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**Investigating Students' Critical Thinking Skills and their Academic
Achievement**

**The Case of Master One Language Sciences Students of English at
Larbi Tebessi University**

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Abstract

Critical thinking is deemed a major area of interest within the field of education, particularly in the twenty-first century. In response to students' academic accomplishments, considerable attention has been directed toward whether or not students are successful in their learning due to their criticality. For this reason, the current research aims at investigating critical thinking skills and academic achievement of Master One Language Sciences students at the department of Literature and English Language, at Larbi Tebessi University. The target sample encompasses 48 participants (38 students and 10 teachers), which was purposefully selected. For the sake of addressing the research questions and hypotheses, a multi-method research was adopted to firstly underline the level of students in this intellectual ability using critical thinking test, and to explore the relationship between critical thinking and academic achievement, following a correlational research design. Additionally, a survey design and conceptual content analysis method were employed to determine the factors that may affect the tested variables. Taken altogether, the findings demonstrated a negative relationship between critical thinking and academic attainment of Master One Language Sciences students who exhibited a low level in the critical thinking test. On the basis of students' and teachers' questionnaires, several factors have notable consequences on their critical thinking skills and educational success. Furthermore, the obtained data from content analysis indicated a lack of higher-order thinking skills in the academic tests under study. Overall, on the basis of what have been covered, future recommendations were proposed.

Keywords: Critical thinking, academic achievement, higher-order thinking skills, multi method research, Master One Language Sciences students

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Dedication

I genuinely dedicate this dissertation

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List of Abbreviations and Acronyms

APA: American Philosophical Association

CCTDI: California Critical Thinking Disposition Inventory

CCTST: California Critical Thinking Skills Test

COVID-19: Coronavirus Disease 2019

CT: Critical Thinking

CTD: Critical Thinking Dispositions

CTS: Critical Thinking Skills

EFL: English as a Foreign Language

EWCTET: Ennis-Weir Critical Thinking Essay Test

HOTS: Higher-order Thinking Skills

ICT: Information and Communication Technology

M1 LS: Master one language sciences

MA: Mean average

MCQ: Multiple Choice Question

N: Number

OCR: Office for Civil Rights

r : Correlation Coefficient

p : Pearson Coefficient

SES: Socioeconomic Status

SL: Second Language

WGCTA: Watson-Glaser Critical Thinking Appraisal

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General Introduction

1. Background of the Study

The human brain functions in an intricate way, which makes it the most complex organ in the body. This part is in charge of numerous mental processes, such as thinking. In effect, thinking is a fundamental cognitive process that all human beings engage in. This mental activity entails various levels; some are simple forms of thinking which, according to Newmann (1990), require utilizing prior knowledge in executing basic activities, known as lower-order thinking skills, whereas others are rather complex, conscious, and effortful, labeled as Higher-order Thinking Skills (HOTS).

HOTS refer to complicated types of cognitive examination and assessment (Resnick, 1987). In today's advanced world, and with the excessive amount of information available to everyone, it is necessary to learn and use such elaborated types of thinking, known as 21st century skills, in order to endure the difficulties and challenges that grow daily.

A large volume of published studies has been devoted to Critical Thinking (CT) as one of the HOTS. It is an essential skill that enables the individual to function effectively and actively in academic, professional, and social settings, in addition to solving complicated problems and making drastic decisions in daily-life. Accordingly, multiple studies investigated CT in the field of education, and have raised the question of whether or not there is a relationship between students' Critical Thinking Skills (CTS) and their academic outcomes. Remarkably, one way to achieve desirable results in this sphere is to explore the conditions that contribute to the development of both CTS and academic success, taking into account students' and teachers' perspectives as well.

2. Statement of the Problem

Studying the module of critical thinking in master one has opened a gate to discover a skill that was new to us, little did we know that it is an essential capacity worthy of development. Interestingly, we were intrigued to learn more about it. Based on our experience and discussions with our classmates, we noticed that students whose marks are high, tend to defend their opinions and make decisions based on logic and not on emotions. Therefore, we questioned whether or not those who obtain high averages are critical thinkers. During the process of narrowing down the topic and choosing the suitable variables to be investigated, we encountered several studies that confirmed our guess, researchers such as Nur'azizah et al. (2021), Vierra (2014), and Kanbay et al. (2017) investigated the relationship between critical thinking and academic achievement. However, we noticed that these inquiries did not really provide extensive coverage of the topic. To put it briefly, the central focus of this study is to investigate the type and strength of the relation between CT and academic achievement of Master One Language Sciences (M1 LS) students at the Department of Literature and English Language, at Larbi Tebessi University (2021-2022). Furthermore, exploring the factors that contributed to attaining a certain level of CT, and of academic performance, as well as the nature of exam questions, is another concern of this study, for stopping at the level of correlation does not provide sufficient insight into the targeted problem.

3. Research Questions

1. Do students' CTS and academic achievement correlate?
2. What is the level of M1 LS students' CT?
3. What are the factors that may affect students' CT level?
4. To what extent do quiz and exam questions require CT skills?
5. What are the factors that may affect students' academic achievement?

4. Research Hypotheses

In the light of the first question, which seeks to investigate the relationship between the two variables, we drew the following hypotheses:

1. Null hypothesis (H₀): There is no statistical relationship between students' CT and academic achievement.
2. Alternative hypothesis (H₁): There is a statistical relationship between students' CT and academic achievement.

5. Aim of the Study

CTS and high academic achievement are equally important in the educational field. Thus, studying the kind of association that exists between the two variables would benefit the field of pedagogy, and exploring the factors that influence each of them would set the basis for practical endeavors into improving the quality of education. The current study aims at revealing the kind of relationship between CTS and academic achievement of Master One Language Sciences students, and the CT level of the same sample. Moreover, the factors that may have an influence on students' CTS and their academic attainments as well as exploring the existence and frequency of CTS in quiz and exam questions.

6. Methodology

With the intention of addressing the previously stated aims, the current study adopts a multi-method research that seeks to statistically examine the relationship between learners' CTS and their academic achievement, in a correlational design. This enquiry depends on a CT test as a first tool to measure students' CTS. Besides, to answer the third and the fifth research questions, a closed-ended questionnaire was administered to students and a semi-open questionnaire to the teachers; i.e., survey design. Afterward, conceptual content analysis was applied to analyze the quiz and exam questions to investigate whether or not teachers design questions that require HOTS. The target population of the study consists of 38

students of M1 LS at the department of Literature and English, at Larbi Tebessi University, Tebessa, in addition to 10 teachers of M1 LS and 10 documents of quiz and exam papers. The entire population represents the target sample that were selected using the non-probability purposive sampling technique.

7. Structure of the Study

The current inquiry comprises two chapters. The theoretical chapter encompasses two sections. The first section seeks to discuss the main aspects related to critical thinking, and the second one is devoted to presenting an overview of academic achievement and its essential parts. The second chapter entails two sections that cover the methodology, along with the results and interpretation.

Chapter One: An Overview of Critical Thinking and Academic Achievement

Introduction

The pace of today's life and the abundance of information coming from myriad sources necessitate being skeptical about what one perceives, evaluating ideas objectively, concluding, and defending one's viewpoints with well-warranted evidence. Such skills, along with others, are the components of CT that are essential to be learned in schools and colleges. According to Vierra (2014), despite the importance of this intellectual ability, there is a shortage of its incorporation into the curriculum; therefore, graduates often lack the fundamental thinking skills to operate adequately in the working environment. CT is considerably needed to equip students with those competencies to meet the requirements of a successful employee. Due to its intricacy, CT has been conceptualized differently, and has been the subject of many debates among scholars. This notion is discussed in the first section of the current paper, along with CTS and dispositions, the debate on its generalizability and specificity, the factors that affect students' CTS, and finally CT assessment. The second section is devoted to providing an overview of academic achievement, its definition, factors that affect students' academic achievement, and its assessment.

1.1. Section One: An Overview of Critical Thinking

1.1.1. The Different Views Regarding Critical Thinking Definition

The term critical is derived from the Greek word "Kritikos" which means to judge (Butterworth & Thwaites, 2013). During the Greek era, CT was used to denote the Socratic questioning when Socrates emphasized the avoidance of accepting concepts without asking profound questions (Paul et al., 1997). Currently, there exist various definitions of CT proposed by many scholars. For Appleby (2006), CT is an enigma; i.e., its conceptualization varies depending on the ideologies of different disciplines. Moreover, according to Sternberg

(1986) and Lai (2011), CT was discussed in the philosophical, cognitive psychological, and educational fields.

The philosophical approach defined CT with regard to logic and perfectionism, which limits the individual to apply particular rules of logic, and to possess ideal characteristics to be called a critical thinker (Sternberg, 1986). The qualities of an ideal critical thinker entail CTS, namely analyzing arguments, evaluating the credibility of sources, making inferences and reasoning; along with critical thinking dispositions (CTD) that are discussed in the second heading, such as being open-minded, clear, fair-minded, and accurate (Ennis, 1991; Paul et al., 1997). Robert H. Ennis, a prominent figure in this field, defined CT as a “reflective and reasonable thinking that is focused on deciding what to believe or do” (1989, p. 45). As such, the use of CT is determining what to consider and what to perform based on a thoughtful and logical process. By the same token, McPeck (1981, as cited in Lai, 2011) claimed that CT is “the propensity and skill to engage in an activity with reflective skepticism” (p. 6). In the line with these definitions, CT necessitates being equipped with both skills and dispositions (dispositions refer to the willingness of performance) that enable the individual to consider and question the truthfulness of ideas and beliefs.

On the other hand, cognitive psychologists introduced contradictive definitions to the previous view, highlighting the notion of behaviors and skills of a critical thinker (Lewis & Smith, 1993). This approach stressed the way of thinking under realistic circumstances, unlike the idealistic view, which restricts the individual to possess specific qualities to be called a critical thinker (Sternberg, 1986). Halpern (1998) stated that CT is “the use of those cognitive skills or strategies that increase the probability of a desirable outcome” (p. 450). In other words, she believed that a critical thinker is someone capable of using intellectual competencies as analysis and synthesis in order to reach specific objectives. Similarly, Willingham (2007) defined CT as a set of skills that involve the ability to accept different

points of view, reason rationally, solve problems, make inference and deduction and provide strong arguments. However, philosophers criticized cognitive psychologists since they confused CT and its constituents; i.e., CT skills (Bailin, 2002; Facione, 1990).

In the field of pedagogy, the concept of CT has been discussed and stressed by John Dewey, the founding father of CT in the modern era. He labeled CT as “reflective thinking”, and recommended the incorporation of this skill in the learning environment (Sternberg, 1986). Dewey (1933) claimed that CT is “Active, persistent, careful consideration of a belief or supposed form of knowledge in light of the grounds that support it and the further conclusions to which it tends” (p. 6). According to him, CT is a cognitive skill that enables the individual to attentively reflect a belief backed by evidence, for the purpose of achieving reasonable consequences. Afterward, scholars like Bloom et al. (1956) and Gagné (1980) have further elaborated the notion of CT in the classroom setting, foregrounding the learning skills, such as synthesis, analysis, and evaluation. Moreover, Benjamin Bloom’s taxonomy is the most applied model in teaching and assessing CT abilities, primarily analysis, synthesis, and evaluation levels (Lai, 2011). It represents different forms of learning from the simplest to the most complex levels. Bloom and his assistants organized what he called “educational objectives” in a pyramid in which the base demonstrates lower-order thinking skills: knowledge, comprehension, and application, while the HOTS are found at the top of the pyramid: analysis, synthesis, and evaluation, as listed in the following:

1. Knowledge: Recalling information like terminology, specific facts, methods, etc.
2. Comprehension: Understating and explaining the input.
3. Application: Implementing concepts and principles in different contexts.
4. Analysis: Dissecting data into its components to demonstrate its relations and structures.

5. Synthesis: Linking components and elements to create a new whole.
6. Evaluation: Judging and assessing the information according to certain norms (Bloom et al., 1956).

Despite the wide variety of CT definitions, it can be concluded that CT is a complex mental capacity that is learned and not acquired, and it is considered a self-directed process that enables individuals to explain, analyze and evaluate concepts objectively. This intellectual construct guides humans to draw conclusions, make decisions and solve problems. CT is one of the 21st-century skills that tends to be an essential requirement in all the domains of life.

1.1.2. Critical Thinking Skills and Dispositions

At first, CT abilities and critical thinking dispositions were used interchangeably, then researchers distinguished between the two terms. CTS are related to the performance of an individual like analyzing, solving problems, and so forth, while CTD designate the intrinsic desire and the personal attributes that allow a person to act effectively as a habit of mind. It was also claimed that CTD are not tangible, and one may master CTS with the absence of dispositions (Ennis, 1996; Facione et al., 2000). This is to state that CTS can be observed in interpreting, evaluating, and inferring ideas, while CTD are the preferences and the values of a person. After drawing the difference between skills and dispositions, their components are tackled in the following.

1.1.2.1. Critical Thinking Skills. In 1990, Facione and other professors, who were interested in CT from different domains, agreed upon six central skills of CT, which they integrated into a document named “The Delphi Report”. Additionally, they confirmed that it is not obligatory to master every skill to be called a critical thinker (American Philosophical Association [APA], 1990). The following list demonstrates CTS accompanied by the sub-

skills mentioned in the report, and that were highlighted by other researchers like Ennis (1985) and Starkey (2010).

- Interpretation: Grasping the meaning of situations or beliefs (APA, 1990; Starkey, 2010).
 - Categorization: To comprehend, express, and differentiate concepts (APA, 1990; Starkey, 2010).
 - Decoding significance: To identify the content, individual's views, and objectives presented in graphs (APA, 1990; Starkey, 2010).
 - Clarifying meaning: To re-express the individual's points of view to avoid ambiguity (APA, 1990; Starkey, 2010).
- Analysis: Identifying the relationship among concepts (APA, 1990; Starkey, 2010).
 - Examining ideas: To compare, contrast, recognize problems, and identify their constituents (APA, 1990; Starkey, 2010).
 - Detecting arguments: To judge if an argument supports or opposes a point of view (APA, 1990; Ennis, 1985).
 - Analyzing arguments: To apprehend the main conclusion, its premises, and intermediate conclusions (APA, 1990; Ennis, 1985).
- Evaluation: Assessing the credibility of claims, facts, sources, and opinions, and determining the rational strength in relation to other concepts (APA, 1990; Starkey, 2010).
 - Assessing claims: To realize the factors that lead to expressing valid opinions (APA, 1990; Ennis, 1985).
 - Assessing arguments: To judge arguments in terms of strength or weakness, criticize the fallacious conclusions as well as to assure the use of credible premises to support claims (APA, 1990; Ennis, 1985).

- Inference/focused observation: To draw conclusions or outcomes regarding assumptions (APA, 1990; Starkey, 2010).
 - Querying evidence: To collect information and generate arguments to advocate one's premises (APA, 1990; Starkey, 2010).
 - Conjecturing alternatives: To resolve issues in different ways by developing arguments and presuppositions (APA, 1990; Ennis, 1985).
 - Drawing conclusion: To assess whether the deduction is highly accepted or refused among various conclusions (APA, 1990; Ennis, 1985).
- Explanation: Demonstrating premises consistently so as to draw conclusions (APA, 1990).
 - Stating results: To clarify reasons, precisely, to examine, evaluate, deduce, or regulate those outcomes (APA, 1990).
 - Justifying procedures: To interpret, scan, or conclude a piece of writing, emphasize the confirmed, notional, and methodological procedures (APA, 1990).
 - Presenting arguments: To recognize premises behind believing or rejecting claims (APA, 1990).
- Self-regulation: Drawing any conclusion that ought to be stated without the interference of one's experiences and prejudice (APA, 1990; Starkey, 2010).
 - Self-examination: To assess if one's reasoning is affected by emotions (APA, 1990; Starkey, 2010).
 - Self-correction: To refine those deficiencies through recognizing feelings and their impacts on decision making (APA, 1990; Starkey, 2010).

In addition to what have been addressed, Starkey (2010) and Bassham et al. (2011) stressed other CTS, particularly deductive and inductive reasoning, detecting and avoiding

fallacies (red herring, Ad Hominem, Post Hoc, false dilemma, slippery slope, among others), differentiating explanations from arguments, and evaluating the validity of numbers, as follows:

- Deductive reasoning: Is the key to building strong arguments, and it is based on a three-part argument that contains two premises, which are general rules or facts, and a conclusion that must follow from these latter; i.e., if the premises are true, then the claim must be true (Bassham et al., 2011; Starkey, 2010).
- Inductive reasoning: Denotes relying on particular experiences, observations, or facts to generate broader conclusions and principles. Unlike deductive arguments that leave no room for doubt, conclusions in inductive arguments are built upon probability.

In fact, arguments may be fallacious, which means the premise is not relevant to the conclusion. A skillful critical thinker can detect fallacies and avoid using them as well. There exist numerous types of fallacies, including:

- Slippery slope: Occurs when someone argues that a small action leads to a series of bad actions (Starkey, 2010).
- False alternatives or false dilemma: Occurs when someone provides the addressee with only two choices to select from, while there are more than that (Starkey, 2010).
- Post Hoc (a Greek word which means after this, therefore because of this): When an event precedes another event, the former one is the cause of the latter (Starkey, 2010).

- Personal attack or Ad Hominem: Attacking the arguer themselves rather than attacking the argument in order to disgrace that person (Starkey, 2010).
- Red Herring: The arguer tries to distract the attention of the listener from the original argument by changing the topic (Starkey, 2010).
- Explanation or argument: The ability to identify explanations and distinguish them from arguments. An explanation is a statement that provides clarification for a fact to help in solving a problem, and it provides the causes of an issue, while an argument seeks to persuade the audience of a belief (Starkey, 2010).
- Evaluating the validity of numbers (the numbers game): Statistics are usually trustworthy, yet a critical thinker needs to be skeptical about every piece of information s/he is exposed to, and numbers are no exception. For instance, numbers used in a survey can be misleading; therefore, it is essential to examine the way they were collected before considering them as facts (Starkey, 2010).

1.1.2.2. Critical Thinking Dispositions. Experts, who participated in the Delphi research, explained CTD stating that a critical thinker should hold the following characteristics: inquisitiveness, open-mindedness, systematicity, analyticity, truth-seeking, critical thinking self-confidence, and maturity (APA, 1990). Inquisitiveness requires the interest and the curiosity to learn even if the applied knowledge is implicit. The second CTD is open-mindedness, which implies both self-control of any prejudice through regulating emotions, behaviors, and thoughts; and the acceptance of various points of view. Experts also underlined the role of systematicity saying that if one is cautious, organized, regular, and persistent in inquiry, s/he will certainly solve problems. Another feature related to the habitual inclination is called analyticity. A critical thinker should be a truth seeker to find and take into account extra information and evidence, even though his/her opinion on an issue

might be changed (Ennis, 1985; Facione et al., 1994). Being disposed to CT also necessitates critical thinking self-confidence when finding effective solutions to issues through believing one's own reasoning; this kind of disposition fosters the development of cognitive CTS. Finally, maturity can be explained as the wisdom needed to make decisions, to be able to understand that some issues call for multiple solutions, to revise arguments, and to base them on standards whenever it is obligatory (Facione et al., 1994).

In brief, although CTS and CTD are two separate entities, they are interconnected. CTS alone are not sufficient; instead, they should be accompanied by the propensity for performance (Ennis, 1996; Facione et al., 1994).

1.1.3. The Generalizability and Specificity of Critical Thinking Skills

Due to the complexity of the notion of CT, it evoked multiple conflicts among scholars. Indeed, the question of whether CT is general or specific is one of the disagreements which is still unresolved. CT was claimed to be generalizable; Siegel (1991) stated "There are readily identifiable reasoning skills which do not refer to any specific subject matter, which do apply to diverse situations, and which are in fact the sort of skills which courses in critical thinking seek to develop" (p. 77).

With that being stated, CT abilities are applicable to a variety of fields and disciplines, and this explains why almost all CT tests assess generic skills, such as the Watson Glaser Critical Thinking Appraisal (WGCTA) test, and the California Critical Thinking Skills Test (CCTST), which are further explained in the heading of CT assessment. This point was raised by Ruggiero (1988), who claimed that even if teaching methods differ in terms of the jargon used in each discipline, the measured capacities are the same. Also, Jones and Ratcliff (1993) have supported this claim, stating that an approach to engineering for ameliorating CTS, called the "guided design" approach, has been applied to different fields, including

journalism, communications, counseling, political science, nursing, chemistry, physics; and the results were satisfactory.

On the opposite extreme, according to McPeck (1990), CT cannot be separated from its specific context; i.e., subject area, and there is a remarkable distinction between CT skills across different domains. He actually doubted the validity of CT tests since they are built upon generic skills, such as analysis, evaluation, and interpretation; and criticized the fact that theorists who were in favor of generalizability discarded the issue of CT definition. Similarly, Resnick (1987) pointed to the vital role of acquiring specific CT abilities and applying them in specific domains. That is to say, one needs skills that are particular to nursing to perform critically in this field.

Other researchers had a rather moderate view, and they attributed both qualities, general and specific, to CTS. Paul (1992) stated that CT elements can be taught through generic as well as specific methods. Moreover, Ennis (1998, as cited in Lai, 2011) described CTS as essentially specific, and at the same time, he suggested that those abilities can however be transferred across different disciplines.

In conclusion, it is reasonable to say that even though assigning certain CTS to specific domains seems more accurate; it is very challenging and impractical to have different skills for every domain. This is because it will necessitate establishing specific approaches to teach CT to each field, and subsequently specific tests to assess them.

1.1.4. Critical Thinking in Education

The changes and the technological development in the 21st century necessitate training learners on CT abilities for their future careers. Consequently, it becomes a fundamental subject in education, and an interesting topic for investigators.

The function of CT in pedagogy can be elucidated in different points. First of all, it enables students to rationalize statements of individuals' views, examine and judge others'

claims as well as support arguments that can be found in textbooks and tackled in the classroom (Bassham et al., 2011). Besides, students would be confident to express their views and reasons, objective to avoid prejudice when making decisions as well as able to evaluate sources (Judge et al., 2009). The cultivation of students' critical thinking is needed because the more they are equipped with CT, the more they would be competent, consistent, and artistic (Shamboul, 2022).

The subject of CT in relation to the field of education has gained considerable attention; thereby, numerous researchers have studied the relationship between CT and academic achievement across a variety of disciplines. It is worth noting that the majority of studies have identified a significant positive relationship between the two variables; by way of illustration, Nur'azizah et al. (2021) and Vierra (2014) have found a strong positive relationship between CTS of high school students and their learning attainments. Similar findings were revealed in the field of biology (Fitriani et al., 2020) and physical therapy (Vendrely, 2007). Furthermore, it was yielded that students' CT levels and their grades in the English language course were positively correlated (Abbasi & Izadpanah, 2018).

On the contrary, very few inquiries proved that CT and academic achievement are negatively correlated, which statistically denotes the rise of one variable and the decline of the other. Unexpectedly, Thalib et al. (2017) found that students with low grades scored better on the CT test than high achievers, which undoubtedly implies a negative correlation between the two concepts. Identical findings were reported by Aghaei et al. (2012, as cited in Shirazi & Heidari, 2019). On the other hand, a limited number of inquiries disclosed opposite results. Kanbay et al. (2017), in a longitudinal study for four years, concluded that there is no relationship between CTS and academic performance. Likewise, Shirazi and Heidari (2019) drew the same conclusion in their cross-sectional research.

Over the years, an enormous amount of research has been devoted to CT in education due to its importance. Accordingly, several researchers have been intrigued to investigate the relationship between CT and academic attainments, the type, and the direction of this correlation.

1.1.5. Factors Affecting Students' Critical Thinking Skills

1.1.5.1. Students' Factors. The development of students' CTS has been the concern of multiple inquiries, whereby researchers attempted to explore the different conditions that affect CTS. The following paragraphs provide an insight into the main factors that were reported in the literature: age, gender, awareness, motivation, language proficiency, culture, prior knowledge, and topic familiarity as well as experience.

1.1.5.1.1. The Impact of Age on Students' Critical Thinking Skills. First and foremost, age appears to be a disputable factor in critical thinking, until now it is not clear whether or not it affects CT development. Education theorists argued that CT starts to develop in late adolescence or early adulthood (Brabeck, 1983; Garrison, 1991). According to these scholars, reflecting and reasoning, which are parts of CT, can be witnessed during adulthood because of the experiences that adults endure, and the challenges they face in their lives. Unlike children who can only view things from their own perspectives, matured individuals are more open to different dimensions. As an empirical support for this view, Friend and Zubek (1958) drew a comparison among the scores of participants obtained from the WGCTA test. The results showed a noticeable change across the different ages of the participants whose ages range from 12 to 80 years old. The rapid development of CT abilities begins immediately after adolescence, and it reaches its highest in the mid-twenties. Then, the progress is sustainable during the mid-thirties, and it only starts to decay steadily afterward, until it fades through the seventies and onwards. On the opposite extreme, Afsahi and Afghari (2017) found no relationship between age and CT evolution, and according to Perkins (1985)

and Kuhn (1992), reflective thinking and reasoning are not affected by age; instead, they are related to the number of academic years.

1.1.5.1.2. *The Impact of Gender on Students' Critical Thinking Skills.* In accordance with age, gender is another factor that led to contradictory results in different studies. Some researchers found that gender has a significant influence on CT capabilities. King et al. (1990) and Aliakbari and Sadeghdaghighi (2011) have found that males have higher CT abilities than their female counterparts. According to Wood (2015), males are competitive by nature, which makes them better at defending their views than women who are often driven by their emotions and tend to be sympathetic and supportive of others. This may convey the impression that men excel in cognitive tasks, while it was noted that women displayed a higher level of CTS (Shubina & Kulakli, 2019), and they are better than males in evaluating the reliability of arguments (Srinivasan & Crooks, 2005). On the other hand, Halpern (2004) claimed that both males and females are critical thinkers, but the distinction lies in that each of them is skillful in different areas of cognitive processes. For instance, men are good at mathematics, science, and spatial reasoning, which are not closely associated with the curriculum. Nevertheless, women show better results in tests that require writing, which are closely linked to the curriculum. Conversely, many studies proved that gender does not affect the ability to think critically; Friend and Zubek (1958), Salahshoor and Rafiee (2016), and Kanbay et al. (2017) have all concluded that there is no existing association between CT ability and gender.

1.1.5.1.3. *The Impact of Awareness on Students' Critical Thinking Skills.* Despite a scarcity of research on the effect of awareness on CT, a few studies proved its impact. In its broad sense, cognitive awareness means consciously recognizing one's own knowledge and cognitive competencies (Gafoor, 2012). For example, in a quasi-experimental study, Mohseni et al. (2020) examined the influence of metacognitive strategy training CT

awareness-raising on learners' reading comprehension in English as a Foreign Language (EFL). They concluded that boosting students' awareness of CTS helped in fostering their abilities to evaluate, analyze, make deductions, and so forth. On top of that, Orszag (2015) indicated that it is problematic to have some students who are not aware of their abilities or those who overrate them. The lack of students' awareness may obstruct the development and the implementation of their CTS and dispositions. As a consequence, Orszag suggested that the use of explicit instruction by the teachers increased students' awareness, which in turn evolved their CTD, and tracked their skills.

1.1.5.1.4. *The Impact of Motivation on Students' Critical Thinking Skills.* Intrinsic motivation is considered an important factor that fosters students' CTS. Chuter (2020), defined intrinsic motivation as "The act of doing an activity purely for the joy of doing it, and it is frankly very rare in school and work contexts" (p. 1); this means that this type of motivation requires the love of performing an action without any reinforcement. Then, she related this internal desire to CT claiming that a motivated student is likely to ask deep questions beyond their memory, prefers to be challenged, and applies the acquired knowledge in new situations. Furthermore, Purvis (2009) reported that a well-motivated student seems to be curious to search and find answers to his/her questions through analyzing and evaluating information.

1.1.5.1.5. *The Impact of Language Proficiency on Students' Critical Thinking Skills.* Equally important, language proficiency has been a subject of debate in terms of its role in CT. It was defined by Nuessel (1991) as being capable of functioning successfully in the second language (SL) in terms of speaking, writing, listening, reading as well as cultural understanding. Rashid and Hashim (2008) studied the correlation between CTS of Malaysian undergraduate students and their level in English language. The results showed that Malaysian students are less critical thinkers than the American ones, and among non-natives,

those who are more proficient in English had higher CT abilities than students with a weaker language level. Yet, another inquiry by Manalo and Sheppard (2016) revealed that the structure of the native language itself does not restrict the person to manifest CT features; it is only the level of mastery of the SL which determines the efficiency of critical augmentation and evaluation. Nevertheless, Errihani (2012) declared that in most cases, SL learners put more focus on developing their linguistic skills like grammatical manipulation and communication. Besides, they may exhibit CT abilities in their first language because they feel comfortable when using it. Errihani concluded that even when students possess a good manipulation of the language, they may fail in using their CTS if they are not familiar with the topic under discussion.

1.1.5.1.6. The Impact of Culture on Students' Critical Thinking Skills. From a broader perspective, more attention has been paid to whether or not culture affects the ability to think critically. Atkinson (1997) described CT as a “social practice” (p. 71); i.e., it is a behavior that is acquired and performed unconsciously as a result of being brought up in a certain cultural community. He believed that western people are cultivated to think critically; he supported his claim by discussing the following studies: Basso (1970), Crago (1992), and Fox (1994). Basso (1970) and Crago (1992) demonstrated that critical thinking is present in individualistic societies, which are characterized by competition, as opposed to collectivistic cultures like the Japanese, in which behaviors are determined in relation to their social world. In like manner, the notion of self-expression is prominent in individualistic western societies, while in societies that value the group, expressing personal opinions is sometimes regarded as a deviation from the cultural norms and standards. Consistently, Fox (1994) inferred that non-native students have difficulties in understanding as well as learning CT, after interviewing seven professors who had experienced teaching non-native graduate students. Also, verbal and written communication is peculiar to the American society and its educational system,

while in other cultures such as the Chinese, remaining silent is a virtue and a sign of politeness.

Contrastingly, Stapleton (2001) described Atkinson's evidence as "anecdotal." Though it has some validity, it is not based on measuring the CT ability of the Japanese learners empirically. Stapleton conducted a study in which he noted that Japanese learners of English managed to think critically, but what might have hindered this process was the existing conflict between the social assumptions of Asians and non-Asians. For instance, the Japanese participants were against importing rice since it is going to be wasted at the end, while the non-Japanese claimed that this idea was wrong because the economic benefits of importing rice would compensate for its waste; that is each side advanced arguments based on their social practices. Another obstacle is topic unfamiliarity, which is presented in the next heading.

1.1.5.1.7. The Impact of Prior Knowledge and Topic Familiarity on Students' Critical Thinking Skills. Numerous scholars argued that prior knowledge and topic familiarity have significant roles in the CT level. Initially, in the context of English as a second language, Pally (1997) claimed that learners ought to be knowledgeable about the subject area to develop the necessary CTS, such as questioning, synthesizing, and evaluating the material they are exposed to. Prior to Pally, Fredrickson et al. (1991) addressed the benefits of familiarity with the technical terms of the subject to improve CT. Over and above, topic familiarity as the outcome of background knowledge is an impactful element in CT development. In his study, Stapleton (2001) assessed the writing of Japanese students who were able to compose argumentative essays about familiar topics for them, namely "Japan's rice policy", rather than topics inspired by the American community such as "gun control". He noticed that the arguments presented in each topic differed in terms of strength and scope as well; he proved that CT ability is neither affected by culture nor by language proficiency,

it is rather a matter of the shared assumptions and topic familiarity. Franklin (1985), Bacha (2010), and Errihani (2012) also arrived at an identical conclusion.

1.1.5.1.8. The Impact of Experience on Students' Critical Thinking Skills. Talking about prior knowledge is reminiscent of experience, which is one of its main constituents. Many studies have ascertained the effect that experience has on CT. Terenzini et al. (1984) reported that students' cognitive skills ameliorated as a consequence of their years of studying in college and their experience beyond the classroom setting. Subsequently, Terenzini et al. (1995) concluded that CT and other higher-level skills are not only influenced by engagement inside the classroom, but also by out-of-class activities. These latter entail formal and informal interaction with classmates and university staff as well as the quantity and quality of the studied courses (Jones, 1992). According to Thomas and Lok (2015), the attained knowledge from employment and life experiences, along with other factors, have a considerable impact on CT. They further explained that experience joined with reflection on experience makes it possible for individuals to learn and practice CTS. Similarly, Fleming (2019), who found that work affects CTD, has asserted that the working place is an appropriate environment to independently solve real-life problems, and to implement the learned knowledge.

In conclusion, after discussing the key factors that influence CTS in relation to the student, which are age, gender, awareness, motivation, language proficiency, culture, prior knowledge, topic familiarity, and experience; it is then relatable to shed light on the same concept from teachers' perspective.

1.1.5.2. Teachers' Effect on Students' Critical Thinking Skills. Instructors have decisive contributions in affecting students' CT abilities in relation to their attitudes and the

way of teaching, including the applied approaches, strategies, classroom activities, and training.

1.1.5.2.1. The Impact of Teachers' Awareness on Students' Critical Thinking Skills.

It is noteworthy that instructors who are aware of CT, and who consider it the core objective of the course, tend to be called “intended users” (Barak & Shakhman, 2008, p. 200). They can engage students in strategic learning, and have insights into what students accomplish and fail to reach. These teachers are qualified to give reasons behind selecting and applying any activity in the classroom, they are expressly aware of using reflection in their teaching. Therefore, students would be able to develop their CT and become aware of their skills in learning when teachers apply explicit CT activities, and prioritize this cognitive capacity (Barak & Shakhman, 2008; Orszag, 2015). Equally important, awareness has to be also linked to instructors' knowledge about learners' CTS. It was found that teachers usually use simple tasks with students whose CTS are feeble, and tricky ones with those who are competent to analyze and synthesize; consequently, learners' CT will be affected (Orszag, 2015; Warburton & Torff, 2005).

1.1.5.2.2. The Role of Critical Thinking Approaches.

Models and frameworks were designed to teach CT, such as the general approach, the infusion approach, and the immersion approach. The general approach is considered the oldest one that seeks to instruct CTS independently from the course content. The second framework aims at teaching high-order skills within the content so that learners can think critically. Finally, the immersion approach focuses on engaging students in CT inexplicitly, as opposed to the second one (Al-Ghadouni, 2021; Ennis, 1989; Haber, 2020). As a matter of fact, there is no perfect method to be universally applied since the notion of CT itself is still under discussion. Indeed, multiple studies have analyzed the effects of the infusion and immersion approaches, especially in the EFL context. For example, studies done by Abrami et al. (2008), Egege and Kutieleh (2004),

van Gelder (2005), and Zhao et al. (2016) advocated the infusion approach arguing that the deliberate teaching of CT should be implemented with EFL students in which instructors clarify and integrate CT in classroom activities. For instance, they can ask their learners to identify the author's argument, reasons, and the main concepts in reading. This is to confirm that students are aware of what skill they develop. On the opposite extreme, investigators criticized the idea of developing CT abilities as a natural consequence of the learned content; i.e., being deeply involved in CT without identifying the type of a skill; for example, asking students what a term or a percentage refers to; as a result, students may improve their high-order capacities without being aware of the targeted skill.

1.1.5.2.3. The Impact of Teachers' Strategies on Students' Critical Thinking Skills.

With reference to teachers' strategies, several experimental studies showed that instructors who make their learners more active, and who involve them in group discussions and debates where learners can justify their opinions, give evidence, and exchange ideas, would foster their awareness, share their different views, evaluate others' claims, develop their HOTS, and raise their responsibility as well (Dallimore et al., 2008; Utami et al., 2021). Additionally, using the Socratic questioning, which is an interrogation based on HOTS beyond students' memory, can help them to think deeply, compare and contrast, synthesize, and make deductions of learned information from different angles; for instance, asking them how they knew that and for what purpose (Orlich et al., 2009; Paul, 2012).

1.1.5.2.4. The Impact of Information and Communication Technology on Students' Critical Thinking Skills.

Another factor that was highlighted to improve students' CTS is incorporating Information and Communication Technology (ICT) in the teaching and learning process. Numerous researchers have clearly supported web-based learning over the traditional because of the following reasons. First, students have more time to examine, reflect and analyze their own and others' ideas, make decisions, and solve problems

objectively and thoroughly (Arend, 2009; Garrison, 2003; Posey & Pintz, 2006).

Additionally, this type of learning provides the opportunity for teachers to attach useful links and documents (Posey & Pintz, 2006). Similarly, Arend (2009) stated that online discussions provide an in-depth reflection on the learned courses. He reported students' perceptions on this issue, who found it interesting to express their own views and comment on others'.

Besides, they felt free to discuss without being interrupted by others, nor distracted by thinking about grammar and form mistakes, as opposed to traditional strategies, in which students are graded on both content and form. Over and above, some students appreciated that their identity can be anonymous; hence, they felt comfortable to interact more openly.

1.1.5.2.5. The Impact of Teachers' Activities on Students' Critical Thinking

Skills. Regarding classroom activities, it was stated that teachers ought to depend on written assignments. This activity itself includes various skills like analyzing, summarizing, drawing conclusions, contrasting, and interpreting; therefore, CT abilities and dispositions will be enhanced (Ebrahim et al., 2020). Bean and Melzer (2021) considered writing as a mechanism that allows individuals to think critically, asserting that when students struggle in their writing, their minds are challenged too. For all that, some researchers underlined the benefits of the written assignments coupled with feedback, claiming that using such kinds of tasks without meaningful feedback prohibits the development of CT. In simpler terms, feedback on the way of organization as well as knowledge helps learners to be aware of their weaknesses so as to be refined (Orszag, 2015; Tapper, 2004).

1.1.5.2.6. The Impact of Teachers' Training on Students' Critical Thinking

Skills. Complimentarily, some researchers have called for teachers' training on how to coach CTS because a properly trained practitioner would be skillful to exert strategic learning skills adequately. This construct was emphasized by studies conducted by Itmeizeh and Hassan (2020) as well as Asgharheidari and Tahriri (2015). However, it was found that some teachers

did not advocate CT training assuming that it is not their job to teach CTS (Eissa, 2021). Teachers who lack CT training may not provide students with the necessary strategies and activities that enhance their criticality, such as discussion and debates.

1.1.6. Critical Thinking Skills Assessment

One last problematic concept discussed in this section is CT assessment. Measuring such a capacity can be challenging due to the lack of consensus on CT definition.

Notwithstanding, this issue did not hinder scholars from assessing CTS through several instruments. The following are some of the major standardized tests, along with their strengths and weaknesses.

The Watson-Glaser Critical Thinking Appraisal (WGCTA) was created by Goodwin Watson and Edwin Glaser in 1937. It is composed of 80 items that measure the ability to make inferences, recognize assumptions, make deductions, draw conclusions, interpret and evaluate arguments through multiple-choice questions (MCQ). It is the oldest and most used test by virtue of its validity and reliability (*WGCTA User-Guide and Technical Manual*, 2012). Validity entails that the test was proven to measure the skills that it was designed to measure, while reliability indicates the consistency of the test's results if the same persons take it again, yet its downside lies in neglecting the dispositional dimensions of CT (Ku, 2009).

The next commercial test is the California Critical Thinking Skills Test (CCTST), which was designed by Facione and his assistants in 1990. It involves 34 MCQs that measure analysis, interpretation, inference, evaluation, explanation, deduction, and induction skills. Even though it was proven to be valid and reliable (Facione, 2013), CCTST was criticized as it does not elicit CT thoroughly because students can easily find the right answer (Lin, 2018).

The Ennis-Weir Critical Thinking Essay Test (EWCTET) is characterized by another common format that assesses the written productions of respondents. It was designed by Ennis and Weir (1985). It is a highly-structured test, which requires students to write an essay that evaluates their abilities and dispositions to formulate and judge arguments (Ku, 2009).

Furthermore, some CT tests were created by teachers and researchers, such as Lauren Starkey, the author of many educational books. She has designed an MCQ critical thinking test in 2010, integrated into her book “Critical Thinking Skills Success in 20 Minutes a Day”. The test targets a number of general CT skills, namely recognizing problems, making inferences, evaluating facts, deductive and inductive reasoning, detecting and avoiding fallacies (red herring, Ad Hominem, Post Hoc, false dilemma, slippery slope), differentiating explanations from arguments, and evaluating the validity of numbers. Despite the fact that this test is not as widely used as the above-mentioned tests, it was utilized by many researchers in their inquiries to measure students’ CT abilities, and it is based on psychometric properties, which consist of validity and reliability, along with other criteria (Fulgueras & Bautista 2020).

In short, CT assessment has received many criticisms. According to Norris (1989), the answers to MCQ tests may be based on the beliefs, cultural assumptions, and political and religious orientations of test-makers, which could be different from those of the examinees. This means that the examiner would consider an answer wrong just because it does not fit within their culture. Moreover, such tests lack questions that are based on real-life problems, which is an important aspect to take into account in test development (Bonk & Smith, 1998). Another obstacle in CT tests is that almost all of them assess generic skills only (Ennis, 1993; Lai, 2011). These deficiencies were addressed by Ku (2009), who highlighted the advantage of using a combination of both MCQ and open-ended formats. Further, Ennis (1993) suggested accompanying MCQ with justification instructions, providing different degrees of

complexity and formats in essay writing tests and performance assessment, which is based on observing the examinees in authentic contexts.

Finally, there exists a wide range of CT tests with different types and formats; however, they have been criticized and none of them is considered satisfactory. Overall, CT assessment is deemed challenging because of the dispute regarding its conceptualization.

1.2. Section Two: Academic Achievement

1.2.1. Definition of Academic Achievement

Academic achievement or performance refers to the learning attainments accomplished by students after studying for a scheduled period of time. These outcomes are determined by students' knowledge, competencies, beliefs, and attitudes; and are supposed to meet the objectives set by teachers (Tian & Sun, 2018). Another definition was advanced by Good (1959), who believed that academic performance is the end result of the learning process, represented by the knowledge and competence of the student. These latter are measured by the marks of teacher-made examinations. He also stated that academic achievement is "the knowledge attained or skills developed in the school subjects usually designed by test scores or marks assigned by the teacher" (as cited in Rakai, 2021, pp. 17-18).

1.2.2. Factors Affecting Students' Academic Achievement

The quality of a country's education is basically determined by the improvement of students' performance since they are the leaders of their communities. Consequently, researchers shed light on several circumstances that could influence learners' academic success: motivation and anxiety, gender, time management, language proficiency, ICT, socio-economic factors, and Coronavirus Disease 2019 (COVID-19).

1.2.2.1. Students' Factors. In the first section, it was clearly identified how students' factors are integrated into the development of CT abilities. Correspondingly in the second

section, predictors linked to learners were taken into account, but with reference to academic progress, which are cited in the following headings.

1.2.2.1.1. The Impact of Motivation and Anxiety on Students' Academic

Achievement. First and foremost, affective or emotional factors like motivation and anxiety have an impact on students' educational growth (Wang et al., 1997). Motivation as it was explained previously does not only empower learners to think rationally, but it is also related to academic success. In other words, students who attend their classes, engage in classroom activities, are disciplined, reinforced, encouraged to learn (extrinsic motivation), and punctual in doing their assignments are supposed to perform adequately, and their learning behaviors would be ameliorated (Atchia & Chinapah, 2019; Tokan & Imakulata, 2019). Equivalently, a study conducted by Muhammad et al. (2015) confirmed that this psychological concern serves as a key predictor of students' success. Along with that, anxiety, which refers to the students' uneasiness and nervousness, could affect the performance of the students undesirably (Mahato & Jangir, 2012). This is to say that the psychological status may reflect positively and negatively on students' educational accomplishments.

1.2.2.1.2. The Impact of Gender on Students' Academic Achievement. Gender is another characteristic that has been highly examined by many researchers, aiming at understanding whether or not it has an influence on academic performance. On the one hand, some researchers claimed that females gained high grades than males (Conger & Long, 2010), others like Wainer and Steinberg (1992) further justified why women tend to earn high performance, stating that they are hard workers, and that they attend courses as opposed to men. This finding was also found in a study conducted on a large population in Turkey, which concluded that females excel in their studies (Dayioglu & Türüt-Asik, 2004). On the other hand, other studies proved opposite results, such as a research done by Attah and Ita

(2017), which revealed that gender did not interfere with students' academic performance in English language.

1.2.2.1.3. *The Impact of Time Management on Students' Academic Achievement.* In addition to what have been tackled, students who are skillful to plan and manage their time are likely to have high achievement, owing to the fact that time management enables them to organize their time according to their priorities as well as obtaining high grades (Cyril, 2015). Similar studies were conducted by Al-Zoubi (2016) and Nigussie (2019), which reported the considerable relationship between time management and academic success.

1.2.2.1.4. *The Impact of Language Proficiency on Students' Academic Achievement.* From the perspective of students' level, language proficiency is thought of as an essential determinant that has consequences on learners' educational attainment. Students' accomplishment could be identified by holding a certain degree in English. This indicates that both language proficiency and academic success are remarkably banded together (Wardlow, 1989). In an attempt to evaluate the attribution of this factor, numerous studies utilized either International English Language Testing Service (IELTS), or other tools like self-reported questionnaires for the sake of assessing students' language level, then the obtained scores were compared with their grades. These inquiries concluded that the educational attainments of students who faced difficulties in mastering the language and answering the IELTS are unsatisfactory (Martirosyan et al., 2015; Woodrow, 2006). To paraphrase, the averages of learners who can write, speak, listen, read, and understand the conveyed meaning may possibly be affected as well.

1.2.2.1.5. *The Impact of Information and Communication Technology on Students' Academic Achievement.* Listing conditions involved in students' success, necessitates discussing the utility and uselessness of ICT due to its widespread in the learning environment. As an illustration, participants of a study conducted by Khan et al. (2015) noted

that advanced materials helped them accelerate in doing their assignments, sharing information, and more importantly working collaboratively through using different websites and platforms. To the same degree, Sherman (2013) valued the effectiveness of digital technologies on language learning, especially social media as a means that situates learners in real-life contexts through videos, posts, and so forth, in developing both CT and learning.

Despite the positive effect of technological materials, it is regarded as a threat to students as well. In other words, spending much time using Facebook, Instagram, and YouTube, among other platforms, causes psychological and physical troubles, like depression, stress, and headache; these latter could minimize students' concentration, and increase the probability of their failure. This problematic issue was tested by several researchers, revealing the negative association between social networking addiction and academic achievement, which signifies that the more students are addicted, the less they are encouraged to study (Azizi et al., 2019; Wordu et al., 2021).

1.2.2.1.6. The Impact of Socioeconomic Status on Students' Academic

Achievement. Socioeconomic status (SES) is usually understood as the social class of a group of individuals, including their economic income, careers as well as their educational level (APA& Task Force on Socioeconomic Status, 2007). It was assumed that learners who have high SES gain better averages than those who come from poor-income families (Jury et al., 2017). Additionally, Atchia and Chinapah (2019) noted that the academic achievement of students who have financial support, possess computers, and have the accessibility to the Internet, was slightly affected. Pedrosa et al. (2007) found that poor learners achieve higher grades than rich ones, which is extremely the reverse of the previous result.

1.2.2.1.7. The Impact of Coronavirus Disease 2019 on Students' Academic

Achievement. The COVID-19 has largely spread in the world, and its effects have been entirely catastrophic. The current crisis has been characterized by social distance, quarantine,

suspended flights, and closed universities and schools. In respect to the educational context, students around the world could not attend school, and their exams were delayed, or annulled, like in the case of Algeria. Moreover, teachers were not able to teach online courses (Mahdy, 2020; United Nations Educational, Scientific and Cultural Organization [UNESCO], 2020). During the pandemic, the Office for Civil Rights (OCR) reported that COVID-19 has a negative effect on academic attainment in the country. Learners have faced complexities in online learning, and disparities have increased; furthermore, they have been deprived of gaining educational support. In California, it was found that students' grades declined by 34% due to the disease (OCR, 2021). In the same vein, an online questionnaire was administered to medical students from different countries seeking to examine the consequences of COVID-19 on students' learning. The gathered data showed that students could not have the chance to practice what they have learned and this affected their results, adding that there are students whose socioeconomic statuses are low; hence, remote learning was not efficient. Furthermore, statistical results represented that 47.5% of participants were highly affected by the virus, while only 3.3% were not (Mahdy, 2020).

In summary, we represented the commonly cited students' conditions that were highlighted by previous works. In fact, teachers' factors are connected to students' success, which are discussed below.

1.2.2.2. Teachers' Effect on Students' Academic Achievement. Teachers remain an indispensable factor to be addressed since they are part of the teaching and the learning process. Consistently, the teaching methods, feedback, the relationship between teachers and students as well as teachers' job satisfaction are prevalent topics that have been addressed in the academic context.

1.2.2.2.1. *The Impact of the Teaching Methods on Students' Academic Achievement.* Teaching methods can be equated to a set of rules that are applied in the

classroom: teacher-centered method, student-centered method, and teacher-student interactive method are the three typical pedagogical approaches. The first mentioned approach is also called the traditional method that belongs to the school of behaviorism, in which instructors are the leaders. Students learn through the process of stimulus-response, and memorization; i.e., rote learning. Although this procedure can contribute to the development of students' performance, it was criticized since learners seem to be passive and unaware. Most importantly, it treats students' minds as machines by ignoring their cognition (Giorgdze & Dgebuadze, 2017; Zhou & Brown, 2015).

As a revolution to the classical method, the student-centered method emerged. It considers students the core element in the classroom, and as responsible for building their knowledge in the learning process. However, instructors act as facilitators and guides; thus, their learners tend to be active and attentive, and this process is called meaningful learning. Based on empirical investigations, researchers qualify this instructional strategy since it develops students' autonomy, and fosters their intellectual skills and learning outcomes (Brown, 2008; Ubulom & Ogwunte, 2017).

The third method appeared to combine the two previously explained methods, which indicates that teachers and learners work cooperatively, according to Giorgdze and Dgebuadze (2017). To put it another way, it is based on communicative interaction between teachers and their students, or between students and their classmates. This latter can be reached through using group discussions, role-plays, and stimulating tasks. Chang et al. (2002), after they applied an interactive strategy, concluded that it is functional by virtue of raising students' awareness, performance, and independence in learning, and good achievement. As far as teaching methods are concerned, deciding upon the appropriate method that targets students' needs is one of the highly examined subjects. For this reason, a study entitled "The Impact of Teaching Methods on Academic Performance of Secondary

School Students in Nigeria”, showed that both student-centered and teacher-student interactive methods have an extremely positive impact on the development of students’ achievement, claiming that they become more critical and analytical comparable to their outcomes in the traditional instruction (Isa et al., 2020).

1.2.2.2. The Impact of Teachers’ Feedback on Students’ Academic

Achievement. Researchers have raised attention to the effect of both positive and negative feedback in enhancing learning accomplishments. It was assured that positive feedback reinforces students to study to perform effectively (Al-Bashir et al., 2016). Nevertheless, the use of negative feedback is questionable. In other words, some researchers reported that negative feedback is impractical and useless, claiming that students would have a negative attitude toward their teachers, and would be discouraged to learn and engage in the classroom (Truscott, 1996). Regardless of Truscott’s view, negative feedback has received a great deal of support from Outbir (2015) and Freedberg et al. (2017), who revealed in their studies that the performance of students who received this type of comment was increased.

1.2.2.3. The Impact of the Teacher-Student Relationship on Students’ Academic

Achievement. Creating a supportive learning environment in the classroom has received a great attention from pedagogues, whose basis is building a positive relationship among students and their instructors because of its effectiveness on students’ involvement and success (Maulana et al., 2013; Varga, 2017). Interestingly, several strategies were established to create a good connection between educators and their learners. First of all, the type of tasks and activities in the classroom can foster students’ extrinsic motivation; in other terms, the more teachers use attractive and fun activities, the more their learners would be encouraged to learn, and their performance would be increased as well (Skinner & Greene, 2008). Moreover, feedback makes a part of the teacher-student relationship; it was believed that sustaining a strong relationship, accommodating students’ errors, and enhancing students’

performance are the results of providing them with positive comments. However, the negative ones are better used with caution so that learners will not have negative attitudes toward their teachers (Skipper & Douglas, 2015; Varga, 2017).

1.2.2.2.4. *The Impact of Information and Communication Technology on Students' Academic Achievement.* One of the modern strategies that encourage learners' academic attainments is integrating ICT. Using technological materials establishes an appropriate environment for motivating students to study, and developing their skills like CT (Haddad & Jurich, 2002). As evidence, experiments were designed to investigate whether or not using ICT is functional. The findings denoted a huge influence, which means students would learn effectively, and would reach satisfactory academic outcomes when digital technologies were added. Equally important, it was noted that teachers are aware of the worthiness of ICT in the classroom, confirming that they facilitated their teaching process in an innovative fashion (Ghavifekr & Rosdy, 2015; Hussain et al., 2017). Therefore, incorporating ICT inspires learners to be active in the classroom, to understand lessons as well as to build an enjoyable atmosphere.

1.2.2.2.5. *The Impact of Teachers' Personality on Students' Academic Achievement.* It was noticed that teachers' personality plays an integral role in changing students' style; hence, their academic attainments might be affected. Teachers' qualities designate their conducts, attitudes, perspectives, and abilities, along with their professional backgrounds, and effective instructions that are used in the academic setting (Stronge, 2018). Prasobnet's findings in 2018 showed that kind and understanding educators would attract their students for being well-disciplined, and they also contribute to maintaining a positive relationship.

1.2.2.2.6. *The Impact of Teachers' Job Satisfaction on Students' Academic Achievement.* Most studies have probed mainly instructors' methods and strategies in the

classroom. However, Teachers' job satisfaction can also be involved indirectly in students' academic achievement. Teachers' job contentment signifies the psychological desire and the positive feeling toward their careers that may reflect students' educational attainment. By way of explanation, if instructors do not enjoy their teaching, they are likely to perform ineffectively (Borah, 2016; Iqbal et al., 2016). Despite this fact, some researchers found divergent results, such as a study conducted with students in higher technical institutions substantiated the inexistence of the relation between teachers' job contentment and students' academic achievement (Borah, 2016).

In closing, the previous predictors accounted for teachers' contribution to increasing learners' academic outcomes through applying adequate methods, using feedback, building a good relationship with the student, integrating digital technologies, with the addition of teachers' qualities and their contentment with their profession.

1.2.3. Academic Achievement Assessment and its Importance

Students' efforts in the classroom activities and projects need to be evaluated using standardized instruments; this notion is known as academic achievement assessment. Assessing academic performance is a set of systematic proceedings conducted by teachers, in which they gather data from students' performance, then they evaluate and analyze those outcomes based on well-defined standards, to maximize students' development. Besides, this process constitutes standardized methods and strategies, intending to improve the quality of education, and endorsing equality among students. This denotes that academic evaluation grants students the opportunity to acknowledge their strengths and weaknesses; therefore, it reflects the quality of educational attainments. Moreover, when equity is assured in the classroom, learners will have equal opportunities to participate and interact; also teachers would assess students' performance by implementing the same grading principles without discrimination against anyone (Tian & Sun, 2018). Overall, the area of academic

achievement has always been the concern of many researchers and educational reformers, this is because a high-quality academic assessment can improve the community as a whole, which is the ultimate aim.

1.2.4. Types of Academic Achievement Assessment

For an efficient and professional assessment, teachers usually select different types of classroom evaluation, including formative and summative. First, formative assessment is an ongoing evaluation of students' understanding and mastery of the lesson at the end of each session. This can be realized through a small task or a few questions to be answered on the spot. Summative assessment, on the other hand, signifies pen-and-paper exams that measure students' knowledge and comprehension of the subjects. Furthermore, it was remarked that effective tests encompass a mixture of task forms; MCQ, true-false, item matching, fill in the blank, and paragraph or essay questions (Callahan, 2006).

Conclusion

The theoretical chapter gave an account of the major aspects related to critical thinking; the contradictive views regarding its definition and generalizability, the core skills and dispositions, and its significance in education, particularly its relationship with academic achievement. Adding to that, the factors that influence students' CTS were tackled, taking into consideration their age, gender, awareness, motivation, language proficiency, culture, prior knowledge and topic familiarity as well as experience. Another investigated aspect was the role played by teachers in fostering this intellectual capacity through classroom strategies, and activities, along with the different instruments that were designed for measuring CTS. Moreover, an overview about academic achievement was presented in another section, starting from its definition, the influencing predictors that control students' success: motivation and anxiety, gender, time management, language proficiency, ICT, SES, COVID-19; with the addition of the teaching methods, feedback, teacher-student relationship, and

teachers' job satisfaction. Finally, the second section was concluded with classroom assessment, and its main types.

Chapter Two: Fieldwork

Introduction

With the aim of answering the research questions, we conducted a multi method research including a non-experimental correlational design and a survey design to determine the relationship between CTS and academic achievement, and the circumstances that could influence them, respectively, in addition to content analysis. Accordingly, this chapter aims at describing the research methodology used, and how it directed the process of congregating the necessary information in order to reach the research purposes. On the whole, this chapter encompasses two sections in which the research method, designs, and instruments were tackled, and the findings were numerically analyzed and descriptively interpreted followed by a numerical as well as a descriptive interpretation of the findings.

2.1. Section One: Methodology

2.1.1. *Research Method and designs*

This study attempts to answer different research questions that require different types of data, mainly quantitative ones. Creswell (2015) stated that: “When multiple forms of qualitative data (or multiple forms of quantitative data) are collected, the term is multimethod research, not mixed methods” (p. 26). Multimethod research necessitates collecting data from different methods so as to address several research questions. Correspondingly, we adopted the method in order to answer different research questions. In other words, we tried to investigate the relationship between critical thinking and academic achievement through the correlation design, and the factors that may influence the tested variables through the survey design.

As far as the purposes of this study are concerned, we exerted an explanatory correlational design. According to Creswell (2012), a correlational design is a quantitative research procedure that is applied to test the relationship between two or more variables

without manipulating them. It can be counted through using “Correlation Coefficient (r)”, more specifically Pearson Coefficient (p). The mathematical equation (which is used in the current study) is the following:

$$r = \frac{\sum(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum(x_i - \bar{x})^2 \sum(y_i - \bar{y})^2}}$$

- x_i : The value for students’ scores of CT
- y_i : The value for students’ average of academic achievement
- \bar{x} : The mean of the values for CT
- \bar{y} : The mean of the values for academic achievement
- N : The sample size (The Odum Institute, 2015).

In effect, the correlation coefficient (r) is a value that is around (-1 to +1); in other words, both (+1 and -1) denote that there is a relationship between the variables, whereas (0) designates the absence of the association. The (r) also gives the researchers the opportunity to check the direction of the measurements, which is detected through the two signals, positive or negative (+ or-). The degree of association can be seen as the following: If the (r), whether positive or negative, is from (0) to (+ or -0.3), the relationship is weak. If the (r) is from (+ or -0.5) to (+ or -0.7), the association is moderate; and if it is from (+ or -0.7) to (+ or -1), it is strong (Cohen et al., 2018; The Odum Institute, 2015). Correspondingly, in the present study we opted for the quantitative approach with the interest of demonstrating the correlation between the students’ CT scores and their averages.

We depended on a survey design for the purpose of elucidating the factors that affect students’ CT and their academic attainment. Creswell (2012) described the survey as a research design that is applied to gather data, about the examined sample, at one point in time (cross-sectional survey design), or over time (longitudinal survey design). This design allows

investigators to use various research instruments like questionnaires and interviews, but it does not permit them to manipulate the variables.

Furthermore, we adopted content analysis, which is a systematic research method that enables researchers to analyze documents. It deals with the frequency of words, concepts, phrases or sentences, and it can be implemented in quantitative, qualitative or mixed research methods (White & Marsh, 2006). Consequently, this method was used to analyze the academic tests of the first semester in the academic year (2021-2022) to identify the existence and frequency of HOTS implementing Bloom's taxonomy.

2.1.2. Population and Sampling

The target population of this study involves:

Students: M1 LS students are the target population of this study at the department of Literature and English Language at Larbi Tebessi University, Tebessa, from which the sample was selected. Relying on non-probability purposive sampling technique, 38 M1 LS students (27 females and 11 males) were chosen. Fortunately, we ensured that M1 LS students meet all the required conditions of the current enquiry: a limited number of participants, which are not less than 30 for the correlation to be adequate (Creswell, 2012), with different age ranges, gender, and their level of English language, which permits them to understand and answer the test unlike the other levels. It was important to note that the reason behind not choosing the other group, particularly Literature and Civilization, is that it is impossible to use the correlation between the averages of academic achievement of the two groups due to the different studied modules.

The purpose of this study dictated choosing students with specific characteristics, which necessitated opting for the non-probability purposive sampling technique. Maxwell (2009) stated that "This is a strategy in which particular settings, persons, or events are deliberately selected for the important information they can provide that cannot be gotten as

well from other choices” (p. 235). The chosen technique is advantageous in that it saves time and money, and guarantees an in-depth investigation of a small number of respondents (Cohen et al., 2018; Patton, 2002). The fact that purposive method does not allow for generalizing the results on a large population, does not necessarily make it deficient. This was plainly averred by Cohen et al., (2018):

Small-scale research often uses non-probability samples because, despite the disadvantages that arise from their non-representativeness, they are far less complicated to set up, are considerably less expensive, and can prove perfectly adequate where researchers do not intend to generalize their findings beyond the sample in question. (p. 113)

Teachers: 10 teachers who taught the same group of students in semester one were chosen as well. The teachers are a good source of information as they can provide information related to the variables of the current study.

Quizzes and tests: As they are used to test students’ achievement, the tests of quizzes and exams are analyzed after taking the permission of teachers.

2.1.3. Research Instruments and Data Analysis Procedure

2.1.3.1. Critical Thinking Test. Tests are effective instruments used by researchers to gather data about people’s abilities, achievements, and proficiency, to mention but a few (Cohen, et al., 2018). As discussed previously in the literature review, CTS have been assessed using a plethora of standardized and researcher-designed tests. Tests like WGCTA, CCTST, and EWCTET are widely used. However, it was not possible to obtain them because of their high prices, the length and complexity of their tasks, and they are inconvenient for classroom distribution due to the lack of the appropriate means to implement such online tests. Therefore, we adopted a more appropriate alternative, which is Lauren Starkey’s test. She is the founder of preparation courses for the Scholastic Aptitude Test (SAT), and the

author of many educational books, as it was mentioned in the literature review. In her book “Critical Thinking Skills Success in 20 Minutes a Day” (2010), Starkey incorporated a CT test from which we selected solely 20 questions that measure the core CTS, and are agreed upon by most researchers such as Facione et al. (1994), Ennis (1985), Watson and Glaser (2012), and many others. The skills involve recognizing problems, making inferences, evaluating facts, deductive and inductive reasoning, detecting and avoiding fallacies (red herring, Ad Hominem, Post Hoc, false dilemma, slippery slope), differentiating explanations from arguments, and evaluating the validity of numbers (see Appendix A). This research instrument is based on generic skills and daily life situations, and it does not require knowledge about specific subject areas, which is important in measuring the actual skills of students, without making them distracted by previously acquired information.

It was utilized by many researchers in their inquiries like Fulgueras and Bautista (2020), Husna (2019), Khalaf (2020), Milto et al. (2020), Pishchik et al. (2019), Ramezani, Modaberi, and Moonesan (2016), Ramezani, Larsaril, and Kiasi (2016), Khalaf (2020), and Wiboonwachara (2019). Starkey’s test is based on psychometric properties, which consist of validity and reliability, along with other criteria (Fulgueras & Bautista, 2020). Moreover, it was adapted by Lutsenko (2014, as cited in Milto et al., 2020) as well as developed and translated into Arabic by Khalaf (2020). It is also important to mention that the total score is out of 20, and the allocated time for answering it is 30 minutes, which was determined after essaying the test on Master Two LS students.

2.1.3.2. Questionnaires. We designed two questionnaires for the students and their teachers based on multiple studies that were tackled in the literature review, with the aim of investigating the factors that may involve in students’ CT level and their academic achievement, taking into account the perspective of students and teachers as well.

2.1.3.2.1. The students' questionnaire. The type of the students' questionnaire is closed-ended, which consists of 30 questions gathered into three sections (see Appendix B). The first section is for personal information (the student's name, age and gender). We inserted age and gender as factors that may influence CTS and/or academic achievement. We also added names intentionally for comparing students' actual skills with their awareness, along with other aspects. The second section entitled "students' critical thinking factors" is composed of MCQs, in which participants were asked about the factors that may affect their criticality, including language proficiency, topic familiarity, motivation, culture and life experience. It also contains questions about some CTS and students' awareness of these latter, among which the ability to analyze and synthesize, and avoiding emotions when making decisions. Lastly, the third section entitled "students' academic achievement factors", involves questions dedicated to analyze what influences students' academic performance, particularly their levels in English language, feelings, time management, ICT, SES, and COVID-19. The rest of the questions are actually related to teachers' factors, but they were asked to students to allow studying the topic from the teachers' and students' perspectives. We distributed this questionnaire in the classroom.

2.1.3.2.2. The teachers' questionnaire. The teachers' questionnaire is semi-closed; i.e., it contains a combination of closed-ended and open-ended questions, which make 29 questions in total, organized in two sections (see Appendix C). The aim behind this choice is that teachers can provide a profound vision on the subject by virtue of their knowledge and experience. This can be reached through both types of questions, for the open-ended questions give more freedom for the respondents to clarify their answers. The first section entitled "critical thinking factors" seeks to examine the teachers' awareness and knowledge about CT, their ability to coach it, and their views on students' CT level, and the possibility of incorporating CT skills in the process of teaching and assessment. In the next section,

"academic achievement factors", teachers were asked questions related to students' motivation to learn, the applied methods, strategies, their relationship with the students, and job satisfaction so as to underline which of these predictors may influence students' success. As for the way of administration, the teachers received the online version of the questionnaire via e-mail (Google forms). Additionally, we translated this questionnaire into Arabic language for teachers of language sciences (Arabic), statistics, and ICT modules (see Appendix D).

2.1.3.2.3. Validity of the Questionnaires. Both questionnaires were revised by our supervisor, and the teachers' questionnaire was sent to another teacher, who taught the module of CT, out of the sample for further validation. The comments delivered by both teachers guided the development of the instrument, and they guaranteed its validity. Because of the sample size, conducting a pilot study was not applicable; hence, we administered the students' questionnaire to Master Two Language Sciences students in order to verify the clarity of the language, and the smoothness of questions so as to make the necessary modifications.

2.1.3.3. Conceptual Content Analysis. Conceptual or quantitative content analysis aims at investigating and counting the existence of explicit or hidden meanings that are related to the unit of analysis (Aacharya, 2022). We analyzed the quiz and exam questions to determine the presence of HOTS. The selected unit of analysis is the quiz and exam questions of the modules of M1 LS, namely pragmatics, language and society, critical thinking and academic writing, research methodology, psycholinguistics, educational psychology, statistics, information and communication technology, language sciences (Arabic), and translation (see Appendix E). In this process, we utilized Benjamin Bloom's taxonomy since it is regarded as a model to be followed in implementing CTS in the teaching and evaluation processes (Clay, 2001; Utami et al, 2021). The coding categories are based on the taxonomy

units that constitute low-order thinking levels (knowledge, comprehension, and application), and higher-order thinking levels (analysis, synthesis, and evaluation) which represent CTS.

The process of content analysis necessitates reading the exam questions attentively, and breaking down their constituents so as to facilitate determining the levels of thinking skills in the unit of analysis. Concerning the codes, we relied on Bloom's taxonomy in identifying the coding categories. In what follows are some examples of the key terms of each category that are used in academic tests.

1. Knowledge: Define, state the characteristics of a concept.
2. Comprehension: Explain, paraphrase, restate
3. Application: Apply, show how, illustrate, use
4. Analysis: Compare and Contrast, differentiate, analyze
5. Synthesis: Create, summarize, diagram
6. Evaluation: Evaluate, criticize, judge (Bloom et al, 1956).

After that, we identified the percentages of the existence and frequency of both lower and higher-order thinking skills in the questions of each module.

2.2. Section Two: Data Analysis and Discussion

On the grounds of acknowledging the way this study was scrutinized, the collected data were examined and discussed through the chosen method and research tools. The second section addresses the analysis, along with the interpretation of the obtained information.

2.2.1. Data Analysis and Discussion

Initially, the sample encompassed 48 participants (38 students and 10 teachers); however, only 32 students answered the test and the questionnaire, and nine teachers answered the questionnaire; i.e., the total number of participants is 41, and the response rate

is 85.41%. Additionally, all the teachers (10) approved the analysis of their quizzes and exams. The following headings revealed the obtained results with discussion.

2.2.1.1. Findings Related to Students' Critical Thinking Skills Level. In order to answer the research question which states "What is the level of M1 LS students' critical thinking?", we administered the CT test. The majority of participants took 30 minutes to answer the test, whereas 10 participants needed 45 minutes. The highest mark is 14.66 over 20, while the lowest mark is 4.83 over 20. The students' mean average (MA) in the test is 10.34. The MA of participants who took extra time is 9.54, which is lower than the MA of the participants who took 30 minutes which is 10.70. These statistical data denoted that M1 LS students have nearly low CTS (see Table 1).

2.2.1.2. Findings Related to the Correlation Between Students' Critical Thinking Skills and their Academic Achievement. After counting students' CT level, and obtaining the approval of using their averages, we manually computed the correlation between M1 LS students' CT level and their averages of the first semester. It was reported that the Mean Average (MA) of students' academic achievement is acceptable; i.e., $\bar{y} = 12.66$. The MA of students' CT has been already stated, which is $\bar{x} = 10.34$. The result of the correlation indicated the existence of the relationship between CT and academic achievement ($r = -0.014$), statistically noteworthy ($p = 0.296 > \alpha = 0.05$) (α represents the significance level). Surprisingly, it was noted that the type of the correlation is negative with a very weak intensity. To put it differently, a weak negative relationship between the tested variables indicates the reduction of one variable, which is CT and the increase of academic achievement (see Table 1). In other words, the raise of academic achievement is not caused by the decline of CT, it is rather due to other factors. As a matter of fact, the alternative hypothesis that states "there is a relationship between students' critical thinking skills and their academic achievement" was approved, whereas the null hypothesis "there is no

relationship between students' critical thinking skills and their academic achievement" was rejected (see Figure 1). The obtained result is totally divergent with most scholars' findings, which foregrounded a positive correlation between the two variables (Abbasi & Izadpanah, 2018; Fitriani et al., 2020; Nur'azizah et al., 2021; Vendrely, 2007; Vierra, 2014). It is also different from the findings of Kanbay et al. (2017) and Shirazi and Heidari (2019) who reported a total absence of relationship between the two variables. Nonetheless, it is compatible with a few studies carried by Thalib et al. (2017) and Aghaei et al. (2012, as cited in Shirazi & Heidari, 2019).

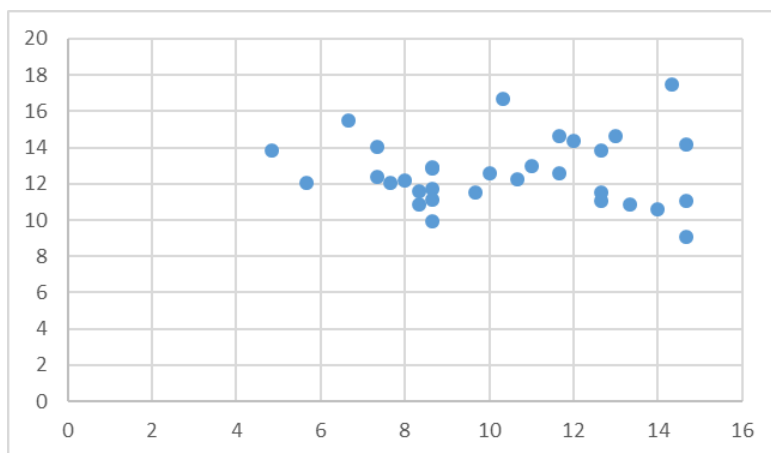
Table 1

Pearson Correlation

Number	<i>R</i>	<i>P</i>
32	-0.014	0.296

Figure 1

The Negative Relationship Between Students' CTS and Academic Achievement



2.2.1.3. Findings Related to Students' Questionnaire.

Section One: General Background

The objective behind this section is not only to collect personal data, particularly names, gender and age, but also to relate them with the conditions that may influence students' CT and /or their academic attainment.

Question 2: Gender

The results from this question disclosed that the number of females in the group is 27, while the number of males is 11. From students' scores in the CT test, we tried to investigate whether or not this predictor has a crucial role. The MA of females is 10.32, while the MA of males is 10.44. To put it differently, the difference between the means is very subtle, i.e., gender has no relationship with students' CTS. The revealed statistics is opposed to many inquiries, which stated the superiority of males in gaining higher CT scores than females (Aliakbari & Sadeghdaghi, 2011; King et al., 1990; Wood, 2008) in addition to studies that reported that women attained higher scores than men (Shubina & Kulakli, 2019). On the other hand, this result is similar to studies done by Friend and Zubek (1958), Salahshoor and Rafiee (2016), and Kanbay et al. (2017). The obtained findings are illustrated in Table 2.

Gender has also been a subject of investigation regarding students' academic achievement. We found that the mean of females' average is (12.72), and males' average is (12.39). As a matter of comparison, there is not a huge disparity between both averages. In other words, gender does not influence students' educational success. This finding is inequivalent to most studies, which highlighted the impact of gender on academic achievement, claiming that females outperformed males (Conger & Long, 2010; Dayioglu & Trk-Asik, 2014; Wainer & Steinberg, 1992). In fact, it is totally corresponded with Attah and Ita's findings (2017).

Table 2*The Mean Averages in Relation to Gender*

Gender	Percentage	MA of CT	MA of academic achievement
Male	18.75%	10.44	12.39
Female	81.25%	10.32	12.72

Question 3: Age

Through analyzing students' ages with reference to CT, the collected statistics revealed that the majority (56.25%) of students' age ranges from 23 to 26 years old [23-26[(see Table 3) whose CT is low (9.85). Whereas, the age of 28.12% of them is [26-29[scored higher in the test than the majority (12.33), except two students whose age is 26, scored (9.99). Furthermore, 3.12% of students whose ages are [35-38[have low CTS (7.33), concluding with 3.12% of learners whose age range [38-41], obtained 10.33 in the test. Taken altogether, the information provided evidence that students in their mid-twenties reach high grades in the CT test, as opposed to those who got 9.85; this finding is nearly identical to Friend and Zubek's view (1958). However, it is contradictive to it in maintaining that the progress of CT is sustainable at the mid-thirties. Moreover, it is totally different to studies conducted by Afsahi and Afghari (2017), Perkins (1985), and Kuhn (1992), indicating the absence of the relationship between CT and age. To conclude, CT appeared low in the correlation because the majority's age [23-26[, and they obtained low average, except for 21.87% whose CT level is satisfactory.

Table 3*Students' Age Ranges*

Age	Percentage	CT level
23-26	56.25%	9.85
26-29	28.12%	12.33
35-38	3.12%	7.33
38-41	3.12%	10.33

Section Two: Students' Critical Thinking Factors

The following section aims at exploring the main conditions that may affect students' CTS, including language, topic familiarity and prior knowledge, motivation, culture, experience, their criticality and awareness, and finally the teachers' role.

Question 4: This question seeks to investigate the impact of language proficiency on CT ability, and whether or not non-natives are capable of thinking critically as discussed in the literature review. Students who classified themselves, according to specific criteria inserted in the question (4), as beginners (9.37%), obtained 10.55, while intermediate students' (59.37%) MA is (10.07). The third level, advanced, was selected by 31.25% of participants whose MA is 10.79 (see Table 4). The statistical evidence from the comparison elucidated that advanced students have a slightly higher CT level than the other levels, yet this indicates that non-native speakers of English have low CTS even if they are proficient in English language. This deduction was also claimed by Atkinson (1997), Basso (1970), Crago (1992), and Fox (1994).

Table 4

Students' Level in English Language

level	Percentage	CT level
Beginner	9.37%	10.55

Intermediate	59.37%	10.07
Advanced	31.25%	10.79

Question 5: This question is related to topic familiarity, in which the students were asked about whether they can build strong arguments based on well-supported claims in topics that they are familiar with. It was reported that 59.37% of the students can easily present their arguments only in the topics that they are familiar with, while 37.5% of them are able to do so in any topic given by the teacher. This goes in parallel with many enquiries, such as Pally (1997), Stapleton (2001), and Fredrickson et al. (1991) who emphasized the role of being knowledgeable about the technical terms of the subject in being a critical thinker.

Question 6: Avoiding emotions when making decisions and being aware of such ability can influence CT level, as it was discussed in the literature review. The results showed that half of the students declared that they possess this capacity, while 46.87% of them do not, and one participant did not answer the question. In the light of students' scores in the CT test, particularly question number three, related to avoiding emotions (see Appendix A), learners who answered yes are able to avoid their feelings, and are aware of that (37.5%). On the other hand, four students (12.5%) believed that they possess this capacity, but they do not. On the contrary, students who said no (31.25%) can avoid their feelings since they answered correctly in the assessment; however, they are not aware of this ability. Concerning those who responded wrongly in the test and did not deny the lack of this skill (15.62%), they are also mindful of their weakness. The general picture emerging from the analysis implies that 53.12 % of the sample are aware of their CTS, while 43.75% are not (see Table 5). As a conclusion, the students' CT level is low because nearly half of the students are unconscious of this intellectual ability.

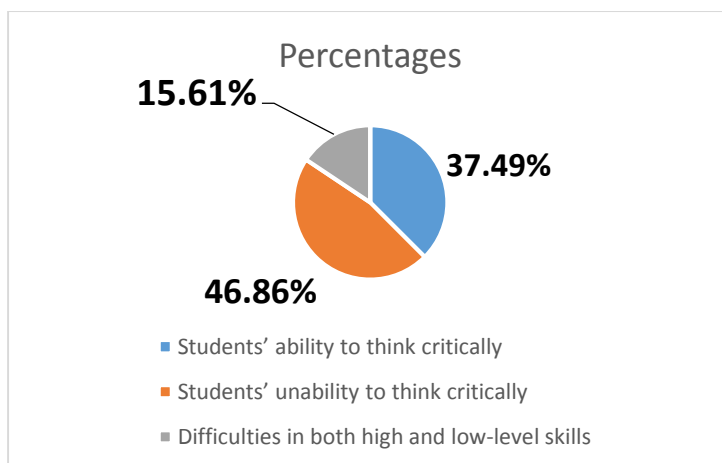
Table 5*Students' Ability to and Awareness of Avoiding Emotions*

Students are	%	Students are	%
Able to avoid emotions	68.75	Aware of this skill	53.12
Unable to avoid emotions	28.12	Unaware of this skill	43.75

Question 7: Students' curiosity and motivation designates their disposition to think rationally. Accordingly, 81.25% of the respondents assured that they do many attempts until they arrive at a solution to their problems, whereas 15.62% assured their unwillingness to do so. In a few words, disposition is suggested to be a predictor in the current inquiry that is possessed by the participants. In the same way, Chuter (2020) and Purvis (2009) focalized the impact of this factor in relation to CT.

Question 8: The target students were provided with different types of exam questions that entail lower-order thinking skills (definition and listing, and explanation), and higher-order thinking skills (comparison and contrast, evaluation, and synthesis). The majority of them (46.86%) affirmed that they are unqualified to answer tasks related to HOTS, which reflects the decrease of their CT level (10.34). Nonetheless, 37.49% of the participants stated that they are skillful to answer such kinds of questions. Additionally, 15.61% of the students declared that they face obstacles in answering both low and high-order thinking skills as explanation, knowledge, evaluation and synthesis (see Figure 2).

Figure 2*Students' Higher-order Thinking Abilities*



Questions 9 and 10: The two questions attempt to investigate the use of questioning both as a teaching strategy and a skill. 81.25% of the learners asserted that teachers of M1 LS challenge them with questions that go beyond their memory coupled with clarifications and examples, which foster CTS, yet 15.62 % of the respondents denied the use of questioning. The use of Socratic questioning can foster students' CTS (Orlich et al., 2009; Paul, 2012). In the 10th question, 78.12% of the students affirmed that they do question the information delivered by their teachers, and the rest did not answer. This could possibly indicate that CT is not totally absent when it was compared to the MA (10.34).

Question 11: This question is linked to the teachers' role in engaging their students in debates. The gathered data showed that 62.5 % of the students think that they were incorporated in such an activity, whereas 37.5% of them disconfirmed it. As a result, we realized that most of the teachers help students to develop their HOTS. This strategy is important for many researchers like Dallimore et al. (2008) and Utami et al. (2021) in enhancing CTS.

Question 12: The rationale behind this question is to check if culture interferes in the students' CT level. It was assumed that the non-western societies like the Algerian one seem conservative when disagreeing with elders, which according to Atkinson's claim, indicates their low criticality. Unexpectedly, it was revealed that culture does not control the students' CT since 81.25% of the participants viewed disagreement with old people as an accepted

practice. On the other hand, 18.75% find expressing their disagreement with elders disrespectful. A possible explanation is that learners thought that social beliefs and assumptions prohibit them from arguing with elders. This idea was previously stressed by Franklin (1985), Errihani (2012), and Stapleton (2001).

Question 13: Finally, the target participants were asked about the impact of their life experience, be it in the educational setting or elsewhere, in developing CTS. The statistical data showed several answers (see Table 6). We noticed that those who chose ‘all of the above’ obtained a low score in the CT test, statistically represented as 9.58, compared to those who said that they have only gained knowledge; i.e., the MA of their CT is 11.24. For those who selected the third choice (9.37%) are more critical than the others since they are capable of solving problems, which was proved by their MA in the test (13.33). In drawing things to a close, participants who believed that they are improved in terms of their CT abilities obtained low marks, except of 9.37%, which means life experience does not influence them compared to students whose choice was knowledge. The findings are entirely opposed to many studies that proved the role of this predictor (Davies & Barnett, 2015; Fleming, 2019).

Table 6

Life Experience in Relation to CTS

Experience impact	Percentages of choices	MA in the CT test
Acquiring new knowledge	12%	11.24
Making appropriate decisions	18.75%	10.66
Becoming capable of solving problems	9.37%	13.33
All of the above choices	59.37%	9.58

Section Three: Students' Academic Achievement Factors

This section accounts for the most cited factors that may influence students' academic achievement. Its objective is to congregate information, namely students' English level, motivation, time management, SES, ICT, COVID-19, their relationship with teachers, along with questions related to instructors' role in the classroom, which might have consequences on the examined variable.

Question 4: We used the result of question four of the second section in order to analyze the impact of language on students' educational success. Most of the students (59.37%) said that they have an intermediate level in English language. 31.25% of them reported that they are advanced, while only 9.37% of them described themselves as beginners. Taking into account the majority's answers, this calculation goes homogeneously with the mean of students' grades 12.66. This is to say that language plays a critical role in affecting students' grades. This was also confirmed by many researchers, such as Wardlow (1989), Martirosyan et al. (2015), and Woodrow (2006).

Question 14 and 15: Both questions attempt to discover whether the students are motivated and willing to learn. The gathered data demonstrated that all the participants attend both the TD and the lectures (90.62%), except three students (9.37%) who declared that they attend only the TD sessions. We integrated the 15th question to further determine the effect of this factor. Accordingly, we found that the MA of learners (37.5%) who take sufficient time in preparing their assignments is (13.39), and they seem more motivated than those who leave the preparation to the last minute (62.5%), whose mean average is 12.34. From this perspective, motivation in this investigation can be seen as a controlling factor of students' learning accomplishment as it was ascertained in many studies, such as Atchia and Chinapah (2019), Muhammad et al. (2015), and Tokan and Imakulata (2019).

Question 16: Another aspect that can be linked to motivation is students' feelings in the classroom. The majority of students (68.75%) feel joyful, satisfied, active and alert; only 29.25% of them have negative feelings in most of the sessions. In point of fact, we realized that the MA of those who feel stressed and anxious in the classroom (11.99) is not strongly affected, in comparison to students whose MA is 12.96, and they have positive feelings. In brief, students' educational progress is not affected by anxiety.

Question 17: With regard to time management, we found that 71.87% of the answers reflected that M1 LS students organize their time according to their priority. Hence, they are aware of the benefits of time management, yet 28.12% neglected its significance. This strategy was highly emphasized by many investigators in the field of pedagogy, including Al-Zoubi (2016), Cyril (2015), and Niggussie (2019).

Question 18-20: These questions are designed to see the negative and the positive effect of ICT on learners' educational performance. It was observed that 75% of students valued the advantages of using technological materials, as it was investigated by Kan et al. (2015) and Sherman (2013). We revealed that more than half of the sample are addicted to social media (71.87%), in which 59.37% of them argued that their grades are dwindled because of that, while 25 % of respondents denied its negative impact. On account of students' averages and their answers, it was unexpectedly found that learners who said that their achievement was affected gained higher average (12.61) than those who said no (12.33), i.e., they are unaware of the negative consequences of this addiction on their academic attainment. This latter matches with works done by Azizi et al. (2019) and Wordu et al. (2021).

Question 21: The question probed the influence of another predictor on students' learning outcomes; socioeconomic status. The sample split into two groups, half of them (50%) believe that their averages were affected by their financial status, while the second

category (46.87%) did not, and only one student left the boxes blank. By the same token, Atchia and Chinapah (2019) have also concluded that SES have a subtle impact; contrastively to scholars who attested that impoverished students reach higher grades than affluent ones (Pedrosa et al., 2007).

Question 22 and 23: The two questions attempted to investigate the impact of COVID-19 on students' performance. Accordingly, the majority (81.25%) of students' averages were affected by the pandemic. The question 23 provided the participants with some possible reasons that caused the decrease of their averages. The implemented measures intended to prevent the spread of this disease, led to the accumulation of many courses, which make 12.5% of the students unable to comprehend, and revise their lessons. The aftermath of COVID-19 further decrease the desire to study, as reported by 18.75%, while 6.25% of them are not capable of answering the exam questions effectively because of reducing the allotted time. Unsurprisingly, the majority of students are affected in terms of all the aforementioned aspects, and 21.87% of them selected more than one factor, whereas six students did not select any. On the other hand, 15.62% of the respondents believe that COVID-19 has no effect on their academic outcomes. The attained percentages conform with the OCR, which reported that students' grades were dramatically declined due to COVID-19 (OCR, 2021). Also (Mahdy, 2020) found that 47.5% of participants were highly influenced by the virus, while only 3.3% were not.

Question 24: With regard to the applied method in the classroom, using interactive approach is dominant; 78.12% of learners reported that this method is frequently adopted by their teachers, which makes them active and collaborative as well as raise their awareness. Therefore, it influences their performance positively; in addition, 3.18% of answers showed that student-centered method is exerted. On the opposite extreme, 18.75% of students' answers denoted the use of the teacher-centered method.

Questions 25-29: We tried to explore through these questions the role of using interesting activities, teacher-student relationship, along with positive and negative feedback. Firstly, based on the students' claims, we revealed that 65.62% of the respondents said fun and interesting activities are not used. This strategy can motivate students, and build a good relationship according to Skinner and Greene (2008). Secondly, students assume that negative feedback makes them feel bad (i.e., 56.25% said yes). On the other hand, the majority (46.87%) of participants claimed that positive feedback is dominant more than the negative one, which may promote a positive relationship as stated by Skipper and Douglas (2015) and Varga (2017), who prioritized the use of positive feedback more than the other type to create a good relationship. Besides, all the students (96.87%) in their responses disconfirmed the negative relationship with their teachers, except one participant. This is to say that although fun activities are not provided, most of the teachers use positive feedback that fosters students' academic achievement, along with their critical thinking because they are conscious of their weaknesses, and would refine them as it was discussed in the literature review. In addition to what have been said, 81.25% of the students reported that feedback is taken into consideration.

Question 30: In the light of teachers' personality, 87.5% of the learners estimated that instructors' qualities (e.g., kind, understanding versus unkind, intolerant teacher) portray an effectual predictor on students' accomplishment. This idea was highlighted by Prasobnet (2018).

2.2.1.4 Findings Related to Teachers' Questionnaire.

Section One: Critical Thinking Factors

The major goal of the first section is to collect information from the teachers' perspective about their awareness, and their role in affecting students' CT abilities, with the addition of the applied approach, strategies, and instructors' ability to teach CT.

Question 1: The first question aims at probing the teachers' understanding of critical thinking. It was inferred that 77.77% of the teachers have a good understanding of the concept of critical thinking. They defined it based on the common skills that are questioning, interpretation, analysis, problem solving, inference, evaluation, synthesis, and self-regulation. 11.11% of the teachers have a limited knowledge, they restricted CTS only to comparison, contrast, and reflection. On the other hand, one teacher declared that they have no idea about CT.

Question 2: The studied sample were asked to select which of the mentioned characteristics (a student who gets high marks, a student who provides valuable comments and reasonable arguments in the classroom, or a well-disciplined student) qualifies a good student. The purpose of this question is to recognize whether they consider enhancing critical thinking one of the main targets in their teaching process, or they prioritize students' conducts and marks. We reported that 77.77% of the teachers believe that a critical student creates a "vivid" environment, showing interest in the modules, and they added that "good grades do not reflect students' level". We also found that 22.22% of the teachers chose the second and the third options, claiming that "a good student thinks clearly and questions everything", "discipline is indispensable, for randomness creates chaos". This is to conclude that teachers of M1 LS are supposedly intended users since CT is one of the core objectives in their teaching process. Teachers' awareness and knowledge about CT were previously emphasized by Barak and Shakhman (2008) and Orszag (2015).

Question 3: This question addresses the students' CT capacities, particularly the ability to gather and evaluate data from different sources so as to draw conclusion. The majority of teachers (55.55%) confirmed that M1 LS students lack this ability. The result may denote that they are aware of their students' CT level. Conversely, 22.22% of them said that

students do have the skill, and the rest of teachers admitted that they have no idea about their students' level.

Question 4: In like manner, we also wanted to know if the students do question their teachers about the validity and credibility of their ideas. Correspondingly, 55.55% of the teachers declared that their students do accept the information to which they are exposed without questioning, which possibly proves the students' low scores in the CT assessment (10.34). However, 33.33% of the participants showed opposite view claiming that the students are skeptical.

Question 5: We intended to examine the impact of culture on students' CTS level. In simpler terms, do M1 LS teachers believe that their students avoid disagreeing with elders due to the cultural norms (i.e., it is disrespectful), lack of the necessary skills, or because of other factors? We noted that 66.66% of the teachers claimed that their students are not capable of defending their viewpoints, while 33.33% of them proclaimed that learners tend to disagree with them. More importantly, some learners might have different intentions behind showing disagreements; "some want to show off, some have different visions and perspectives, and some get confused"; this view was presented by one teacher. As a consequence, culture does not appear to be impactful on students' CTS, it is rather their abilities which did interfere. The presented result reflects many investigators' views like Franklin (1985), Errihani (2012), and Stapleton (2001).

Question 6: We aimed to investigate whether the teachers use debates in the classroom. We found that 66.66% of them engage their students in this strategy in order to foster their CTS, such as synthesis and judgement, along with the disposition of open-mindedness. With regard to distant modules, the instructors do not apply it due to the limitations of online teaching (33.33%). Debates are one of the applicable techniques to make

students more critical in terms of judging others, and assessing claims (Dallimore et al., 2008; Utami et al., 2020).

Question 7 and 8: In the same vein, the teachers were asked if they use questioning. An estimation of 88.88% of the teachers provide their students with the opportunity to clarify their answers and opinions, or give examples. According to them, the rationale behind implementing this technique is to improve the learner's language, attract their attention, correct their mistakes, and to stimulate their open-mindedness, and valid argumentations. Two respondents, however, do not involve their learners in questioning because of the restrictions of online courses. On this account, Socratic questioning is a key strategy that was underlined in the current study, and other investigations done by Orlich et al. (2009) and Paul (2012).

Besides, participants were required to demonstrate how they see their students' justifications and explanations. 33.33% of them said that students base their claim on both logic and emotions in different contexts; 11.11% of instructors reported the logical thinking of their students. While two teachers said M1 LS students are emotion-driven. The rest (66.66%) provided their answers and said that their opinions are based on "perceptions", "conceptions", "prior knowledge", and "fallacious ideas".

Question 9: On account of CT approaches, implementing explicit questions that require analysis, synthesis, and evaluation can foster students' CTS and their awareness, which was supported by Abrami et al. (2008), Egege and Kutieleh (2004), van Gelder (2005), and Zhao et al. (2016). It was found that 44.44% of the instructors use this kind of questions (i.e., the infusion approach), as opposed to 22.22% of the respondents who depend on indirect questions (i.e., the immersion approach).

Question 10: Regarding students' assessment, we asked the teachers about the types of questions that they usually include in quizzes and exams, namely the questions that entail lower-order thinking skills and higher-order thinking skills. We reported that more than half

of the of respondents (55.55%) design their quizzes and exams based on all the kinds of questions (definition and listing, explanation, comparison and contrast, synthesis and evaluation). These teachers tend to target the levels of all students through combining various types of questions, also to examine students CTS. While 33.33% of the quiz and exam questions require low-order thinking skills like knowledge, and comprehension; only 11.11% of instructors use evaluation questions due to the nature of the course.

Question 11: In relation to the previous question (10), 55.55% of the participants stated that their students are competent to answer questions that are based on HOTS, whereas 44.44% of them believed that they fail to do so.

Question 12: We concluded this section by addressing the teachers' ability to coach CT. It was reported that 66.66% of the studied sample assumed that they do not need training because they considered CT as a crucial element in their teaching process. Conversely, the rest of respondents admitted their inability to teach CT stating the following reasons: "it needs high-quality expertise", "it is not my job", and "I do not know what is CT".

Section two: Academic Achievement Factors

The established section endeavors to ensure the predictors that may control, in a way or another, the learners' outcomes. Its constituents are basically linked to students' English level, their motivation and feelings, the effect of COVID-19, the teachers' applied method and strategies, feedback, their relationship with the students, the impact of their personality, and job contentment.

Question 13: The teachers were asked about their students' level in English language. As for M1 LS students' level in English, nearly all the teachers proclaimed that the intermediate level is dominant. Correspondingly, this statistical data apparently goes in parallel with the MA of students' academic achievement, meanwhile only one teacher described them as advanced.

Question 14: In reference to students' motivation, different responses were elicited, in which 66.66% of the participants asserted that learners attend both the TD and lectures because they like the sessions, they recognize their benefits, and are motivated to learn. Contrarily, students who attend only the TD sessions are "reluctant" and "unmotivated" according to 33.33% of teachers.

Question 15: The question attempts to investigate the consequences of the pandemic on students' achievement. Most of the teachers (66.66%) cited the effect of this pandemic on students' educational attainments: "they became lazy", "they lost the desire to study", "there appeared a distance between students and teachers", and "Since they have less sessions, this will affect their chance to learn more and improve their level". On the other hand, 33.33% of the teachers do not seem knowledgeable on this matter.

Question 16: Regarding the teaching method, the findings showed that teacher-student interactive method is the prevalent approach for classroom instruction (88.88%). This approach gained high support for developing both students' learning and their analyticity (Chang et al., 2002; Isa et al., 2020). Only one teacher implements the traditional method (teacher-centered method).

Question 17 and 18: Teachers were asked about whether they integrate ICT in their teaching process, along with its effects. 44.44% of teachers claimed that they do not utilize technological materials, believing that "they do not add much to the lecture", "there is a lack of computing rooms to teach statistics course", and one teacher did not justify his or her answer. On the opposite extreme, 55.55% of the teachers identified the advantages of using ICT which are: creating an enjoyable atmosphere in the classroom, facilitating students' comprehension of the lectures, and developing students' cognitive skills, such as analysis and evaluation. Among these teachers there are two who limited the benefits of ICT to the second

choice (facilitating students' comprehension of the lectures). Similarly, Ghavifekr and Rosdy (2015) and Hussain et al. (2017) highlighted the role of ICT in the academic field.

Question 19-21: In addition to what have been said, COVID-19 has not only affected students' learning, but also the teaching process, in particular, this disease has influenced the instruction of 77.77% of teachers. These latter claimed that they are no longer capable of determining their students' deficiencies, using activities as well as finishing the curriculum. More importantly, all of them face challenges in assessment in terms of quality, number, and degree of difficulty of the test questions. This is to confirm that COVID-19 is a recent predictor that causes obstructions in the field of pedagogy.

Question 22-26: The teachers were also asked if they provide their students with attractive activities, positive, negative feedback, both of them, or none, along with the effect of negative feedback on students' attitudes toward them. It was revealed that interesting or fun activities are used by 66.66% of the teachers in order to change the routine, create a better learning environment, and attract students' attention. While this strategy was not applicable for certain modules like psycholinguistics, and ICT (33.33%). The majority of the instructors (66.66%) provide students with both types of feedback, which has a significant impact on the educational accomplishment and critical thinking, according to Al- Bashir et al. (2016), Orszag (2015), Shim and Walczak (2012), and Tapper (2004). More than that, for 55.55% of teachers, students take feedback into account, which can indicate the development of students' academic outcomes. On account of teacher-student relationship, negative feedback does not have an influence on students' attitudes toward them. Besides, all of the teachers averred that they have a good relationship with their students, clarifying that mutual respect and good treatment from the part of teachers are key principles in the classroom setting. In brief, a good relationship between students and their instructors was underlined in the current study, along with the importance of feedback.

Question 27: On account of students' feelings, 55.55% of the participants said that their learners look active and alert during their sessions, i.e., they are motivated to learn. Despite this fact, it was observed that students are stressed and uninterested by 44.44% of the respondents. Several studies shed light on the role of students' feelings in the classroom, claiming that a well-motivated student obtains satisfactory results (Atchia & Chinapah, 2019; Muhammad et al., 2015).

Question 28: Furthermore, we tried to explore if teacher's personality has an effect on students' success, as it was explained in the literature review. Accordingly, 88.89% of the teachers assumed that their personality can have a considerable influence on students' educational attainments. One of the obtained justifications is that the instructor is a "model" for students, if a teacher has a good character, learners would succeed in his or her module. Another participant asserted that teachers' personality controls the way students perceive the course. Regardless, only one instructor did not have an insight on this notion.

Question 29: Finally, in the last question, we reported that all the participants said that they are satisfied with their job as a teacher. The majority (88.88%) of respondents maintained that they like teaching, they feel satisfied when delivering information, and "thrilled" when discussing with their students. This is to infer that the teachers like their job; hence, they are supposed to perform actively in their teaching process.

2.2.1.5. Findings Related to Content Analysis. To answer the fourth research question which states "To what extent do quiz and exam questions require critical thinking skills?" a conceptual (quantitative) content analysis was conducted. We noticed that the majority of quizzes and exams include questions that require low-order thinking skills in different modules. In particular, pragmatics quiz (75%), critical thinking and academic writing exam (60%), psycholinguistics exam (60%) and quiz (80%), educational psychology exam (90%) and quiz (70%), statistics (63.63%), research methodology quiz (60%),

information and communication technology (100%), and language sciences (Arabic) (60%). On the other hand, we found that only language and society exam entails 63.6% of questions that are based on HOTS. Besides, both higher-order thinking skills and lower-order thinking skills are equivalently incorporated in language and society quiz, critical thinking and academic writing quiz, pragmatics exam, and translation exam. In summary, it was concluded that the majority of modules lack the assessment of CTS (see Table 7), which may possibly minimize students' CT level.

Table 7

The Frequency of HOTS in the Academic Tests

Modules	Higher-order thinking skills	Low-order thinking skills
Pragmatics exam	50% (analysis, synthesis)	50% (knowledge, application)
Pragmatics quiz	25% (analysis)	75% (knowledge, comprehension, application)
Language and society exam	63.6 (analysis, synthesis)	36.36% (comprehension)
Language and society quiz	50% (analysis)	50% (comprehension)
Modules	Higher-order thinking skills	Low-order thinking skills
Critical thinking and academic writing exam	40% (analysis)	60% (knowledge, application)
Critical thinking and academic writing quiz	50% (analysis)	50% (comprehension, application)

Psycholinguistics exam	40% (analysis, evaluation)	60% (knowledge, comprehension)
Psycholinguistics quiz	20% (analysis)	80% (knowledge, comprehension, application)
Educational psychology exam	10% (analysis)	90% (knowledge, comprehension, application)
Educational psychology quiz	30% (analysis, evaluation)	70% (knowledge, comprehension, application)
Statistics exam	36.36% (analysis, synthesis)	63.63% (knowledge, application)
Research methodology quiz	40% (analysis, synthesis)	60% (knowledge, comprehension, application)
Information and communication technology exam	0%	100% (knowledge, comprehension)
Arabic exam	40% (analysis)	60% (knowledge, comprehension)
Translation exam	50% (knowledge, application)	50% (analysis, synthesis)

2.2.1.6. Concluding Findings of the Gathered Data. from the gathered data, we concluded the following results:

- M1 L1 students have a nearly low CT level in the CT test. Both CT and academic achievement are negatively correlated. After Comparing, and interpreting both questionnaires, several conclusions were drawn for the sake of answering the third and the last research questions.

In order to answer the third research question which states: “What are the factors that may affect students’ critical thinking level?”

- Gender does not appear to affect the critical thinking level of M1 LS students when it was compared to their mean average, while age influences students' CT level since most of the learners' age did not reach the mid-twenties. As a result, the MA of their critical thinking is low.
- Since M1 LS students are non-natives, their CT level is low. Therefore, language is considered an influencing factor.
- The students do think that familiarity with the topic plays a decisive role in creating solid arguments.
- M1 LS students are aware of their capability to avoid emotions when making decisions, which was proved by their scores in question number three in the CT assessment.
- Teachers of M1 LS are not aware of their students' level in CT since learners admitted their inability to gather and evaluate data from different sources, and analyze in addition to the results obtained from the test. Moreover, teachers and students' answers were contradictory in relation to the questioning skill.
- Most of the learners are mindful of their abilities and deficiencies of CTS, and they are seemingly disposed to think critically because they do many attempts to solve problems.
- The teachers are knowledgeable about CT and capable of teaching it since they prioritize it, and they use the adequate approach (infusion), and strategies (debates and questioning) that foster CTS, that is why students are aware of their CTS. However, teachers' assessment does not require HOTS, which is confirmed by the results of conceptual content analysis.
- Culture and experience may not control the students' CT level.

In order to answer the last research question which states: “What are the factors that may affect students’ academic achievement?”,

- Gender does not seem to interfere in the participants’ academic success.
- The students’ level in English language affects their educational outcomes.
- Due to the fact that M1 LS students are well-motivated and unstressed, their grades are satisfactory (12.66).
- Time management has a slight impact on the students’ averages.
- In the present study, students believe that socio-economic status is an impactful element on their educational success.
- Teachers of M1 LS adopt the interactive teaching method, and provide students with both positive and negative feedback, which contributes to the development of students’ performance.
- Negative feedback does not affect students’ attitudes toward their instructors, which indicates the good relationship between them.
- Some of the students are not aware of the threats of social media on their academic achievement.
- Despite the advantages of using ICT in the classroom, including fostering CTS, approximately half of the teachers do not incorporate it due to time constraints and lack of computing rooms.
- COVID-19 is a serious obstacle in the teaching and learning process.
- The teachers are regarded as models for students; hence, their qualities and behaviors can have a great impact on students’ learning.
- M1 LS teachers are satisfied with their career; thenceforth, they are supposed to increase students’ academic performance.

Conclusion

In drawing things to a close, the second chapter attempted to discuss the methodology, precisely the opted approach, design, research tools, accompanied by the procedure, in the interest of investigating students' CTS and their academic accomplishment. Correspondingly, the second section showed the negative relationship between CT and academic success, and the poor level of students' CTS. Over and above that, it gave prominence to the main circumstances that regulated the variables under study. Moreover, this last section provided evidence that the academic tests of M1 LS lack higher-order thinking skills.

Limitations of the Study

The findings of this investigation have to be seen in light of some limitations. The first shortcoming that should be acknowledged is that the results cannot be generalized on the whole population because of the small sample size that was purposefully selected. As explained before, the aim of the current study is to target specific characteristics, which compelled the use of non-probability purposive sampling technique. In fact, opting for this type of sampling indicates that generalization is not the concern of the study. The total number of students in the sample initially was 38 when six of them were absent the day of the test.

In the process of selecting the appropriate tool to measure students' CTS, it was quite difficult to obtain and apply one of the high-ranking CT tests, such as WGCTA and CCTST because they are available for online administration only, and they are not affordable. As a result, Starkey' CT assessment was adopted.

This research paper also aims to gather information related to students' and teachers' factors of the studied variables; however, the small sample size as well as time constraint did not allow for piloting both questionnaires.

Recommendations

On account of the aforementioned limitations, future suggestions were accented in terms of methodology and content. Firstly, it was recommended that researchers can test strategies and methods that foster students' CTS through conducting experimental studies. Future researchers can apply a correlational design in order to determine the relationship between CT dispositions and academic achievement since dispositions also was stressed by many scholars, such as Ennis (1996) and Facione et al. (1994). Moreover, they may use observation as a tool to evaluate the implemented strategies and activities that foster CTS as well as academic achievement. Besides, future researchers can replicate the study through investigating the topic on a larger sample, using randomized sampling technique to guarantee the generalizability of the results.

As for the pedagogical recommendations, the teachers are recommended to raise students' awareness of critical thinking starting from early levels university education due to the importance of the skill. They are advised to make the best use of technology to engage students to use their higher order thinking skills. The teachers are advised to carefully design their questions to target higher order thinking skills. As critical thinking is a learned skill, the teachers are recommended to train students to use the different skills in both daily instructions and exams.

Lastly, some implications were elucidated through this study for fostering students' CTS. It is important to teach CT starting from middle school since CT develops during adolescence. Using the infusion and immersion approaches to teach CT within the courses is another effective strategy. More importantly, teachers need to be trained to coach CT, implement the appropriate methods and activities, and evaluate their learners' CT level.

General Conclusion

On the whole, this research paper targeted one of the twenty-first century skills, critical thinking, seeking to explore this cognitive capacity and its relationship with the academic performance of M1 LS students of English at Larbi Tebessi. In addition, the study focalized how these two variables are affected under several conditions, accompanied by investigating the existence and the frequency of higher-order thinking skills in the educational tests.

This research paper is divided into two chapters. The first chapter focused on presenting an overview of the studied variables in two sections. It initially provided a thorough discussion of the various definitions regarding the concept of critical thinking, the common skills and dispositions, the debate on whether CTS are general or specific, its importance and relationship to the field of pedagogy, its assessment, and the commonly cited factors that may affect critical thinking, mainly students and teachers' factors. Academic achievement, as a second variable in this study, was underlined in the second section, reporting its definition together with the main predictors that could control students' educational performance, and finally its assessment.

The next chapter aimed at gathering data, and addressing the research questions through the adopted methodology. Correspondingly, the fieldwork intended to explain the selected approach profoundly, i.e., the mixed research method, and how it was effectively directed to meet the research problem. Besides, it also shed light on the utilized research instruments, particularly the CT test, the learners and teachers' questionnaires and the conceptual content analysis as well.

Finally, this paper centralized on interpreting the obtained data. The first finding revealed a negative correlation between students' critical thinking and academic performance with a weak intensity, in other terms, accepting the alternative hypothesis. In the second

phase of this work, both questionnaires revealed which of the cited factors in the literature review, affected students' CT and their academic attainment and which did not. Furthermore, the last tool of the investigation indicated that higher-order thinking skills in the exam and quiz questions are insufficient. By way of conclusion, after conceding the restrictions of this study future suggested investigations were highlighted.

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Appendices

Appendix A



Larbi Tebessi University -Tebessa
Faculty of Letters and Languages
Department of Letters and English Language



Full Name:

Age:

Gender:

Level: M1 LS

Duration: 30 mins

Score:

Critical Thinking Assessment:

The following assessment intends to measure students' critical thinking skills. We appreciate your time and efforts in answering this test. Your personal information will remain confidential, and will be used only for our research purposes.

- **Choose the right answer (do not choose more than one answer, except for Q.16).**
- Unfamiliar terms are explained between parentheses

1. Which of these situations does NOT require problem solving?

- a. After you get your new computer home, you find there is no mouse in the box.
- b. When you get your pictures back from being developed, you realize they are someone else's.
- c. Everyone on your team wants to celebrate at the Burger Palace, but you just ate there last night.
- d. You've been assigned to finish a report for tomorrow morning, but it is your son's birthday, and you promised you would take him to the ball game tonight.

2. Which is NOT a sound (*strong*) argument (*a statement that includes a claim and evidence*)?

- a. Sabrina wanted to be a better figure skater, so she took extra lessons and practiced every day. Her skating improved so much that she entered a competition.
- b. Yesterday, a black cat ran in front of me, and later, I lost my wallet. If I don't see that black cat today, I won't have any bad luck.
- c. We had a storm last night with hurricane-strength winds, and many trees were downed. There was a citywide power outage (*a failure in the supply of power, e.g. electricity*).
- d. On a clear day, I can see the top of Murphy Monument from my house. If it's clear tomorrow, I'll be able to see the monument.

3. Which scenario best represents a situation that has been decided by emotion alone?

- a. Sue hates the winter, so even though she can't afford it, she takes a vacation to the Bahamas.
- b. The school shuts down after a bomb threat.
- c. Third-quarter earnings for Marie's company were much higher than predicted.

d. Alexis needs a new mixer, so she watches the newspaper ads and buys one when it goes on sale.

4. When would it be better to do research in the library rather than on the Internet?

- a. You are writing a report on recent U. S. Supreme Court decisions.
- b. You want to know the historical performance of a stock you are considering purchasing.
- c. You need to compare credit card interest rates.
- d. You want to find out more about the old trails through the forest in your town.

5. Which is NOT a valid (*strong*) argument?

- a. There are six cans of tomatoes in Carlo's pantry and 14 in his basement. There are no other cans of tomatoes in his house. Therefore, he has 20 cans of tomatoes in his house.
- b. Everyone northbound (*northward*) on the Interstate (*highway*) yesterday was late to work. Faith was northbound on the Interstate. Faith was late to work.
- c. Huang lives in either Kansas City, Kansas, or Kansas City, Missouri. If he lives in Kansas, then he is an American.
- d. No one who eats in the cafeteria likes the pizza. My boss eats in the cafeteria. Therefore, my boss does not like the pizza.

6. What is wrong with this argument? "You think we need a new regulation to control air pollution? I think we already have too many regulations. Politicians just love to pass new ones, and control us even more than they already do. It is suffocating. We definitely do not need any new regulations!"

- a. The person speaking doesn't care about the environment.
- b. The person speaking has changed the subject.
- c. The person speaking is running for political office.
- d. The person speaking does not understand pollution.

7. Which is a judgment, not a fact?

- a. That production of Hamlet was first-rate; you'll never see it done better.
- b. That production of Hamlet was first-rate; it was cited as such in the Daily News.
- c. That production of Hamlet was first-rate; it won an award this year.
- d. That production of Hamlet was first-rate; 94% of audience members interviewed after the show agreed.

8. What is wrong with the following argument? America—love it, or leave it!

- a. There is nothing wrong with the argument.
- b. It implies that if you leave the country on vacation, you do not love it.
- c. It does not tell you how to love it.
- d. It presents only two options, when in fact there are many more.

9. Which is NOT a likely cause of this situation? "I can't turn on the lamp in the family room!"

- a. The lamp isn't plugged into an electrical outlet.
- b. We just bought a new couch in a color that matches the lamp.
- c. There's a power outage in the neighborhood.
- d. The light bulb in the lamp has burned out.

10. Evidence shows that people who live in the Antarctic score higher on happiness surveys than those who live in Florida. Which is the best conclusion (*the statement in an argument that is supported by reasons*) that can be drawn from this data?

- a. Floridians would be happier if they moved to the Antarctic.
- b. People in colder climates are happier than those in warmer climates.
- c. There are only happy people in the Antarctic.
- d. Those in the Antarctic who scored high on a happiness survey probably like snow.

11. You want to sell your three-year-old car and buy a new one. Which website would probably give you the best information on how to sell a used car?

- a. Auto Trader: get the latest pricing and reviews for new and used cars; tips on detailing for a higher price
- b. Better Business Bureau: provides free consumer and business education; consult us before you get started in your new business!
- c. New Wheels: research every make and model of Detroit's latest offerings
- d. Car Buying Tips: everything you need to know before you shop for your new car

12. Which explanation is weakest?

- a. The steak was overcooked because I cooked it too long.
- b. Jose didn't drive his car today because it was in the shop for repairs.
- c. We don't belong to the country club anymore because we can't afford it.
- d. Gabrielle overslept because she stayed up very late last night.

13. You read a story in the newspaper about salary negotiations with public transportation workers. The workers are threatening to go on strike tomorrow if their demands for higher wages and better benefits are not met. What can you infer (*conclude*) from this news story?

- a. Health insurance premiums (*prices*) are very expensive.
- b. The cost of gas will make ticket prices increase in the next few weeks.
- c. People who ride the bus should look for possible alternative transportation.
- d. Employers never like to meet salary demands.

14. Which is the most important reason for evaluating information found on the Internet?

- a. Authors who publish on the Internet are typically less skilled than those who publish in print.
- b. Web writers are usually biased (*prejudiced*).
- c. Anyone can publish on the Internet; there is no guarantee that what you are reading is truthful or objective.
- d. Information found in print is almost always more accurate than that found on the Internet.

15. Which type of website most likely provides the most objective information about Abraham Lincoln?

- a. the home page of a history professor who wrote a book on Lincoln's presidency
- b. a Confederate group's site on famous assassinations, with the most pages devoted to Lincoln.
- c. the site of a historical preservation group that archives Lincoln's correspondence.
- d. the official site of the presidential library in Springfield, Illinois, devoted to telling the life story of the 16th president

16. You conducted a successful job search, and now have three offers from which to choose. What can you do to most thoroughly investigate your potential employers? (Choose all that apply).

- a. check out their websites.
- b. watch the news to see if the companies are mentioned.
- c. research their financial situations.
- d. speak with people who work for them already.

17. Which of these problems is most severe?

- a. Your professor is sick and misses class on the morning you are supposed to take a big exam.
- b. You lose track of your schedule and forget to study for a big exam.
- c. You can't find one of the books you need to study for a big exam.
- d. The big exam is harder than you thought it would be and includes a section you did not study.

18. Choose the best conclusion for an argument that begins, "The other members of Philip's swim team ..."

- a. won their events, so Philip will win his event, too.
- b. have been swimming for at least six years, so Philip has been swimming for six years, too.
- c. prefer to swim in outdoor pools, so Philip prefers outdoor pools, too.
- d. wear swim trunks with the school logo on them, so Philip wears them, too.

19. What is wrong with the following argument? "We should not change our grading system to numbers instead of letters. The next thing you know, they will take away our names and refer to us by numbers, too!"

- a. The conclusion is too extreme.
- b. There is nothing wrong with the argument.
- c. Students should not have a say in the type of grading system used in their schools.
- d. It does not explain why they want to get rid of letter grades.

20. What is wrong with the logic of the following statement? "How can you believe his testimony? He is a convicted felon (*criminal*)!"

- a. The fact that the person testifying was convicted of a crime does not mean he is lying.
- b. A convicted felon cannot testify in court.
- c. The person speaking has a bias against criminals.
- d. The person speaking obviously did not attend law school

Thank you for your collaboration!

The test answers:

1. c / 2. b / 3. a / 4. d / 5. c / 6. b / 7. a / 8. d / 9. b / 10. d / 11. a / 12. a / 13. c / 14. c / 15. d / 16. a, c, d / 17. b / 18. d / 19. a / 20. a

Appendix B



Larbi Tebessi University -Tebessa
Faculty of Letters and Languages
Department of Letters and English Language



Students' Critical Thinking and Academic Achievement Questionnaire

The following Questionnaire aims to gather information about your critical thinking skills and academic achievement. We appreciate your time and efforts in answering it. Your answers will remain confidential, and will be used only for our research purposes.

Section one: Personal Background

1. **Full name:**
2. **Gender:**
 - a. Male
 - b. Female
3. **Age:**

Section two: Students' Critical Thinking Factors

4. **How can you describe your level in English language?**
 - a. Beginner (you use basic English grammar and vocabulary).
 - b. Intermediate (you can interact and be spontaneous, but you have problems with grammar and vocabulary).
 - c. Advanced (you can speak fluently, accurately and understand a wide range of demanding, longer texts, and recognize implicit meaning).
5. **When writing argumentative essays, can you easily present your opinions and arguments in?**
 - a. Any given topic by your teachers
 - b. Topics that you are only familiar with
6. **When making decisions, can you detach yourself from your emotions (be it in educational setting or your daily life)?**
 - a. Yes
 - b. No
7. **When resolving a problem, do you usually do many attempts until you arrive at a solution?**
 - a. Yes
 - b. No
8. **Which of the following exam questions are difficult for you to answer? (you can select more than one choice)**
 - a. Questions that require definitions and listing.

- b. Questions that require explanation.
 - c. Questions that require comparison and contrast.
 - d. Questions that require evaluating information.
 - e. Questions that require synthesis (combining different elements to form a new whole).
- 9. Do most of your teachers ask you to justify your opinions and give examples?**
- a. Yes
 - b. No
- 10. Do you usually accept everything said by your teachers without having doubts on the trustworthiness of their information?**
- Yes
 - No
- 11. Do most of your teachers engage you in debates?**
- a. Yes
 - b. No
- 12. Do you consider disagreeing with elders disrespectful?**
- a. Yes
 - b. No
- 13. Do you think that your life experience (working or studying) has helped you improve in?**
- a. Acquiring new knowledge
 - b. Becoming capable of deciding what is appropriate for you and what is not
 - c. Becoming capable of solving problems
 - d. All of the above

Section three: Students' Academic Achievement Factors

14. Do you attend?

- a. Only the TD sessions
- b. Both the TD and the lectures

15. When do you prepare most of your assignments?

- a. Beforehand (you take enough time preparing)
- b. At the last minute

16. How do you feel in most of the courses?

- a. Joyful and satisfied
- b. Stressed and anxious
- c. Active and alert
- d. Depressed and uncomfortable

17. Do you manage and plan your time according to your priorities (your studies and daily-life activities)?

- a. Yes

- b. No
- 18. Do you believe that using a laptop and digital platforms facilitate your learning?**
- a. Yes
- b. No
- 19. Do you use social media most of the time?**
- a. Yes
- b. No
- 20. If yes, do you believe that social media addiction may decrease your average?**
- a. Yes
- b. No
- 21. Do you think that your socioeconomic status has an effect on your academic achievement?**
- a. Yes
- b. No
- 22. Has the aftermath of COVID-19 affected your academic achievement?**
- a. Yes
- b. No
- 23. If yes, in what sense? (you can choose more than one answer)**
- a. You are no longer able to comprehend and revise, due to the accumulation of too many courses, including distant modules.
- b. You lost the desire to study.
- c. You are not capable of answering the exam effectively because of reducing the allotted time.
- d. All of the above
- 24. How can you describe the applied method in most of the courses?**
- a. Teacher-centered Method
- b. Student-centered Method
- c. A collaboration of both methods
- 25. Do most of your teachers provide you with interesting or fun activities?**
- a. Yes
- b. No
- 26. Do most of your teachers provide you with?**
- a. Positive feedback
- b. Negative feedback
- c. Both
- d. None of the above
- 27. If they do provide you with feedback, do you take it into consideration?**
- a. Yes
- b. No
- 28. Does negative feedback make you feel bad?**

a. Yes

b. No

29. Do you have a good relationship with most of your teachers?

a. Yes

b. No

30. Do you think that teachers' personality (e.g. kind, understanding Vs. unkind, intolerant teacher) affects your academic performance?

a. Yes

b. No

Thank you for taking the time to complete this questionnaire!

Appendix C



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Critical Thinking and Academic Achievement Questionnaire

The following Questionnaire aims to gather information about critical thinking skills and academic achievement of Master One Language Sciences students, taking into account the role played by the teachers. All the questions are related to Master One students only (first semester of the academic year 2021-2022). We truly appreciate your time and efforts in answering it. Your answers will be kept confidential, and will be used only for our research purposes.

Section One: Critical Thinking Factors

1. **What is your own understanding of the concept of “critical thinking”?**

2. **According to you, which of the following characteristics qualifies a good student? (choose only one answer)**
 - a. A student who gets high marks.
 - b. A student who provides valuable comments, and reasonable arguments in the classroom.
 - c. A well-disciplined student
 - **Explain why:**

3. **Are most of your students capable of gathering and evaluating data from different sources to draw conclusions?**
 - a. Yes
 - b. No
 - c. I do not know.
4. **Do most of your students believe your ideas and information without questioning their validity and credibility?**
 - a. Yes
 - b. No
 - c. I do not know.
5. **Do you think that your students avoid to disagree with you because? (choose only one answer)**
 - a. They consider disagreeing with elders disrespectful.

b. They lack the necessary skills to defend their viewpoints.

c. Other:

6. Do you engage your students in classroom debates (via Google Classroom/Zoom for the distant modules)?

a. Yes

b. No

• **Justify your answer:**

7. Do you usually provide your students with the opportunity to justify their answers and opinions, or give examples?

a. Yes

b. No

• **Justify your answer:**

8. If yes, how do you find their justifications and explanations? (choose only one answer)

a. They are based on logic

b. They are based on their emotions

c. Other:

9. Which of the following questions do you usually ask your students to answer in classroom activities? (you can choose more than one answer)

a. Explicit analysis questions

b. Implicit analysis questions

c. Explicit Synthesis questions

d. Implicit synthesis questions

e. Explicit evaluation questions

f. Implicit evaluation questions

g. None of the above

h. Other:

10. What is/are the type/s of questions that you usually include in your quizzes and exams? (you can choose more than one answer)

a. Definition and listing

b. Explanation

c. Comparison and contrast

d. Synthesis

e. Evaluation

• **Justify your choice/s:**

11. Which of the following type of questions do your students excel in answering? (you can choose more than one answer)

f. Definition and listing

g. Explanation

h. Comparison and contrast

- i. Synthesis
- j. Evaluation

12. Do you think that you are capable of teaching critical thinking skills?

- a. Yes
- b. No

• **Justify your answer:**

Section Two: Academic achievement Factors

13. How can you describe your students' level in English language? (this question was omitted in the Arabic version of the questionnaire).

- a. Beginner (they use basic English grammar and vocabulary).
- b. Intermediate (They can interact and be spontaneous, but they have problems with grammar and vocabulary).
- c. Advanced (they can speak fluently, accurately and understand a wide range of demanding, longer texts, and recognize implicit meaning).

14. Do most of your students attend (or the online sessions for the distant modules)?

- a. Only your TD sessions
- b. Both the TD and the lectures

• **Why?**

.....

15. Have you noticed that COVID-19 affected the level of your students?

- a. Yes
- b. No
- c. I do not know.

• **If yes, how?**.....

16. How can you describe your teaching method used for classroom instruction?

- a. Teacher-Centered Method
- b. Learner-Centered Method
- c. Teacher-Student Interactive Method

17. Do you use technological aids in teaching? (this this question was omitted in the version of distant modules questionnaire)

- a. Yes
- b. No

• **Justify your answer:**

18. If yes, what is/are the benefit/s of using them with your students? (you can choose more than one answer)

- a. They create an enjoyable atmosphere in the classroom.
- b. They facilitate students' comprehension of the lectures.
- c. They develop students' cognitive skills such as analysis and evaluation.
- d. I don't know.

19. Has Covid-19 affected your instruction and/or assessment process?

a. Yes

b. No

20. If yes, how has it affected your instruction process?

.....

21. How has it affected your assessment process? (you can choose more than one answer)

a. It has affected the quality of the exam questions.

b. It has affected the number of the exam questions.

c. It has affected the degree of difficulty of the exam questions.

d. All of the above

e. Other:

22. Do you provide your students with fun or interesting activities?

a. Yes

b. No

• **Justify your answer:**

23. Do you provide your students with?

a. Positive feedback

b. Negative feedback

c. Both

d. None of the above

24. Do they usually take your feedback into consideration?

a. Yes

b. No

c. I do not know

25. Have you ever noticed that using negative feedback affected students' attitudes toward you?

a. Yes

b. No

c. I do not know.

26. Do you have a good relationship with your students?

a. Yes

b. No

• **Justify your answer:**

.....

27. During your sessions, do most of your students seem?

a. Active and alert

b. Stressed and anxious

c. Not interested

d. I do not know.

28. Do you think that the teacher's personality has an effect on students' educational success?

- a. Yes
- b. No
- c. I do not know.

• **Justify your answer:**

.....

29. Are you satisfied with your job as a teacher?

- a. Yes
- b. No

• **Justify your answer:**

.....

Thank you for taking the time to complete this questionnaire!

Appendix D



جامعة العربي التبسي - تبسة

كلية الآداب واللغات

قسم اللغة الانجليزية



استبيان للأساتذة حول التفكير النقدي والتحصيل الأكاديمي

في إطار البحث العلمي، نتقدم لكم نحن طلبة ثانية ماستر قسم لغة إنجليزية بهذا الاستبيان والذي يهدف إلى جمع معلومات حول مهارات التفكير النقدي لطلبة أولى ماستر قسم اللغة الإنجليزية تسعة علوم اللغة، وقد تم الأخذ بعين الاعتبار دوركم في هذا الميدان. نتمن وقتكم في الإجابة عنه، كما نضمن لكم ان بياناتكم ستكون سرية ولن تستعمل الا لأغراض علمية.

ملاحظة: أنتم فقط ملزمون بالإجابة على هذا الاستبيان فقط فيما يتعلق الامر بطلبة أولى ماستر -علوم لغة للسداسي

الأول 2021-2022

المحور الأول: التفكير النقدي

1. ما مفهومك الخاص للتفكير النقدي؟
2. مما يلي ما هي صفات الطالب المجتهد حسب منظورك الخاص؟
 - أ. الطالب الذي يتحصل على علامات جيدة
 - ب. الطالب الذي يقوم بمداخلات أثناء الدرس من خلال إبداء تعليقات قيمة ومدعمة بحجج منطقية
 - ج. الطالب المنضبط
- **علل إجابتك:**
3. هل يتمتع طلبتك بمهارة جمع المعلومات من مصادر متنوعة من أجل حل مشكلة أو اتخاذ قرار؟
 - أ. نعم
 - ب. لا
 - ج. لا أعلم
4. هل يتساءل طلبتك عن مدى صحة الافكار والمعلومات التي تطرحها أثناء تقديم الدروس؟
 - أ. نعم
 - ب. لا
 - ج. لا أعلم
5. هل تعتقد أن طلبتك يتجنبون معارضة آرائك لأنهم؟
 - أ. لأنهم يعتبرون مخالفة الأكبر سنا أمر يدل على قلة الاحترام
 - ب. لأنهم يفتقدون المهارات اللازمة للدفاع عن آرائهم المخالفة

ج. أخرى تذكر:
6. هل تجري نقاشات تفاعلية مع طلبتك؟

أ. نعم

ب. لا

7. هل تمنح طلبتك فرصة لتعليل إجاباتهم والدفاع عن آرائهم وتقديم أمثلة؟

أ. نعم

ب. لا

8. إذا كانت إجابتك بنعم، فكيف ترى حججهم؟

أ. مبنية على المنطق

ب. مبنية على المشاعر

ج. أخرى تذكر:

.....
9. من بين الخيارات الآتية، ماهي الأسئلة التي تطرحها غالبا من خلال التمرينات التطبيقية؟ (بإمكانك اختيار أكثر من إجابة).

أ. الأسئلة التحليلية المباشرة.

ب. الأسئلة التحليلية غير المباشرة.

ج. أسئلة التركيب المباشرة (وضع الأجزاء مع بعضها البعض لتشكيل كل جديد)

د. أسئلة التركيب غير مباشرة

هـ. أسئلة التقويم المباشرة.

و. أسئلة التقويم غير المباشرة.

ز. لا شيء مما سبق

ح. أخرى تذكر:

.....
10. هل غالبا ما تبني أسئلة الامتحان على؟

- أ. أسئلة المعرفة والمفاهيم
- ب. أسئلة الفهم والشرح
- ج. مقارنة وتباين
- د. أسئلة التركيب
- هـ. أسئلة التقويم

• **علل إجابتك:**

11. مما يلي ماهي الأسئلة التي يتفوق فيها أغلب طلبتك؟

- أ. أسئلة المعرفة والمفاهيم
- ب. أسئلة الفهم والشرح
- ج. مقارنة وتباين
- د. أسئلة التركيب
- هـ. أسئلة التقويم

12. هل تعتقد أنك مؤهل لتدريس مهارات التفكير النقدي؟

- أ. نعم
- ب. لا

• **علل إجابتك:**

المحور الثاني: التحصيل الأكاديمي

13. هل يحضر معظم الطلبة حصصك؟

- أ. نعم
- ب. لا

• **لماذا؟**

14. هل لاحظت أن لجائحة كوفيد-19 أثر على مستوى الطلبة؟

- أ. نعم
- ب. لا

ج. لا أعلم.

15. إذا كانت إجابتك بنعم، فيما يتمثل هذا الأثر؟

16. كيف تصف المنهج الذي تتبعه في التدريس؟

أ. المنهج المتمركز حول الطالب (ذلك المنهج الذي يجعل من الطالب محور العملية التعليمية).

ب. المنهج المتمركز حول الأستاذ (ذلك المنهج الذي يعتبر الأستاذ المصدر الرئيسي والوحيد للمعلومات)

ج. المنهج القائم على التفاعل بين الأستاذ والطالب.

17. هل تستخدم الوسائل التكنولوجية الحديثة من أجل التدريس؟

أ. نعم

ب. لا

• علل إجابتك:

18. إذا كانت إجابتك بنعم، ماهي فوائد استخدامها على الطلبة؟ (بإمكانك اختيار أكثر من إجابة).

أ. تخلق الوسائل التكنولوجية الحديثة بيئة تعليمية محفزة للطالب.

ب. تسهل الوسائل التكنولوجية الحديثة فهم الدروس.

ج. تطور المهارات الذهنية لدى الطلبة، مثل التعليل والتقييم.

د. لا أعلم.

و. أخرى تذكر:

19. هل أثرت جائحة كوفيد-19 على عملية التدريس والتقييم لديك؟

أ. نعم

ب. لا

20. إذا كانت إجابتك بنعم، فيما يتمثل أثرها على عملية التدريس لديك؟

21. وفيما يتمثل أثرها على عملية التقييم؟ (بإمكانك اختيار أكثر من إجابة).

أ. أثرت على طبيعة ومضمون أسئلة الامتحان.

ب. أثرت على عدد الأسئلة.

ج. أثرت على درجة صعوبة الأسئلة.

د. كل ما سبق ذكره.

و. أخرى تذكر:

22. هل تقوم بتطبيق أنشطة ممتعة ومحفزة؟

أ. نعم

ب. لا

• **علل إجابتك:**

23. هل تقدم ملاحظات لطلبتك حول أدائهم وما نوعها؟

أ. ملاحظات إيجابية

ب. ملاحظات سلبية

ج. كلاهما

د. لا شيء مما سبق

24. هل غالبا ما يأخذ الطلبة تعليقاتك بعين الاعتبار؟

أ. نعم

ب. لا

ج. لا أعلم

25. هل سبق ولاحظت أن تعليقاتك السلبية تجعلهم يتخذون موقفا سينا تجاهك؟

أ. نعم

ب. لا

ج. لا أعلم.

26. هل علاقتك مع لديك علاقة جيدة مع أغلب طلبتك؟

أ. نعم

ب. لا

• **علل إجابتك:**
 27. في أغلب حصصك، ماذا يبدو على طلبتك؟

أ. النشاط والانتباه

ب. القلق والتوتر

ج. غير مهتمون

د. لا أعلم.

28. هل تعتقد أن لشخصية الأستاذ أثر على التحصيل الدراسي لدى الطالب؟

أ. نعم

ب. لا

ج. لا أعلم.

• **علل إجابتك:**
 29. هل أنت راض بمهنتك كأستاذ؟

أ. نعم

ب. لا

• **علل إجابتك:**

Appendix E

First Term Exam in Pragmatics

Task One (5pts): Answer the following questions in the space provided.

1. To what extent is it true to say that to speak is to act? (Use One example of your own to justify your answer).
2. What roles do the addresser and addressee assume in any communicative act?

Task Two (2.50 pts): Which maxims of the co-operative principle are being broken in the following?

1. A: So tell me, do you like what I did to my hair?

B: Er . . . what's on TV tonight?

2. A: Hmmmm, I thought I left my watch in my desk drawer before I left for Spring Break.

B: Well I definitely didn't take it. Absolutely not. There's no way I would take someone else's property. Besides, I already have my own watch. And I would never steal from someone, never.

3. A: How can I develop a great body like yours?

B: Choose your parents carefully.

4. A: Would you like to hear my rendition of 'Feelings'?

B: Sorry I can't! I'm quite busy now.

5. A: Hey, Kenny! What are you reading?

B: A book. [abrupt silence]

Task Three (4.5 pts): Identify the deictic expressions in the utterances below.

1. My friend is going to sing here in a concert tomorrow.

2. I bet you have not heard this story.

3. Sorry, sir. We haven't got any more tickets.

4. The bus is ten minutes from here.

5. That's the most ridiculous excuse I've ever heard!

Task Four (8pts): Analyse the stretches of language below using **semantics** and **pragmatics**.

1. A: Can you cook?

B: I'm French.

2. We should practise social distancing.

First Term Quiz in Pragmatics

Task: For each of the utterances below

a- Name the speech act performed providing its type (Searle's Classification)

b- Provide and explain their felicity conditions

a) You are under arrest. b) I am bloody sure you can get your room cleaner than this! c) This road is so dark. d) Can you people at the back hear me?

First Term Exam in psycholinguistics

1. Define briefly the following concepts from a psycholinguistic point of view. (04pts)

a) Anaphor b) Explicit Syntactic Markers

2. Present the fundamental difference between the following: (04pts)

Serial Vs. Parallel accounts of sentence processing.

3. Explain the following statements briefly. (06pts)

a. Sentence interpretation is incremental in nature.

b. Readers might rely on several types of linguistic cues during text processing.

c. According to the tripartite model (van Dijk and Kintsch, 1983), readers construct three different levels of memory representations, with different information encoded at each level.

4. In a well-structured paragraph, discuss the following: (06pts)

You are parsing a sentence (give an example) into a tree structure in Psycholinguistics class one day. Your classmate beside you gets a different answer than you do. Is it possible that

you are both right? How? What do you call this type of sentence? And what are the principles that guide it to avoid confusion and incorrect parsing.

First Semester Quiz in Psycholinguistics

1. **Answer with true (T) or false (F) and correct the wrong statements.**
 - a. [p] has a longer voice onset time (VOT) than [b].
 - b. The capacity of the long-term memory is very limited.
 - c. The word-initial cohort for /sta/ can be: static, stagnate, study, stand, stab.
 - d. **Word Association Test is used to find sense relations.**
2. **Define briefly the following concepts.** a. Agrammatism b. McGurk effect
3. **Compare between the following:** Bottom-up vs. Top-down processing
4. Using information from the following figure, try to explain the principle idea behind the Hierarchical Network Model developed by Collins & Quillian (1969) and present some of its shortcomings (Use the back side of the paper to answer).

First Term Quiz in Academic Writing and Critical Thinking

Correct the false statements and justify (explain your answer)

1. After reading different sources and collecting information, it is acceptable to write them as your ideas.
2. When paraphrasing a text, it is enough to change some verbs to nouns, and some words with their synonyms. False
3. A paraphrase is using different words, style, and structure than the source to state the main points.
4. When paraphrasing, quoting or summarizing you can detach information from its context to support your own claims
5. When quoting inside a quotation use single quotation marks. True
6. Quoting, paraphrasing and summarizing are different ways to deal with the different sources a researcher might use. They all serve the same purpose; hence a researcher can use anyone them to diversify including other sources in his research.
7. When writing a literature review, you are advised to write about all sources and studies that are related to your topic

Identify the problem with the following sentences and improve them

- These decisions are concerned primarily with the nature of the students or services.
- Today, everyone uses credit cards for all their shopping.

First Term Exam in Academic Writing and Critical Thinking

Task 1: WRITE True or False. CORRECT the false sentences and EXPLAIN in detail your answer.

1. Using NOT will limit your search by requesting the search engine to look for sources that include two terms, either in the title or in the article itself.
2. Primary sources are written by people who experienced the event first-hand.
3. Combining search terms using 'OR' will give you more results than combining terms using 'AND'.

4. An interview with a woman who participated in the Algerian war and the comments of the researcher on what the woman said are both primary sources.
5. A literature review is simply a summary of sources.
6. If the information is presented in few words, but the presentation is difficult to understand, then paraphrasing might be best.
7. There are many considerations when you write. The first element to consider even before writing is the purpose.
8. The writer responsibility is to use formal academic language. It is the responsibility of the reader to consider what is written and understand it.

Task 02: WRITE the sentences in a more academic way and EXPLAIN your answer.

1. Actually, very little is known about the general nature and prevalence of plagiarism.
2. The key factor of divorce is gender hierarchy and gender inequality.
3. You can clearly see the differences between these two learning processes.
4. We evaluated the results and this explains the loss in revenue.
5. Coal is expected to continue to account for almost 27% of the world's energy needs. However, awareness of pressures on the environment is building up and people have caught on to the need to achieve sustainable development in energy resources.
6. This problem doesn't have many viable solutions.
7. There has been a lot of interest in how background sounds such as music affect an individual's ability to concentrate.

First Term Quiz in Educational Psychology

Part One: Circle the best description for the following statements

- 1. The intellectual ability is a key element in the definition of:** a. Chronological age. b. Biological age. c. Mental age. d. developmental age

- 2. Amin is having trouble recognizing sequences letter sequence and reading slowly. Based on these symptoms, what type of learning disability might Salah be experiencing:** a. Fine Motor skills b. Language skills c. Math's skills

- 3. Lina hates dance classes because she is suffering from trouble to perform with her body, she is experiencing:** a. Dysgraphia b. Dyslexia c. Dyspraxia d. Dyscalculia

- 4. Interpersonal Intelligence is defined as having which of the following criteria?** a. a sensitivity to those distinctions, acknowledged by treating each individual with their personal distinctions in mind. b. The ability to act on the basis of self-knowledge, creating environments, guiding behavior, and making decisions based on an accurate picture of oneself. c. An intense interest in the plant and animal species of the world,

- 5. Reflexive independent learner is characterized by**
 - a. Analytic and quick response
 - b. Slow response and many errors

- c. Both of them
- d. None of them

6. Bill Gates is a famous example of what intelligence?

- a. Naturalist intelligence
- b. Logical-mathematical Intelligence
- c. Linguistic intelligence

7. G-factor and S-factor

8. The balanced and unbalanced bilingualism are:

Part Two: write a short paragraph answering the following questions

1. What are some considerations must be provided when designing course instructions for students with (or suspected of having) Dyscalculia?
2. What are some considerations should be made for students with Cultural differences in language use in the general education classroom?

First Term Exam in Educational Psychology

Part One: Circle the best description for the following statements

- 1. All of the following are proposed causes of dysgraphia, except:** a. Problems with understanding and processing what you are hearing b. Problems with sequencing and organizing information. c. Problems with orthographic coding. d. Problems with processing tactile information
- 2. The number of years since a person was born is a key element in the definition of:** a. chronological age. b. biological age. c. psychological age. d. developmental age
- 3. Salah is having trouble recognizing sequences and is unable to recall math facts. Based on these symptoms, what type of learning disability might Salah be experiencing:** a. Fine Motor skills b. Language skills c. Math's skills
- 4. Amin's intelligence test indicates that he is average to above -average intelligent. However, his grades in reading, spelling, and science are very low. His math's grades are quite high and his writing skills are adequate. Amin most likely has:** a. Dysgraphia b. Dysphasia c. Dysgraphia d. Dyscalculia
- 5. Ali has a great rhythm, a knack for creating, singing or playing melodies.** a. Musically intelligent b. Musical intelligence c. Linguistic intelligence d. bodily-kinesthetic intelligence
- 6. Which of the following definition falls within the category of interpersonal intelligence?** a. The capacity to discern and respond appropriately to the moods, temperament, motivations and desires of other people b. Access to one's own feelings and the ability to discriminate among them and draw on them to guide behaviour; knowledge of strengths and weaknesses c. The ability to control body movements and to handle objects skillfully d. Sensitivity to the sounds, rhythms and meanings of words and different functions of language.
- 7. During her educational psychology presentation, Sara spoke eloquently. He displayed great _____ intelligence.** a. Bodily kinesthetic b. Spatial c. Existential d. Linguistic
- 8. have a general view of things, failing to focus on minor details. On the contrary, field independent people are keen observers with an eye for details, ignoring the background in which the details emerge. rely on external signals and shapes, have short memory spans, are simply distracted and prefer natural learning situations. Additionally, / are cognitive learning styles that individual**

can be classified or measured according latency (time taken to respond- long /short latency) and accuracy (number of errors).

Part Two: write a short paragraph answering the following questions

1. What are some considerations must be provided when designing course instructions for students with (or suspected of having) dyslexia or dysgraphia? (choose one)
2. What are some considerations should be made for students with cultural differences in beliefs and attitudes in the general education classroom?

First Term Exam in Language and Society

NB: Use your own Words, Pay Attention to Key Terminology & Be Precise

Task 01: Explain FIVE (5) out of the following statements as briefly and accurately as possible.

1. The addressee affects the speaker's style shifting but the eavesdropper does not.
2. Tannen (1990) believes that the difference between male and female speech is related to socialisation not to male dominance.
3. The sample and data collection instrument used by dialectologists are biased compared to those used by sociolinguists.
4. Speakers attitudes towards language affect their linguistic choices, a conclusion that Labov drew.
5. Language is often not neutral. It indexes the gender or sex of speakers and hearers.
6. Attention to speech goes hand in hand with the speaker's formality of style.
7. The difference between male and female linguistic choices is not related to biology.
8. Social prestige is not always related to the standard variants.
9. Paradoxically, in some linguistic situations (such as in Norwich), female speakers use the standard variants, while in others (such as in Newcastle), they use the innovative/non-standard variants.

Task 02: For long sociolinguistic variation was considered an instance of free variation. However, in 1961, Labov managed to test and prove the opposite relying on two major arguments. Explain.

First Term Exam in Language and Society

Be precise. Use your own language and examples.

Task 01: Sociolinguistic studies were limited in spread in the early 20th C due to three main reasons. Explain them.

Task 02: In collecting sociolinguistic data, explain

1. The advantage of using the sociolinguistic interview
2. The disadvantage of using ethnographic observation

Task 03: Explain the difference between every pair of concepts. Then, illustrate your answers with examples.

1. Variable vs. Variant
2. Sociolinguistic Variation vs. Linguistic Variation
3. Intraspeaker Variation vs Interspeaker Variation

First Term Quiz in Research Methodology

Question: In a well thought-out essay explain, explain how would you use a survey and an experiment to study the following variables: vocabulary knowledge, teachers' feedback.

First Term Exam in Translation

السؤال: ترجم النص التالي إلى اللغة العربية:

Rayan: Moroccan boy trapped in well for four days dies

A five-year-old Moroccan boy who was trapped in a well for four days has died, despite painstaking efforts to rescue him.

A royal statement announced his death soon after his removal from the well.

The bid to free the boy, Rayan Oram, had gripped the country, with hundreds of people gathered at the well and thousands more following online.

The boy plunged 32m (104ft) through the well's narrow opening. The rescue had been hampered by fears of a landslide. Rescuers finally brought the boy out of the well on Saturday evening. No word had been given at the time about his condition, and the apparent rescue was initially met with cheers from the crowds.

- **How Morocco held its breath for Rayan**

On social media, people using the hashtag #SaveRayan, which had been trending across the country and around the world, expressed their jubilation. But this turned to heartbreak minutes later when the statement came announcing that Rayan had died. Twitter users then began paying tribute and expressing sadness using the same hashtag. "Rayan's courage will stay in our memories and continue to inspire us," AC Milan's Algerian midfielder Ismael Bennacer tweeted.

First Term Exam in ICT

1) Colorer en vert la bonne réponse pour la définition de « Technologies de l'Information et de la Communication dans l'Enseignement » (TICE) a) Ensemble des moyens pédagogiques qui peuvent être intégrés dans un cours. b) Ensemble des techniques d'enseignement qui peuvent être utilisées dans un cours. c) Ensemble des outils informatiques qui peuvent être intégrés dans un cours. d) Aucune réponse n'est correcte.

2) Colorer en vert deux (02) apports pédagogique des T.I.C.E pour l'élève : a) Outil à la motivation : l'ordinateur stimule le plaisir d'apprendre. b) De s'adresser autrement que par le discours à ses collègues. c) L'élève devient dépendant uniquement de l'ordinateur. d)

L'ordinateur favorise l'activité intellectuelle, développe l'autonomie. e) La participation de l'élève est suscitée par l'enseignant.

3) What is The Interactive White Board?

4) "Resistive Membrane" is one of Interactive White Boards types, explain how it works?

5) What are the features of Interactive White Boards? (Explain briefly)

6) "Facebook" is an American for-profit corporation and an online social media and social

networking service, how it is useful as an educational tool at university level?

7) What are the disadvantages of social networks in education?

8) What is the impact of the Wiki on students?

9) Quel avantage offre l'enseignement ouvert et à distance aux étudiants ?

امتحان السداسي الأول في مقياس علوم اللغة

1. ان الدراسات اللغوية قائمة على أشكال متعددة تحملها منظومة يتواصل عبرها افراد المجتمع الواحد: حدد هذه المنظومة مع تفسير طرائق اشتغالها وفق روادها

2. غالبا ما تصب التغييرات اللغوية عبر الأزمنة في قلب اهتمامات الدارسين وأساسا المجموعة من المناهج التي تتحدد عبرها صلات الدراسة. - ما هي هذه الصلات التي تتابع الحالة اللغوية عبر تغييراتها. - اشرحها شرحا مفصلا، موضحا أوجه التلاقي وأوجه الاختلاف بينها.

اختبار السداسي الأول في مادة الاحصاء

التمرين الأول: قام بنك القرض بإجراء دراسة إحصائية بهدف التعرف على مدى رضا الزبائن حول جودة الخدمات الإلكترونية المقدمة من طرف البنك.

1. ما هو الهدف العام من الدراسة 2- ما هي الوحدة الإحصائية والمجتمع الإحصائي في هذه الدراسة 3 ما هو المتغير

الإحصائي المدروس؟ أذكر نوعه؟ 4. ما هو الأسلوب المستخدم وما هي المصادر المعتمدة لجمع البيانات؟ علل

التمرين الثاني: لدراسة مستوى طلبة السنة الأولى علوم اقتصادية تم سحب عينة مكونة من 80 طالب وكانت نقاطهم كما يلي:

1. حدد المجتمع، الوحدة الإحصائية، المتغير الإحصائي ونوعه. 2. لخص هذه البيانات في جدول التوزيع التكراري وذلك

بحسب التكرارات المطلقة والنسبية، تكرارات المجمع الصاعد. 3. ما هو عدد الطلبة الذين تحصلوا على 10 أو أكثر؟ و 11 أو أقل؟

X	Y	$x - \bar{x}$	$x - x^2$	$y - \bar{y}$	$y - y^2$	$(x - \bar{x})(y - \bar{y})$
7.33	12.37	-3.01	9.06	-0.29	0.08	0.87
12.66	11.08	2.32	5.38	-1.58	2.49	-3.66
11	12.98	0.66	0.43	0.32	0.10	0.21
12	14.37	1.66	2.75	1.71	2.92	2.83
14	10.58	3.66	13.39	-2.08	4.32	-7.61
13.33	10.87	2.99	8.94	-1.79	3.20	-5.35
14.66	9.08	4.32	18.66	-3.58	12.81	-15.46
8	12.15	-2.34	5.47	-0.51	0.26	1.19
10.66	12.22	0.32	0.10	-0.44	0.19	-0.14
14.33	17.5	3.99	15.92	4.84	23.42	19.31
9.66	11.52	-0.68	0.46	-1.14	1.29	0.77
6.66	15.5	-3.68	13.54	2.84	8.06	-10.45
8.66	12.92	-1.68	2.82	0.26	0.06	-0.43
14.66	14.16	4.32	18.66	1.5	2.25	6.48
10.33	16.69	-0.01	0.0001	4.03	16.24	-0.04
8.33	10.85	-2.01	4.04	-1.81	3.27	3.63
8.66	11.75	-1.68	2.82	-0.91	0.82	1.52
12.66	13.86	2.32	5.38	1.2	1.44	2.78
10	12.6	-0.34	0.11	-0.06	0.003	0.02
7.66	12.08	-2.68	7.18	-0.58	0.33	1.55
8.66	11.11	-1.68	2.82	-1.55	2.40	2.60
11.66	14.64	1.32	1.74	1.98	3.92	2.61
13	14.66	2.66	7.07	2	4	5.32
14.66	11.08	4.32	18.66	-1.58	2.49	-6.82
7.33	14.05	-3.01	9.06	1.39	1.93	-4.18
5.66	12.08	-4.68	21.90	-0.58	0.33	2.71
4.83	13.81	-5.51	30.36	1.15	1.32	-6.33
8.66	9.96	-1.68	2.82	-2.7	7.29	4.53
8.66	12.86	-1.68	2.82	0.2	0.04	-0.33

	12.66	11.53	2.32	5.38	-1.13	1.27	-2.62
	8.33	11.6	-2.01	4.04	-1.06	1.12	2.13
	11.66	12.61	1.32	1.74	-0.05	0.0025	-0.06
Σ	331.02	405.12	/	243.521	/	109.66	-2.42

Résumé

La pensée critique est considérée comme un domaine d'intérêt majeur au sein de l'éducation, en particulier dans le XXI^e siècle ; en réponse à la réalisation académique des étudiants, étant dirigée vers la réussite ou non des étudiants dans leur apprentissage et à leur criticité. Pour cette raison, la recherche actuelle vise à étudier la pensée critique et la réussite scolaire des étudiants de Première Année Master au département de langue anglaise, sciences de langage, à l'Université de Larbi Tébessi - Tébessa. L'échantillon ciblé comprend 48 participants (38 étudiants et 10 enseignants) qui ont été sélectionnés à dessein. Dans le but de répondre aux questions et des hypothèses de la recherche, une méthode de recherche multi méthodes ont été choisie pour souligner, d'abord, la relation entre la pensée critique et la réussite scolaire, à la suite d'un plan de recherche corrélationnelle ainsi qu'avec le niveau de cette capacité intellectuelle des étudiants. En outre, une conception d'enquête et une méthode d'analyse du contenu conceptuel a été utilisée pour déterminer les facteurs susceptibles d'affecter des variables testées. Dans l'ensemble, les résultats ont démontré une relation négative entre la pensée critique et le niveau académique des étudiants de Première Année Master Science de Langage, qui ont montré un faible niveau dans le test. Au niveau de questionnaires des étudiants et des enseignants, plusieurs facteurs ont eu des résultats remarquables sur leurs capacités de pensée critique et leur réussite scolaire. En outre, les données obtenues à partir de l'analyse de contenu ont indiqué un manque de compétences de réflexion d'ordre supérieur dans ces devoirs et examens. Dans l'ensemble, sur la base de ce qui a été étudié des futures recommandations ont été proposées.

Mots clés : Pensée critique, réussite scolaire, capacité de réflexion d'ordre supérieur, multi méthodes, Les Étudiants de Première Année Master Sciences de Langage

الملخص

يعتبر التفكير النقدي محورا أساسيا في مجال التعليم، خاصة في القرن الحادي والعشرين. لقد تم توجيه اهتمام كبير إلى ما إذا كان التحصيل الأكاديمي للطلبة نتيجة تفكيرهم النقدي. وعليه تهدف هذه الأطروحة إلى دراسة التفكير النقدي والتحصيل الأكاديمي لطلبة أولى ماستر تخصص لغة إنجليزية، علوم اللغة بجامعة العربي التبسي. تتكون عينة البحث من 48 فردا (38 طالبا و10 أساتذة) تم اختيارهم عن طريق العينة الغير عشوائية القصدية. من أجل معالجة إشكاليات الدراسة وفرضياتها، تم اختيار المنهجية المختلطة لتحديد مستوى الطلبة في هذه المهارة الذهنية أولا، باستخدام اختبار التفكير النقدي وإبراز العلاقة بين التفكير النقدي والتحصيل الأكاديمي عن طريق البحث الارتباطي، إضافة إلى استخدام المنهج الاستقصائي وتحليل المضمون لمعرفة العوامل التي أثرت على المتغيرين قيد الدراسة. إجمالاً، أسفرت النتائج على وجود علاقة عكسية ضعيفة بين التفكير النقدي والتحصيل الأكاديمي لطلبة أولى ماستر تخصص لغة إنجليزية والذين أظهروا مستوى منخفضاً في اختبار التفكير النقدي. بناءً على الاستبيانين لكل من الطلبة والأساتذة هناك العديد من العوامل أثرت تأثيراً ملحوظاً على مهارات التفكير النقدي والتحصيل التعليمي. علاوة على ذلك، أشارت بيانات تحليل المضمون إلى نقص مهارات التفكير العليا في الاختبارات الأكاديمية قيد الدراسة. عموماً واستناداً على كل ما تم تقديمه، تم تقديم اقتراحات لتؤخذ بعين الاعتبار في أبحاث مستقبلية.

الكلمات المفتاحية: التفكير النقدي، التحصيل الأكاديمي، المنهجية المختلطة، مهارات التفكير العليا، طلبة أولى ماستر تخصص علوم اللغة