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The Effect of Critical Thinking Strategies on Postgraduate Students' Performance in Reading and Writing

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ABSTRACT

The point of this study was to look into what happens to EFL students' critical thinking when they read and write, as well as how training critical thinking skills affects those skills. To do this, 60 middle school students were put into two groups, one for the trial and one for the control. These groups were made equal using a Nelson test. After that, both groups took a reading comprehension test and a critical thinking assessment test. The same tests were given to both groups as a follow-up. For the reading comprehension test, there was a significant difference between the two groups .On the other hand, for the critical thinking test, there was no significant difference. However, the data show that teaching EFL students critical thinking can help them learn the language better. The study is important for people who plan courses, teach, and students, what they understand. In line with studies that show a link between being able to think critically and being able to speak a language well.

Keywords: *debate; argumentation; critical thought; reading comprehension; writing*

المستخلص

هدفت هذه الدراسة إلى معرفة أثر تدريس مهارات التفكير الناقد على الفهم القرائي والقدرة على الكتابة، وكذلك أثر تطبيق المناظرة على التفكير الناقد لدى متعلمي اللغة الإنجليزية كلغة أجنبية. ولهذا الغرض تم توزيع 60 طالباً من طلاب المرحلة المتوسطة على مجموعتين تجريبية وضابطة بعد تجانسهم من خلال اختبار نيلسون. بعد ذلك، تم إجراء اختبار الفهم القرائي والاختبار القبلي لتقييم التفكير النقدي على المجموعتين. خلال الفصل الدراسي، تلقت المجموعة التجريبية 8 جلسات علاجية باستخدام المناظرة كنشاط في الفصل الدراسي. لمقارنة المجموعتين، تم إعطاؤهم نفس الاختبارات كالاختبار البعدي. وأظهر تحليل البيانات التي تم جمعها وجود فرق كبير بين المجموعتين في اختبار الفهم القرائي، ولكن الفرق في اختبار التفكير الناقد كان غير كبير. ومع ذلك، تشير النتائج إلى أن تدريس مهارات التفكير النقدي في سياق اللغة الإنجليزية كلغة أجنبية يمكن أن يحسن تعلم اللغة. الدراسة لها آثار على مصممي الدورة والمعلمين والطلاب. مصطلحات الفهرس - التفكير النقدي، والمناقشة، والحجج، وفهم القراءة وكتابه ما تم فهمه **(أثر التفكير الناقد على الأداء الأكاديمي لطلبة الدراسات العليا في القراءة والكتابة.** تماشياً مع الدراسات التي تؤكد العلاقة الإيجابية بين القدرة على التفكير الناقد وإتقان اللغة،

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CHAPTER ONE: INTRODUCTION

Problem of the Study

Critical thinking has its roots in the way Socrates taught 2500 years ago. He found that people could not rationally back up their knowledge claims when asked deep questions. Socrates taught us to ask deep questions that get to the heart of our thinking before we believe something (Paul, 1997: 4).

Critical thinking in higher education also includes discussions on critical pedagogy, the purpose and purpose of education in society, curriculum, and topics relating to education that are labeled as "critical." (Williams, 1976, p. 74).

The practice of critical thinking pertains to the significance of cultivating universal reasoning skills, which we aspire for all graduates to possess. This type of inquiry, characterized by discipline and systematicity, is employed for diverse objectives:

-To engage in the exploration of intricate concepts
- To ascertain the reality of matters
- To bring forward and examine challenges and difficulties
- To reveal underlying assumptions, to analyze the notions.
-To differentiate between our knowledge and our lack of knowledge.
- To pursue the logical consequences of our thoughts. (Barnett, 1997: 1)

Plato and Aristotle, among other Greek philosophers, also espoused the notion of critical thinking. They stressed that only a highly educated intellect can delve past surface-level appearances to reveal the genuine essence of things. The notion of critical thinking has garnered much scrutiny in education in recent times (Ibid).

Cultivating critical thinking skills is a fundamental component of education that has long been a focus of numerous educators because it contributes to improved academic achievement. Critical thinking is the disposition to inquire, the forbearance to harbor doubts, the inclination to engage in contemplation, the deliberateness to pronounce, the preparedness to contemplate, the diligence to organize and dispose of, and the abhorrence of any form of deceit (Williams, 1976, p. 74).

INTRODUCTION

Nearly every aspect of human education depends on thinking. It is so clearly that everyone thinks and it is our nature to do so. But much of our thinking, left to itself, is biased, unclear, partial, uneducated or absolute narrow-minded.

Yet the quality of our life and that of what we produce, make, or build depends on the quality of our thought. Two important style of thinking is creative and critical thinking. Scriven (1976) stated: “Critical skills go hand in hand with creative ones”. These skills are considered essential for students (Crane, 1983). Many psychologists and researchers have proposed definitions for the term "critical thinking," which are similar in content. Fischer and Spiker (2000) found that most definitions for the term "critical thinking" include reasoning/logic, judgment, metacognition, reflection, questioning, and mental processes. Jones and his colleagues described that critical thinking is a broad term that describes reasoning in an open-ended manner and with an unlimited number of solutions (Jones, Dougherty, Fantaske, & Hoffman, 1997; Jones, Hoffman, Moore, Ratcliff, Tibbetts, & Click, 1995). It involves constructing a situation and supporting the reasoning that went into a conclusion. Michael Scriven & Richard Paul (1987) pointed out that "Critical thinking is the intellectually disciplined process of actively and skilfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action.

Russell, cited (d'Angelo, 1971, p. 6). In short equation that:

Attitude + Knowledge + Thinking Skills = Intelligent Thinking

It seems that it is very important for students who want to be successful in higher education that must have the Higher studies students need to have the ability to think critically. The concept of critical thinking predates the advent of psychology, but an overall construct of critical thinking theories is based on three perspectives of thought:

(1) the philosophical, (2) the psychological, and (3) the educational (Sternberg, 1986).

The Aims

The present study aims at finding out the effect of critical thinking strategies on postgraduate students' performance in reading and writing.

Hypotheses

It is hypothesized that critical thinking strategies do not have an effect on postgraduate students' reading and writing abilities.

Limits

The present study is limited to:

1- Higher studies EFL students at the colleges of education for women at the University of Baghdad. Non-departmental.
2- New headway academic skills for M.A students . LEVEL 2 Student's Book
3- The academic year 2021-2022 .

Procedures

Developed an assessment to evaluate students' ability to comprehend data, make deductions, and demonstrate aptitude skills. This test can be used as a partial measure of critical thinking. Subsequent examinations will be carried out to improve the validity of this critical thinking assessment, and further aspects of critical thinking must be explored to acquire a dependable and comprehensive measure of critical thinking.

Definition of Basic Terms

Critical thinking refers to a process of logical and reflective thinking aimed at making informed decisions about what to believe or how to act. It involves asking probing questions such as "How can we verify this?" or "Is this applicable universally or only in this specific situation?" It entails adopting a skeptical mindset and questioning assumptions instead of merely memorizing information or unquestioningly accepting what pupils encounter through listening, reading, and writing.

Critical thinking Strategy

Critical thinking is the systematic and rigorous process of actively and proficiently conceptualizing, applying, analyzing, synthesizing, and evaluating knowledge obtained from observation, experience, reflection, reasoning, or communication in order to guide one's beliefs and actions. To summarize, the equation follows: Attitude plus Knowledge plus Thinking Skills equals Intelligent Thinking. The source Angelo (1971: 6) states.

Postgraduate Students':

Classes for postgraduate degrees are more concentrated on a single field of study than classes for undergraduate degrees. It takes an extra one to three years of study to get a master's degree and four to six years to get a graduate degree. Some colleges give bachelor's and master's degrees, while others only give one or the other. There are times when people who have done very well in their chosen areas are given honorary postgraduate degrees. (Rose, 2007:6).

Performance in Reading and Writing :

In pairs, students can read to each other and carry out their plans. They can also do a performance reading of the book, starting with just a few characters and building up to a continuous performance reading of the whole book. This can be done for parents and people in the neighborhood or for other classes at school. For performance reading, put together a set of good textbooks that students can read independently, act out in pairs or small groups, and then show to the class (Ericsson & Lehmann, 2016, p. 98).

CHAPTER TWO:

THEORETICAL BACKGROUND

Philosophical and psychological ideas are at the heart of critical thinking. A third Critical Thinking strand in education has also been pointed out. Different areas of study have come up with different ways to define critical thinking from

various points of view; According to this definition, critical thinking is a certain kind of thought that meets specific criteria or standards for being adequate and correct. In the past, the philosophical method has mostly been about using formal rules of logic. Vogler (2021:80)

There are three approaches: the philosophical, the cognitive-psychological, and the training. Philosophical writings from Socrates, Plato, Aristotle, and more recently show how this method works. Rather than listing the behaviors or actions a critical thinker can do, this method focuses on the made-up critical thinker and lists their qualities and traits. People who work in the philosophical field also stress the importance of thought standards or qualities (Kent, 2003, p. 57).

Halpern (2014:54), devote that critical thinking is "the use of those cognitive skills or strategies that increase the probability of a desirable outcome" . "It is purposeful, reasonable, and goal directed.. Dispositions toward critical thinking have been proved to be highly correlated with the use of critical thinking skills." There are five critical thinking skills: (1) reasoning, (2) comprehension, application, analysis, and synthesis, (3) interpretation, (4) judgment, and (5) evaluation.

Critical thinking is linked to cognitive perspective, per Krathwohl (2002:122). He partitions the cognitive domain into two sections: the knowledge section comprises metacognitive, conceptual, factual, and procedure cognition, and the cognitive process section comprises the following: recall comprehension, application, evaluation, and generation.

Critical thinkers see reading, writing, talking, and hearing as ways to think well. People who read see the text as a written record of the author's thoughts. They try to see things from the writer's point of view. They try to figure out what the writer was thinking in their minds. Language is a way for people to show what they are thinking. You can look into this in skills where understanding is essential, like reading and listening comprehension. What the students know is shown by what they say or write (Ritola, 2021, p. 122).

Elder and Paul (2004 :216)), pointed out that "to learn well, one must read well". Regarding reading comprehension skill as a fundamental skill in language learning, L2 "learners need to learn to read for communication and to read more easily than they can acquire any other skill, and they can use reading materials as a primary source of comprehensible input as they learn the language".

According to Paris and Jacobs (1984:208), "skilled readers often do things that require effective thinking, flexible strategies, and regular self-monitoring, while novice readers often do not seem to know about these strategies or why they need to use them." Read critically requires basic skills in comprehending and deciphering meaning, which was looked at: 1) Figurative language, 2) Figurative meanings, 3) Getting the main idea and the details, 4) Telling the difference between fact, opinion, and inference, 5) Seeing connections, 6) Predicting outcomes, 7) Drawing conclusions, 8) Making broad statements, 9) Figurative meanings, and 10) Recognising propaganda.

Paul (1990:33) found it is trouble with university students' reading comprehension skills when "they cannot identify the evidence an author needs to justify the implications that follow from what the author said." In an attempt to reduce the lack of this academic, cognitive skill, he maintained that instead of approaching "written material as a collection of sentences," a university student should try out "various interpretations until one fits all of the work, rather than ignoring or distorting statements that do not fit their interpretation."

Critical Thinking & Higher Education

The term "critical thinking in higher education" refers to a way of thinking about things and a moral way of being. The idea of critical consciousness is taught to create critical intellectuals. When you are in college, critical thinking can also include discussions about critical teaching and the role and purpose of education in society. It is about how important it is to learn general skills that we want all grads to have. "Critical thinking" is still an idea that Williams (1976, p. 74) calls a "most difficult one."

There are no definitions of critical thought that are important to critical pedagogy or critical feminism. No amount of learning about them can help you become more critical of the world you live in. Determining what critical thinking means philosophically does not help you become a critical citizen. What these definitions talk about as "critical thinking" will always be at the heart of what we mean by that term. Critical thinking starts with specific skills, like drawing conclusions, reasoning, etc. Being able to think critically is more than just this, however. These broader areas of critical thinking research do not fit into the philosophical definitions of critical thinking used in Higher Education.

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Table 1: Constructs of critical thinking

The Critical Thinking Model in Higher Education

Barnett (1997:67) suggests that critical thinking in higher education has at least six distinct dimensions, which are:

(1) Core skills in critical argumentation (reasoning and inference-making),
(2) Critical judgments,
(3) Critical thinking dispositions and attitudes,
(4) Critical actions,
(5) Critical social relations, and
(6) "Critical creativity", "critical openness", or critical being.

Each of these is important in a bigger picture form of critical thinking. The model of critical thinking has both an individual and a sociocultural dimension. A minimum of six facets of critical thinking are accounted for by the model's sociocultural and individual components, which consist of axes: abilities, judgments, dispositions, behaviors, social connections, and critical consciousness. This contributes to developing a higher education theory of critical thinking that analyzes traditional and contemporary approaches to the subject. This may help progress on the many critical thinking problems in Higher Education right now. There are a lot of well-developed models of critical thinking out there. You could call them "philosophical" examples of how to think critically. They include the tried-and-true taxonomy of educational goals and newer versions of it. It is in Ennis (1991:67).

Critical thinking models that focus on cognitive decision-making are also commonly used to teach critical thinking, intending to build a strong cognitive base for making judgments and decisions. The second one has a very different and limited goal. Philosophical explanations of critical thinking might be needed for one important reason in higher education (teaching important cognitive skills). However, more is needed to explain where critical thinking fits in Higher Education.

The Place of Critical Thinking in Higher Education

Critical thought is an important part of learning how to do certain things when you get to college. Skills like arguing and making good decisions are among these, and grads are expected to have these skills. Critical thinking is a set of skills and attitudes primarily about helping each person grow. In order to do this, one approach could be to find examples of bad critical thinking or to explain what critical thinking is not. This helps clarify the idea's limits (Scriven & Paul, 1987).

Fortunately, there is little dispute on negative cases. McPeck,(1981:3)states that Critical thinking (C.T) is not:

- **Purposeless Thinking:** C.T must be goal-directed, aimed towards an end, and purposeful.
- **Random Thinking:** C.T relies on meeting adequate standards.
- **Accidental Or Unintentional Thinking**: Critical thinking is necessarily an 'intellectually disciplined process'. There must be some kind of metacognitive awareness as well
- **Good Thinking:** "Good" thinking, is asymmetrical but it is not an example of critical thinking. The concepts are not equivalent.
- **Independent thinking:** The relationship between this and "good" thinking is uneven. Independent thinking may not necessarily imply critical thinking.
- **Rational thinking:** It is closely connected but not identical.
- **Problem-solving:** requires the application of judgment in order to accomplish objectives. These evaluations may or may not satisfy the criteria for critical thinking.
- **Decision-making:** This can be seen in the same way as "problem-solving":
- **Higher-order thinking:** "Critical, reflective, metacognitive, logical, and creative thought." However, it differs from critical reasoning because the former has a more limited scope.
- **Logical, reflective,** Metacognitive thinking refers to specific components or features of critical thinking, although it should be noted that metacognitive thinking is not synonymous with critical thinking.
- **Creative thinking:** Creative thinking and critical thinking are (sometimes) inseparable kinds of thinking, but they are not the same
- **'Intuitive' thinking:** This type of "intuition" is founded on prior knowledge and shared beliefs and is supported by facts, making it reasonable. However, it may not be synonymous with critical thinking—the same source.
- A Taxonomy of Critical Thinking Skills can be seen as falling under four main categories:

- lower-level thinking skills ("foundation" thinking),or thinking skills
- "higher level" thinking),
- complex thinking skills, and
- thinking about thinking or metacognitive skills. "Identifying an assumption" analyzing" or "drawing an inference". (Ennis, 1985: 57)

Critical Thinking as Conformity

Critical thinking is arguing, including judging claims, drawing, and figuring out what they mean. They want to do very different things. The critical thinking movement wants to change the way we teach. As shown in the following picture, they make up different directions. These disagreements center on different ways of looking at critical thinking .

But the critical thinking movement believes that the critical education movement is dogmatically "uncritical" about their main idea. Some of the ways that the two groups are different when it comes to critical thinking (CT) are shown below in the table.

Table
An Analysis Of The Critical Pedagogy Movement And The Critical Thinking Movement

	Critical thinking movement (CTM)	**Critical pedagogy movement (CPM**
Aim	To employ logical and rational contemplation for the purpose of understanding and freeing the intellect.	In order to liberate individuals and raise their awareness of political matters, ultimately leading to their active engagement in political action.
Scope	to employ rational, contemplative reasoning with the purpose of determining one's beliefs or actions	To foster societal change in order to address prevailing social circumstances
Involvement	as a method for developing cognitive abilities and fostering critical thinking attitudes	as a method of fostering self-assurance, enhancing literacy, and consequently eradicating weakness
Purpose of teaching CT	The objective is to impart critical thinking skills and attitudes in order to cultivate more proficient thinkers.	To cultivate students' awareness of indoctrination and the prevailing social conditions.
Agenda of CT	Critical thinking can be accomplished by employing abstract formalism.	Political matters are integral to the process of critical thinking.
Attitude	It is an essential quality that is inherently a disposition of critical thinking.	It serves as proof of control and subjugation.
Wider context	Not related. The social and political context is autonomous.	Interconnected. The social and political environment is an inherent aspect of critical thinking.
Criticism of the other	CPM lacks the ability to engage in critical thinking regarding its own premises and assumptions.	CTM lacks sufficient awareness of its own political conformity.

Assessing Critical Thinking

Many problems arise when you test kids' critical thinking skills and attitudes. The experts have pointed out issues with the current measures' validity and reliability. For example, I looked at the marks students got on writing assignments meant to test their critical thinking skills. When students read passages, they use arguments to back up an inference or judge an argument from the text. Underlying performance across jobs that were meant to be done at the same time

Also, students' skills with topic sentences, evidence, explanations, conclusions, and logical organization did not transfer to other tasks. This suggests that the specifics of each passage or task, which may not have anything to do

with their overall ability to think critically, were more important in determining how well they did. 2008 Silva pointed out that performance-based creativity tests bring error and subjectivity. Another problem is that it is hard to tell how much critical thinking skills have improved with these kinds of performance tasks because each sends more noise than signal (Moss & Koziol, 1991).

Walton (1998:67), for example, described a four-step process for looking at and thinking critically about something. This method is used to ensure the talk is accurate and helps reach the goal of settling a disagreement. • Figure out what the case is;

• Figure out what the dialogue is about; • Figure out who has to prove their point;

• Figure out what the criticisms are. What is written in the following table

The Four steps Method of Examining Critical Thinking

1.Identify the argument	-Determine the statements that form the basis of the logical argument, specifically the premises and conclusions . -Assess if the reasoning was deductively sound or unsound . -Assess the strength of the argument, whether it was weak or strong inductive reasoning . -Assess whether the subsidiary arguments were aimed at the primary objective . -Detect underlying, absent, or superfluous assumptions . -Detect instances of ambiguity or equivocation . - Assess whether the conclusion is substantiated by the logical progression of arguments.
2. Identify the contexts of the dialogue.	-Determine the nature of the conversation, such as a rigorous debate or analysis . -Assess the extent to which the objectives of the conversation were pertinent . -Assess whether the problem discussed in the discourse is substantiated by the overarching conclusion . -Ascertain whether there has been a change in the type of discussion . -Ascertain if evidential precedence has been established. Assess whether the participants' stances changed during the conversation.
3. Establish burden of proof.	-Establish the onus of demonstrating evidence . -whether the reasoning is inductive, ascertain whether any premises are absent or whether any errors in inductive reasoning have taken place . -If the logic is deductive, ascertain whether any premises are absent . - Ascertain whether the questions' presuppositions were biased or multifaceted.
4.Evaluate the criticisms.	Assess critiques promptly when they are presented . Ascertain the presence of mistakes.

CHAPTER THREE: METHODOLOGY

An Introductory Note

As promised, the next chapter discusses the steps to reach the study's goal.

A- Population and Sample

The study's participants were selected from a group of 75 female EFL learners. They both went to the same school and were from similar families and social classes. They were both learning English in the intermediate class at the English Institute in Karaj, Iran. Their ages ranged from 24 to 26. All of the people who took part were college students. A test was given to find out how well they could speak Nelson. Nelson test 60 students were split into two groups: the testing and control groups. Based on the Nelson test results, 60 students were split into the control and the experimental groups. There were 30 kids in each group.

Face Validity

When making any tests, the first thing that should be checked is validity. It is about "the extent to which an assessment measures what is supposed to be measured." Instrument validity pertains to the extent to which an item accurately assesses its intended construct (Bergam, 1981, p. 150). In the case of self-rating, face validity is deemed the most reliable form of validity (Nunnally, 1972, p. 353). An item list is considered reliable if it appears to measure the intended construct (Ebel, 1972, p. 78).

So, experts in English as a Second Language (ELT) and writing are shown the test to decide if it makes sense. The amount of agreement shows that the items on the checklist are valid; in this case, 90% of agreement shows that the items are valid.

Reliability of The Test

One of the things that a good test must have is reliability. It means how consistently measurements are made, which makes truth possible and shows how much trust you can put in test results (Oller, 1979, p. 4). It is how well the results of one test match up with the results of that test (Davies et al., 1999, p. 168). The researcher watches sixty EFL students at Baghdad University College of Education for Women. These students were chosen at random.

The researcher used the Pearson correlation measure to find links between the data they collected. This is known as inter-scorer stability. It was found that the reliability coefficient value is (925.80), which is good because it is higher than the value shown in the table (3808) at a significance level of 0.05 and a degree of freedom of 28 (Mehrens & Lehmann, 1991, p. 113).

B. Instrumentation and the Description of the test

1. Homogeneity Test

A Nelson 150D English literacy test was given to confirm that all subjects were the same. It had 50 multiple-choice questions about how well you know English patterns. You had 25 minutes to complete this test, and the grade was based on a possible 50 points. Additionally, an independent t-test was carried out to determine if these 60 students had the same skill level. The scores and the independent t-test provided evidence that the language proficiency levels of both groups were comparable.

2. Test of Reading Comprehension

The pre-test and post-test were both valid tests of reading comprehension. There were six readings on the test. After reading, ten multiple-choice questions tested seven sub-skills of inferential reading comprehension. The table (Table 1) shows the different parts of inferential understanding tested for each of the ten multiple-choice questions. These skills are based on the inferential understanding skills that Keene and Zimmerman (1997) and Barret (1974)

Table 1.

Various Components of Inferential Reading Comprehension

Question No.	**Related sub-skill of inferential comprehension**
1	Write Conclusion and Summary of The Text
2	Write Conclusion and Summary of The Text
3	Write Conclusion and Summary of The Text
4	Make reasonable predictions
5	Link the conclusions they reach to additional beliefs or knowledge.
6	Answer questions using what you already know about the topic and information directly stated in the text.
7	Answer queries utilizing a combination of prior knowledge and information explicitly stated in the text (sub-skill).
8	Determining the central concept
9	Sequence identification
10	Form critical or analytical views on what they have read.

3. Critical Thinking Test

The subjects were given the critical thinking assessment test (CTA), which has 30 items and measures some of the most essential skills in critical thinking. This test was given before and after the therapy to see if there were any changes in the subjects' critical thinking skills through debate. The Cronbach Alpha value for its reliability was 89. A 5-point scale was introduced from "always" to "never. That is why the scores were between 30 and 150. The participants' scores were found by adding up all of their marks.

4. Material for Debate

The researcher picked eight very controversial topics because that was the point of the study, and there is strong evidence that debate is the best way to learn and use critical thinking skills (Freely, 2000). The topics were chosen from the Headway book Academic Skills (2) reading, writing, and study skills, student's book. by Wegmann and Knezevic. They were casual and controversial. The series editors for Sarah Philpot are Liz and John Soars and Stewart (2016). It is based on how the Ministry of Higher Education manages its courses.

C. Procedure and Design

Control groups that were not chosen randomly were used in this study, which was like an experiment. The following stages were taken to test the study idea of this study. The Nelson 150D test was given to 75 learners at the beginning of the study to ensure that all students were on the same language skills grade. Of the 75 students, 60 were split into the control and the experimental groups. The number of people per group was 30. Then, they received a test on reading comprehension skills to see how well they understood what they had read. As a result of the reading comprehension test, they were given an evaluation test to see how well they could think critically before the therapy. After the therapy, the same examinations were given to the control group again to see if they had changed.

D. Care Plan: The trial group was given 15 topics that were boiled down and told to pick eight based on their interests. Halvorsen et al. (2005) say picking exciting things for the students is essential. Eight were chosen, and one was given to each student every week. To hold the conversation in the classroom, the researcher did what Halvorsen (2005) said to do. The first thing done was to discuss the topic with the students and give them texts to read and study at home. Many people say that knowing something about a debatable subject is the most important thing you need to do before you can hold a debate. According to Willingham (2007), cognitive science study shows that "the process of thinking is intertwined with the domain knowledge." So, they were told over and over that they needed to learn as much as they could about the subject from the internet, books, magazines, and newspapers, and then they had to share what they had learned with their parents, teachers, and friends so that they could evaluate the proof. Then, they had to bring lists of the issue's pros and cons to class. The next step was to split the students into small groups so that they could talk about their ideas and discuss possible counterarguments. The kids learn how to work together, which helps them think critically through this process. The debaters were then split into two groups: those who agreed and those who did not. Before starting, one of the students would clearly explain the topic and the ideas so that no one got confused. Djuranovic (2003) says that defining the terms in a debate is very important because it sets the discussion's topic and limits. What would happen next is the discussion, where people would argue for or against their points of view. After the argument, the teacher would summarise the students' points of view and opinions, pointing out their strengths and weaknesses. Then, the students would be asked which side they thought was more convincing. Students learn that discussion and thought can produce actual results (Halvorsen, 2005). This part is essential because it helps them understand this. After each session, the students had to write down their thoughts about the problem and what the class had learned. At the end of the discussion, students get grades based on how well they thought things through. During the debate, the teacher tried to teach the students to tell the difference between facts and views or judgments and back up their claims with examples, statistics, and experts' opinions. They learned to start an argument with "I think/believe that... because... therefore..." (Krieger, 2005, pp. 2-3). At the end of the experiment, the reading comprehension skills and critical thinking tests that were utilized at the pre-test were given again to both groups to see if there were any differences between them, to see if discussion might improve critical thinking, and to see what the connection was between debate and critical thinking.

Test administration final

Test administration final will take place from February 25, 2022, to May 10, 2022. As the people in this study's sample listen to the talk, the researcher starts to watch and write down their learning. Each lesson has sixty minutes set aside for it.

Scoring system

A rating scale is used for measuring language teaching performance. Which aspects of a person's language use are judged using scales that go from worst to best performance in several steps (Richards & Schmidt, 2002, p. 441).

One way to make the marking scale more objective is to carefully describe the different scores for each category (Harmer:2007:172).

Statistical Methods

1- Using Pearson's Correlation Coefficient
It is used to calculate the test's reliability
2- The Weighted Mean

3- The Percentile Weight

T- Test for Two Independent Samples
The t-test is used for the equality of the experimental and control groups in the age of students, the final score of the methods of teaching material, and the final scores of the checklist.

$$t = \frac{X1 - X2}{\sqrt{\frac{S1^2(n1-1) + S2^2(n2-1)}{n1+n2-2}\left\{\frac{1}{n1}+\frac{1}{n2}\right\}}}$$

(Stevens, 2007: 159)

Where:
X1 is the average score obtained by the experimental group .
X2 represents the average score of the control group .
n1 represents the number of subjects in the experimental group .
n2 is the number of participants in the control group .
S12 represents the variance of the experimental group.

Pearson Correlation Coefficient Form

It is used to calculate the observation checklist's reliability coefficient.

The following formula is used:

$$r = \frac{N\sum xy - \sum x \sum y}{\sqrt{[N\sum x^2 - (\sum x)^2][N\sum y^2 - (\sum y)^2]}}$$

Where:
x = the first variable
y = the second variable
N = the size of the sample

(Mitchell and Jolley ,2013:258).

Results relating to the objective and confirmation of the null hypothesis:

A. Nelson Homogeneity Test :

The data show that the two groups were similar on the pretest regarding their language skills, reading comprehension, and critical thinking ability. Table (1) shows that the experimental group's mean score is 19.13, and the control group's score is 18.90. The differences of the two groups are the same, at 5.024 and 5.032. The people in both groups are chosen from the same community.

Table 1:

Descriptive Statistics Nelson

	Groups	No.	M.	S.D	*t*–value		df	Results
					Computed	critical		
Nelson	Experimental	30	28.00	5.024	13.84	2	58	significant
	Control	30	25.83	5.032				

B. Reading Comprehensions Pre-test

A separate t-test (Table 2) shows that the two groups' Reading comprehension pre-test (RC Pre-Test) scores were similar regarding reading comprehension. Table 2 shows that the average scores for the two groups are 19.13 and 18.90. The uniform variances of 3.093 and 3.346 show that the groups are similar.

Table 2

Descriptive Statistics Reading Comprehension Pretest

	Groups	No.	M.	S.D	*T*–Value		Df	Results
					Computed	critical		
RC Pre –Test	Experimental	30	19.13	3.093	13.84	2	58	significant
	Control	30	18.90	3.346				

Critical Thinking Pre-Test

Table 3 shows the pretest scores of the two groups for critical thinking (C. CT). In Table 3, the mean scores for the two groups are 96.10 and 97.83 respectively. A homogeneous variance of 13.087 and 13.483 indicates homogeneity between the two groups.

Table 3

Pretest on descriptive statistics and critical thinking

	Groups	No.	M.	S.D	*T*–Value		Df	Results
					Computed	critical		
(C. CT)	Experimental	30	96.10	3.093	13.84	2	58	significant
	Control	30	97.83	3.346				

D. The Post-Test on Reading Comprehension (RC)

Tables 4 and 5 illustrate the notable disparity between the experimental and control groups in reading comprehension skills. However, no significant difference is observed in the critical thinking evaluation test following the therapy.

Table 4

Reading Comprehension Post-Test for Descriptive Statistics

	Groups	No.	M.	S.D	*T*–Value		Df	Results
					Computed	critical		
(R.C) Post - Test)	Experimental	30	21.67	2.468	13.84	2	58	significant
	Control	30	19.23	3.645				

Table 4 The data shown illustrates the mean scores of both the experimental and control groups, which are 21.67 and 19.23, respectively. The evidence suggests that the instruction of critical thinking abilities has a notable impact on enhancing the reading comprehension abilities of English as a Foreign Language (EFL) learners .

E. Critical Thinking Skills(CTS) Post-test

Table 5:
Posttest on Critical Thinking - Descriptive Statistics

	Groups	No.	M.	S.D	*T*–Value		Df	Results
					Computed	critical		
(CTS) Post - Test)	Experimental	30	98.50	2.468	13.84	2	58	significant
	Control	30	96.37	3.645				

Table 5 presents the descriptive statistics of the two groups' performance on the Critical Thinking test. The average scores for the experimental and control groups are 98.50 and 96.37, respectively.

CHAPTER FOUR

Results relating to the objective and validation of the null hypothesis.

Discussion

"covers the full spectrum of Bloom's taxonomy in critical thinking," as stated by Robinson (2006), page 32. This includes knowing facts, understanding ideas, applying them, analyzing them, putting them together, and judging them. So, the above claim has been proven true by the fact that the study group got much better at reading comprehension and writing. This shows that both brain skills are related to critical thinking and comprehension. Improving critical thinking can help improve reading comprehension. These results back up the study's main idea, which is that teaching

Critical thinking skills make reading and writing better. The statistics study looked at how the experimental and control groups did on the critical thinking posttest. According to IT, there was a slight change between the two groups. Because there was no significant difference, the researcher looked at how the experimental and control groups' mean scores changed between pre- and posttests. The experimental group got an average score of 96.10 on the critical thinking test before the study (table 3) and a mean score of 98.73 after the study (table 5). The control group got an average score of 96.37. The experimental group's mean scores on the posttest went up by this much—from 96.10 to 98.50—which shows that students' critical thinking got better after the therapy time. The study compared the experimental and control groups' mean results on the critical thinking posttest. Conversely, The debaters did not make as much progress as the non-debaters, but their progress was not significantly better than those of the same group. Still, the shortage of a significant distinction can be explained in several ways: First, the researchers think that the little time and number of debates during a term could be a good reason for this significant difference.

CONCLUSIONS

Instructing critical thinking skills is essential for improving English language skills. Using necessary thinking doctrines in this study can be a creative stimulation for people who make lessons and materials, students, teachers, and people who make tests. The study's results will likely lead people who make lessons and materials to include critical thinking topics in student textbooks and courses for teachers. Students need textbooks that make them think critically, and teachers must learn how to change how they feel about themselves and their students .

-Because teachers have many duties in the classroom, it is very important that they are not focused on exams and making students who will do well on them. Instead, teachers should be more flexible in how they teach and consider their students' perspectives, interests, and abilities, motivating them to think and express themselves in critical and creative ways. Using discussion in language classes shows how important it is to know about a subject to think critically. As it says in ADSA, "familiarity with the issue is the most important part of preparing for the discussion." When the students were first introduced to the topic, they appeared unprepared to debate. However, after researching it and learning more about it, they were more eager to join the discussion, come up with great ideas, ask intelligent questions, and show they could think critically.

- Surprisingly, the students who participated in this study liked the program, and after each debate session, they asked for more time and debate sessions. The program taught Students to find information about the topics independently from various sources. Usually, students count on their teachers and textbooks for most of their information in school. They would be more likely to think for themselves if they sought information.

- Another benefit of the program for the students was that they were encouraged to speak up during debates. This made even the shy students ready to share their thoughts.

Lastly, writing a report about the discussion's main point was good practice that got students to use their writing skills and share their thoughts through writing. Cohen tells Peirce (2005:4) that discussion can help students improve speaking, listening, reading, and writing.

- This report also talks about test developers. Because of the backwash effect in testing, it would not help to teach critical thinking skills in EFL settings as long as teachers use standard tests that require students to memorize facts. Considering that the point of testing is to see how well the students are learning and how well the teachers are doing, this study encourages test developers to make changes to testing, creating tests that will affect the quality of teaching and help students be more creative in how they do on tests. Bloom's taxonomy is a famous way to make tests in critical thinking, and it meets all the requirements for tests in critical thinking programs.

REFERENCES

1. ADSA, (2006). Step-By-Step Guide To Debate. Retrieved September 14, 2008 From www. Albertadebate.Com . **American Diary Science Association**
2. Alexander, L. G. (1973). For And Against. London. Longman Group Limited.
3. Angelo, Y. K (1971**).** . Learning for an unknown future. Higher Education Research and Development, 23(3), 247–260.
4. Barnett, R. (1997). Higher education: A critical business. Buckingham, UK: Open University Press.
5. Barfield, K. D. (1989). A study of the relationship between active participation in interscholastic debating and the development of critical thinking skills with implications for school administrators and instructional leaders. Dissertation Abstract International, 50-09A:271.
6. Bergman, Jerry (1981) Understanding Educational Measurement And Evaluation: Boston: Hongton Mifflin Company.
7. Davies, A., Brown, A., Elder, C., Hill, K., Lumley, T., & McNamara, T. (1999). Dictionary of Language Testing. Cambridge: Cambridge University Press.
8. Halpern, D. (1998). Teaching critical thinking for transfer across domains: Dispositions, skills, structure training, and metacognitive monitoring. American Psychologist, 53(4), 449–45**.**
9. Ericsson ,K . Lehmann, A . (2016). Expert and Exceptional Performance:
10. Evidence of Maximal Adaptation to Task Constraints February 1996Annual Review of Psychology 47(1):273-305.
11. Elder And Paul (2004 (. Paul, Richard, And Linda Elder. Critical Thinking Competency Standards. Dillon Beach: Foundation For Critical Thinking. Upper Saddle River, N.J.: Prentice
12. Ennis, R. (1991). Critical Thinking: A Streamlined Conception. Teaching Philosophy,14,124. (Http://Dx.Doi.Org/10.5840/Teachphil19911412).
13. Ennis, R. H. (1985). Critical Thinking and the Curriculum. National Forum: Phi Kappa Phi Journal, 65(1), 28-31.

14. Ebel, R. L. (1972). Essentials of Educational Measurement (1st ed.). Upper Saddle River, NJ: Prentice Hall.

15. Johnson, P. (1981). Effects on reading comprehension of language complexity and cultural background of a text.TESOL Quarterly, 15, 169-181. Retrieved from http://www.jstor.org/stable/3586408.

16. Kent, L. D. 2003. Teaching Intellectual Autonomy: The Failure of The Critical Thinking Movement. Educational Theory, 41(4), 361–370.

17. Krathwohl , J. (2002). Critical thinking: Theory, research, practice, and possibilities (ASHE-Eric higher education report no. 2). Washington, DC: Associate for the Study of Higher Education.

18. McPeck, J.E. (1981). Critical Thinking and Education. 1st Edition, London.

19. Moss, P. A., & Koziol, S. M. (1991). Investigating the validity of a locally Developed critical thinking test. Educational Measurement: Issues and Practice, 10(3), 17–22.

20. McPeck, J. E. (1990). Critical thinking and subject specificity: A reply to Ennis. Educational Researcher, 19(4), 10–12.

21. Nunnally, Jum G. (1972) Educational Measurement And Evaluation, New York MC. Graw. Hill**.**

22. Oller, J. (1979) Language Tests at School: A Pragmatic Approach. Longman, London.

23. Paris S.G., Jacobs J.E. (1984). The benefits of informed instruction for children's reading awareness and comprehension skills. *Child Development*, 55, 2083–2093.

24. Paul, R. (2011). Critical thinking movement: 3 waves. Retrieved from (http://www.criticalthinking.org/pages/critical-thinking-movement-3- waves/856.) May 20, 2013.

25. Paul, R., Elder, L. & Bartell, T. (1990). California teacher preparation for instruction in critical thinking: Research findings and policy recommendations. The Foundation for Critical Thinking: Dillon Beach, CA.

26. Peirce, W. (2005). Strategies for teaching thinking and promoting intellectual development in online classes. Electronic Communities: Current Issues and Best Practices. U.S. Distance Learning Association: Information Age Publishing.

27. Ritola, J. 2021. "Philosophical Issues in Critical Thinking." In Oxford Research Encyclopedia of Education. New York: Oxford University Press.

28. Rose, G. (2007). The concept of mind. Harmondsworth, U.K.: Penguin.

29. Sternberg, R.J. (1986). The triarchic mind: Conceptions of the nature of intelligence. Cambridge, UK: Cambridge University Press. Sternberg, Robert J.(1986) Critical Thinking: Its Nature, Measurement and Improvement. National Institute of Education, Washington DC.

30. Scriven, M., & Paul, R. (1996). Defining critical thinking: A draft statement For the National Council for Excellence in Critical Thinking. Retrieved April 23, 2008, from: (http://www.criticalthinking.org/University/univlibrary/library.nclk).

31. Vogler, G. 2021. "Bridging the gap Between Affect and Reason: On Thin Feeling in Politics." Distinktion: Journal of Social Theory 22 (3): 259–276.

32. Walton, D.N. (1998). The new debate: Conversational contexts of argument. Toronto: University of Toronto Press.

33. Williams, David C. (1976). Ressentiment and Schooling. Volume 26, Issue 1Pages: 3-131 January 1976