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ENGLISH SECTION



**Examining the Effect of Critical Thinking on EFL Students'**

**Performance**

**Case Study: First-Year EFL Master Students**

**A Dissertation Submitted to the Department of Foreign Languages in Partial Fulfilment of the  
Requirements for a Master's Degree in Didactics**

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# *D*edication

*I* gladly dedicate this work,

*To* the soul of my father

*To* my truthful and beloved mother

*To* my dearest sisters, brothers, and family members

*To* everyone who contributed in this work

## *A*cknowledgements

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### **Abstract**

The current study aims at examining the effect of critical thinking on EFL students' performance. Therefore, the problematic at hand seeks to examine students' execution and awareness of critical thinking skills. Moreover, it intends to explore EFL instructors' perceptions regarding the implementation of critical thinking and students' performance in the classroom. To carry out this research, a mixed-method approach of both quantitative and qualitative research design was adopted. Accordingly, a formal critical thinking test by Watson-Glaser was administered to first-year master students of Ibn Khaldoun university, as well as a semi-structured interview was held with EFL teachers of master, in order to meet the research objectives. The gathered data was analyzed using "SPSS" software and a "thematic analysis". Ultimately, the results exhibit that both linguistics and didactics students lack critical thinking skills to some extent. Further, EFL teachers approved that the majority of master students are unreflective thinkers and rely on rote learning. Additionally, teachers' contextualization of critical thinking is somehow undefined with its major principles.

*Keywords:* Critical thinking skills, students' performance, CT implementation, Watson-Glaser test.

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### List of Abbreviations

<b>CT</b>	Critical Thinking.
<b>CTS</b>	Critical Thinking Skills.
<b>CCTST</b>	California Critical Thinking Skills Tests.
<b>CCTT</b>	Cornell Critical Thinking Test.
<b>EFL</b>	English as a Foreign Language.
<b>ELT</b>	English Language Teaching.
<b>GPA</b>	Grade Point Average.
<b>IQ</b>	Intelligence Quotient.
<b>LMD</b>	License, Master and Doctorate.
<b>W-GCTA</b>	Watson- Glaser Critical Thinking Appraisal.

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## **General Introduction**

## **General Introduction**

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### **Background to the Study**

Human thought is an essential cognitive process that allows the act or ability to consider the difference between what could be done and what should be done. However, in many instances, thinking is connected with solving problems and making decisions. Among the three modes of thinking, critical thinking is one of those skills that refines and enhances the process or quality of thinking. The concept of critical thinking is multidimensional as many theorists have developed rich definitions. In general, CT is seen as a self-regulatory, self-disciplinary, and self-reflective judgment, in which the thinker interprets, analyzes, evaluates, synthesizes, and makes inferences from evident contexts based on reasoning.

Experts and educationalists share a common consensus on the significance and integration of CT whether at the academic level or in civic life. Particularly at the level of education, CT is a vital liberating force in the journey of university students, especially in the field of English language teaching. In this context, EFL (English as a foreign language) students oriented towards critical thinking skills solve problems effectively, supervise and evaluate their work assignments, as well as communicate efficiently. Put simply, CT engages students in active and independent learning. While having a limited command of thinking skills advocates rote learning and could be the reason behind students' failure at university. It is imperative that critical thinking skills be practiced, integrated, and developed in ELT paradigms.

### **Problem Statement**

Previous research has demonstrated that most faculties of universities of all levels put much focus on deliberating subject content; in return, little attention is directed towards critical thinking instruction. The fact that CT is somehow neglected by educators or rarely used has made students primarily associate learning with rote memorization and place much responsibility

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on the teacher. English language learners are not an exception, more specifically first-year master students of Ibn Khaldoun university. After attending several trial sessions with both groups, it seemed that most didactics and linguistics students were reluctant to question the meaning behind lectures, being unable or unwilling to analyze and interpret teachers' standpoints or classmates. Though teachers sometimes tried to provoke their inner inquisitiveness and critical thought, students acted totally passive and some were even absentminded. In fact, only a few students took part in active participation, while the others played the role of information receivers. This proves that either students are not disposed to get involved in reflective thinking or they have a dearth of CTS, which badly disrupts learners as being active agents of their own learning.

### **Purpose of the Study**

The researcher decided to tackle and investigate the topicality of CT for its major role and effect on students' academic and career success. Likewise, only a few studies in Algeria have assessed students' CTS with standardized tests. To this intent, the overall aim of the present study is to examine the impact of CTS on EFL students' performance. To put it another way, the research seeks to find out whether EFL students execute or are aware of the application of CTS. Further, it attempts to explore teachers' perspectives on CT integration and students' performance in the classroom.

### **Research Questions**

To meet the requirements and objectives of the study investigation, the researcher endeavors to answer the following questions:

1. To which extent, does critical thinking affect EFL students' performance?
2. Are EFL students aware of the application of critical thinking skills?

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3. How can teachers promote the integration of critical thinking with their subject-matter instruction?

## **Research Hypotheses**

Based on the aforementioned research questions the subsequent hypotheses were defined:

1. It is assumed that students who lack CT are dependent and reliant on rote memorization.
2. The majority of EFL students are unaware of the application of CTS.
3. Teachers who contextualize CT according to its principles are more likely to enhance students' CTS.

## **Methodology**

For the purpose of gathering reliable data and addressing the research questions raised within this research, a multi-method approach of both quantitative and qualitative research was adopted. For the quantitative method, the researcher opted for the Watson-Glaser (1960) CT test as a model to measure the CT skills of first-year EFL master students. As for the qualitative method, a semi-structured interview was used to evoke EFL master teachers' points of view concerning CT.

## **Significance of the Study**

The significance of the study revolves around the fact that both EFL students and teachers will approach critical thinking from a different angle and consider its effectiveness on students' performance in ELT. To boot, the practical results will raise students' and instructors' awareness and reflection of CTS execution in learning.

## **Structure of the Dissertation**

In an attempt to meet the dissertation objectives, this humble work is divided into three main chapters. The initial chapter offers a theoretical overview of critical thinking in terms of its

## **General Introduction**

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background history, interconnection with other concepts, and principles. In reverse, the second chapter discusses the significance and the effect of CTS on students' learning and performance in general. Lastly, the third chapter discusses the empirical framework relating to research methodology, data analysis, and interpretation. Accordingly, it concludes with some research limitations and future educational recommendations.

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**Critical Thinking -An Overview-**

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## Introduction

Throughout the last decades, the ability to think critically has become a required and vital ingredient to succeed in the current modern world. Thus, individuals with high cognitive skills can achieve positive change on both academic and career levels. The present chapter introduces a basic review of critical thinking principles. Hence, it starts with a look at the historical context of CT, and followed by the most eminent definitions of the concept. Furthermore, the chapter attempts to identify the characterological traits of critical thinkers, the standards to assess thinking, and elements of reasoning.

### 1.1 Historical Background

The evolution of critical thinking has undergone through numerous historical stages that evidently contributed to its expansion in the 21<sup>st</sup> century. Basically, the concept of critical thinking was initially introduced by the Greek philosopher Socrates 2.500 years ago. Socrates established a series of precise and targeted questions to probe profoundly students' thoughts and beliefs. Socrates era was supported by Plato critical thinking, Aristotle, and other skeptics philosophers who asserted that humans should train their minds to perceive what is beyond the surface and not adhering to deceptive appearances. Socrates questioning is presently acknowledged as one of the outstanding strategies in teaching critical thinking that enables learners to seek evidence, examine and reflect on ideas logically conducive to regulate and control their assumptions and thoughts before approving them as a worthy belief. (Paul et al., 1997).

In the early Middle Ages, Thomas Aquinas stressed the importance of reasoning to be systematically scrutinized and fostered. According to Thomas critical thinkers are not necessary

those who refute common beliefs, unless such beliefs lack reasonable grounds. Furthermore, during the Renaissance period (15<sup>th</sup> and 16<sup>th</sup> centuries.) European scholars as Erasmus, Colet, and Moore highlighted the fact that all major life disciplines should be probed, analyzed, as well as criticized. In France, Descartes affirmed the need of structured disciplines to think clearly and precisely, as he developed a strategy of basic thought based on the principle of efficient doubt. In other words, every portion of thought ought to be addressed, questioned, and tested. Consecutively, critical thinking (18<sup>th</sup> and 19<sup>th</sup> centuries.) was even extended to economics, human social life, and language spheres, which ultimately produced Adam Smith's Wealth of Nations, Kant's Critique of Pure Reason, in addition to linguistics fields.

With the beginning of the twentieth century, the nature and the power of critical thinking have increasingly emerged. In relation, John Dewey the American philosopher and psychologist who is regarded as the father of CT described in his book "How we think" (1933) the necessity to learn through reflection, and suggested that reflective thinking is a part of the process of critical thinking, as he used the terms interchangeably. Along the second half of the twentieth century intensive works by several theorists (e.g., Piaget, 1952; Bloom et al., 1956; Ennis, 1962; Scriven, 1976; Brookfield, 1987; Facione, 1990; Paul, 1992...etc.) have made the term CT more comprehensive and contributed to level up its value and evolution up to the present 21<sup>st</sup> century.

## **1.2 Critical Thinking Conceptualization**

Critical thinking is a rich and intricate concept that has been refined and developed over years, as many scholars and authors interpreted the term distinctively in both fields of philosophy and psychology. In accordance, philosophers (e.g., Dewey, 1933; Scriven, 1976; Siegel, 1980; Siegel, 1980; Paul & Elder, 2001; Ennis, 2011; Facione, 2011) emphasize on the attitudes, nature and quality of critical thinking, the process of how to reach rational and reasonable beliefs.

Socrates argued the need to question students' knowledge in order to, assess the truthiness and plausibility of thought. He also contended that students should endeavor to make the unknown known. Besides, Ennis (2011) believes that CT is "reasonable and reflective thinking focused on deciding what to believe or do" (p.10). On the other hand, Paul and Elder (2001) agree on the fact that CT "is the art of analyzing and evaluating thinking with a view to improving it" (p. 2). In addition to the mentioned definitions above, Facione (2011) sees critical thinking as the ability to make purposive, thoughtful, reflective, and self-regulatory judgments based on reasoned consideration of evidence, methods, and standards. More prominently, Siegel (1980) considers CT as the process that embodies rationality and principled thinking to guide and control judgments in accord with objectivity, non-arbitrary, and appropriate assessment.

Psychologists in contrast (e.g., Glaser, 1941; Strenberg, 1987; Halonen, 1995; Halpern, 2014...etc.) put emphasis on cognitive skills, testing humans' cognitive schemata in various fields. (Siahi Atabaki1 et al., 2015). According to Halpern (2014) critical thinking can be defined as "the use of those cognitive skills or strategies that increase the probability of a desirable outcome" (p.8). She also points out that thinking critically is beyond reflecting only on own thoughts, solving problems, and making judgments, but rather critical thinking "uses evidence and reasons and strives to overcome individual biases" (p. 8). On the other hand, Glaser (1941) defines CT as the ability to assemble and interpret data, to use language with accuracy and clarity, to recognize problems and draw reasonable judgments or conclusions.

In short, critical thinking is a self-directed, self-guided, self-regulated and self-disciplined process that engages individuals in higher-order thinking to interpret, analyze, evaluate, draw inferences, monitor, remedy conflicts, and make sound judgments of any given subject or context. (Facione, 2011).

### **1.3 Interrelated Concepts**

#### **1.3.1 Metacognition**

Metacognition generally means the ability to be conscious of one's own thinking process, or what is commonly referred to as "thinking about thinking." It is approved that CT and metacognition go hand in hand. In fact, engaging in CT requires individuals to use a higher-level of metacognitive ability or certain cognitive skills and strategies (Choy & Cheah, 2009). One of the major problems in CT is the way knowledge is transferred. In other words, how to retain what we already know and use it in different real-life situations that we have never been familiar with, as well as how to ensure accuracy and make appropriate decisions. Metacognition comes into play as the governor function that directs how to plan and assess the prior knowledge, and how to monitor the thinking development (Halpern, 2014, p. 27). Several studies emphasize the relationship between metacognition and critical thinking. According to Schoen (1983), critical thinking skills are more likely to be developed and facilitated through metacognition. Further, Mango (2010) found that the factors of metacognition such as planning, monitoring, debugging, information management and evaluation are significantly related to the factors of CT. Ultimately, students who possess various metacognitive skills are more involved in critical thinking, which signifies that metacognition affects CT in one way or another.

#### **1.3.2 Creative Thinking**

It is recognized that creative thinking and critical thinking are different entities, as the former tends to generate original, fresh, and unique ideas to solve problems. It is regarded as a divergent and imaginative process. Moreover, creative thinking is about abandoning the old ideas and creating new ones, as having excessive knowledge within a discipline will set bounds for

creativity (De Bono, 1983, p. 162). Whereby, the latter is more convergent, evaluative, and judgmental in its nature. It is based on a reasoned and logical manner to reflect on issues in a sequential and structured way. Despite, the difference in their inner meaning, some authors consider creative thinking and critical thinking as complementary segments of thinking. In this regard, Scriven (1976) stated that possessing a great deal of creative and imaginative abilities without the combination of critical thinking skills, it is completely useless. That means you need to be critical in order to, be capable of imagining and producing plausible new theories or hypotheses. Accordingly, the application of logical criticism to a particular problem will lead to the use of creative thinking to construct a solution. This indicates that creativity is somehow grounded on the back-up of CT (Padget, 2013; pp. 5-18). Therefore, the complementarity view suggests that both creative and critical thinking are embedded in each other and inseparable processes, even though they both function distinctively.

### **1.3.3 Intelligence**

One of the most controversial questions is whether thinking critically helps individuals to be more intelligent. Or whether intelligence helps people to be critical thinkers? The answer to these questions is determined by the nature and the definition of intelligence. Similarly to CT, there is no standard definition of the notion of intelligence. Psychologists debate that intelligence is a higher intellectual cognitive ability that can be inherited by genetics or increased by environmental stimulation. According to Gottfredson (1997), intelligence is the ability “to reason, plan, solve problems, think abstractly, comprehend ideas, learn quickly, and learn from experience” (p. 13). Intelligence, for Gardner (1993), is an intellectual competence that enables individuals to solve genuine problems or difficulties they may experience. In other terms,

intelligence should incorporate problem-solving skills and the potential to create or find problems. The definitions aforementioned are consistent with CT units. In this context, Halpern (2014, pp. 30-34), explained that intelligence thinking is linked to critical thinking and reasoning, only if intelligence is measured on how well a person thinks in everyday situation. She clarified that intelligence standardized tests do not test for rational thinking. Thus, thinking critically will not make an individual smarter, if intelligence is assessed by standardized IQ measurements. Although, learning to be a better thinker and practicing the acquired thinking skills across various contexts can actually help individuals to be more intelligent. Halpern concluded that people differ in thinking and that not everyone can be a genius, but they can learn to reason and think intelligently. In summary, the relationship between intelligence and CT depends upon how the former is interpreted and examined.

#### **1.4 Characteristics of Critical Thinkers**

It is worth noting that critical thinkers are not just recognized by certain cognitive skills but also defined by a set of intellectual virtues, or habits of mind that are generally referred to as critical thinking dispositions. Many theorists (e.g., Dewey, 1933; Ennis, 1987; Siegel, 2009; Facione et al., 1994; Halpern, 1999; Paul & Elder, 2014..., Etc.) have urged that it is essential to possess some characterological components that can help students or anyone to understand the way we think and increase the chances of thinking better or reaching valid and logical solution to an argument. In light of this, Halpern (1999), stipulates that critical thinking skills are not enough for college students, if they are not disposed to use them. As a result, CT instruction must tackle both the dispositions and the skills. Whereby, Facione et al. (2001) considered CT dispositions as the persistent internal motivation factor to make decisions and solve problems through the use of

thinking. Facione, Noreen Facione and Sanchez (1994), proposed several attributes of dispositions which included, inquisitiveness, analyticity, open mindedness, systematicity, self-confidence, truth-seeking, and maturity (see Figure 1.1). Paul and Elder (2014) on their part submitted unique CT traits which covered intellectual integrity, intellectual humility, intellectual autonomy, confidence in reason, intellectual empathy, intellectual perseverance, intellectual courage, and fair-mindedness. The following traits are among the most common qualities that can encourage and motivate students to think critically.

**Figure 1.1**

*Critical Thinking Dispositions*



**Note : Adopted From Critical Thinking : What is and Why It Counts. (Facione , 2011)**

**a. Inquisitiveness**

Refers to one's desire and intellectual curiosity to seek knowledge and gather information, as an effective critical thinker will be ambitious and craving to know more regardless of the topic (Facione et al., 1995). Those inclined in inquisitiveness would rarely accept or take things for granted or as they appear, but instead always make sure to ask questions

and understand everyone and every aspect of life. Being consistently eager to learn and measure available limits or options (Dwyer, 2019). Curiosity is a basic quality that can help critical thinkers to become lifelong learners.

**b. Analyticity**

The ability to interpret, examine, and question evidence of a set of data or a problem with explaining properly to others the consequences of that information (Doyle, 2022). A person inclined of being analytical would make efforts to expect potential or practical difficulties, and consistently having alteration towards applying evidence and reasoning to solve problems. An analytical thinker is described as a logical person who relies on strong arguments to defend good ideas and bothered of the fact that there is no way to be sure whether a solution is better than another one (Facione et al., 1994, p. 4).

**c. Open Mindedness**

Having an open mind means to act flexible and fairly towards opposite beliefs or viewpoints, to purge the mind from bias information or self-interests that would restrict the exploration of new or unusual ideas. A good critical thinker, would be open to criticism, analyze opinions objectively without the inclusion of personal emotions. In addition to, accepting or at least considering constructive feedback. Though, being open minded does not mean that you are a critical thinker as Siegel (2009) noted that critical thinkers are typically open-minded but not the other way around. As you may have an open mind and still not being disposed to judge or reason effectively. Nevertheless, open mindedness is an essential ingredient that should be integrated in the journey of CT.



**d. Self-Efficacy**

The term self-efficacy relates to individuals' trust and beliefs in their abilities to accomplish a goal or the needed tasks. Besides, People who have strong self-efficacy belief can maintain their efforts despite the difficulties they might face (Bandura, 1997). A skilled critical thinker would believe in one's own reasoning and judgments, and be confident to lead others towards the rational solution of problems. On the other hand, those whose level of CT Confidence is less or lower than their genuine critical skills could display a lack of leadership whether in group settings or personal contacts (Facione et al., 1995; p. 6). Furthermore, students with low self-efficacy would rely on memorization and avoid engaging in problem-solving tasks or details no matter what their actual abilities (Syarifah et al., 2019). Conclusively, self-efficacy promotes critical thinking and can act as a motivational factor.

**e. Truth-Seeking**

Refers to someone's spirit to aspire and strive for the greatest knowledge in any given context. Being attentive and brave to ask questions. A truth seeker would be objective even if the conclusions or results do not fit oneself interests or presumed opinions; willing to consider or adjust facts or ideas that contradict within own assumptions. Critical thinkers acknowledge being error-prone, approve their limits, are honest, and disposed to constantly evaluate new information and evidence (Facione, 1995; Roggiero, 1999).

**f. Maturity of judgment**

The maturity trait targets the tendency to make judicious decisions in uncertain conditions and pressured moments. The ability to realize that some problems are ill structured including

some, may require more than one credible option or response. The CT-mature person makes sound judgments based on standards, evidence, and context. Alternatively, immature critical thinker would agree to solve problems with the assistance of others, and approach things as they appear to be (Facione et al., 1994).

**g. Systematicity**

The inclination to be systematic, organized, and diligent with the available information or in inquiry. To maintain focused on resolving problems of all levels of complexity, tasks, or making decisions. Students who are disposed toward systematicity plan to address and work on questions and issues in a disciplined, orderly, and systematized ways. Conversely, students with deficits in systematicity would face negligence and get distracted in practice, or may rush into decisions too quickly (Facione et al., 1994-1995).

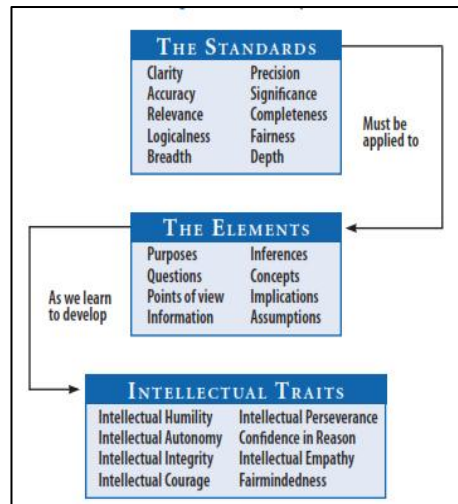
**1.5 Intellectual standards**

Reasoning is the process in which one draws conclusions or inferences through the use of reason i.e., making sense or meaning of something. Human beings on a daily basis engage in interrelated intellectual processes, consciously or subconsciously. However, effective reasoning is the one that is used with purpose and conscious. Whereby, one's can recognize what is beyond the surface of thought and avoid making mistakes (Paul & Elder, 2006; p. 13). One of the fundamental qualities in critical thinking is the ability to assess one's own reasoning, which significantly requires the awareness and knowledge of the intellectual standards. In this respect, Paul and Elder (2014) introduced a revised version of CT model which consists of the standards,

elements of thought, and intellectual traits. The above figure 1.2 highlights the key elements of the three categories.

Figure 1.2

*Critical Thinking Intellectual Standards, Elements, and Traits*



**Note : Adopted From the Miniature Guide to Critical Thinking Concepts and Tools**

**(Paul & Elder , 2008)**

The model summarizes how critical thinkers apply regularly the standards to elements of reasoning as a means to develop intellectual traits. Thus, the standards (Clarity, accuracy-precision, depth, relevance, logicalness, significance, breadth, and fairness.) can be used as tools of evaluation to identify the strengths and weaknesses in thinking as to make sure to reason well and according to some clear purpose. That is to say, to master thinking, critical thinkers analyze and assess the process of reasoning by utilizing these standards to one or more elements. (Elder & Paul, 2014; pp. 128-129).

**a) Clarity**

It is an essential accession standard, if the statement is unclear one's cannot understand what is being said or move on to other standards. Questions that focus on clarity would include for instance; could you express that point differently? Could you provide me with another example?

**b) Accuracy**

It means representing something with relation to what is actually is. Critical thinkers doubt and question whether statements are true or correct. They tend to imply a healthy skepticism in order to assess accurately facts or their own views as well as those of others. Questions that weigh accuracy in thinking would be, for example, Is that really true? How could we figure out if that is accurate?

**c) Precision**

To be precise means to provide the needed details to make statements meaningful. Some situations may call for clarity or accuracy but not precision. Therefore, specifics are essential to reach quality thinking. Questions that direct precision in thinking can be, for example, what precisely is the problem? Could you be more precise?

**d) Relevance**

It means to connect thinking to deal with issues or situations at hand. Being pertinent and analyzing a problem for what it truly bears on it. Moreover, those who think in a relevant way master self-discipline and stay on a track. Questions that focus on relevance would be, for

instance, how does this idea relate to the question or issue we are dealing with? How this idea relates to other ideas?

**e) Depth**

To think deeply means to treat an issue profoundly beyond its surface. Addressing and identifying the complexities inherent in a problem in an intellectual responsible way. Questions dealing with depth of thought may include, for example, how to deal with the most important factors in the problem? Does the answer deals with intricacy in the question?

**f) Breadth**

Thinking broadly means to avoid narrow-mindedness and try to understand alternative viewpoints. Taking into consideration opposite perspectives which contradict with our own. Questions focusing on making thinking broader would be, for example, is there an alternative way to look at this question? Do I need to take into account another point of view?

**g) Logicalness**

Logical thinking means the combined thoughts mutually support each other and make sense together. However, when ideas do not make sense or the combination is contradictory in some sense, the thinking is illogical. Questions that assess logical thinking may include, for example, how does that follow from the facts? Does it really make sense?

**h) Significance**

Many ideas might be relevant to a problem but not significant. Effective thinkers concentrate on the most important information and avoid trivial details. Questions that determine

significance would be for example, which of these questions or concepts is the most important?

How is that fact significant in context?

**i) Fairness**

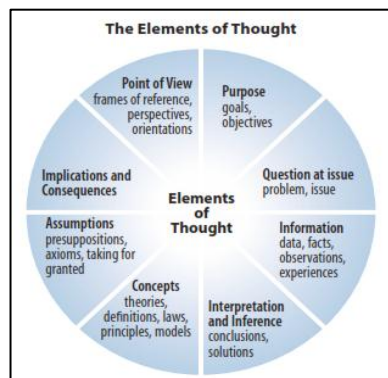
Thinking fairly means to avoid prejudices and unjustified assumptions that would cause faulty inferences. In other words, making sure that thinking is fair and justifiable even it would lead to change one’s own premises or ideas. Questions that ensure fair thinking may include for example, are my assumptions justifiable according to the given the proof? Am I using unjustified or unfair concepts to avoid considering alternative viewpoints?

**1.6 Elements of Thought**

Recognizing the elements of thought is essential for effective critical thinking. Wherein these elements outline reasoning and help to identify deficiencies in thinking (Paul & Elder, 2006). The following figure 1.3 introduces those elements.

**Figure 1.3**

*The Elements of Thought*



**Note : Adopted from The Miniature Guide to Critical Thinking Concepts and Tools.**

**(Paul & Elder , 2008)**

The above elements can encourage students to reason with purpose, cover positions on difficult issues, consider a variety of viewpoints, discover the process of information, analyze concepts or theories, examine assumptions, clarify conclusions or issues, and assess superficial facts (Paul, 2005). The ability to distinguish between elements of thought is crucial, but it is worth noting that the elements are interrelated and the difference is a relevant matter and not totally absolute (Paul & Elder, 2014). The elements of reasoning are explained as follows:

**1. Purpose**

Setting a clear, precise and realistic objective to accomplish a particular need.

**2. Questions at issue**

The ability to ask relevant and important questions to assess reasoning.

**3. Point of view**

Adopting flexible, broad, justifiable and fair point of view to avoid any defect in reasoning.

**4. Information**

Making sure to assess whether information and facts are accurate, fairly and to the issue at hand.

**5. Concepts**

Using fundamental and appreciate concepts and considering the needed theories to settle a problem.

## **6. Assumptions**

The ability to recognize and analyze whether the assumptions are taken for granted or should be questioned, justifiable or unjustifiable, clear or unclear.

## **7. Implications and consequences**

The ability to understand implications whenever they occur and track down reasonable consequences.

## **8. Interpretation and inferences**

The ability to interpret facts logically and spot or make sound inferences.

## **Conclusion**

This chapter was developed in an attempt to highlight and raise the reader awareness regarding the key principles of critical thinking. It discussed how the increasing role of CT has been evolving since Socrates era to the recent years. Within this chapter, the notion, and the interrelation of CT with other concepts have been addressed in greater details. Moreover, it served to point out the importance of the inclination towards thinking critically. Conclusively, the chapter outlined how students can analyze and evaluate the process of thinking through the use of intellectual standards, beside how students can identify the nature of elements of thought to evade the fall into the trap of unreflective thinking. Subsequently, the following chapter will report the efficacy of CT as the forefront of learning.



## **Chapter Two**

### **The Effectiveness of Critical Thinking Skills Towards Learning**

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## **Introduction**

It is widely agreed that critical thinking is one of the indispensable contributing factors to students' educational success. Critical thinking skills assist EFL learners to express ideas efficiently and communicate effectively in the target language. In parallel with, students who internalize CTS become more self-regulative, self-monitored, and self-reliant of own learning which positively affects their performance. On the other side of the coin, absence of CT causes rote memorization among students, as poor thinking generates poor learning (Elder & Paul, 2010). On this account, educational models and approaches must nurture the infusion of CTS. In a like-manner, educators need to put forth productive strategies and assessment techniques to help students develop CT abilities and overcome the difficulties they may encounter.

### **2.1 Students' Performance**

Before discussing the effectiveness of CT skills on students' performance, the researcher is going to identify what is meant by the term "performance" in this study. Conventionally, when the term "academic performance" is mentioned or heard, the first thing that comes to mind is students' GPA (grade point average). However, students' academic performance can indicate several factors as being initiative, students' leadership, intelligence, curiosity, persistence, impressive test scores, and achievements (Williams, 2018). Successful learning is not always measured by grades, but it also interrelates, to students' intellectual abilities and skills such as, logical reasoning, critical and creative thinking, students' ability to demonstrate knowledge and skills in different situations both inside and outside the classroom. Students who are not in possession of such mental tools cannot be expected to perform better academically or succeed in

life. To that end, performance in this study is associated with students' motivation, intellectual level, self-confidence, study habits, how well students manage the process of learning, learning skills, participation in classroom, teacher and students relationship.

## **2.2 Critical Thinking Skills**

Critical thinking entails a taxonomy of higher-order skills, which requires the thinker to unleash those lower-order skills such as memorization or comprehension. In general terms, CT has no specific skills but it depends more on those skills that can be defined and practiced spontaneously over various contexts of knowledge (Halpern, 2001). Nonetheless, many scholars (e.g., Fisher & Scriven, 1997; Cottrell, 2005; Giancarlo & Facione, 2001; Halpern, 2014) have listed some commonalities of skills. For example, Giancarlo and Facione (2001) advocate analysis, interpretation, inference, explanation, evaluation, and self-regulation as a set of skills that help critical thinkers to make up a judgment and monitor or enhance the quality of that judgment. Thus, such skills can also be applied to one another as an individual can explain one's analysis or evaluate one's inference.

### **2.2.1 The Transferability of CTS**

One of the sustained debates in educational research is whether CTS instruction should be integrated within a specific subject or taught separately. The issue has not settled yet, and experts (e.g., Glaser, 1984; Kurse & Presseisen, 1987; Ennis, 1989; McPeck, 1990) are still arguing whether CT should be infused separately (general approach), be learned through immersion, be infused within subject matter, or be combined with generic approach with infusion or immersion. These four CT approaches are classified as follows: (a) a general

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approach focusing on teaching CT and the dispositions separately from the subject matter knowledge through exposing students to CT in non-school context; (b) an infusion instruction providing a deep explicit subject instruction in which students have the opportunity to think critically about the subject and learn about CT principles explicitly, (c) an immersion approach conducted similarly to the infused instruction in which students are encouraged to get immersed deeply in the content, but without explicit indication to critical thinking abilities and dispositions, (d) a mixed approach method combining both general approach with either infusion or immersion instructions, under a separate course that involves general CT principles and subject specific CT instruction (Ennis, 1989; pp. 4-5). Albeit, there is a lack of consensus regarding CT approaches. Ennis (1989) suggests that CT should be taught within all domains using a mixed approach. On the whole, each version of these approaches has its own arguments for and against but most importantly the selection should be relevant to teaching context and critical thinking constituents and principles.

Critical thinking skills translate to both academic and professional success. However, many may face difficulties or are unaware of how to use the skills appropriately (Cottrell, 2005). In the light of this presumption, Halpern (2014) indicates that it is essential to know how to use CT skills and how to recognize which skills are needed in different situations. She further adds that the more students direct their learning and focus on the structural aspects of a problem, the more CT skills are learned in a way that can be easily recalled in novel situations. Indeed, CTS are best recognized and transferred when they are learned explicitly, spontaneously, and consciously within various contexts (Marin & Halpern, 2011).

The development of critical thinking skills demands allocation of time and consistent practice. Succinctly, students can learn to use CT skills naturally when exposed to specific instruction that is particularly designed to encourage the implementation of the skills explicitly or implicitly in different contexts.

### **2.3 Critical Thinking in Higher Education**

Educationists and scholars lay stress on the significance of teaching critical thinking in all classes. Yet, it is deemed that students in higher education are more in need of possessing CT skills that would prepare them to become competent employees, especially in the current economic workforce. Allegretti and Frederick (1995) state that it is essential for students to develop CT as it helps them to make reasoned judgments, remedy conflicts, and evaluate their own and others' arguments. Siegel & Splitter claim that CT is vital in academic learning as it promotes students' autonomy, reasonable and reflective thinking (cited in M. Lipiec, 1997). Students who can use their intellectual knowledge to engage in CT when learning something are more likely to succeed than those who rely on memorizing facts (Chaffee, 1992). Therefore, educational paradigms should focus on how students think rather than what to think.

In the Algerian context, CT is becoming a more interesting topic for investigation, especially in recent years. Nevertheless, CT still has not yet penetrated across EFL university faculties. The research literature has proved that instructors rarely teach CT and EFL students are graduating with deficits in CTS. For instance, Ouslimani and Benboulaid (2020) attempted to investigate teachers' perceptions of the development of CT and the effect it has on language teaching. The researchers concluded that the majority of teachers concede the importance of CT

effectiveness in language pedagogy. However, they focus more on teaching subject content than CT. Another study by Abdaoui and Grine (2020) examined the effect of the university education system on fostering students' CTS through the use of the Watson-Glaser test. They found that the LMD (License, Master, and Doctorate) reforms do not truly cultivate learners' CTS, along with participants achieved low scores on the test.

In a general sense, critical thinking in Algeria is constrained by countless sociocultural and psychological variables, which have actually hampered the inclusion of CT in educational curricula. Consequently, college faculties and educators are prerequisite to bring into practice CT culture and methods through successful explicit instruction, in order to improve students' criticality.

#### **2.4 Critical Thinking in ELT**

As discussed earlier, CT is a fundamental goal of any educational agenda; English language teaching does not fall apart. CT plays a key role in conveying students' inner thoughts into arguments and communication. In accordance, Kabilan (2000) adds that “to become proficient in a language, learners need to use creative and critical thinking through the target language” (p. 1). In essence, teaching CT within English can help students produce meaningful communication in the target language (Yue Lin, 2018). Though CT is more associated with a high proficiency level in English, Hughes & Dummett (2019) believe that it is not necessary to equate lower-order thinking with lower language proficiency. Relatively, Highes and Dummett have suggested a model which consists of “comprehension, CT, and creative thinking”, adhering that both lower and higher-order thinking should be combined to integrate CT into lessons.

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English or language learners are supposed to master the four skills namely, speaking, writing, listening, and reading to grasp fluency. Such skills can be successfully developed when students are critical. As a matter of fact, effective thinking contributes to effective writing, as the process of writing embraces the processes of decision-making, problem-solving, seeking solutions, and expressing or supporting ideas using language. Such a mechanism is linked to CT, creative thinking, and metacognition (Yu Lin, 2018, p. 16). By the same token, critical thinking works in a harmony with reading, as the former helps the reader to analyze and examine the text deeply along with it allows the reader to monitor one's own understanding while reading (Kurland, 2000). Identically, the principles of critical thinking appeal to the process of listening as active and critical listeners analyze, evaluate, and make mental judgments to check the validity of the message heard. As follows, all types of reading and listening involve the core critical thinking skills. Consequently, students' major shortcomings in some skills could be attributed to deficiencies in CT and not their lack of knowledge in the subject.

Among the prominent studies in Algeria, Melouah (2016) examined the importance of fostering students' CTS and the concept of critical thinking using an experimental research design. The results demonstrated that infusing explicit instruction in CT has greatly enhanced first-year EFL students' performance and engagement in the classroom. Investigating the effect of promoting CT topics as a technique to improve EFL students' speaking skills. Guendouzi (2015) concluded that using such an instrument played a role in developing EFL students' speaking abilities. Different studies have also shown a high relationship between CT and students' academic GPA performance (e.g., Jenkins, 1989; Karbalaei, 2012; Ghanizadeh, 2017; Abbasi & Izadpanah, 2018).

In sum, critical thinking can help EFL students monitor their learning and make the language more successful and meaningful for them (Shirkhani & Fahim, 2011). Additionally, students who execute CTS tend to ask challenging questions, approach effectively the curriculum and participate in active learning (Muraswski & Linda, 2014).

## **2.5 Critical Thinking Development**

It is undisputable that CT is not innate, rather an acquired ability that can be taught. Thus, it is essential for teachers to help students to shift from being unreflective thinkers to challenged thinkers and promote their CTS through well-established instruction. Accordingly, educators should focus on applying content that can stimulate thinking, the process of learning, and methods of assessment (Snyder & Snyder, 2008).

Instructors can use various techniques to integrate CT into the classroom. Bloom's Taxonomy is one of those tools that can be used to ask critical questions. Bloom's Taxonomy method classifies six hierarchical levels of skills (knowledge, comprehension, application at the bottom, and analysis, synthesis, and evaluation at the top). The first three categories are used for lower cognitive ability, while the top other skills are mainly designed for higher cognitive ability (Armstrong, 2010). The taxonomy suggests that both lower and higher-order thinking skills can be equipped to design tasks to promote CT. Another instructional technique to implement critical thinking is Socratic questioning. Paul and Elder (2008) recommend teaching the three discussions of Socrates, spontaneous, exploratory, and focused. Each of these modes of orientation can enhance the cultivation of CT and encourage students' active participation in classroom meetings. Other researchers (e.g., Darby, 2007; Cheong & Cheung, 2008; Tawil,



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2016; Rafidah & Rambler, 2020; Wale & Bishaw, 2020; Boumediene et al., 2021) advocate the implementation of debates, online discussions, digital mind maps, and inquiry-based instruction to foster students' critical thinking skills.

English foreign language teachers are requisite to avoid being the whole and the only spoon-feeding. But instead give, students more space to be the center of the classroom as well as try to involve them in problem-solving tasks (Irawati, 2014). Thereby, instructors should act as facilitators or guiders and follow a constructivist instruction that places the student as an active independent agent in the learning process. (Dewey, 1933; as cited in Baghoussi, 2021).

Technology is an effective supplement to reinforce CTS, especially since most students are already steeped in a virtual digital world. In this perspective, instructors can use online discussion forums in which students feel inspired to evaluate evidence and understand or reflect on their classmates' perspectives. Classroom response systems ("clickers") are another engrossing-advanced strategy that facilitates teaching activities and helps students participate in active learning, which ultimately extends to CT (Ekarani, 2019). Technological methods such as mindmeister, 3D designing, whoo's reading, flow chart games, online classes, and others can stimulate and increase students' CTS and interaction.

Educational instructors play a major role in helping and encouraging students to become critical thinkers. However, students also have to work on themselves to improve the quality of their thinking. In this vein, learners should try to discover the structure of own thinking, observe its inferences, and identify its basis and standpoint. Learners should also learn the habit of being intellectually autonomous. Students, who learn autonomously do not accept others beliefs passively, take charge of their lives or thinking, complete what they begin, have self-control, and

have willingness to face people alone using evidence and reasoning (Paul & Elder, 2014). To think critically, learners need to have the ability and confidence to provide own positive and negative judgments, reflect on own prejudices/biases honestly, and being flexible to consider alternative opinions ( Brenda et al., 2009). Aside from that, students should take advantage of technology and use web applications and games such as (Edmodo, Google Docs, spent, online crossword puzzle maker) to practice thinking and develop problem-solving skills (Cole, 2016).

Critical thinking is a lifelong journey that should be integrated in all parts of our lives. Developing the art of skilled thinking requires commitment and daily practice for both intellectual skills and traits (Paul & Elder, 2014). Moreover, to strengthen CT in schools and colleges instructors need to have a clear definition of the concept of CT (Lipman & Matthew, 1989). In fact, critical thinking teacher introduces the value of CT through real life situations, and motivate students to practice thinking (Bowell & Kingsbury, 2015).

## **2.6 Barriers to Critical Thinking**

Critical thinking is a tangled, persistent skill that encourages individuals to be creative and face frequent problems. On a regular basis, students may come across barriers that can lessen and impede the progress of their critical intellectual abilities, which poorly impacts their performance in the classroom. The following CT pitfalls are amongst the most widespread.

### **1) Egocentric Thinking**

Those involved in egocentric thinking are self-centered and view things in relation to oneself interests. Egocentricity makes an individual more selfish, believe only in one's own perceptions, and distorts others rights or points of view. There is no doubt that this type of

dominating and submissive thinking can diminish students from being critical thinkers. Fortunately, using the legitimate intellectual standards can help students to recognize and lose this character flaw (Paul & Elder, 2014).

## **2) Misunderstanding the Term Criticism**

Criticism is often misunderstood as making negative judgments or comments, when it genuinely means constructing both negative and positive aspects of an analysis. This falsification of what is meant by criticism leads students not to offer any negative statements and to be restricted only to positive comments. Others may also be reluctant to give their own feedback on what can be improved as they regard a critical thinker as an unpleasant sort of person (Cottrell, 2005). Such a misinterpretation of the term can preclude students from practicing criticality.

## **3) Lack of Motivation**

Motivation is a necessary precondition for critical thinking. Halonen (1995) noted that individuals' dispositions or inclinations to establish higher-order thinking is relevant to their motivation. Overall, intrinsically motivated students are prone to reflect on established rules of the field, ask deeper thought-provoking questions, and challenge themselves to experience new ideas (Chuter, 2020). Paradoxically, lack of motivation creates passivity, unhappiness, and dissatisfaction (Sasson, 2019). Not to mention, unmotivated students are willing to accept information as given, uninterested to engage in inquiry-based thinking, give up at the early indication of a challenge, and are happy with just things getting by. In the long run, amotivation can be a serious obstacle to the advancement of CTS.

#### **4) Drone Mentality**

Drone mentality is the habit of paying little attention to what is going on in the world (surroundings and people). Those caught in a drone mentality have the tendency to work through daily tasks without thinking, and drop behind on new challenges or problems (Maher, n.d.). Assuredly, such a mentality can cost dearly damage to CTS, as it causes an inability to analyze issues. The drone mentality can slip into everyone at any time, however identifying oneself biases, questioning things, looking for multiple solutions for problems, and being self-aware of mind mechanism can help stave off such state of mind (critical thinking secrets, n.d.)

#### **5) Social conditioning**

Each individual of us is being raised and taught to think in a certain manner owing to social norms, ideologies, customs, and conditions. Such social patterns induce the habit of thinking within one's own comfort zones and fend off thinking beyond a broader spectrum. Biased social conditioning conforms to stereotyping people around and making unwanted assumptions which limits the process of CT. Consequently, having social and cultural awareness can minimize social conditioning (Bhasin, 2019).

#### **6) Lack of Practice**

The key to succeed in CT relates not only to make sure understanding the process, but more importantly being able to bring it into application and practice. Some students may find it difficult to think critically or simply do not know which steps should be undertaken to improve CT. Others are inattentive that school strategies are insufficient for higher-level academic thinking (Cottrell, 2005). Altogether, to make students prosper in the domain of CT, teachers

need to equip them with opportunities to practice the content learned into real-life situations (Farrell, 2022).

In closing, there are alternative CT obstacles besides the prior mentioned which can limit students' rationality, such as lack of background knowledge, insufficient time, groups think, and arrogance...., etc. All of the above, being fully aware of the nature of these handicaps can help students to avoid and remove these deadly boundaries.

## **2.7 Critical Thinking Assessment**

Assessing students' critical thinking skills is one of the fundamental issues in higher education. Alsaleh (2020) explains that assigning learners to write essays or students' participation in discussions cannot demonstrate the presence of CTS. Therefore, teachers need an effective instrument to assess strategies that promote CT and make decisions. Different approaches have been suggested by scholars and researchers to assess CT. The most commonly used methods are (a) general knowledge standardized tests. (b) teachers' self-constructed assessment related directly to the aims of the course. (c) students' self-assessment.

### **A. Standardized Tests**

Commercial standardized tests are one of the most widely used tools to assess CT skills and abilities. For example, the Watson- Glaser Critical Thinking Appraisal (1960), which is a multiple choice version that measures five sub-scores (evaluation of arguments, identification of assumptions, deduction, inferences, and interpretation of information.) (Assessment Day, 2022). Another well-known measurement, The California Critical Thinking Skills Test (1990) by Peter Facione, designed for college students. The CCTST assesses five cognitive skills, named

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analysis, evaluation, inference, deductive reasoning, and inductive reasoning. An additional guide for assessing students' reasoning ability, Cornell Critical Thinking Test, Level X (1985) outlined by R.H. Ennis and J. Millman. Midwest Publications. The CCTT assessment evaluates five subscales; induction, deduction, observation, credibility, and assumptions. The Ennis-Weir Critical Thinking Essay Test (1985), is also one of the most effective instruments intended for both teaching and testing. The form includes open-ended questions which tackles arguments that appraise students' ability to formulate complex arguments in writing.

All the above-mentioned tests have been acknowledged in relation to their reliability and validity. Ennis (1993) confirms that before adopting any of the proposed assessments, teachers must have an elaborated logical definition of critical thinking, and also a clear purpose for which the test is used for. He also indicates that multiple-choice tests are less comprehensive compared to open-ended assessments.

**B. Teachers' self-Constructed Assessments**

Standardized tests are valid and reliable, but they can be somehow expensive and complicated for teachers due to its implications and limitations. Henceforth, instructors can design their own tests consistent with course aims to measure CT. Rubrics are one of those quick and easy methods that teachers can adapt. In this sense, Facione and Facione (1994) established the "Holistic Critical Thinking Scoring Rubric", which can evaluate teachers' work products, essays, and presentations, including the CT skills and dispositions. The HCTSR is more useful for both summative and formative assessment. The rubric is translated into many languages and used across numerous educators (Insight Assessment, 2021)

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In the English language context, assessment focuses more on linguistics and communicative competencies. If the assessment integrates both the language and the thinking skills, critical thinking would be more promoted. Shirkhani and Fahim (2011) suggest some assessment practices that can enhance CT among language learners, such as,

- The use of continuous assessment rather than depending on one-shot evaluation.
- Providing students with frequent feedback that reflects students' performance and how it should be improved, as well as teachers' planning of classes and activities.
- The use of activities that encourage to think, cooperate, and ask questions.

Assessment in the foreign language classroom highly affects how students learn the language. Teachers should construct an appropriate assessment with an effective criterion that can diagnose students' CTS, taking into account, classroom requirements and course aims.

### **C. Students' Self-Assessment**

Another approach for testing critical thinking is through students' self-assessment. Elder and Paul (2010) discussed the importance of understanding the CT competency standards, which are useful for teachers assessment and students self-assessment. The standards entail indicators that identify to what extent students are using CT. Elder and Paul claim that students who internalize the competency standards are more likely to become self-disciplined, self-directed and self-monitored thinkers. Overall, self-assessment develops reflection, independent learners and responsibilities for learning.

The purpose of assessment is to improve students' thinking abilities through content. All of the mentioned assessment methods can promote CT when used appropriately. Yet, students

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cannot become skilled at reasoning or CTS unless teachers design instruction that assimilates CT principles and concepts for daily routine practice (Paul & Elder, 2007).

**Conclusion**

This chapter shed light on the significance of CTS in education and how it should be recognized, taught, and transferred. The chapter also covered the position and role of CT in higher education. Additionally, it discussed the essence and effect of critical thinking in ELT and how can teachers and students develop CTS. Finally, the chapter concluded with a brief representation of students' main difficulties in CT and the most common assessment tools used in the field. The next chapter will mainly present research methodology procedures and field data analysis.



## **Chapter Three**

### **Field Work & Data Analysis**

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## **Introduction**

This chapter is devoted to provide a detailed analysis of the practical framework. The chapter presents a thorough explanation of the research design, sample, instruments, and the procedures undertaken for conducting research and collecting data. Further, it provides a description and interpretation of the findings related to the study. Lastly, the chapter ends with a list of limitations and recommendations.

### **3.1 Research Design**

This study aims to examine the effect of critical thinking skills on EFL students' performance. In addition, it attempts to seek how EFL teachers perceive and develop CT among students. For the sake of having a comprehensive and broad understanding of the research problem and questions, the researcher opted for a mixed method approach of both quantitative and qualitative research. In first hand, the quantitative method deals with a practical model of CT test designed to explore and evaluate students' critical thinking skills. In the other hand, the qualitative method encompasses a semi-structured interview with EFL teachers to elicit their views regarding the implementation of CT and students' performance in the classroom. The collected data is analyzed with SPSS software and thematic analysis. The research took place at Ibn Khaldoun university of Tiaret. Particularly, department of letters and foreign languages, section of English, during the academic year 2021-2022.

#### **3.1.1 Sampling and population**

The population of this study is first- year master students of both specialties linguistics and didactics. The total number of both groups is four hundred students and ten EFL teachers.

The sample under investigation consisted of sixty students (thirty students from each specialty) and four EFL teachers selected randomly. In a view of the study objective, gender and age were not taken into consideration. The researcher have chosen first-year master students because they are skilled enough to practice CTS consciously or subconsciously compared to bachelor students. Put it another way, master students have more intellectual experience. Likewise, students were more available and reachable in contrast with second-year master students.

### **3.1.2 The Aim of the Interview**

The interview was conducted to reveal teachers' perceptions towards students' performance and critical thinking skills. Apart from that, it is intended to explore how instructors foster CT in ELT. A semi-structured interview was adopted to gather the relevant information on behalf of other interview types. Semi-structured interviews demonstrate that the interviewer is fully prepared and competent to lead the conversation without imposing excessive control over the informants (Russell, 1988). Besides, semi-structured interviewing is somewhat more suited for running in-depth reconnaissance of the interviewees' independent thoughts using probing open-ended questions (Adams, 2015).

### **3.1.3 The Aim of the Test**

The Watson-Glaser Appraisal Test was developed by Goodwin Watson and Edward Glaser since the year 1925, published by TalentLens. The test is highly approved, reliable, suitable, and valid for its application in assessing critical thinking abilities. Effectively, the W-GCTA is used in various educational settings and cited by many researchers. It is also considered as one of the main and most successful measuring tools to predict professional success. Inspired

by these motivating reasons and by the virtue of depicting, analyzing, and measuring students' CTS. The researcher decided to choose the Watson-Glaser Appraisal Test, form A.

### 3.1.4 Description and Administration of the Test

The Watson-Glaser Appraisal Test, Form A consists of eighty (80) multiple choice questions divided into five sections (evaluation of arguments, recognition of assumptions, deduction, inferences, and interpreting information). Each of these five subtests provides statements with guidelines and instructions that are designed to measure an individual's reasoning and CTS. The test takes approximately sixty minutes (Assessment-Day, 2022).

- **Evaluation of Arguments:** Arguments are a set of statements to support a given idea in order to convince someone to believe or behave in a particular way. Participants are subjected to analyze arguments objectively and distinguishing between strong and weak arguments by selecting statements that are well justified and relevant to the point.
- **Recognition of Assumptions:** An assumption is something taken for granted or accepted as true without question. Participants are asked to decide whether the assumption is logically justified according to the given evidence.
- **Deductions:** Participants are supposed to come to a final conclusion by applying different premises and determine whether a conclusion logically follows or does not follow based one the statement provided.
- **Inferences:** An inference is to draw a conclusion based on reasoning and evidence. Participants are expected to conclude the conclusion that is the most accurate.

- **Interpreting Information:** Participants need to interpret the information based on the given facts and judge logically whether conclusions follow or does not follow beyond a reasonable doubt.

The test was piloted for a group of students in a form of an online version. Most Students revealed that it is almost impossible to answer the questions as the test is too long, difficult, and time-consuming. Based on students' complaints and taking into account their busy schedule, the test was reformulated into a short version composed only of fifteen (15) questions and five statements presented with options. For good measure, the content of the test was kept without any changes, except statements and questions were reduced to a proper number to make it more practical and easier for students. The adapted version of the test was administered to first-year master students during the second semester. The test was distributed equally on both specialties as each group was given thirty copies. Some students volunteered to take the test, the rest were selected randomly. To avoid ambiguities and misunderstandings, each section of the test was explained and clarified. Students were requested to take out the test at home and bring it back the following day, in order to, ensure credible results. Finally, the process of collecting data took almost two weeks as the majority of students forgot to hand over the test. Therefore, the only solution was to deliver it once again and request them to answer it right away.

### **3.1.5 Description and Administration of the Interview**

The interview is semi-structured, designed for teachers of first-year master students. It consists of six open-ended questions subjected to some adjustments throughout the interview sessions. The interview was held during the second semester with four EFL teachers. Unfortunately, arranging meetings with teachers was complicated as most of them were busy. To

this end, two of the participants were interviewed individually face -to- face at the university. The interview was audio taped and lasted from ten minutes to fifteen minutes. Diversely, the remaining teachers were interviewed online.

### 3.2 Findings

#### 3.2.1 The Analysis of the Test

The test includes fifteen questions and scores one point for each correct answer and zero for each wrong option, so the highest general average would be 15/15. In accord with the nature of the research population, the independent sample T-test is conducted to analyze the required data. Since group one (linguistics) and group two (didactics) are unpaired independent samples, the t-test is more applicable and adequate to assess if there is a significant difference at the level of 0.05 between the group means. Subsequently, the following hypotheses are generated;

- **H0: There is no significant difference at the level 0.05 between G1 and G2.**
- **H1: There is a significant difference at the level of 0.05 between G1 and G2.**

#### SPSS Output 3.1

*General Mean Scores of First-Year Master Students in the WGCTA*

	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Error STD</b>
<b>Linguistics G01</b>	<b>30</b>	<b>8,5000</b>	<b>0,56</b>	<b>1,03585</b>
<b>Didactics G02</b>	<b>30</b>	<b>8,5667</b>	<b>0,60</b>	<b>1,10244</b>

The SPSS Output 3.1 illustrates the statistics related to the general results of the two samples, group one is composed of 30 participants, and group two is also comprised of 30

respondents. As shown in the above table the total mean score of linguistics students is 8,5000 with a standard deviation of 5,67359 and a standard error mean of 1,03585. While didactics students achieved a mean score of 8, 5667 with standard deviation of 6, 03829 and a standard error mean of 1, 10244. This implies that there is a noticeable improvement in the total average score and standard deviation of G2 compared to G1.

**SPSS Output 3.2**

*The Balance of Means of Both Groups*

<b>T</b>	<b>DF</b>	<b>SIG P Value</b>	<b>Mean Difference</b>	<b>Error STD</b>	<b>95% Confidence interval of the difference</b>	
<b>11,379</b>	<b>59</b>	<b>0,000</b>	<b>8,53333</b>	<b>0,74994</b>	<b>Lower</b>	<b>Upper</b>
					<b>7,0327</b>	<b>10,0340</b>

The results bestowed in the SPSS Output 3.2 display that statistically, the unpaired samples t-test succeeded to reveal a reliable difference between the mean scores (8,5000 & 8,5667) of both groups. The p-value (0.000) is lower than a (0.05) and the confidence interval (7, 9327- 10, 0340) does not include a H0, hence the null hypothesis is rejected in favor of the alternative hypothesis. This suggests that, there are significant differences between the average results and the assumed value, which means that there is a significant difference at the level of

0.05 between the mean scores of linguistics and didactics students. Moreover, the positive t-value (11,379) denotes that G2 performs higher than G1 with a mean difference of 8, 53333.

**SPSS Output 3.3**

*CTS Scores of the Two Samples*

<b>CT Skills</b>	<b>Mean G01</b>	<b>Mean G02</b>	<b>Difference of Means</b>	<b>P – value</b>
<b>Arguments</b>	<b>0,6667</b>	<b>0,6890</b>	<b>-0,0223</b>	<b>0.000</b>
<b>Assumptions</b>	<b>0,6222</b>	<b>0,4443</b>	<b>0,1779</b>	<b>0.002</b>
<b>Deduction</b>	<b>0,6556</b>	<b>0,7223</b>	<b>-0,0667</b>	<b>0.014</b>
<b>Inferences</b>	<b>0,4111</b>	<b>0,4010</b>	<b>0,0101</b>	<b>0.286</b>
<b>Interpreting Information</b>	<b>0,5000</b>	<b>0,5567</b>	<b>-0,0567</b>	<b>0.001</b>

The SPSS Output 3.3 shows that there is a significant statistical difference at the level of 0.05 between the scores of linguistics and didactics students in the skills of arguments, assumptions, deduction and interpreting information. The p-values of 0.000, 0.002, 0.014, and 0.001 are lower than a (0.05) which signifies the significant difference. Though, non-significantly G1 accomplished a slight higher performance than G2 in the inference skill (0,0101) and performed a highly significant difference at the level of 0,05 in the recognition of assumptions skill (0,6222) with a difference of mean (0,1779). Contrarily, group two exceeded group one in the evaluation of arguments, deduction, and interpretation of information skills with



a difference of (-0.0223, 0.0667, -0.0567) in the means. Conclusively, both groups attained the lowest mean score in the inference skill (0,4111, 0,4010).

### 3.2.2 The Analysis of Teachers' Addressed Interview

In a line with the research purpose, the data collected from the interviewees was interpreted using a thematic analysis. The process incorporates identifying common themes and adding codes for interesting patterns. In order to, assure validity and credibility, some responses are provided in a form of quotes as a support.

**Table 3.4**

*Demographic Information about the Participants*

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Teachers	Gender	Major	Teaching Experience
T1	Male	English Language and Linguistics	11 Years
T2	Female	English Language and Didactics	3 Years
T3	Male	English Language and Didactics	9 Years
T4	Female	English Language and Linguistics	6 Years

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The above table describes detailed information regarding participants major and teaching experience. All the teachers are graduates of ELT and have a teaching experience ranging from 3 years to 11 years.

**Q 01: From your perspective how do you conceptualize critical thinking?**

Participants claimed that critical thinking is the ability to criticize, reflect, and scrutinize opinions and ideas. They added that CT is also a skill that involves being objective, self-monitored, and to relate what is theoretical to practical.

To mention precisely, critical thinking was defined as,

**T1-** “The ability of having students able to reflect on what they study, and also trying to bring all the experiences that are taught theoretically to real life experiences.”

**T2-** “CT is one of the 21<sup>st</sup> century skills. It refers to learners being able to think critically.”

**T3-** “It refers to students’ abilities and skills to scrutinize, understand, and criticize thoughts, ideas, attitudes, and opinions.”

**T4-** “Critical thinking is a self-monitored/directed thinking towards knowledge or information. This entails the availability of enough arguments and proofs to approve or disapprove a thought. A critical thinker is unbiased/not subjective; she/he is objective.”

**Q2: Do you include critical thinking skills in your course designs / plans? If yes how?**

All teachers stated that they try to implement critical thinking from time to time. Additionally, teachers indicated that they have the willingness to include CT using different strategies, for instance, asking open-ended or provoking thoughts questions, debates, discussions, solve problems, and provide different or opposite definitions of concepts. Teachers also admitted that CT is not really implemented and needs more experience.

**Q3: Do you think that critical thinking should be taught explicitly within subjects, or implicitly integrated? Please justify either answer?**

Teachers revealed that critical thinking should be taught both explicitly and implicitly within subjects to help students address and think of any topic from different perspectives and try to show them the significance of the skill in education. One of the participants reported that teaching CT through an explicit or implicit instruction depends mainly on the nature of the topic. She noted that,

It all depends on the topic at hand. Some topics revealing ideologies (social) need the integration of critical thinking implicitly because of the redundant act of a speech community, for example, the naturalization of LGBT's in our society, students should understand that each TV show, movie or music can naturalize the existence and approval of the third gender. Other ideologies that are secretly initiated and are not redundant like political discourse, CT should be introduced explicitly to justify such an act and make students aware about it. (T4)

In general teachers insist that CT should be integrated in every single module and on daily basis.

**Q 4: In your opinion, do you think first-year Master EFL students lack CT skills? If yes how can that affect their performance in general?**

Teachers agreed on the fact that most first-year master students lack CT skills for many reasons such as, the absence of autonomy among students, most learners are not aware of the meaning and the importance of CTS, the majority of subjects are not of students' interest, teacher

centered approach, and learners were raised since childhood to memorize things. Regarding the sub- question of whether the lack of CTS can affect Students' performance, educators highlighted that it has some impacts on students as they rarely ask triggering or high-level questions that reflect their thinking. Alongside, learners rely basically on memorization and try to regurgitate it back to the teacher or put it in exams. Decisively, participants expressed that a dearth in such skill will make students take things for granted, and have an influence on their behavior not just in the classroom but also as future citizens.

**Q 5: What are the main obstacles that would more likely restrict the development of CT in higher education, especially in ELT?**

The respondents listed abundant barriers that would prevent the development of CT in higher education and ELT in particular. For example two of the participating teachers commented,

“They do start from early begging years of education; therefore it has to be something that is neutral since childhood.”(T1)

The program, the approach of teaching adopted the redundant strike that could impede the completion of the program, the unexpected pandemic. Absence of interest and autonomy in the lectures, the subject, or the field, besides the absence of intrinsic motivation among learners. (T4)

In reverse, the other teachers pointed out the following restrictions:

- “Students tend to focus more on marks and grades.”
- “The large number of students.”
- “Students rely on handouts.”

- “The limited time devoted for teaching.”
- “Teachers’ ways of presenting the lectures.”
- “Lack of motivation.”

**Q 6: How can teachers promote critical thinking among EFL students?**

According to participants, instructors should adopt new approaches that encourage the use of CT and stay updated to recent developments in the education area. Respondents also perceived that teachers need to be trained of the implementation of CT at all levels and all over the world. Aside from that, one of the teachers approved that to promote CT, educators may consider to lean on a learner-centric approach rather than rote learning, Follow the Bloom’s taxonomy in their lesson plans to reach higher scales of the hierarchy, along with attract students’ attention with topics of interest. Other interesting suggestions, noted by one of the teachers were as follows,

- “Ask students to check the weaknesses and strength of a concept.”
- “Introduce thought-provoking or challenging tasks.”
- “Assigning project works.”
- “Upgrade group works and students’ negotiation skills.”

Finally, teachers reported that, although there are a lot of strategies, it is somehow hard to include the skill in teaching the language. Adding that compared to abroad education, their learners are much more critical than what we are having here, as they tend to observe and analyze things from an early age. As a final point, respondents concurred that substantial efforts from instructors and students are needed to ensure the development of CT in higher education.

### 3.3 Discussion

The findings obtained from the Watson-Glaser test suggest that there is a significant difference between didactics and linguistics EFL students at the level of the five skills and general score. Evidently, didactics students outperformed linguistics students' scores with a slight difference, which underlines that G2 probably treated the test with more focus and seriousness as against to G1. Yet still, both specialties failed to achieve a recognizable and adequate mean score. As the given results report most EFL students in both groups are not aware enough or able to use CTS properly. Students' average grades in the five skills indicate that they have limited capacities in reasoning. This may be due to the lack of motivation as most students when handed the test seemed unmotivated and uninterested to do it. Effectively, teachers also confirmed that most first-year master students lack intrinsic motivation, for many reasons such as, bad marks and the impact of the pandemic situation. Motivation is a necessary condition to reinforce the exposition of CT, as opposite insufficient motivation is an obstacle that can block the development of CTS (Marzieh et al., 2011).

Students' inadequate performance in the five skills especially their lowest score in the inference skill, could be attributed to students' self-efficacy. Typically, students were less efficacious to feel inclined to reach valid conclusions, make judicious judgments, and interpret information from an open-minded perspective. This infers that students were not mentally disposed enough to pursue the test, as mental laziness or distraction lead more to mistakes (Facione, 1997). Another important factor that inhibited both groups from realizing better results is students' unfamiliarity with critical thinking concept, and executive functions. This corresponds with the teachers' stand that the majority of master students lack CTS, and depend

on memorization or the teacher rather than autonomous learning. Put simply, the absence of autonomy among EFL learners hindered the presence of CT. Significantly, students who take control of own learning have more opportunities to dig in reflective thinking (Soyhan, 2016).

The nature of CT contextualization and teachers' Conceptualization of the term have a major effect on how students perceived the W-GCTA. Though, teachers have addressed several techniques to support the integration of CT and stressed the significance of CTS in ELT. Nonetheless, teachers' way of using the methods is much more important than the materials itself. Instructors should create conducive classroom environment that guarantees students' engagement and sense of control before promoting CT among students. In regard to, EFL teachers' definition of CT, most of the participants viewed the concept as reflecting, criticizing and scrutinizing ideas objectively. Correlated with the definitions proposed in the literature, it is hard to confirm teachers' awareness of CT components and principles. Paul et al. (1997) state that most college faculty lack concrete definition of critical thinking, which signals that teachers' beliefs and interpretation of the notion CT may have negative implications on classroom practices and students' grasp of CTS.

In a nutshell, the minor difference in general score between didactics and linguistics students exhibits that field study might not have noticeable impact on students' quality of thinking specifically in the case of English language.

### **3.4 Limitations of the Study and Recommendations for Further Research**

The researcher encountered some constraints during the research period, which affected the completion of the study. First, it was hard to convince students in both groups to take out the

test as most of them are used only to questionnaires and interviews. Second, most EFL teachers were not accessible due to their busy schedule, which have reduced the number of interviewees. Third, the researcher faced difficulties in reaching primary sources, which led to more waste of time. Fourth, time was not sufficient to evaluate students' dispositions. Finally, the research was conducted during the Coronavirus; hence, unfortunately the results cannot be generalized.

Based on these obstacles, further research studies should take the following suggestions into consideration.

- Future researchers have to test both students' dispositions and CTS.
- Observation sessions are necessary to examine students' mindsets.
- The timing, the type of the test, and the number of the sample should be selected carefully.
- For more credibility, the research should be redone after the virus gone away to ascertain students' mental health and emotional wellbeing.

### **Conclusion**

This chapter was carried out to introduce in detail the fieldwork of the study. It embedded three sections. The first dealt with the research methodology, describing the data collection tools. The second section addressed the data analysis, while the last section represented the interpretation of the results, some limitations of the study, and future recommendations.



## General Conclusion

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### General Conclusion

The main objective of the current study is to investigate and assess the impact of critical thinking skills on first-year master EFL students' performance. Moreover, it intends to explore EFL instructor's perceptions to develop CT pedagogy and students current performance at the classroom. In this respect, the researcher adopted a diagnostic CT test model to assess students' CTS. In accord with, a semi-structured interview was conducted with EFL teachers at Ibn Khaldoun university of Tiaret, in order to investigate the research problematic.

The research work consisted of three chapters. The first chapter is devoted to provide a general overview about critical thinking, which highlights an overall picture of CT principles and elements. The second chapter reviewed the contribution and the effect of CTS on education and students learning in particular, it also clarified the essence of CT assessment and the major barriers that hamper its progress. The last chapter deals with the practical formula in terms of data analysis and interpretation of the results. Further, it discusses the limitations faced during the research and it offers some recommendations and pedagogical implications for both teachers and students.

The findings attained from the W-GCTA reveal that first-year master students lack to some degree CTS or are unaware of how to use the core skills of higher-order thinking. The unsatisfactory scores of both groups in the five skills could be traced to several reasons, such as: lack of motivation or attention; absence of self-efficacy and other CT dispositions; being unfamiliar with CT executive functions; and students' reliance on rote learning than being autonomous. Besides, the slight outperformance of didactics students relative to linguistics

## **General Conclusion**

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students could be credited to the fact that didactics learners handled the test with more concentration and seriousness contrasted to G1. In reference to the interview results, teachers affirmed students' dearth of CTS and dependency on memorization, which negatively affect their performance. Correspondingly, teachers' Conceptualization of CT is somehow indefinite apropos of CT elements and skills, which might be the reason for students' inadequate results in the test. This is due to the fact that the way teachers perceive CT has an effect on the way CT is taught inadequately or successfully. All in all, the above results confirm the research hypotheses that EFL master students are not fully aware of the use of CTS and that those who lack such skills are tend to be passive learners who rely on memorization.

In the light of the study findings, the following multifarious critical implications and insights are provided:

- ❖ EFL instructors should have extensive knowledge of critical thinking skills, elements, standards, traits, and instructional strategies to insure its best cultivation among students.
- ❖ EFL students should discard the habit of rote learning and studying for the sake of grades and rather raise their awareness of CT and independent learning.
- ❖ Teachers should take into consideration students' habits of thinking and try to use specific strategies that can thrive both learners' critical dispositions and skills.
- ❖ EFL teachers have to embrace technology tools or techniques to trigger students' thinking.
- ❖ Faculty teams should participate in CT conferences to share programs and experiences.
- ❖ EFL instructors should shift instruction from purely didactics to CT.

## **General Conclusion**

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There is no doubt that critical thinking is a vital skill that promotes self-esteem, independence, and reflects students' academic and career success. Therefore, educational paradigms need to provide instruction that can help students abandon rote memorization, and get involved in the process of critical and creative thinking.

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## **Appendices**

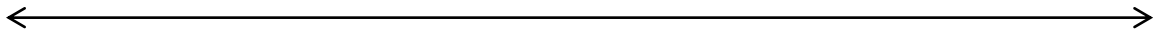
## Appendix A: Students' Test

Dear Students,

You are kindly requested to answer the following questions. This test will assess your critical thinking skills. Be sure that your responses will be kept confidential and used only for research purposes. The test is comprised of the following five sections:

1. Arguments
2. Assumptions
3. Deductions
4. Interpreting Information
5. Inferences

Please read the instructions preceding each section and select only one option. Try to find a time and place where you will not be interrupted during the test.



### Section 1: Arguments

Instruction: In this section, a statement is presented to you with an agreeing or disagreeing argument below. You must regard each argument as true, regardless whether it is weak or strong.

If you consider an argument to be strong, select “**Strong Argument**” or if you consider an argument to be weak, select “**Weak Argument**”



**Statement:**

**Should university-level education be free to all students?**

**Argument 1:** No, too much education can lead to over-qualification, and therefore unemployment.

**Strong Argument**

**Weak Argument**

**Argument 2:** Yes, having a highly qualified workforce ensures high levels of employee productivity in organizations.

**Strong Argument**

**Weak Argument**

**Argument 3:** No, downsizing leads to demoralization of the workforce and causes a drop in Employee productivity.

**Strong Argument**

**Weak Argument**

## Section 2: Assumptions

**Instruction:** An assumption is something which is presumed or taken for granted. When a person says, “I will see you tomorrow”, it is taken for granted that they will be around tomorrow. Select “**Assumption made**”. If you think that the assumption is not taken for granted in the statement, and if it is not therefore logically justified, select “**Assumption not made**”.

**Statement:**

**Monarchic nations, i.e. those with royal families, differ from republic nations in several ways. An example of this difference is that citizens of monarchic nations pay more tax than citizens of republican nations.**

**Assumption 1:** The governments of monarchic nations are responsible for setting tax rates on their citizens.

**Assumption Made**

**Assumption Not Made**

**Assumption 2:** Republican nations do not have a royal family.

**Assumption Made**

**Assumption Not Made**

**Assumption 3:** The only types of nation are monarchic and republican.

**Assumption Made**

**Assumption Not Made**

### Section 3: Deductions

**Instruction:** In this section, a statement will be provided followed by a series of suggested conclusions. If you agree that the conclusion exactly follows the statement, choose “**Conclusion follows**”. If you do not agree that the conclusion exactly follows then choose “**Conclusion does not follow**”.

**Statement:**

**Sarah owns a new company. New companies are more likely to fail than well-established companies. Therefore:**

**Conclusion 1:** Sarah’s company will fail.

**Conclusion Follows**

**Conclusion Does Not Follow**

**Conclusion 2:** Sarah’s company is more likely to fail than a well-established company.

**Conclusion Follows**

**Conclusion Does Not Follow**

**Conclusion 3:** Well-established companies are more likely to succeed than new companies.

**Conclusion Follows**

**Conclusion Does Not Follow**

#### Section 4: Inferences

**Instruction:** This section will begin with a statement of facts that must be regarded as true. You will be provided with 5 possible answers: **True**, **Probably True**, **More Information Required**, **Probably False**, and **False**. Select one option.

**Statement:**

**Turkey is a surprising addition to the list of rapidly developing economies; with a GDP increase of 8.5% in the year 2011 alone. However, such rapid growth leaves worries regarding possible side-effects. For instance, in 2011 Turkey's rate of inflation was well above that of its peers. Secondly, there is increasing concern regarding Turkey's growing dependency on foreign capital. A large portion of the Turkish banking system is part-owned by banks within the Eurozone. As the single currency falters, such a dependency raises questions about the stability of Turkish growth.**

**Inference 1:** There are concerns that Turkey's development is at risk of faltering in the years after 2011.

**True**

**Probably True**

**More Information Required**

**Probably False**

**False**

**Inference 2:** As Turkish banks are part-owned by those in the Eurozone, they may suffer if the European banks face financial difficulty.

<b>True</b>	<input type="checkbox"/>
<b>Probably True</b>	<input type="checkbox"/>
<b>More Information Required</b>	<input type="checkbox"/>
<b>Probably False</b>	<input type="checkbox"/>
<b>False</b>	<input type="checkbox"/>

**Inference 3:** The Turkish banks are part-owned by European banks as this provides greater Variation to the market and extra finance to the economy.

<b>True</b>	<input type="checkbox"/>
<b>Probably True</b>	<input type="checkbox"/>
<b>More Information Required</b>	<input type="checkbox"/>
<b>Probably False</b>	<input type="checkbox"/>
<b>False</b>	<input type="checkbox"/>

### Section 5: Interpreting Information

**Instruction:** If you think that a conclusion follows beyond a reasonable doubt select "Conclusion Follows". If you think the conclusion does not follow beyond a reasonable doubt based on the facts given, select "Conclusion Does Not Follow".

**Statement:**

**The British National Library has the largest collection of publicly-owned books in the United Kingdom. Therefore:**

**Conclusion 1:** There might be a larger collection of books in the United Kingdom.

**Conclusion Follows**

**Conclusion Does Not Follow**

**Conclusion 2:** There might be a larger collection of publicly-owned books in the United Kingdom.

**Conclusion Follows**

**Conclusion Does Not Follow**

**Conclusion 3:** The British National Library is in the United Kingdom.

**Conclusion Follows**

**Conclusion Does Not Follow**

**I thank you immensely for your participation.**

## **Appendix B: Teachers' Interview**

### **Question 1:**

From your perspective how do you conceptualize critical thinking?

### **Question 2:**

Do you include critical thinking skills in your course designs / plans? If yes how?

### **Question 3:**

Do you think that critical thinking should be taught explicitly within subjects, or implicitly integrated? Please justify either answer?

### **Question 4:**

In your opinion, do you think first-year Master EFL students lack CT skills? If yes how can that affect their performance in general?

### **Question 5:**

What are the main obstacles that would more likely restrict the development of CT in higher education, especially in ELT?

### **Question 6:**

How can teachers promote critical thinking among EFL students?

## Résumé

La présente étude vise à étudier l'effet de la pensée critique sur le performance des étudiants d'anglais langue étrangère. Par conséquent, le problème en question vise à examiner l'exécution et la conscience des aptitudes de pensée critique des élèves. D'ailleurs, il a l'intention d'explorer les perceptions des instructeurs d'anglais langue étrangère concernant la mise en œuvre de la pensée critique et le rendement des étudiants en classe. Pour mener à bien cette recherche, une approche mixte a été adoptée. Ainsi, un test formel par Watson-Glaser a été administré aux étudiants en première année de maîtrise, ainsi qu'une entrevue semi-structurée avec les enseignants de maîtrise afin d'atteindre les objectifs de recherche. Les données recueillies ont été analysées à l'aide du logiciel « SPSS » et d'une « analyse thématique ». En fin de compte, les résultats montrent que les étudiants en linguistique et en didactique manquent dans une certaine mesure de capacités de pensée critique. En outre, les enseignants ont approuvé le fait que la majorité des étudiants en Master sont des penseurs irréfléchis et s'appuient sur l'apprentissage par cœur. A partir de la contextualisation de la pensée critique par les enseignants est en quelque sorte indéfinie avec ses grands principes.

**Mots de clés:** *L'esprit critique, exécution de la pensée critique, performance des étudiants, test de Watson-Glaser.*



## الملخص

تهدف الدراسة الحالية إلى التحقيق في تأثير التفكير النقدي على أداء طلاب اللغة الإنجليزية. و عليه فان المشكلة المطروحة تسعى إلى فحص تنفيذ الطلاب لمهارات التفكير النقدي وكذلك وعيهم به. علاوة على ذلك تعتمزم الدراسة على استكشاف تصورات اساتذة السنة أولى ماستر فيما يتعلق باستخدام التفكير النقدي و أداء الطلاب في الفصل الدراسي. لإجراء هذا البحث تم اعتماد نهج مختلط. وفقا لذلك تم اجراء اختبار رسمي لواطسون- جلاسر موجه لطلاب السنة أولى من الماستر، بالإضافة إلى القيام بمقابلة شبه منظمة مع نفس اساتذة الطلاب من أجل تحقيق أهداف البحث. تم تحليل البيانات التي تم التحصل عليها باستخدام برنامج "SPSS" و كذا "تحليل موضوعي". في النهاية تظهر النتائج أن كلا من طلاب اللسانيات و التعليمية يفتقرون إلى مهارات التفكير النقدي إلى حد ما. فضلا عن ذلك أجمع جميع الأساتذة على أن غالبية طلاب الماستر لا ينخرطون في التفكير الانعكاسي و يعتمدون على التعلم عن ظهر قلب. إلى جانب ذلك سياق الأساتذة للتفكير النقدي غير محدد مع مبادئه.

**الكلمات المفتاحية:** مهارات التفكير النقدي، أداء الطلاب، تنفيذ التفكير النقدي، اختبار واطسون جلاسر