Education.

2. Statement of the Problem:

English majors' need for developing reading and skills was an incentive for initiating such a study . In normal classes, students are not offered the opportunities to practice these skills especially in the reading and writing courses which mainly aimed at developing these skills .

Reviewing the literature on the use of critical thinking strategies programs in education and on the importance of these strategies in higher education and particularly with pre service teachers motivated the researcher to try to find out the effect of using a critical thinking strategies program on enhancing reading skills of first year English majors at the Faculty of Education.

Objective of The Study:

- developing the reading skills of 1St year English Majors.

Question of the study

The problem of the study was stated in the following main question:

*How effective would a program based on some critical thinking strategies be in developing reading skills of first year English majors at the Faculty of Education?.

Hypothesis of The Study:

The following hypothesis was tested

- There would be a statistically significant difference (favoring the treatment group) between means of scores obtained by the treatment group and the non treatment group on the post test of reading skills

Significance of the Study:

Conventional methods of teaching reading skills are observed to be of limited value in producing good readers. Therefore, the present study was conducted to investigate the effect of using a critical thinking strategies based program on developing reading skills of 1st year English majors at the Faculty of Education.

The significance of the present study is represented in the following:

- * Helping students strengthen their linguistic skills by helping them build learning strategies and promote their self-confidence.

*** Developing students' thinking skills .**

- Departing from the traditional over-dependence upon textbooks.
- providing students with an invaluable chance to surpass the limit of textbook-bound knowledge to discover thousands of other sources.
- * course designers and instructors of reading will find it useful and effective in the programs of teacher preparation as critical thinking strategies provide exciting ways in all fields of learning and teaching.

Therefore, the present study will be undertaken with the purpose of increasing the level of performance of students' reading skills.

Delimitations of The Study:

The study will be delimited to the following

1-Critical thinking strategies: only the following strategies were used:

- Summarizing, Questioning, Inferring, Synthesizing, Visualizing, Predicting. Distinguishing fact from opinion, Comparing and contrasting, and Cause and effect.

2-Reading Skills : (As a result of administering the questionnaire only the following skills were used:

- *determining the main idea of the text
- * Identifying the supporting details of the main idea

* Making inferences .

* Identifying facts and opinions in a reading text .

*Identifying cause effect reasoning .

*Recognizing effect to cause reasoning

3- Only sixty students of first year English majors participated in the study.

Definition of Terms:

Critical Thinking:

Moore (2013) presents seven definitions , namely critical thinking: (i) as judgment; (ii) as skepticism; (iii) as a simple originality; (iv) as sensitive readings; (v) as rationality; (vi) as an activist engagement with knowledge; and (vii) as self-reflexivity. This multiplicity of meanings is thought to have important implications for university teaching and learning. In the present study, the researcher adopted this definition.

Reading:

According to Mikulecky (2008) "Reading is a conscious and unconscious thinking process. The reader applies many strategies to reconstruct the meaning that the author is assumed to have intended. The reader does this by comparing information in the text to his or her background knowledge and prior experience. In the present study, the researcher adopted the definition of Mikulecky (2008)

The oretical Background and Related Studies

Everyone would agree that a primary, yet insufficiently met goal of learning is to enable students to think critically. In layperson's terms, critical thinking consists of seeing both sides of an issue, being open to new evidence that disconfirms ideas, reasoning dispassionately, demanding that claims be backed by evidence, deducing and inferring conclusions from available facts, solving problems, and so forth.

In a paper presented by [Bailin](#) , [Case](#) , [Coombs](#) & [Daniels](#) (2010) , they set out that critical thinking is a normative enterprise in which, to a greater or lesser degree, we apply appropriate criteria and standards to what we or others say, do, or write.

Critical thinking includes the component skills of analyzing arguments, making inferences using inductive or deductive reasoning, judging or evaluating, and making decisions or solving problems. Lai (2011) mentions that critical thinking involves both cognitive skills and dispositions. These dispositions, which can be seen as attitudes or habits of mind, include open and fair-mindedness, inquisitiveness, flexibility, a propensity to seek reason, a desire to be well-informed, and a respect for and willingness to entertain diverse viewpoints. There are both general- and domain-specific aspects of critical thinking.

Elder and Paul (2006:4) clarify that everyone thinks; it is our nature to do so. But much of our thinking, left to itself, is biased, distorted, partial, uninformed or down-right prejudiced. Yet, the quality of our life and that of what we produce, make, or build depends precisely on the quality of our thought.

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According to Facione (1990:10), a critical thinker is habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, clear about issues, orderly in complex matters, diligent in seeking relevant information, focused in inquiry, and persistent in seeking results which are as precise as the subject and the circumstances of inquiry permit. Although developing the various characteristics of a critical thinker can appear overwhelming and unattainable, the skills can be learned. Critical thinking skill is exemplified by asking questions about alternative possibilities in order to reliably achieve some **objective**. Alternative possibilities are represented by mental models. A process of questioning mental models is adopted because of its reliability for achieving the purposes of the participants within the available time.

Critical thinking requires approaching a subject from multiple angles. The word "critical" suggests that one should come to the topic with heightened awareness of fallacies, missing information and contradictions. One should also be aware of assumptions and generalizations that have been made about the topic in the past. As a writer, when you use critical thinking, you enable yourself to create new knowledge rather than simply reporting on what already exists. (Archer, 2017)

Birjandi & Bagherkazemi, (2010) highlights that critical thinkers are those who ,

- have a strong intention to recognize the importance of good thinking;

- identify problems and focus on relevant topics and issues;
- distinguish between valid and invalid inferences;
- understand the difference between logical reasoning and rationalizing;
- anticipate the consequences of alternative actions;
- accurately explain their decisions;
- consider alternative explanations for any state of affairs;
- determine the truth or falsity of assumptions;
- develop and present reasoned and persuasive arguments;
- distinguish between primary and secondary sources of information;
- differentiate evidence from opinion, common sense, anecdotes.,
- distinguish opinions from facts; draw inferences;
- formulate and ask appropriate questions;

Undeniably, Rezaei, Derakhshan, and Bagherkazemi,(2011) mention that all such qualities are essential to what teachers reveal to students about their particular academic disciplines as well as to how students negotiate problems in everyday life. Surely, if there is one skill that college should hone in students, it is how to apply what they learn in their classes in their everyday life. Sadly, academic settings have put too much emphasis on —what to think rather than —how to think .

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Kennedy et al. (1991) concluded that instructional interventions aimed at improving students' critical thinking skills have generally shown positive results. In a meta-analysis of 117 empirical studies examining the impact of instructional interventions on students' critical thinking skills and dispositions, Abrami et al. (2008) found that these interventions, in general, have a positive impact, with a mean effect size of 0.34.

Ghaemi and Taherian (2012) investigate the relationship between EFL teachers' critical thinking and their teaching success. The objective was to find out whether critical thinking ability has any significant relationship with teaching success or not. The researchers asked 70 EFL teachers to answer the "Watson Glazer Critical Thinking Questionnaire". Besides, their students were asked to evaluate their teachers' performance via answering a questionnaire called the "Characteristics of Successful EFL Teachers". The results showed that there is a significant relationship between EFL teachers' critical thinking and their teaching success.

Marzano (1991:521) suggests that "writing used as a means to restructure knowledge, improves higher-order thinking and in this context, writing may provide opportunity for students to think through arguments and use higher-order thinking skills to respond to complex problems". Thus, among language skills, 'writing' is the most important one in relation to critical thinking and there is a need for further research.

[DeWaeltsche¹](#) (2015) explores the viability of higher-level questioning in student-centered activities to elevate critical thinking and increase student engagement among English majors. Participants pose and respond to higher-level questions in structured, small-group conversation activities. Findings reveal that cultural and institutional factors, as well as limitations in English language proficiency, can impact participation in student-centered, critical thinking activities.

Page (1998) reports on a teaching experiment involving instructors and students. These instructors helped their students understand better their course contents and develop higher order thinking abilities by including reading and discussion of literary texts in their courses. They found that the technique helped students develop such thinking skills as analysis, synthesis, and evaluation.

Tung and Chang (2009) investigate the efficacy of developing critical thinking through literature reading. A few strategies are incorporated into the course design: reading comprehension pop quizzes, learning log, group presentations, guided in- class discussion with essay – question reports. Students took the pre-test and the post- test (California Critical Thinking Skills Test) and a self- assessed questionnaire and then conducted an individual interview with the teacher. Results show that literature reading helped those who scored low in the pretest improve their overall critical thinking skills.

Nosratinia, Abbasi and Zaker (2015) conduct a study to investigate the relationship among learners' critical thinking ability, autonomy, and the choice of vocabulary learning strategies. The results revealed significant relationship between learners' autonomy and their critical thinking ability

Material and Method

The present study followed a pre-post control group design. A treatment group and a non treatment group were exposed to pre – post means of getting data. The treatment group only was instructed and trained through a program based on some critical thinking strategies to develop reading skills.

Subjects of the study:

1-The Treatment Group: Thirty male and female students were randomly chosen. They were instructed and trained in some critical thinking strategies using a program designed by the researcher to develop reading skills. This was performed through the "reading course" which is normally assigned to be taught during the first semester.

2-The Non Treatment Group: Subjects of the non Treatment group (30 male and female students) followed the conventional procedure of teaching in the reading course. They were not exposed to training through the prepared program.

3- The Instructor: The researcher herself taught the Treatment group and worked as an assistant for the other instructor (a lecturer at the Faculty of Arts) who taught the non Treatment group .

Variables of the Study:

1- The Independent Variable:

Training first year English Majors through using a program based on some critical thinking strategies for developing reading skills.

1- The Dependent Variable:

1- level of performance in some reading skills.

111- The Control Variables:

1- language proficiency 2- years of studying English

3- sex 4- age

Tools of the Study:

1- Two questionnaires were developed by the researcher:

- a- The first one was to identify the main reading skills that are most needed by 1st year English Majors.(a needs assessment questionnaire)
- b-The second one was to identify the main critical thinking strategies that might develop the reading skills.

2- A Reading Test.

A- Objectives of the Test:

- 1- To assess first year English Majors' reading skills.
- 2- To ensure equality of the treatment and the non treatment groups before carrying the program.
- 3-To assess the degree of improvement of the treatment and the non treatment groups' performance.

B- Construction of the Test:

It consists of (19) questions representing the most important and the most emphasized objectives of the program. The test was designed according to the table of specifications.

C- Item Type:

The items are of the following types:

- 1- Summarizing.
- 2- Multiple choice items .
- 3- Matching .

D- Scoring: One point is given for each test item. The total score of this test is (40) scores.

E- Instructions of the Test:

They are written in English. They are brief, easy to understand and free from any possible ambiguities. They contain information about the purpose of the test, time allowed to complete the test and how to record the answers. An answer sheet was provided.

F- Validity of the Test:

A pilot study was conducted about a month prior to the administration of the program to estimate the validity and the reliability of the test. A group of 30 first year English Majors were selected representing different levels of achievement: high, middle and low. t-value (11.13) is significant at 0.01.

Table (1)

t-value of the highest and the lowest quarters in the Reading Test

Test	Total Score	High Group N=10		Low Group N=10		Degree of Freedom	t-value
		Mean	SD	Mean	SD		
Reading	40	16.413	1.832	26.821	4.157	18	11.13*

***Significant at 0.01**

a- Face Validity of the Test:

The reading test was constructed on the basis of the specific objectives included in the training program. The test was submitted to a jury of ten qualified and experienced EFL and TEFL specialists. They were requested to judge the linguistic stating of the items, appropriateness and fitness of the items for the participants, applicability, and how far the items measure the program objectives. Their suggestions were taken into consideration. They confirmed the suitability and applicability of the test.

b- Internal Consistency:

The validity of the test was determined by internal consistency. The internal consistency for each skill was calculated by using (Pearson Correlation) formula. Correlation coefficient ranged from (0.21) to (0.67). Table (2) shows the internal consistency of the Reading Test.

Table (2)

The Internal Consistency of the Reading Skills Test

Item No.	Internal Consistency	Item No.	Internal Consistency	Item No.	Internal Consistency
1	0.43**	8	0.23*	15	0.48**
2	0.44**	9	0.67**	16	0.47**
3	0.33*	10	0.43**	17	0.31*
4	0.36*	11	0.52**		
5	0.45**	12	0.39*		
6	0.66**	13	0.21*		
7	0.30*	14	0.58**		

** Correlation is significant at 0.01 level (two tailed)

* Correlation is significant at 0.05 level (two tailed)

G- The Reliability of the Test:

The test was administered to thirty first year English Majors. The data obtained was computed to calculate the reliability coefficient. It is (0.585). The reliability coefficient of the test score was determined by the test – retest method. Gronlund (1981) reported that the reliability coefficient of the classroom tests typically ranges between (0.60 -0.80) to be considered useful. Thus the reliability coefficient of this test is considered within the acceptable range. See table (3) below.

Table (3)

Correlation Coefficient Between the Test and Retest of Reading

Test	Test		Re-Test		Person cor.	Significance
Reading Test	Mean	SD	Mean	SD	.585*	0.000
	22.24	5.48	20.93	4.44		

* Correlation is significant at 0.05 level (two tailed)

Testing Time:

During piloting the test, the researcher calculated time taken by each student finishing the test and the average was found to be two hours.

Item Analysis:

a- Item Difficulty:

Responses to individual items were analyzed to determine item difficulty index of this test. The difficulty index each item it ranged from 0.30 to 0.75. Hence, the difficulty index of the items of this test is acceptable. Gronlund (1981) mentioned that items correctly answered by at least 92% of the students (excessively easy) or those answered correctly by less than 30% of the group (too difficult) should be omitted as they do not contribute significantly to the measurement function of the test.

b- Item Discrimination Power:

Item Discrimination was calculated to determine how well each item discriminates between high and low achievers. To achieve this purpose, the researcher separated the highest and the lowest on the test. The discriminating items are those answered correctly by more of the

higher group than of the lower group. Gronlund (1981) stated that "an item discriminates in a positive direction if more students in the upper group than the lower group get the item right". In addition to this, t-test was conducted to determine the item discrimination index. The results revealed that there is a discriminating power of the items of the test. Table (4) shows the Item Difficulty and discrimination Power of the reading test.

Table (4)

Item Difficulty and Item Discrimination of the Reading Test

No.	Diff Index	Disc. Power	No.	Diff Index	Disc. Power
1	0.48	0.25	10	0.35	0.23
2	0.49	0.25	11	0.80	0.26
3	0.70	0.21	12	0.38	0.23
4	0.74	0.19	13	0.65	0.23
5	0.35	0.23	14	0.48	0.25
6	0.57	0.24	15	0.63	0.23
7	0.43	0.24	16	0.45	0.25
8	0.56	0.24	17	0.46	0.25
9	0.30	0.21			

The Control Variables:

To achieve homogeneity and equality of the two groups, the researcher controlled the following variables:

Language proficiency level:

The English proficiency test was developed by Transparent Language. (TLI@tRarent.com).

Objectives of the Test:

- 1- To assess the students' level of proficiency in English.
- 2- To ensure initial equivalence of the treatment and the non treatment Groups.

Construction of the test:

The test consists of 50 items. It is divided into four parts:

- Grammar (15 items) - Structure (15 items).
- Structure and written expressions (10 items)
- Reading Comprehension (10 items)

The listening part was not administered as it was not available to the researcher.

Scoring of the test:

The score is simply the total number of correctly marked answers. One point is given for each test item. The total score of this test is (50).

The validity of the test:

The validity of the test was determined by computing internal consistency of each item using (Pearson correlation formula). Correlation coefficient ranged from 0.38 to 0.84.

Table (5)

Internal Consistency of The Language Proficiency Test Items

No. of Item	Corr.						
1	0.84	14	0.84**	27	0.80**	40	0.84**
2	0.84**	15	0.84**	28	0.84**	41	0.38*
3	0.78**	16	0.82**	29	0.83**	42	0.80**
4	0.78**	17	0.81**	30	0.76**	43	0.81**
5	0.78**	18	0.78**	31	0.67**	44	0.85**
6	0.80**	19	0.76**	32	0.75**	45	0.77**
7	0.78**	20	0.78**	33	0.77**	46	0.76**
8	0.79**	21	0.66**	34	0.87**	47	0.80**
9	0.76**	22	0.65**	35	0.74**	48	0.82**
10	0.79**	23	0.75**	36	0.80**	49	0.78**
11	0.84**	24	0.83**	37	0.80**	50	0.76**
12	0.78**	25	0.80**	38	0.71**		
13	0.80**	26	0.80**	39	0.77**		

- **Correlation is significant at 0.01 level.
- *Correlation is significant at 0.05 level.

Reliability of the Test:

The reliability of the test was calculated. The test was administered to 1st year English majors. The data obtained was computed to calculate the reliability coefficient. The r-value of the test re-test (0.87) is not significant.

Table (6)

r-value of Scores obtained in the language proficiency test

Variable	Test		Re- Test		r-value	P-value
	Mean	SD	Mean	SD		
Proficiency	45.10	10.48	45.03	8.02	0.87**	0.000

Not Significant at 0.05 level.

2- Years of Studying English:

Students in both groups Studied English for 12 years, from primary one till they joined the university.

3- Age:

The age of first year English majors ranged between 18 and 19 years old with the same number in each group. Table (7) below shows no significant difference between means of scores of the two groups' age as t-value (0.41) is not significant at 0.05 level.

Table (7)

t-value of the treatment and the non treatment Groups' age

Variable	Treatment		Non- Treatment		DF	t-value	P-value
	Mean	SD	Mean	SD			
Age	18.60	0.50	18.57	0.50	58	0.41*	0.683

*Not significant at 0.05 level

Gender:

The participants were of both sexes. Each group had (10) males and (20) females.

Pre-testing

1- Pre-testing of the Reading Skills Test:

Comparison of the mean scores of both the treatment and the non treatment groups on the reading skills test show that t-value (0.61) is not significant at 0.05 level. See Table (8) below.

Table (8)

t-value of Scores Obtained on the Pre Reading Test of Both the Treatment and the non Treatment Groups

Test	Total Score	Treatment Group(30)		Non Treatment Group (30)		DF	t-value	Sig.
		Mean	SD	Mean	SD			
Reading	40	21.935	6.057	21.080	4.831	58	0.61*	0.541

* Not Significant at 0.01 level.

Procedure followed in teaching the treatment group:

- 1- The instructor began the training program by acquainting the participants with the objectives of the program.
- 2- Critical thinking strategies were displayed and explained one by one.
- 3- Thirty students admired the idea of the program and decided to participate.
- 4- Each lesson dealt with a different critical thinking strategy (its definition, skills and sub skills, training exercises were presented and practiced.

5- Formative and summative evaluation were presented at the end of each lesson and unit.

6- Students were asked to prepare a portfolio for the whole course including comments on the program and on their performance.

Procedure followed in teaching the non treatment group:

- Another instructor taught the non treatment group following the conventional method of teaching reading.
- Students were required to read the text and answer the questions that follow.

Findings and Discussion

Findings:

The hypothesis of the study predicted that there would be a statistical significant difference, favoring the treatment group, between means of scores obtained by the participants of the treatment and the non-treatment groups in the post reading test .

Analysis of data obtained using t-test shows that the treatment group achieved a higher degree of improvement than the non-treatment group on the reading test since t-value (14.66) of the post test is significant at (0.01) level and beyond and thus the first hypothesis is confirmed. See Table (10) below. .

Table (10)

t-value of Scores Obtained on the Post Reading Skills Test of Both the Treatment and the Non-Treatment Groups

Test	Total Score	Treatment Group(30)		Non Treatment Group (30)		Degree Of Freedom	t-value	Cohen's d	Eta Squared
		Mean	SD	Mean	SD				
Reading	40	36.51	2.73	21.00	5.22	58	14.66 **	5.35 (big)	0.88

****Significant at 0.01 level**

To ensure the effect of the critical thinking strategies based program on reading performance of the two groups, Eta- Squared formula is used. As shown in table (11) Eta-Squared value (0.87) is highly significant. Nassar (2006) mentions that when Eta-Squared value (η^2) is more than 0.6 it means that the significance is high.

Table (11)

t-test results of the Pre-Post Test of the Reading Skills of the Treatment Group (Number of participants=30)

Test	Score	Pre Mean	Post Mean	Mean difference	Std Error	DF	Cohen's D	Eta Squared
Reading	40	21.	36.52	14.58	1.07	29	5.2 big	.87

*Significant at 0.05 level

Discussion:

The present study was conducted to investigate the effect of some critical thinking strategies based program on enhancing reading skills of first year English majors at the Faculty of Education – Minia University. The participants were introduced to the different skills through implementing the critical thinking strategies program.

Results of the present study are encouraging and promising as they show that there are statistically significant differences between the means of the participants' scores on the pre-post tests in favor of the post applications. This indicates that the participants' reading skills have been developed.

The participants' scores on the pre-tests were unsatisfactory. Before implementing the program, their performance showed that they are in bad need of being trained on the skills of reading. Consequently, training them through the critical thinking strategies based program gave them enough opportunity to fill the gap in their knowledge of the target skills and to score higher on the post test.

To support the result in terms of the study hypothesis that proves the impact of teaching critical thinking strategies on reading comprehension, it is necessary to state the views of some cognitive experts regarding this variable. Some of the mental skills employed in reading comprehension, as Celce-Murcia (2001) quotes Grabe (1991), are inference, synthesis, analysis, and evaluation which are what experts include as being at the very core of critical thinking. "As to the cognitive skills here is what experts include as being at the very core of critical thinking : interpretation, analysis, evaluation, inference, explanation, and self- regulation."(Facione, 1992, p.4)

In this regard, taking the definition of reading comprehension by Durkin (1993), to mean "intentional thinking during which meaning is constructed through interactions between text and reader", this construction of meaning during reading is "a complex merger of skills, prior knowledge and text mediated by the language skills, motivation and interest of the reader" which, covers the full spectrum of Bloom's taxonomy in critical thinking including knowing facts, understanding concepts, application, analysis, synthesis, and evaluation. Thus the above claim has been crystallized in the significant improvement of the treatment group in reading comprehension. As it can be seen, critical thinking and comprehension both are cognitive abilities having cognitive skills in common so that improving the first can contribute to the improvement of the other—reading comprehension. This supports the purpose of the study that teaching critical thinking strategies has a positive effect on reading comprehension.

As shown earlier, results obtained on the post test of the reading skills revealed that there are significant differences favoring the treatment group. The degree of improvement reflected students' abilities to develop their reading skills. Thus, the hypothesis is confirmed. This result is consistent with the results obtained by Dalton (2008), Englert, et al. (2005:357), Dreyer & Nel (2003:349), Humble (2000:1), Potter & Small (1998:383), Chambless & Chambless (1994:151), Arroyo (1992:1), Shaver & Wise (1990:3), and Aljarf (2012:1-7). They all agreed that critical thinking strategies helped students read deeply; question; engage in divergent thinking; evaluate ideas to decide if they are valid and applicable to their experience; discern fact from opinion and do not accept the printed words at face value.

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The purpose of the study conducted by Dalton (2008) was to evaluate an approach to teaching reading skills. This approach is employed by the researcher to determine its effectiveness in developing such skills. A control and a study groups were used and a series of reading tests was administered to each group. In addition, interviews and focus group were conducted for qualitative data. Results across groups were then compared. Test results indicate a higher level of successful performance in the class exposed to the critical thinking strategies.

Learning reading through the use of the critical thinking strategies showed that these strategies are of much importance and helped the students in the treatment group to develop their reading performance. There were major incentives behind progressing in the post testing of the reading test such as the training program, the students' book, the exercises and the activities included in the program..etc.

In a study by Dreyer & Nel (2003:349), South African college students with low reading ability who received strategic reading instruction in a technology enhanced environment received higher marks on reading comprehension measures than students in the control group.

The study conducted by Al-Hazmi (2006) revealed positive results with regard to promoting students' critical reflection and in the service of EFL teachers' writing. Other positive indications included making a writing class a personal process, that is, a continual critical reflection on the problems posed by the EFL context; a search for meaning; a process of acknowledging students' need to be understood; and a protocol of communicating perceptions.

Observation of students participating in the present study revealed that in the writing class, they were more likely to (a) continually check spelling; (b) be in a constant state of revision and rewriting; (c) make use of "cut and paste" features, presumably to improve the flow and organization of the paper; and (d) make more changes during the draft creation phases of writing.

The participants of the treatment group also produced significantly more words, sentences and paragraphs by using critical thinking strategies than those who did not use these strategies to write, and received higher ratings on a structured rubric. They were overall more critical. The most significant finding of this research was the improvement shown by the participants when they were able to compose essays. Explicit in class instructions about clear statement of an argument or a proposition to ensure effective essays, importance of evidence to support and develop a line of thinking or conclusion and identification of a response to counter arguments added to the positive results obtained by the treatment group.

Students' Reactions to the Program:

To obtain more in-depth information on the implementation of critical thinking strategies in the English reading course from the participants, the researcher conducted an informal interview with the participants after the program is over. The students' responses to the interview questions were carefully recorded and coded by the researcher.

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Responding to the question:” What do you think of the program management and implementation ?” ,all students indicated that the most important factors for them to be motivated to learn English and find the class interesting were the instructor’s teaching techniques, teacher’s enthusiasm, and sense of humor. Additionally, students indicated that using this program in the English reading course was beneficial and helpful for them to learn reading and to exchange opinions and ideas.

The instructor’s Reflections on the Students’ reading:

The negative views about the existing reading course posed a problem to the researcher. Students are generally unmotivated, fail to see the relevance of the program and hate reading. Review of the related literature indicates that designing tasks in which students would be interacting with their peers for a real purpose would be a solution by making English as a Foreign Language (EFL)classrooms more authentic, interactive, meaningful, real, and functional.

Implications:

The significant gains obtained by the participants of the treatment group on post reading test could be attributed to the use of the critical thinking strategies based program which is mainly based on the idea of enhancing some reading skills

The researcher of the present study observed that one of the most notable benefits of critical thinking strategies is the ability of the learners to continue asking questions about a topic that was not clear in the classroom in the first place. Learners usually don’t have the ability to grasp the whole lecture in a traditional class. They have to wait until the next class or schedule a meeting to see their instructor in person for additional clarification.

The students' reflections on the implementation of this program as a whole were moderately to highly positive. In particular, the students showed high satisfaction with the units' arrangement. Using the program was highly appreciated by all the students. It was surprising that the program could moderately stimulate the students' learning motivation for reading. Besides, the use of the activities could possibly enhance the group members' friendships or interpersonal relationships.

As it is strongly believed that using critical thinking strategies is vital for the improvement of language skills, implementing critical thinking strategies in the present study can be a creative inspiration to syllabus and material designers, teachers, students and test developers.

The result of the study can inspire the syllabus and material designers to include critical thinking strategies both in students' text books and in teacher training courses. Learners are in need of text books that invoke their critical thinking and teachers need to be trained to change their attitudes toward students and themselves.

Concerning teachers, as they have an enormous responsibility in the classroom, it is crucially important that instead of being exam- oriented and producing learners who would obtain good results on their exams (Kabilan, 2000), they should be more flexible toward teaching, and they should consider students' attitudes, interests, and abilities encouraging them to use their thinking and express themselves critically.

In the process of observing the implementation of the program ,

the researcher could record , in writing, the following points:

- 1- The inclusion of warm up in the form of puzzles helped to refresh their minds and to attract them to the lessons.
- 2- Irrespective of the differences in their language level, participants could indulge in the activities of the program effectively and enthusiastically and they could learn at their own pace.
- 3- Participants admired the activities and evaluation items very much as they found it a non conventional way of evaluation.
- 4- The immediate feedback given to participants was very stimulating to them.
- 5- Participants could share and exchange ideas with each others and with the instructor.
- 6-Participants could ,to a great extent, achieve the expected objectives of the program embodied in the development of reading, and writing .

After implementing the program, the researcher observed remarkable changes in the performance of the participants whether during the lessons or the unit evaluation. This indicates that the training program was so much effective in improving the students' performance . This also indicates that the training program was well designed to meet the needs of the students and that the objectives, the material presented, the method of teaching used, the numerous and varied activities, the interesting activities used in the program and the type of evaluation, all suit the language level of the students and meet their interests and likeness.

Recommendations:

- 1- The present study focused on the use of critical thinking strategies to develop reading skills. This program is recommended to be used in teaching writing in the pre service teachers' programs.
- 2- There is a need to develop a critical thinking strategies based program to help instructors to achieve the goal of promoting listening and speaking.
- 3- EFL teacher preparation program designers are advised to include a critical reading course to first year English majors' courses.
- 4- EFL teacher preparation program designers are advised to include a critical writing course to first year English majors' course.
- 5- EFL teachers of the prep and secondary schools are advised to help their students to be critical thinkers.

Suggestions for Further Study:

- 1- The present study can be replicated on a larger sample of EFL students.
- 2- Investigating the effect of using a critical thinking based program on developing students' critical listening skills.
- 3- Investigating the effect of using critical thinking strategies on Developing students' problem solving skills.

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