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The Effects of Richard Paul's Critical Thinking Model on EFL Learners' Achievement in Reading:

The Case of Fourth-Year Primary School Pupils in Mbarek Elmili, Tolga, Biskra

Dissertation Submitted to the Department of English Language and Literature as Partial Fulfillment of the Requirements for the Degree of Master in Sciences of Language

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Dedication

I dedicate this work to those who has been my greatest support after Allah.

To my wonderful parents, whose love, wisdom, and prayers have been a guiding light in my life.

To my dear husband Mohamed, my life partner, whose unwavering support, patience, and encouragement helped me through every challenge.

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Abstract

The study investigates the Effects of Richard Paul's Critical Thinking Model on the EFL learners' achievement in reading. Data is acquired from twenty-five forth year primary school pupils studying at Mbarek Elmili Primary School in Tolga, Biskra where a quasi-experiment takes place and an interview is conducted. The research aims to study the impact of Richard Paul's Critical Thinking Model on learners' reading achievement and critical thinking. It seeks to examine the ways Richard Paul's Critical Thinking model influences reading performance to see if its implementation increases pupils' comprehension and analysis of texts. The results extracted from the quasi-experiment indicate that there are significant outcomes from the pretest and posttest. After the implementation of the four elements of thought, it shows that the scores between the pretest and posttest displayed noteworthy improvement and implication using elements of thought as the basis of the lessons. The results from the interview, on the other hand, note that pupils struggle to integrate the implications of the model they have learned into their learning process. Furthermore, pupils have an easier time identifying and comprehending information. They have active memory, which helps them remember the previously taught content when it is used in the text. The study recommends that there is need to implement elements of thought to activate young learners' memory.

Key Words: Critical Thinking, Elements of Thought, Pupils, Richard Paul's Model, Implementation

List of Acronyms

CT: Critical thinking

EFL: English as foreign language

L2: Second Language

NCERT: National Council of Educational Research and Training
SD: Standard Deviation

SL: Second Language

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General Introduction

The notion of critical thinking is quality that distinguishes individuals' from each other. Critical thinking is the disciplined practice of utilizing the most effective reasoning possible in any given situation. The primary objective of thinking is to "“figure out the lay of the land" all individuals are presented with a variety of options. Moreover, it is imperative that humans possess the most accurate information in order to make the most informed decisions (R. W. Paul & Elder, 2002). Critical thinking is a commonly used phrase in classrooms. Adult learners are encouraged to develop and practice these skills in various situations. Critical thinking is the process of assessing and evaluating one's thinking in order to improve it. A skilled critical thinker formulates clear questions and problems, obtains and evaluates relevant information, and successfully interprets it utilizing abstract concepts (R. Paul & Elder, 2009).

Critical thinking instructors empower students to comprehend and manage their own learning. Critical thinking skills enable students to engage more deeply with course material, ask tough questions, and actively participate in the learning process. Richard W. Paul is one of the pioneers that gave importance to human thought and has worked to advance the concept of fair-minded critical thinking. Paul asserted that the primary responsibility of the logician is to create instruments for the analysis and evaluation of reasoning in every field and domain of human thought.

These instruments are intended to be employed in the process of navigating the numerous intricate problems and issues that life presents. He underscored the significance of the "logic of language" in the context of human reasoning. He proposed the idea that every subject and discipline has a fundamental logic that could and should be explicitly formulated, and that an

adequate theory of reasoning would serve as the foundation for this logic (Elder, 2010).

Critical thinking cultivates an authentic sense of curiosity, enabling students to analyze and assimilate information, thereby enhancing creativity and forming informed ideas. It is self-corrective, self-monitored, and self-disciplined, which facilitates the comprehension and contemplation of issues. Critical thinking cultivates life skills such as communication, open-mindedness, planning, and organization, which empower students to confront obstacles in both their personal and professional lives (Singh, 2022).

1. Statement of the Problem

Academic success is exemplified through the successful application of the material learned. Achieving the correct reading in foreign language learning is a goal that every learner seeks to reach. However, learners struggle with the reading aspect due several reasons such as comprehension, analysis, and critical engagement with texts. Traditional reading focused on memorizing and recalling rather than using thinking and logic. Richard Paul's critical thinking stressed on the intellectual standards', elements of thought, and intellectual virtues. Paul provided a systematic approach to improve reading comprehension via nurturing deep analytical evaluative skills.

Reading strategies are one of crucial components that facilitate reading written materials. Yet, there is a little attention and focus on the explicit way to integrate and implement Paul's critical thinking framework and its effect on reading achievement. A number of studies noted that critical thinking enhances reading achievement as it aids in comprehending and reasoning. However, there is limited empirical evidence that links Paul's model to reading achievement. The proposed study aims to explore the role of Richard Paul's model of critical thinking on reading.

Furthermore, the research seeks to investigate its application and influence on students' abilities in interpretation, analysis, and synthesizing information. The endeavor intends to provide insights into whether adopting Paul's Approach into reading instruction can lead to measurable increases in reading achievement.

2. Research Aims

First, the study seeks to analyze how Richard Paul's critical thinking model affects reading performance to ascertain whether its implementation improves students' comprehension, analysis, and interpretation of texts. Furthermore, to look at how Paul's framework's components of thinking affect students' reading comprehension skills, especially in terms of spotting primary ideas, drawing conclusions, and assessing arguments. Moreover, in order to Examine how intellectual standards e.g., clarity, accuracy, relevance, logic might help students better interact with books and evaluate their success in acquiring more advanced reading abilities. Also, to discover how teachers and students view applying Paul's critical thinking techniques in reading instruction to grasp their pragmatic uses and difficulties in actual classroom environments.

3. Research Questions

From the contextualization above, the quasi-experiment aims to measure and find answers to the following research questions:

1. To what extent will the explicit teaching of Richard Paul's Elements of Thought (i.e., Purpose, Information, Concept, and Implication) to the fourth year primary school pupils at Mbarek Elmili Primary School in Tolga, Biskra enable them analyze the writer's thoughts in reading sessions?

2. What are the immediate effects of Richard Paul critical thinking model that of Elements of Thought on the fourth year primary school pupils at Mbarek Elmili Primary School in Tolga, Biskra comprehension and applications?

4. The Research Hypotheses

Based on the research questions, we attempt to test the following hypotheses:

Negative-hypothesis: Explicit teaching of Richard Paul's Elements of Thought (i.e., Purpose, Information, Concept, and Implication) to the fourth year primary school pupils at Mbarek Elmili Primary School in Tolga, Biskra may not have a significant impact on their ability to analyze the writer's thoughts in reading sessions.

Positive Hypothesis: Explicit teaching of Richard Paul's Elements of Thought (i.e., Purpose, Information, Concept, and Implication) to the fourth year primary school pupils at Mbarek Elmili Primary School in Tolga, Biskra may have a significant impact on their ability to analyze the writer's thoughts in reading sessions.

5. Research Methodology

The research employs mixed methods approach. The effects of Richard Paul's critical thinking paradigm on reading achievement are investigated in this study through the use of a quasi-experimental design and a pretest-posttest approach. The research consists of one group to make the study easy and due to time constraints. The study uses reading instruction methods an experimental group that receives reading instruction that incorporates Paul's critical thinking framework. In order to accomplish research objectives, the data obtained from the latter are statistically analyzed. The qualitative approach is also implemented to guarantee that the data is qualitatively analyzed and collected to achieve the research objectives. The data is organized

and analyzed meticulously using research approaches to ensure that the findings adhere to the established guidelines.

6. The Participants

The researcher employs 25 fourth year primary pupils from primary school Mbarek Elmili Tolga in Biskra as a sample. The study uses a quasi-experiment with pupils through using Richard Paul's Critical Thinking model.

7. Quasi-Experiment

The research employs a quasi-experiment with forth year primary school pupils. The study is comprised from pretest, treatment and posttest. The study uses lessons from the text book of Forth year primary school education "My Book of English". Elements of thought inspired from Richard Paul's Critical thinking Model are used through the explanations. Purpose, information, concept and implication are the four elements of thought used for this experiment.

8. Interview

An interview with forth year primary school pupils at Mbarek Elmili Primary school is conducted. The interview is formed from five questions and used as significant supplement for the researcher to examine the significance of critical thinking and its effect on reading achievement.

9. Structure of the Dissertation

The study is structured into three parts. The first chapter identifies Critical thinking as concept with its types and definition. Furthermore, the study presents Critical Thinking put

forward by Richard Paul and its elements. The second chapter examines reading as skill and its significance in EFL learning. The third chapter is the field of the study where the findings and research outcomes are quantitatively and qualitatively analyzed.

Chapter One: Probe on Critical Thinking

Introduction

Contemporary with rapid technological advancements, the educational field is evolving and new ways of teaching have surfaced. Critical thinking is one of the components that gained attention and significance recently**.** Learners need to be able to analyze information and evaluate different perspectives, and mark rational choices. Critical thinking permits learners to become autonomous thinkers, skilled at engaging with content more deeply and apply their knowledge in practical contexts.

This chapter at hand discusses the concept of critical thinking, starting from defining thinking in general and critical thinking in specific. Moreover, the research attempts to explore critical thinking and its significance in education as well as in EFL classrooms. Furthermore, it examines Richard Paul's model of critical thinking, describing its framework and key components. Finally, the section scrutinizes the significance of incorporating critical thinking into English as Foreign Language (EFL) classrooms, highlighting its role in enhancing language learning and fostering independent thought**.**

1.1 Defining Thinking

The Cambridge Dictionary describes thinking as the cognitive process employed to comprehend issues, form judgments, and resolve difficulties. The act of having an opinion or thought about something, or the thoughts or views that comes from this act. Thinking is a conscious process that includes analyzing, putting together, fixing problems, making choices, and evaluating things critically. It enables individuals' change how their minds work. Insightful thinking helps individuals comprehend complicated information better, develop new ideas, solve problems, render smart choices, and carefully examine information and ideas. In addition, it is a mental tool that helps us learn about and study the world, deal with problems, and come to important conclusions (Pacheco, 2024).

` Cognition is fundamentally rooted in thought, a process exclusive to humans. It entails the modification and analysis of information obtained from the environment. Thinking is the action of human reasoning that strengthens the link between stimuli and response. It is a logical application of multiple viewpoints to knowledge that has been stored in the mind long before the advent of fresh knowledge. Furthermore, thinking can be understood as a memory, and it is possible to question whether there is a relationship between what is intended. Additionally, cognitive processing involves reorganizing information from the environment and storing symbols in memory. Thinking is a symbolic representation of some event train of ideas in a precise and careful manner that began with the problem. It is also mental process mental representations that develop through the alteration of knowledge by interaction, attributes such as the evaluation of mental abstraction, logic, imagination, and problem-solving (National Council of Educational Research and Training, 2024).

It is conscious, a mental process that includes reasoning, problem solving, and decision making. In a nutshell, thinking is a spontaneous or conscious mental activity/process that incorporates reasoning in order to solve a problem or make a decision. Humans have spontaneous thinking, which is effortless and does not require reflection. Conscious thinking, on the other hand, demands work and evaluation to make meaningful judgments, solve issues, and draw inferences (Wahyana, 2022).

1.2 Critical Thinking

Ennis (1991) identifies critical thinking as a rational reflective thinking that is concentrated on deciding what to believe or do. It is the intellectually disciplined activity of actively and successfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating knowledge obtained by observation, experience, reflection, reasoning, or communication to guide belief and action. In its ideal form, it is built on universal intellectual ideals that transcend subject matter divisions: clarity, accuracy, precision, consistency, relevance, sound evidence, good arguments, depth, breadth, and fairness.

Scriven and Paul (1987) noted that it involves the analysis of the structures or components of thought inherent in all reasoning: objectives, issues or questions at hand; assumptions; concepts; empirical foundations; reasoning that leads to conclusions; implications and consequences; counterarguments from differing perspectives; and contextual framework. Critical thinking, which adapts to diverse subject matter, issues, and objectives, is integrated within a network of interconnected modes of thought, including scientific, mathematical, historical, anthropological, economic, moral, and philosophical thinking.

Schafer man (1991) explained critical thinking as accurate reasoning in the quest for pertinent and trustworthy knowledge about the world. It can also be characterized as rational, contemplative, accountable, and adept reasoning aimed at determining what to accept or pursue. A critical thinker can pose pertinent inquiries, collect relevant data, systematically and innovatively analyze this information, deduce logically from it, and arrive at credible and dependable conclusions about the world, facilitating successful living and action within it. Critical thinking does not merely involve the capacity to process information enough to recognize when to halt at red lights or to ascertain if one has received the proper change at the supermarket. This rudimentary reasoning, while necessary and beneficial, is adequate solely for personal existence; the majority of persons attain this proficiency.

1.3 Types of Critical Thinking

Thinking is a necessary mental process implemented in problem-solving. Due to the widespread information and disruption of technology in the present time, it became vital that students learn various thinking skills. Critical thinking can be divided into two categories: lower-level and higher-level thinking (Miterianifa, 2021).

1.3.1 Higher-Level Thinking Skills

Miterianifa (2021) identified that the thinking skills which belong to the higher-order are as follows:

1.3.1.1 Creative Thinking

Creative thinking is often described as the ability to build something out of nothing or to perceive an ordinary notion in an original or new way. It encompasses the transformation of an idea, product, or task through addressing it from alternative perceptions. More often than not,

creativity is viewed as a form of problem-solving or improvisation similar to musicians of jazz that create new things through spontaneous performances. Richard Florida (2012) indicates in *The Rise of the Creative Class Revisited* that creativity emerges from the place where usefulness, novelty, and surprise overlap (DiYanni, 2015).

The cornerstone of critical thinking revolves around perceiving new ideas, recognizing the potential of numerous solutions, and contemplating different approaches to tackle problems. It also concentrates on attempting to generate novel ideas through innovative methods and experimenting with unconventional methods to generate ideas. Creative thinking is linked to attributes such as innovation, imagination, and originality. Individuals who employ creative thinking often presents mental agility and adaptability. They use instruments like analogies, metaphors, and visualization to draw connections and study notions (DiYanni, 2015).

Indeed, some references exclude creativity as a higher-level skill. However, that does not negate the fact that solving problems often obliges the individual to be creative and not focus on previously acquired knowledge and established rules. Creative thinking employs both divergent and convergent notions to establish original ideas (King).

1.3.1.2 Logical Thinking

Logical thinking involves actively engaging the mind through the use of various concepts and judgments. This process refers to the cognitive activities where the certain objectives are examined with transparency and reason. It is a skill that enables individuals to scrutinize situations and identify solutions. This type of thinking is heavily dependent on the reasoning abilities that assist in analyzing problems and finding solutions based on facts and appropriate data. Piaget (1969) believes that logical thinking is a mental activity individuals implement to

identify and tackle problems using reason obtained through a collection of data. Hence, logical thinking is considered rational and scientific in nature. Nonetheless, developing this type of thinking is often challenging (Punia et al., 2023).

Logical thinking plays a crucial role in the lives of students. It depends on the use of reason and many other thinking approaches to neutrally analyze situations and find answers that are based on facts. This type of thinking improves the decision-making abilities of individuals. That is to say, the more an individual possessed strong thinking abilities, the better they were at understanding issues and determining efficient solutions. Logical thinking also allows individuals to address and resolve certain issues using well-structured rationale. It enables students to analyze complex issues and helps in making important decisions. It also promotes creativity, aids in the identification of challenges, and helps set objectives. When students assess situations, they collect and interpret data to tackle the problems at hand. Thus, it is safe to say that these skills are essential for the personal and professional growth of students (Punia et al., 2023)

1.3.1.3 Metacognitive Thinking

A *meta* was a cone-shaped pillar inserted in the ground at each end of the Roman Circus. These pillars marked the spot where racers are allowed to turn. Similarly, the notion of metacognition symbolizes a crucial shift in the understanding of the mind. The prefix meta usually indicates going beyond or above the issue it modifies. Nonetheless, defining the term is not that simple. The term metacognition was implemented by Flavell in 1979 to depict the awareness of an individual and the understanding of their cognitive processes and strategies. This term refers to the human ability to be self-aware. It also indicates that individuals not only have to think and know but also contemplate their own thinking and knowledge (Fisher, 1998). Flavell maintains that metacognition consists of two main components: metacognitive knowledge and

metacognitive experience or regulation. Metacognitive knowledge centers on the understanding of cognitive processes and includes data that can be implemented to regulate those processes. Metacognitive experiences involve the application of metacognitive strategies. These strategies are organized methods implemented to govern cognitive tasks, ensuring that certain mental goals, such as understanding a text, are accomplished (Livingston, 2003).

Metacognitive thinking refers to higher-level thinking, which includes effectively regulating the cognitive processes that are involved in learning. Activities like planning the way to tackle learning tasks, checking one understands, and analyzing progress toward completing the task are all considered metacognitive. This type of thinking is essential in effective learning. Therefore, it is important to investigate the way metacognitive processes develop in order to decide the best method to teach students to better implement their thinking skills through metacognitive regulation (Livingston, 2003).

1.3.1.4 Problem Solving

Problem-solving skills indicate the individual's aptitude to use cognitive processes to comprehend and address issues when the answer is not promptly apparent. This skill is crucial for future teachers because it not only improves their critical thinking but also aids them in governing and planning learning experiences that foster the development of these thinking skills. In order to enhance students' problem-solving abilities, many efforts have been undertaken through the implementation of learning models such as problem-based learning and problem-solving approaches. Regardless of that, the outcomes were not ideal. For instance, a workforce survey conducted in 2016 indicated that the college graduates' problem-solving skills were found to be inadequate (Ismet et al., 2020).

The problem-solving skills are often a hardship for students because they concentrate on low-level factual questions instead of engaging with abstract analysis. It is also difficult for students to implement systemized evidence while establishing arguments. Indeed, students might be skilled when performing procedures. However, they are often unable to justify the necessity of those particular procedures (Ismet et al., 2020).

Decision-making refers to the process through which an individual, group, or organization establishes a particular course of action to make based on specific objectives and limited resources (Russo, 2014). Every day, people find themselves in difficult situations that demand decision-making. In the management decision process, decisions are usually made through a conscious and reasonable process instead of opting for random ones. Prior to making a decision, it is necessary to pinpoint the most appropriate option according to relevant information to accomplish the intended results. This option is a process rather than a single momentary act. Even though the option chosen is rather significant, individuals often remember the decision's outcome. Each obtainable option has advantages and disadvantages.

It is essential to carefully evaluate each one prior to making the decision. Thus, collecting data and analyzing its benefits and drawbacks for each alternative is vital. In general, a well-thought-out decision can bridge the gaps between reality and the desired goals. It also aids in steering the path of the process from the beginning through to its execution and conclusion. Efficient decision-making takes into consideration limits and preferred conditions. This is found to be useful when individuals are faced with challenges in different areas of life. The decision-making process will be more difficult when the challenges turn out to be complex and many other factors affect it. In real life, the mistakes that result from the decision-making process can have severe consequences, such as the loss of time, money, and reputation. It is unrealistic to imagine

this process to be perfect and error-free. However, understanding factors and their influence and weighing the advantages and disadvantages would minimize the room for errors and improve the chances of making better decisions (Taherdoost & Madanchian, 2023).

1.3.2 Lower-level Thinking Skills

Basic thinking, also known as lower-level thinking, encompasses a variety of skills such as knowledge, comprehension, and application. It is widely agreed that these skills must develop to progress to more advanced levels of thinking (Al-Asadi & Hussein, 2021).

1.3.2.1 Knowledge

Knowledge or remembering in Bloom's revised taxonomy refers to the primary level within the cognitive domain. This level concentrates on basic thinking skills, mainly the ability **to** retrieve and reproduce information. Generally, the verbs affiliated with this level include label, recall, identify, name, repeat, sequence, find, define, and arrange **(Wilkins, 2018).**

1.3.2.2 Comprehension

In the revised taxonomy, the term 'comprehension' entails extracting meaning from information through engagement in different processes such as interpretation, explanation, or summarization. This particular level is commonly depicted through the implementations of verbs like "explain, summarize, restate, estimate, compare, discuss, and illustrate **(Wilkins, 2018).**

1.3.2.3 Application

The skill of application, in the revised taxonomy of Bloom, is concerned with the use of information through its implementation of manipulation. This skill is usually indicated through verbs such as predict, construct, classify, demonstrate, solve, calculate, and plot **(Wilkins, 2018).**

1.4 Barriers of Critical Thinking

Critical thinking is one of the characteristics that represent the correct use of mind and reason. Critical thinking has many barriers that obstruct the process of thinking critically. Critical thinking may divert from its main function when barriers obstruct its actual use.

1.4.1 Confirmation Bias

Altering evidence to agree with personal views is a common issue. More often than not, individuals in powerful positions seek information that corroborates their opinions rather than looking for impartial ones. To avoid instinctive confirmation bias, a person might have to look for data that challenges or opposes existing premises (Noruzi & Vargas, 2010).

1.4.2 Attribution Bias (self-serving bias)

This particular bias refers to the tendency to credit our accomplishments to our own abilities and blame our shortcomings and failures on external factors. On the other hand, individuals often perceive the success of others as luck and their failures as personal flaws. This bias causes individuals to condemn the negative actions of others and assume that it is their fault without taking into consideration the context or the situation (Noruzi & Vargas, 2010).

1.4.3 Trusting Testimonial Evidence

Trusting testimonial evidence refers to the acceptance of information from others without any evidence to support it. Research has repeatedly shown that many people are prone to purchases solely based on the recommendation of others rather than taking into consideration marketing strategies or advertisements. Many of these individuals rarely confirm that those recommendations are accurate or truthful (Noruzi & Vargas, 2010).

1.4.4 Memory Lapses

At first glance, this barrier might seem self-explanatory since people forget things. However, the problem lies in the way individuals often fill those gaps with information that may or may not be correct. In essence, individuals often invent or alter memories without. This can ultimately interfere in the decision-making process since they would be based on incorrect information (Noruzi & Vargas, 2010).

1.4.5 Accepting Authority without Question

This particular behavior was illustrated by Stanley Milgram's experiments. Numerous participants accepted the orders to deliver stronger electric shocks under the instructions of an authority figure while disregarding their doubts of morality regarding their actions. This lapse in critical thinking still exists as individuals thoughtlessly trust others whose expertise and qualifications are questionable (Noruzi & Vargas, 2010).

1.4.6 Ignorance and the Failure to Admit It

The refusal to recognize one's ignorance often leads to fabricated information and groundless speculation. Individuals often try to avoid appearing ignorant. Therefore, instead of admitting they have no knowledge about a certain subject, they might pretend they do and draw up false justification to appear more believable. It is best to be careful when dealing with others who claim to be knowledgeable and hesitate to concede they are uncertain (Noruzi & Vargas, 2010).

1.5 Richard Paul Model of Critical Thinking

Paul and Elder (2009) defined Critical thinking as self-directed, self-disciplined, self-monitoring, and self-corrective thinking. It necessitates strict standards of perfection and a careful knowledge of their application. Effective communication and problem-solving skills are essential, as is overcoming egocentrism and sociocentrism. Paul-Elder's critical thinking framework outlines the thinking sections using eight reasoning elements (goal, attempt, assumption, point of view, data, concepts and ideas, and inference and interpretation). The implementation of the aforementioned elements is evaluated using nine criteria (clarity, accuracy, precision, relevance, depth, breadth, logic, significance, and fairness) (Elmansy, 2023).

1.5.1 Critical Thinking Framework Elements

Paul divided elements of thought into eight elements (Paul and Elder 2009).

1.5.1.1 Purpose: Every thought has a goal. There is always a goal or an aim behind thinking.

1.5.1.2 Question at issue: All reasoning constitutes an endeavor to ascertain information, resolve enquiries, or address challenges**.**

1.5.1.3 Assumptions: All reasoning revolves around assumptions.

1.5.1.4 Point of View: All reasoning is carried out from a specific perspective.

1.5.1.5 Data, Information and Evidence: All reasoning is built on knowledge, data, and facts. Knowledge is the ability to retrieve pertinent information when addressing a problem, which typically involves identification and memorization. It entails the capacity to recall specific terminology, facts, and conventions in particular domains, as well as the ability to classify, categorize, and apply criteria to verify or evaluate facts (Báez, 2004).

1.5.1.6 Concepts and Ideas: All reasoning is articulated via, and influenced by, concepts and ideas.

1.5.1.7 Inferences: All thinking encompasses inferences or interpretations by which we derive conclusions and ascribe meaning to evidence. Inference is a cognitive ability that involves the identification and verification of factors that facilitate rational outcomes. These findings, in turn, serve as hypotheses and hypotheses for the analysis of substantial data and the inference of conclusions from convictions, tenets, data, and opinions (Báez, 2004)**.**

1.5.1.8 Interpretations: On the other hand, Interpretation pertains to the ability to comprehend a collection of attributes that define a particular piece of information. This process typically entails extrapolation, interpretation, and translation. Using the individual's own words, translation involves paraphrasing. Interpretation encompasses students' capacity to comprehend and interpret various types of texts, as well as their capacity to differentiate between legitimate and contradictory conclusions, and to grasp the content of a given context in its entirety (Báez, 2004).

1.5.1.9 Implications and Consequences: All reasoning results in implications and consequences.

1.6 Essential Intellectual Standards

Paul and Elder (2013) proposed that a minimum of nine intellectual standards are essential for proficient reasoning in daily life. The attributes include clarity, precision, accuracy, relevance, depth, breadth, logical coherence, significance, and justice. It is incomprehensible to assert that any instance of reasoning can be both sound and yet contradict these principles. Maïga (2021) states that whenever an individual is interested in evaluating the quality of reasoning regarding a problem, issue, or situation, universal intellectual standards must be applied to their thinking. Having a command of these standards is essential for critical thinking. Teachers

should ask questions that probe student thinking, questions that hold students accountable for their thinking, and questions that become internalized by students as questions they need to ask themselves through consistent use in the classroom. This will assist students in learning this material. The objective is for these standards to become ingrained in the minds of students, thereby becoming a component of their inner voice. This voice will subsequently assist them in developing increasingly sophisticated reasoning skills.

1.6.1 Clarity

It is a "gateway" standard. The accuracy or relevance of a statement cannot be ascertained if it is ambiguous. In reality, it is impossible to ascertain any information about a statement without understanding its contents. Thinking is consistently more or less lucid. It is beneficial to presume that one is unable to comprehend a concept completely unless they are able to provide a detailed explanation, illustration, or example (Paul & Elder, 2013, p31).

1.6.2 Accuracy

It comes in accordance with the truth; without errors, blunders, or distortions. While a statement may be unambiguous, it may not be true. "Thoughts are continually more or less precise." It is beneficial to assume that the accuracy of a statement has not been completely evaluated, except to the extent that one has verified that it accurately represents the real situation (Paul & Elder, 2013, p31).

1.6.3 Precision

It is Specific to the requisite degree of detail. A statement may be both precise and accurate, but it may not be precise. There is an inherent degree of precision in the process of thinking. It is probable that an individual does not comprehend a statement to the fullest extent unless they can provide a detailed explanation.

1.6.4 Relevance

Indicating a close logical relationship with and significance to the subject matter and bearing upon or relating to it. Despite being clear, accurate, and precise, a statement may not be pertinent to the query at hand. The capacity to deviate from the task, query, problem, or issue at hand is inherent in the cognitive process. It is advantageous to presume that individuals have not conducted a comprehensive evaluation of their thinking, except to the extent that they have taken into account all pertinent issues, concepts, and information (Paul & Elder, 2013, p31).

1.6.5 Depth

It suggests a comprehensive examination of the numerous variables in the situation, context, idea, or query, as it is characterized by complexities and multiple interrelationships. Thinkers may either operate at the surface of objects or delve into the underlying issues and matters. A line of reasoning is not completely evaluated unless all of its significant complexities have been fully considered (Paul & Elder, 2013, p31).

1.6.6 Breadth

Breadth perspective is broad-minded, comprehensive, and wide-ranging, comprising multiple viewpoints. Thinking can be either more or less broad-minded (or narrow-minded). The ability to reason insightfully within multiple points of view or frames of reference is a prerequisite for breadth of thinking. One has not completely evaluated a line of thought until the individual has determined the extent of the breadth of thinking necessary to comprehend it (and the extent to which this breadth has been actually exercised) (Paul & Elder, 2013, p32).

1.6.7 Logic

The components are coherent and there are no contradictions; they are consistent with the principles of sound judgment and reasonability. A person assembles a diverse array of thoughts into a specific order when they are thinking. The reasoning is logical when the combination of thoughts is mutually supportive and makes sense when combined. When the combination is not mutually supportive, contradictory, or illogical, it is not logical. The process of thinking can vary in its degree of logicality. It is possible to integrate and maintain consistency. It may provide a coherent whole or be in conflict or contradiction (Paul & Elder, 2013, p32).

1.6.8 Significance

It means possessing substantive or significant meaning; being of consequence; being of importance. The significance of thinking can vary. It may concentrate on the most significant implications, the most substantial matters, or the trivial and superficial matters (Paul & Elder, 2013, p33).

1.6.9 Fairness

There is a degree of fairness to the process of thinking. The thinker is required to take into account all pertinent viewpoints in good faith whenever they are pertinent to the situation or context. Look to the query in question to ascertain the pertinent perspectives. It is devoid of bias, dishonesty, favoritism, selfishness, deception, or injustice (Paul & Elder, 2013, p34).

1.7 Critical Thinking in Education

It is generally assumed that critical thinking is a broad skill that can be taught in a general manner. The academic burden certainly presents a challenge when it comes to incorporating the teaching of critical thinking, let alone the specific skills required for each subject and area of knowledge. Nevertheless, there is evidence that it is exceedingly challenging for students to apply the skills they possess in one context to another. This corroborates the notion that critical thinking abilities are distinct for distinct domains of knowledge**.** Regarding the instruction of this refined skill, it is crucial to teach students on the following topics: common sense, open-mindedness, skepticism, reasoning, logic, generalization, correlation, and causality—anything that can assist in the development of critical thinking abilities. It is imperative that students contemplate the process by which their opinions are developed. They should be aware of the process by which they connect and combine facts, objections, and assumptions to construct arguments. Finally, I am of the distinct conviction that critical thinking is not possible without an awareness of one's biases. They have the potential to influence our ability to make impartial observations, our judgment, and our perception of reality (Shiroma, 2022).

1.8 Importance of Critical Thinking in EFL Classroom

Critical thinking is more profound than the mere memorization and recall of information. Students who engage in critical thinking engage in profound thought; they not only possess knowledge of the facts, but they also go beyond them to apply them in a meaningful way. It suggests a transition from the perception of learning as the acquisition of information from a teacher or text to the perception of learning as the elaboration and transformation of received information into a different form by the learner**.** Therefore, critical thinking skills are crucial because they allow students to effectively address social, scientific, and practical issues. The

educational reform is predominantly centered on the enhancement of critical thinking skills, as these skills will provide students with the ability to reason about social affairs in a world that is rapidly changing (Geryville, 2021).

Critical thinking is promoted by all educators in the present day. It is essential in all facets of human existence and in all intellectual pursuits. It is one of the abilities that are necessary in the job market. This is the reason why schools are now incorporating critical thinking as an independent course into their curriculum. Before achieving reliability, the critical ability learner must pose questions, gather information that they select, and reflect on. Paul and Elder's Foundation for Critical Thinking underscores that a robust intellectual environment which is contingent upon the establishment of critical thinking as the cornerstone of education. The reason for this is that students can only apply the content they are learning in real-world scenarios when they develop the ability to critically think about it (Sèna & Etienne, 2022).

Conclusion

Critical thinking is a fundamental tool that raises intellectual thinking and critical abilities among learners. It also achieves effective learning and communication, particularly in EFL settings. By understanding and applying Richard Paul's model, teachers can prepare learners with the tools to analyze language and content thoughtfully. Integrating critical thinking into EFL teaching not only improves linguistic proficiency but also promotes learners' ability to explore complex ideas and engage with diverse perspectives. As education continues to familiarize to global challenges, the development of critical thinking remains vital for increasing competent and reflective language users

Chapter Two: Critical Reading: Definitions, Importance, and Challenges

Introduction

Reading is one of the skills in language learning. It enables learners to interact and comprehend a piece of writing. Academic success requires competencies in all aspects of language and reading competence represents one of them. Reading competence fosters EFL learners' communicative ability as well as enhancing their reading proficiency in decoding and analyzing written texts. Consequently, it improves the process of engaging with texts in a meaningful way. Reading skills assist the access to a vast range of knowledge, supporting learners to acquire new vocabulary, understand complex grammatical structures, and gain insights into varied cultures and perspectives.

Furthermore, the integration of critical thinking into reading practices improves learners' abilities to scrutinize, evaluate, and synthesize information. This consequently leads to fostering a deeper comprehension and promoting autonomous learning. This s chapter investigates into the identifying the nature of reading competence, exploring the essential reading skills, the significance of reading in EFL learning, and the key role of critical thinking in improving reading achievement. By examining these aspects, the researcher aims to highlight the significance of promoting reading competence as an essential aspect of language proficiency.

2.1 Defining Reading

Smith (2012) notes that the term "reading" is appropriately used to describe a variety of activities that involve the attempt to comprehend the circumstances; its original definition was "interpretation." We read the weather, the state of the tides, people's sentiments and intentions, stock market trends, animal tracks, maps, signals, signs, symbols, hands, tea leaves, the law, music, mathematics, minds, body language, between the lines, and above all a point I must reiterate we read faces. "Reading" is merely a specialized application of the term when it is used to describe the interpretation of a written work. We have been reading and interpreting experience continuously since birth, and we all continue to do so.

Reading involves the construction of meaning through written texts. It can be accomplished by engaging in new concepts and ideas and practicing. Reading is an essential skill that necessitates both visual and non-visual information to be effectively utilized. Knowing every word is not essential for reading; rather, the accumulation of ideas to establish significance is sufficient. Good readers enhance their comprehension of the text by maintaining an awareness of novelty, and they employ minimal word and letter indications. Individuals can enhance their reading abilities and continue to refine this essential skill by engaging in reading exercises (Johnson, 2008).

The process of reading involves the production of meaning from printed material, which is referred to as word recognition. Construct an understanding of them through the process of comprehension. Fluency is the ability to automatically and accurately read by coordinating the identification of words and the formation of meaning. Additionally, the act of "reading" involves the examination of a sequence of written symbols in order to derive meaning from them. In the act of reading, we employ our eyes to perceive written symbols (letters, punctuation marks,

and spaces) and our brains to transform them into words, sentences, and paragraphs that convey a message. Additionally, the cognitive process of decoding symbols in order to construct or derive meaning (reading comprehension) is intricate. It serves as a method for the acquisition of language, communication, and the exchange of information and ideas (Arcos, 2018).

Liu (2010) defines reading as the interaction between the text and the reader. Numerous events transpire during this procedure. Readers are not only examining the print, decoding the marks on the page, and determining the meaning and relationship between the marks, but they are also contemplating the content they are reading: its significance to them, its relationship to other texts they have read, to things they know, and to what they anticipate will occur next in the text. Evidently, the reading process is likely to be dynamic, variable, and distinct for the same reader on the same text at a different time or with a different purpose.

Reading is a critical talent for success in all aspects of life. Reading is a process of critical thinking that entails the evaluation of ideas and their application to everyday situations, rather than merely identifying words on a page. Vocabulary acquisition, pre reading strategies, textual comprehension, organizational skills, and response techniques comprise fundamental reading abilities. A reader's reading speed, comprehension, and overall vocabulary can be enhanced by mastering fundamental reading skills. This is particularly true for readers who are new to the English language, as they will discover that employing ESL reading strategies will facilitate their comprehension of the literature they have read (Riphah International College, 2024).

2.2 Levels of Reading

Reading is essential part in learning. Individuals read to achieve a certain goal or aim. Reading has many forms and levels depending on the type not the text read and the information intended to extract.

2.2.1 Literal Reading

Literal comprehension necessitates that a reader be capable of reciting and recollecting the information or facts that are presented in a text. A teacher at this level may request that students investigate the information and concepts that are explicitly stated in the text. The idea and fact that are explicitly stated in printed pages are referred to as literal reading comprehension. It implies that students can directly acquire information from text, including the identification of the main idea, the elucidation of supporting details, the organization of information, the summarization, and the outlining. The reader is endeavoring to gain a more comprehensive understanding of the events that are occurring within the text (Naniwarsih & Andriani, 2018).

2.2.2 Interpretive Reading

Conversely, to read at the interpretive level is to read "between the lines" in order to identify ideas and information that are not explicitly stated. Subsequently, the reader is obliged to draw conclusions. He may be required to infer time relationships, including the year, time of day, and season; geographical relationships; cause-and-effect relationships; the ages, emotions, and familial relationships of characters; and principal ideas and generalizations if they are not explicitly stated in the text. In other words, the reader must analyses the information provided in the text and draw a conclusion by combining the facts. An individual reads audibly from a written literary script in a manner that creates the illusion of a performance, despite the fact that the individual is not performing the script. The action must be envisioned by the audience, rather

than being observed directly. Interpretive readers will employ vocal and physical signals to assist in the communication of the action that the script implies (Nurdiana & Amelia, 2017).

2.2.3 Critical Reading

Critical reading allows readers to assess the arguments presented in a text and transcend mere comprehension. In the critical reading approach, it is advised that readers refrain from merely accepting or rejecting the arguments presented, but rather critically evaluate them from a variety of perspectives in order to identify their strengths and limitations. Consequently, critical readers must be capable of transcending the printed word to interpret, analyses, and synthesize the information. Readers progressively acquire the ability to accept what is logical and to reject what is erroneous or distorted by adopting this viewpoint. A critical reading approach in pedagogy emphasizes the importance of assisting students in comprehending the logic of the material they read. Regrettably, language textbooks do not frequently emphasize this point. Students are unable to comprehend the precise or imprecise use of language, as well as the clarity or vagueness of its usage. In turn, their lucidity of thought is compromised when they read due to their lack of comprehension of the logic of language (Tasnimi, 2017).

2.2.4 Creative Reading

Creative reading necessitates the development of new concepts, insights, applications, and approaches and the cultivation of rending skills. It necessitates use of the imagination, prediction, and invention. Creative reading exercises involve proposing an alternative conclusion or generalization based on a reading text and suggesting related examples. The act of composing orally, drawing, or writing stories that follow the same pattern or use the same words as those that have been read are also exercises in creative reading (Adams, 1968).

2.3 Importance of Reading

Reading is a vital skill that must be improved since it functions as the foundation of learning across various academic disciplines. Competence in reading is necessary when it comes to pursuing higher education or procuring employment. Furthermore, reading assists the personal growth of the individual, their academic achievement, and the advancement of their nation. Numerous advantages can be accomplished through reading, like expanding knowledge, improving the ability to communicate that knowledge to others, and enhancing concentration (Pradani, 2021).

2.3.1. Expanding Knowledge

Reading frequently significantly contributes to the growth of one's knowledge. It may appear self-evident; however, constant reading enriches the individual's capacity to understand various subjects, tackle challenges, and value other perspectives and human behavior. Furthermore, an extensive base of reading experience enhances communicative abilities and can produce better creativity **(**Miranda, 2025).

2.3.2. Enriching Vocabulary

Expanding the vocabulary of individuals is one of the many significances of reading. That is to say, readers are more likely to have a better store of vocabulary due to their reading. Ultimately, reading improves both interactional and interpersonal skills. The aptitude to articulate notions in a clear fashion is considered a great asset. It often distinguishes individuals and promotes a competitive benefit in various fields (Miranda, 2025).

2.3.3. Enhancing Concentration

Due to the technological advancement, many concerns have been raised regarding its negative impact on the individual's ability to concentrate. The frequent stream of messages and notifications would result in fragmented attention. The answer to this issue lies in cultivating a habit of reading books. That is to say, while reading, the individual would have their undivided attention on the subject they are reading. Consequently, readers would be able to sustain their focus for longer periods of time (Miranda, 2025).

2.4 Reading Comprehension

Reading comprehension refers to the ability to extract meaning from written texts. It marks the objective of reading, and it is the reason this skill is taught. Furthermore, reading is significant for knowledge acquisition and the engagement of the learning process through textual material. Reading comprehension adapts a mental skill that evolved from other functions— specifically, oral comprehension—to a different mode of input (text). Opposite to oral comprehension, which originates with the least form of intervention, reading comprehension is not an inherently human ability and thus requires conscious and planned teaching. For over 100,000 years, humans used oral communication, and it nearly became a universal skill. Reading, on the other hand, only existed for approximately 5,000 years. For the majority of that time, reading was limited to only a small section of the population. Due to this difference, it is understandable that reading comprehension presents a greater challenge. Nonetheless, while applying comprehension to texts, our cognitive capacity amplifies (Kirby, 2007).

2.5 Difficulties of Reading

Due to various causes, individuals often experience challenges while reading. More often than not, those causes remain unidentified; however, they are usually linked to neurological disorders. Said disorders are able to hinder the brain's ability to obtain and process data. Consequently, individuals with these types of disorders may find it challenging to learn at the same pace or in the same manner as others. Furthermore, children who are impacted by reading difficulties may find it difficult to acquire certain skills or accomplish tasks on their own, especially when the teaching methods used are traditional (Abdulmumini, 2023).

Individuals may face various types of difficulties while they are reading. For some, the main challenge lies in decoding the text. In other words, many people struggle to modify written letters into the equivalent sound, which formulates words. Others may find trouble with reading comprehension simply because they would struggle with the information introduced in written texts. Indeed, people often struggle with reading difficulties. Yet, it is also significant to identify some of the causes that may lead to that struggle (Yacoub, 2023).

2.5.1 Limited Vocabulary

Individuals whose vocabulary is restricted may be unable to understand and use the words they possess in an effective manner. That is to say, limited sources of vocabulary might obstruct the comprehension ability of the individual. Due to the fact vocabulary plays a significant role for reading comprehension, any restrictions in this area can cause difficulties in understanding the written texts (Yacoub, 2023).

2.5.2 Poor spelling

Feeble spelling skills can hinder the individual's ability to decipher the words and sustain their meanings. These struggles are often linked with deficits in word recognition, which is a common trait for dyslexia (Yacoub, 2023).

2.5.3 Struggling with Comprehension

Difficulties in understanding and obtaining information from texts are considered a common indication of a reading difficulty. Some individuals can be successful in decoding the words presented in texts. Yet, they often find difficulties when they attempt to comprehend the meaning conveyed (Yacoub, 2023).

2.5.4 Reversals and Substitutions

Some individuals reverse the letters. That is to say, these individuals might read or write the letters backwards or upside down. This is considered a common sign for dyslexia. People with dyslexia often replace one letter for another. For instance, they might confuse letters like "b" and "d **(Yacoub, 2023).**

2.5.5 Challenges with Sequencing

Individuals who struggle with reading often are unable to comprehend the sequence of the events within the text. That is to say, some individuals find it challenging to grasp the chronological order of the event the text illustrates, such as recognizing what happened first and what followed, for instance (Yacoub, 2023).

2.6 Critical Reading and Critical Thinking

Kurland (2000) says that Critical thinking enables us to assess our comprehension as we read. If we perceive that the assertions are absurd or negligent (critical thinking), we conduct a

more thorough examination of the text to evaluate our comprehension (critical reading). In contrast, critical reading is essential for critical thought. Critical reasoning is contingent upon comprehension (critical reading). We have the discretion to approve or reject a presentation; however, it is imperative that we are informed of the rationale behind our decision. It is incumbent upon us to identify the genuine issues of agreement or disagreement, both for ourselves and for others. This is the only way in which we can comprehend and honor the perspectives of others. It is imperative that we read critically in order to identify and comprehend those perspectives.

Reading stimulates our cognitive faculties in a manner that is unparalleled, and it not only imparts knowledge but also encourages us to consider novel perspectives. Reading is a significant factor in the development of critical thinking skills that are necessary for success in a variety of fields, including the ability to analyze, interpret, and articulate an argument. This is the reason it is crucial to read extensively and frequently (Lucy Cooper, 2022).

The significance of critical thinking education and learning cannot be overstated, as the students who have attended schools and colleges have been affected by the conflict that occurred in the past. Regardless of their emotional distress, they have forfeited the capacity to challenge any issues or problems. The capacity to think critically is particularly critical for students residing in a country with political and socioeconomic challenges, as it will enable them to examine issues from various perspectives and develop into responsible and independent citizens (Sharma, 2012).

2.7 Critical Thinking and Reading Achievement

The literature has firmly established the correlation between critical thinking and reading comprehension. Additionally, Yu-hui et al. (2010) assert that reading is a cognitive process that involves the construction of meaning. They elucidate that critical thinking is a method for elucidating the capacity to resolve ambiguous texts by generating alternative interpretations, considering them in the context of experience and world knowledge, suspending decisions until additional information is available, and accepting alternative explanations. The reader's comprehension level can be determined by the process of critical reasoning that they employ to understand the text (Aloqaili, 2011). It is also believed that critical thinking skills are associated with the pace of reading comprehension. Individuals are required to retain all information when they read. The objectives of individuals who read can dictate the information that they require and do not require. Individuals can quickly grasp the messages by skimming the page, jumping around, and processing new terms or blocks of information with a critical eye.

Conclusion

Reading proficiency is essential for the comprehensive development of EFL students, as it serves as an entrance to academic success and language proficiency. The development of reading skills enables students to effectively negotiate texts, which promotes the acquisition of new knowledge and the enhancement of language skills. Incorporating critical thinking into students' reading practices facilitates their critical engagement with texts, thereby promoting autonomous learning and enhancing their knowledge. In order to equip students with the necessary tools to prosper in both academic and practical environments, it is imperative that we employ teaching techniques that not only enhance reading abilities but also cultivate critical

thinking. The EFL syllabus's emphasis on reading ability is instrumental in preparing students to be independent, intelligent, and competent users of the English language.

Chapter Three : Qualitative and quantitative data analyses

Introduction

The chapter presents the practical part of the study. It demonstrates both qualitative and quantitative analysis of data. It contains the research methodology and the instruments used to collect data on the Effects of Richard Paul's Critical Thinking Model in EFL Learners' Achievement in Reading. Moreover, the chapter also discusses the population of the study and research tools primarily a quasi-experiment and an interview devoted to primary school pupils. The chapter also presents data analysis of the findings and recommendations.

3.1 The Research Methodology

The study utilized a mixed methods approach. It was exemplified through the use of quasi experiment with fourth year primary pupils at Biskra. Pupils are exposed to a quasi-experiment which consists of pretest treatment and posttest. In addition the researcher conducted an interview with pupils. The findings are analyzed and interpreted using qualitative and quantitative approaches to ensure the reliability and credibility of the study.

3.2 Quasi Experimental Design

In research design, quasi-experimental design (QED) provides a pragmatic approach when genuine experimental conditions are not feasible. Quasi-experimental designs bridge the distance between experimental rigor and practical application by investigating cause-and-effect relationships in real-world settings. This post will examine quasi-experimental design, its

methodology, and its applications. A quasi-experiment is a research design that does not include random assignment, which is a critical component of true experiments. In the event that random assignment is not feasible due to ethical or practical constraints, researchers utilize quasi-experimental designs to investigate causal relationships (Critical Appraisal Skills Programme. n.d.).

For instance, in a non-equivalent groups design, researchers compare the outcomes of groups that were established based on pre-existing conditions rather than arbitrary allocation. This approach enables the examination of interventions in real-world environments, which is particularly advantageous in the fields of psychology and social sciences. The regression discontinuity design is an alternative method that allocates treatments according to a predetermined threshold, thereby facilitating a robust analysis in the vicinity of the cut-off point. Researchers can obtain valuable insights into cause-and-effect relationships even when ideal experimental conditions are unattainable by comprehending and implementing quasi-experimental designs (Critical Appraisal Skills Programme. n.d.). .

3.3 The One Group Pretest and Posttest Design

The research is based the research about elements of thought put forward by Richard Paul's notion in critical thinking. The study employs a sample of twenty five pupils in primary school of Mbarek Elmili of Tolga in Biskra. The study uses one class of fourth year primary school. The researcher conducted five consecutive sessions with them. During the sessions, the researcher would write words on the board in English with Arabic translation and repeat their definitions in attempt to fix it in their memory on the long term. It enables pupils to comprehend the terms and their use. Later the words explained for pupils would be used and applied in sentences and passages to examine their comprehension and application for the elements (i.e.,

purpose, information, concept, and implication). The study uses one group due to time constraints and inability to cover more than one group as school permissions was limited. Therefore, the researcher utilizes one group of primary school pupils aged about (9-10) years old as a sample for the interview as well. The use of one group as sample for the experiment in this design aids the assessment of change over time without the use of control group.

3.4 Participants

Twenty five Algerian primary school pupils are randomly selected by the researcher. The sample is comprised of both males and females whose age range from nine to ten years old. These participants are fourth year pupils at Mbarki Elmili primary school in Tolga, Biskra. The pupils have been only studying English language only for nearly two years. The major objective for the selection of this specific sample is to study the extent pupils' use of critical thinking considering their lack of exposure to English language. Therefore, the researcher assumes that their young age is facilitator in examining human thinking and activity.

3.5 Instrument

Richard Paul's elements of thought are many. The researcher uses four main elements that fit the sample used. According to Paul (2009) humans think for a certain goal and reasoning and it is built upon information and influenced by concepts and ideas that have specific implications. The selection of these four elements is because they are appropriate at the heart of text comprehension, in addition these element are practical due to the shortage of time in sessions.

3.6 The Critical Reading Program Description

Pupils are exposed to the experiment through the use of lessons extracted from the Algerian textbook “My book of English” of fourth year primary education. The study uses the lessons from the English textbook the pretest used the lesson of food (Couscous) from page 61. The treatment phase utilizes three main lessons. The researcher teaches three paragraphs separately in each session. The first session, they are given model answer to imitate for the next paragraphs. Each word in the paragraph conveys one piece of information. Lessons discuss variety of information (e.g. Grandpa is sickp53, information about the school facilities p39, and Riyadh being a footballer p68) the posttest used the lesson of animals’ page 84.

3.7 Test construction and grading procedures

Concerning the pretest and posttest forms are constructed from a small passages with pictures and the researcher tries to explain to the pupils using hand gestures and body language and motivating pupils through rewards like candies and extra marks. The tests are formed from a passage and four questions. The questions aim to verify Richard Paul’s elements of thought. Therefore, the questions reflect purpose, information key concepts and implications. The pretest and posttest is composed of paragraph to read and four questions. For instance in the lesson about food the pupils are asked “What is the main purpose of the writer?” the answer is: The main purpose of the writer is to describe a traditional Friday lunch and express love for a healthy food. “What is the main information the writer uses in this short paragraph?” the answer: Today is Friday. The grading of this test is on 2.5pts per each question and the tests were scored out of 10. The designed tests and the total mark is 10/10 because it is appropriate for their young age and less demanding for primary school pupils as it facilitates the analysis. The posttest is the fifth

and the last paragraph and learners are given time of 1 hour.

3.8 Results of Quasi-Experiment

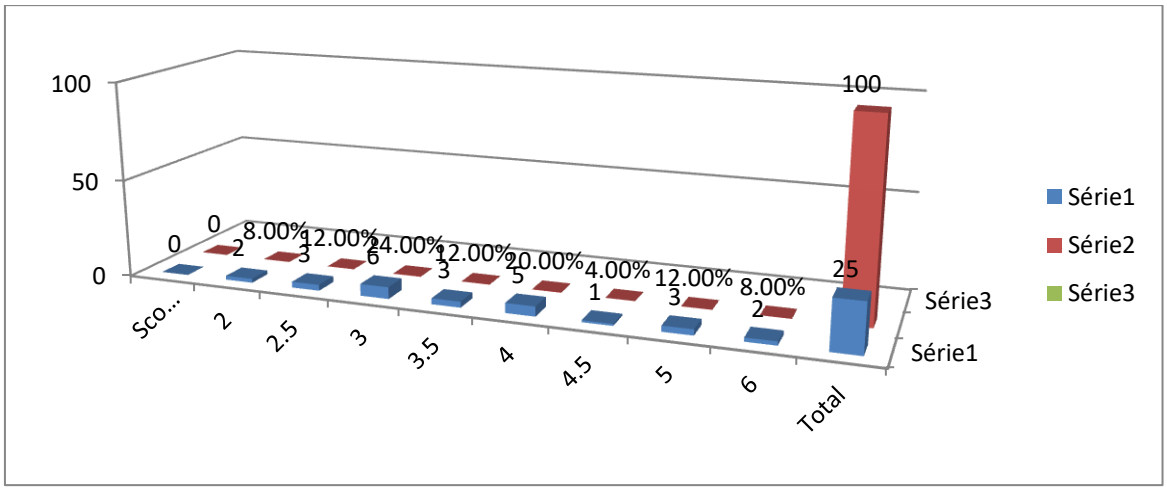
Table 3.1 :

Results of the pretest

Scores	Frequency	Percent
2.00	2	8.0%
2.50	3	12.0%
3.00	6	24.0%
3.50	3	12.0%
4.00	5	20.0%
4.50	1	4.0%
5.00	3	12.0%
6.00	2	8.0%
Total	25	100.0

Figure 3.1:

Results of the pretest



From the results above, pupils' marks are varied two pupils have 2 out of 10(8%). Three pupils on the other hand have 2.5/10 (12%). Six learners have 3/10 (24%) while three pupils have 3.5/10 (12%). Five pupils have 4/10 (20%) and just one pupil had 4.5/10 (4%). Three pupils have 5/10 (12%) while other six get 6/10(8%). The results of the pretest show that pupils' marks are somehow weak and the highest mark is six. The findings suggest that pupils are not yet familiar with this type of test and concepts used.

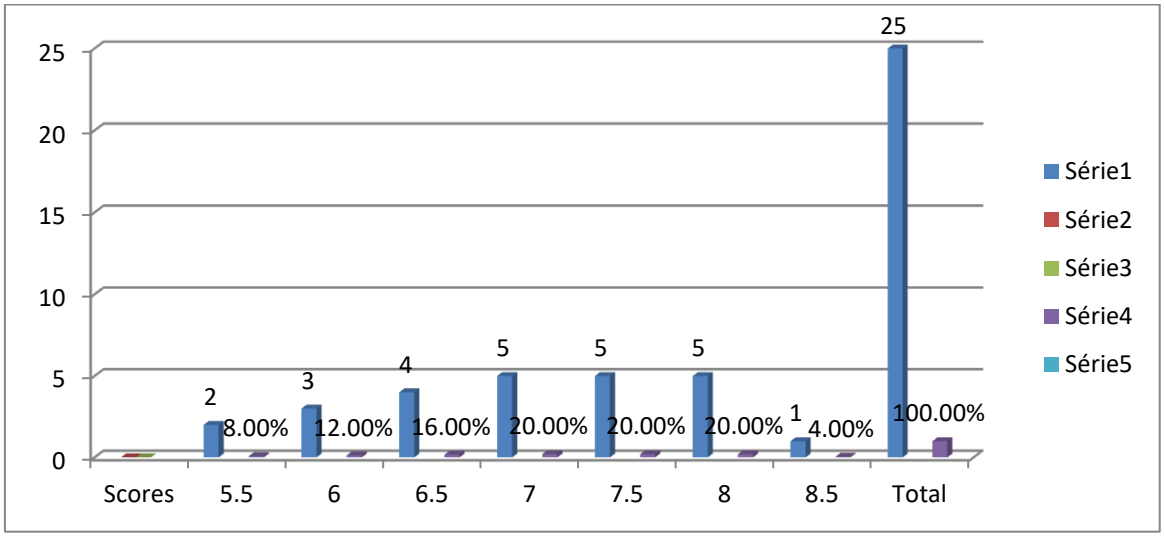
Table 3.2:

Results of the posttest

Scores	Frequency	Percent
5.50	2	8.0%
6.00	3	12.0%
6.50	4	16.0%
7.00	5	20.0%
7.50	5	20.0%
8.00	5	20.0%
8.50	1	4.0%
Total	25	100.0%

Figure 2:

Results of The Posttest



From the results shown above, two learners mark is 5.5/10 (8.0%) while other three pupils have 6/10 (12.0%). Four others have 6.5/10 (16.0%). Fifteen pupils have marks range from 7/10, 7.5/10 and 8/10 with frequency of five per each. The highest mark is highlighted by one who had 8.5/10. The results show that pupils' marks are acceptable comparing to the pretest.

3.7.1 Pretest and Post Test Scores of Critical Reading

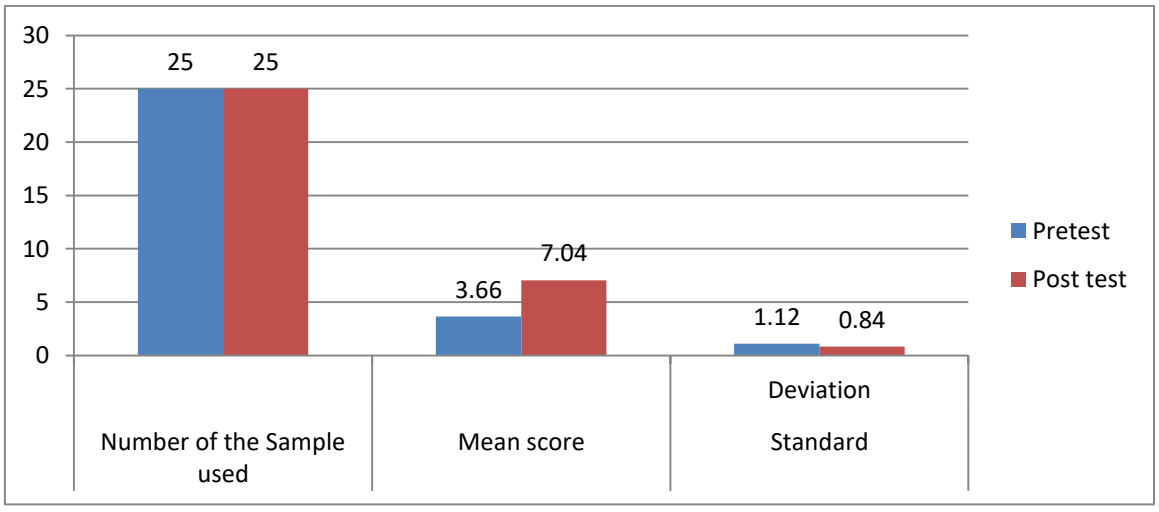
Table 3.3:

The Mean Scores and Standard Deviations for the Pretest and Posttest

Test	Number of the Sample used	Mean score	Standard Deviation
Pretest	25	3.66	1.12
Post test	25	7.04	0.84

Figure 3.3:

The Mean Scores and Standard Deviations for the Pretest and Posttest



The table and figure show the standard deviation and the mean score for the pretest and the posttest demonstrating pupils' performance before and after intervention. The results of the pretest show a mean of 3.66, this demonstrates that pupils initial reading comprehension skill were low and different. The standard deviation indicates average variability. Scores are somehow close to the mean yet they show differences in individual performance. The posttest scores witness an important development as the mean of 7.04 is (SD = 0.84). The change reflects a noticeable increase about 3.38 points on marks. This can suggest that intervention had a significant impact on students'' reading abilities.

3.7.2 Analysis of Mean Difference and T-Test

The paired samples t-test was employed to ensure the examination of the difference between the pretest and posttest was statistically significant. The pretest mean is 3.66 and posttest mean is 7.04 the mean difference is 3.38 and the t test is $t(24) = -40.69$, $p < 0.001$. As the intervention was based on integrating Richard Paul's elements of thought it resulted in significant development and efficacy of the intervention sessions. The key elements of thought were used as a guide to analyze appropriately. Also the t value negative noted that posttest scores are more than the pretest scores well-matched with aim of intervention. The critical reading implementation proves to unlikely highly significant p-value ($p < 0.001$) which indicates its effectiveness.

3.7.3 Analysis of Size Effect

The size effect was calculated (Cohen's d) to specify the scale of the intervention's effect on pupils critical reading skills. The use of Cohen's d the extent and the magnitude of the effect of the intervention are in practice Cohen's d: 8.14. The developmental effect of the intervention is 8.14 times better than the usual variation in pupils' performance. The results suggest that the

treatment had a significant impact on students' reading and comprehension.

3.7.4 Analysis of internal reliability

In order to assess the consistency and reliability the measurement of students' reading performance the test-retest reliability is measured. The measurement is employed through calculating the correlation of coefficient (Pearson's r) between the pretest and post test results. The Correlation coefficient **(r) is** 0.95 that means it is high positive correlation that indicates there is consistency between the pretest and the posttest. Furthermore, the r value as 0.95 show positive link between the sets of scores. This consistency means that the observed improvement among pupils from the pretest to the posttest is highly reliable because of the implementation of thought and notions corresponding to the pupils' age and their levels.

3.9 Qualitative Data Analysis of the Interview Finding

Introduction

This part represents qualitative data analysis from the interview with 25 fourth year primary pupils. The aim from the interview is to ask pupils about the way they engaged during the experiment with the implementation of Richard Paul's elements of thought through reading activities.

3.9.1 The interview

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A research interview is a two-way conversation that involves an interviewer who facilitates the discussion and asks questions, and an interviewee who responds to the questions. Interviews may be conducted either in person or via telephone. Furthermore, the internet is

increasingly being utilized as a viable resource for conducting interviews. Interviews are an appropriate method for collecting comprehensive information about the perspectives of individuals. These views include Concepts, emotions, and experiences. When dealing with subjects that require in-depth investigation and complex enquiries, interviews are advantageous. Face-to-face interviews are preferable when the target population is capable of communicating more effectively through face-to-face conversations than through written or phone conversations (e.g., minors, elderly, or disabled individuals) (Easwaramoorthy & Zarinpoush, 2006).

3.9.2 Objective of the Interview

The use of the interview with learners in young age is to receive direct and honest perceptions and experiences of the intervention and to see if they benefited from the experiment. Furthermore, the interview aimed to discover the elements of thought that pupils found challenging and difficult to comprehend or apply during reading. Moreover, the interview is a way to collect data complimentary to the quantitative analysis which enriches the findings with clear impact about Richard Paul's elements of thought significance

3.10 Participants

Twenty five pupils participated in the study and had been interviewed by the researcher. The interview results are analyzed while the answers would be analyzed collectively with the whole group due to identical responses of the pupils.

3.11 Analysis of the Results

Pupils provided collective responses correspondent with the interview questions. The analysis and Interpretation of the results identified and classified the responses based on themes.

Question 01: Do you enjoy the session? Why or why not?

Pupils are asked if they find the session enjoyable and fun. The responses of the pupils expressed that they find the sessions fun and interesting they stated that: *"Yes, we enjoy the session because it is fun and different from our normal lessons."* This means that providing information through explanations with hand gesture and writing on the board was easy to grasp for pupils. The intervention that focuses on incorporating elements of thought of Richard Paul in reading activities proves to be fun and enjoyable for pupils. The use of different techniques and focus on attracting pupils' attention with rewards and fun activities motivated them to engage with the researcher.

Question 02: Which element was the most difficult for you and why?

Pupils say that implication is the most difficult element for them they said *"the most difficult element is implication*". The results suggest that pupils find it difficult to think outside of the text. Pupils at this age have limited knowledge and still learning about a lot of notions and elements. Therefore, it is difficult for them to consider broader and detailed meanings or future outcomes of words and information they encountered during the intervention. This lines up with Paul's frame work where implications demand reasoning in its deeper sense in order to establish links beyond immediate comprehension.

Question 03: Which element was easiest for you? Why?

Pupils are consistent in their answer about the element they find easy. They note collectively: "The easiest element is information." This shows that learners find it easy to

identify facts, details, and main notions. This can indicate that it is foundational skill that was empowered by intervention and strived during reading activities.

Question 04: What Is The Purpose Of The Information You Learned?

Pupils collectively agree that information they acquire during the intervention is helpful. They said "the information we learn is used to identify elements we study" for them and that the information they learn is used in context and has function. This shows that pupils have active memory that allows them to remember information they have learned if it is used within the text.

Question 05: Do You Think The Information You Have Learned Is Useful?

Pupils are asked if they believe that what they learned during the intervention is useful. They said: "we think it is necessary in English language and maybe helps our English learning". This indicates that pupils have awareness and attentiveness about education and learning English as beginners. Pupils have consideration about the importance of knowledge they acquire at school.

Conclusion

The chapter presents the field word and qualitative quantitative data analysis of the research findings. The data is collected through two different research instruments, namely a quasi-experiment and pupils' interview. The study attempted to find the significance of Richard Pauls' notion of elements of thought and its role in activating and motivating learners' to be more active and use their critical thinking comparing to their brain activity at this age. The study finds that pupils can develop and improve with the use of the Elements of thought of Paul Richard. . The sessions with the researcher, who implemented Richard Paul's concepts in the elements of thought, were well-received by the pupils. The implications of the information the pupils acquire

are difficult for them to incorporate. Moreover, the interview results indicate that pupils enjoy learning information yet they do not have enough knowledge of its implications and uses. The study also concludes with providing recommendations based on the insights and views collected from the data analysis which aims to put forward workable suggestions to help young learners to learn foreign language

General Conclusion

Critical thinking is a quality that sets individuals apart from one another. A disciplined practice of employing the most effective reasoning feasible in any given situation is known as critical thinking. Classrooms frequently employ the term "critical thinking." The development and exercise of these skills in a variety of situations are encouraged for adult learners. Critical thinking is the process of evaluating and assessing one's own thought processes in order to enhance them. The objective of the investigation is to investigate the influence of Richard Paul's critical thinking model on reading. Additionally, the study aims to examine the impact of the research on the abilities of students to interpret, analyze, and create information.

The study at hand uses mixed methods approach through the use of quasi experiment and interview with forth year primary school pupils. The data extracted are qualitatively and quantitatively analyzed. The study consists of from three parts. The first chapter explores the concept of critical thinking, beginning with the definition of critical thinking and the general concept of thinking. Additionally, the investigation endeavored to scrutinize the importance of critical thinking in EFL classrooms and education. Additionally, it identifies Richard Paul's critical thinking paradigm, documenting its framework and essential components. Lastly, the chapter examines the importance of integrating critical thinking into English as Foreign Language (EFL) classrooms, emphasizing its role in promoting independent thought and improving language acquisition.

The second chapter examines the fundamental reading skills, the importance of reading in EFL education, and the critical role of critical thinking in enhancing reading achievement, thereby defining the nature of reading competence. The researcher's objective is to emphasize the importance of fostering reading proficiency as a fundamental component of language proficiency by analyzing these factors.

The third chapter on the other hand attempts to analyze the findings of the study. The study aims to determine the importance of Richard Pauls' concept of elements of thought and its function in encouraging and activating learners to engage in critical thinking and be more active in comparison to their brain activity at this age. Teaching elements of critical thinking based on Richard Paul's Approach into reading instruction can lead to measurable increases in reading achievement. Furthermore critical thinking model has significant role in the development of reading skill. This proves that the hypotheses are confirmed.

Limitations of the study

As researchers, it is undoubtedly that the researchers are confronted with specific constraints that hinder the advancement of the investigation. The primary concern is the time constraints that obstruct the ability to ensure complete class engagement in primary school English classes as a result of a lack of sessions. Another limitation that the researcher faces is inability to work with more than one group due to time limitations and attempt to simplify research procedure and focus only on one group. Moreover, implementing such notion to young learners was not easy task due to their small age and the fact that pupils need special treatment and encouragement for the researcher to work and provide healthy environment for the learner.

Furthermore, the experiment's coordination and selection of appropriate activities were significantly hindered by the absence of prior knowledge. Nevertheless, these challenges do not deter the researcher from maintaining commitment to research, and exerts a significant amount of effort to overcome them. It is acknowledged that these challenges are prevalent in scientific inquiry, and measures have been taken to address them in subsequent investigations. Additionally, the researcher has been unwavering in dedication to enhancing the understanding of the investigation and making a meaningful contribution to the broader scholarly community.

Recommendations

The study recommends the following:

1. **Recommendations For Teaching Critical Thinking at the Primary School Level**

a. Teachers ought to try new teaching methods that fit young learners who have started studying English recently.

b. Teachers in primary school can adopt critical thinking elements which would help pupils become active learners

c. Encourage activities that focus on the use of the Elements of Thought rather than rote Memorization.

d. Explicit teaching of Richard Paul model helps pupils think critically about the writer's thoughts.

e. Educational institution ought to help the instructor with materials necessary to teach.

f. Encourage the use of body language and gestures to entertain and to clarify information for learners.

2. **Recommendations For Course Designers And Policymakers**

a. Policy maker should offer training, workshop, and resources to train and reinforce primary school teachers of English with strategies that encourage critical thinking among the pupils.

b. Course designers are requested to highlight, model, scaffold, and evaluate methods for critical thinking skills. Richard Paul's critical thinking model appears useful and practical to primary school pupils.

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Appendix

Interview Questions

Question 01: Do you enjoy the session? Why or why not?

Question 02:Which element was the most difficult for you Why?

Question 03: Which element was easiest for you? Why?.

Question 04: What is the purpose of the information you learned?

Questio05: Do you think the information you have learned is useful?

الملخص

تدرس الدراسة تأثير نموذج ريتشارد بول للتفكير النقدي على إنجاز متعلمي اللغة الإنجليزية كلغة أجنبية في القراءة. حالة تلاميذ السنة الرابعة ابتدائي في بسكرة. تم الحصول على البيانات من خمسة وعشرين تلميذًا في السنة الرابعة من المرحلة الابتدائية في مدرسة مبارك الميلي الابتدائية في طولقة حيث تم إجراء تجربة شبه تجريبية وإجراء مقابلة مع التلاميذ. يهدف البحث إلى دراسة دور وتأثير نموذج التفكير النقدي لريتشارد بول على فهم القراءة لدى المتعلمين. يهدف إلى دراسة الطرق التي يؤثر بها نموذج التفكير النقدي لريتشارد بول على أداء القراءة لمعرفة ما إذا كانت تنفيذه يزيد من فهم الطلاب وتحليلهم وتفسيرهم للنصوص. تشير النتائج المستخلصة من التجربة إلى أن هناك نتائج هامة من الاختبار القبلي والاختبار البعدي. بعد تنفيذ العناصر الأربعة للتفكير، أظهرت النتائج أن الدرجات بين الاختبار القبلي والاختبار البعدي أظهرت تحسنًا ملحوظًا وتطبيقًا باستخدام عناصر التفكير كأساس للدروس. تشير نتائج المقابلة إلى أن الطلاب يواجهون صعوبة في دمج تداعيات المادة التي تعلموها. علاوة على ذلك، يجد الطلاب سهولة أكبر في تحديد وفهم المعلومات. يمتلك الطلاب ذاكرة نشطة، مما يساعدهم على تذكر المحتوى الذي تم تدريسه سابقًا عند استخدامه في النص. توصي الدراسة بضرورة تنفيذ عناصر التفكير لتنشيط ذاكرة الأطفال.

الكلمات المفتاحية: التفكير النقدي، عناصر التفكير، التلاميذ، نموذج ريتشارد بول، التنفيذ