

PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA
MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH
UNIVERSITY OF IBN KHALDOUN—TIARET—
FACULTY OF LETTERS AND LANGUAGES
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ENGLISH SECTION



**Promoting Critical Thinking Skills for EFL Learners Through Teacher
Questioning**

Case Study of Master and License Students at the University of Ibn Khaldoun Tiaret

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

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Academic Year: 2020/2019

Dedications

*We thank Allah almighty for the strength and patience he has given us to write this
dissertation.*

We would like to dedicate this work to our parents,

Our brothers and sisters and our loved ones.

To our close friends who supported us.

Our deepest love and gratitude go to all of you.

Acknowledgments

First and foremost, we want to thank our supervisor Mr. Yacine Moulai Hacene for his feedback and encouragement at every stage of this study. We feel extremely fortunate to have had the opportunity to work with him and to learn from him.

We express our gratitude to the board of examiners for reading and evaluating our work.

We are indebted to the teachers and students of the English department at Ibn Khaldoun University, for their participation and engagement in the project in various ways.

Finally, we would like to thank our families and friends, their unconditional love and selfless support provided us with strength to complete this project.

Abstract

The purpose of this study is to investigate the extent to which teacher questioning can be helpful in promoting students' critical thinking skills, accordingly the main purpose is to examine the cognitive levels of questions English teachers ask EFL learners at the University of Tiaret based on Bloom's taxonomy. To increase the validity of our research, two online questionnaires were sent to a sample of both 16 English teachers and 65 Master and License English students at the University of Ibn Khaldoun Tiaret. The data gained was compared to Bloom's taxonomy, in order to examine the types of questions asked in the classroom according to the six cognitive levels of Bloom's taxonomy consisting of lower level questions (knowledge, comprehension and application), and higher-level questions (analysis, synthesis and evaluation). The findings show that both teachers and students are aware of the importance of teacher questioning in developing students' critical thinking skills.

Keywords: Critical thinking skills, teacher questioning, Bloom's taxonomy, EFL learners.

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List of Abbreviations

EFL: English as a foreign language.

CT: Critical thinking.

L1: University first year students.

L2: University second year students.

WGCTA: Watson Glaser Critical Thinking Appraisal Test.

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GENERAL INTRODUCTION

Critical Thinking became one of the major concepts under consideration in education, and its role in second and foreign language learning and teaching is of great importance. According to Paul and Elder (2010) Critical thinking is a mode of thinking that allows people to analyse and examine ideas of a topic and then synthesize it into a process of decision making. Although there are a variety of methods through which such skills can be developed, Bloom (1956) claims that asking questions to students is an effective means of improving learners' critical thinking skills. In fact, the key to powerful thinking is powerful questioning and when teachers increase their repertoire of questioning techniques, the quality of instruction can be significantly improved.

This study aims at demonstrating the great significance of teacher questioning and the positive effect it plays on learners' critical thinking skills. More precisely, the aims of this study is to examine what cognitive levels of questions EFL teachers ask in English only classes at the University of Tiaret in order to promote higher order thinking skills based on Bloom's Taxonomy.

Studies have shown that there is a lack of awareness toward the importance of critical thinking skills in the instructional process, especially in Second Language education. As John Dewey (1933) pointed out that learning to think is the central purpose of education. In addition, there is omission of both incorporating critical thinking in education and developing strategies that prompt learners' thinking abilities which is mainly teacher questioning technique.

Based on the statement of the problem, this study sought to answer the following questions:

1. How can students' critical thinking skills be developed?
2. What cognitive levels of questions EFL teachers ask in English only classes?

3. What is the impact of teacher questioning on the thinking skills of EFL learners?

In accordance with the declared questions, it is hypothesized that:

1. Students' critical thinking skills can be developed through teacher questioning, more specifically, through asking higher level questions.
2. EFL teachers ask both lower level and higher level questions.
3. Teacher questioning can shape the thinking process and creativeness in EFL learners and therefore help them solve language problems.

The present dissertation is divided into three chapters. Chapter one attempts to review some of the outstanding definitions of critical thinking, along with a focus on the skills and attitudes required in order to be a critical thinker. It attempts to examine the close relationship between critical thinking and higher education, more precisely, the teachability of critical thinking in EFL classes. Chapter two deals with teacher questioning and its relationship with critical thinking development, this relationship is thoroughly investigated through a discussion of the functions, application and types of questions teachers ask in the classroom, as well as the types of questions derived from bloom's taxonomy and Socratic questioning and how it can improve students' critical thinking skills.

Concerning the last chapter, it is solely devoted to the field of investigation for this study. To carry out this research we opted to conduct a quantitative methodology where two online questionnaires were distributed to 16 EFL teachers and 65 Master and License English students at the University of Tiaret. The focus was on answering the research questions as well as raising a kind of awareness about the necessity of integrating critical thinking in language teaching.

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Introduction

In a social age characterized by a lot of information, easy to access and with which individuals see themselves faced with at each second, it is significant to realize how to catch the information that is important and submit it to a proper treatment, whether it is to acknowledge it as solid and deserving of being prepared, or whether it is to arrange it as false and dispensable. In this sense and given the never-ending and quick social changes, critical thinking remains as a central cognitive asset, it may even comprise itself as the unequivocal component for students to effectively achieve and succeed when performing the assortment of assignments and circumstances they tackle consistently in the classroom and outside the classroom. In view of that, the present chapter aims at clarifying the concept of critical thinking, Accordingly, the researchers will try to review some of the definitions of critical thinking, along with a focus on the skills and attitudes required in order for learners to be critical thinkers. Given that our focus is EFL classrooms it would be inevitable to examine the close relationship between critical thinking and higher education, more precisely, the teachability of critical thinking in EFL classes.

1.1. WHAT IS CRITICAL THINKING?

There are many definitions to the term CT, although resulting from proximal assumptions and maintaining some similarity amongst them. This diversity comes from the fact that CT is studied in different scientific subjects and applied in multiple contexts (Philly, 2005).

1.1.1. Definition of The Term Critical Thinking

The term CT was first inspired by the pragmatic philosopher John Dewey (1910) and endorsed by analytic philosopher max black (1946). Dewey first called it "reflective thinking"

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and then it was re-labelled by some progressive educators as "critical thinking". Dewey (1933) defined critical thinking as "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. 9).

The main key part of Dewey's definition is that CT is dynamic. CT must be finished by decision. This simply means that critical thinkers are dynamic thinkers, in the sense that they continuously invest in adopting and adapting habits of mind that allow them to think and respond to challenges critically and creatively. critical thinkers are at a continuously curious mode, to make intellectual inquiries all the time. Think outside the box and deliver innovative ideas, recommendations and decisions. More importantly they are willing to change their views and are accountable for their actions. They are confident in tackling complexity and communicating uncertainty.

As people delve deeper into the different aspects of CT, they will figure out how to connect as critical thinkers. (Fisher, 2001). For Dewey, and for every researcher who has worked in this custom along these lines, CT is basically a functioning procedure – one in which you thoroughly consider things for yourself, bring up issues yourself, find significant data yourself...etc., as opposed to learning in a to a great extent inactive path from another person. (Fisher, 2001)

In characterizing CT as 'persistent' and 'cautious' Dewey is standing it out from the sort of unreflective reasoning all thinkers participate in, for instance when they hop to a determination or make a 'quick judgment call' without contemplating it. Once in a while, thinkers do this since they have to choose rapidly or the issue isn't sufficiently significant to warrant cautious idea, however, when solving a problem or wanting to reach a certain decision, researchers should stop and think, they should persist and proceed with caution, this is what characterize a critical thinker. (Fisher,2001)

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In any case, the most significant thing about Dewey's definition is in what he says about the 'grounds which support' a conviction and the 'further ends to which it tends'. To communicate this in increasingly recognizable language, he is stating that what is important are the reasons we have for thinking something and the ramifications of our convictions. It is no embellishment to state that CT joins gigantic significance to reasoning, to giving reasons and to assessing thinking as well as could be expected. Reasoning is a key component. (Fisher,2001).

Glaser (1941) has built on Dewey's concepts by defining critical thinking as:

(1) an attitude of being disposed to consider in a thoughtful way the problems and subjects that come within the range of one's experience; (2) knowledge of the methods of logical enquiry and reasoning; and (3) some skill in applying those methods. Critical thinking calls for a persistent effort to examine any belief or supposed form of knowledge in the light of the evidence that supports it and the further conclusions to which it tends. (p. 5)

It is promptly evident that this definition owes a great deal to Dewey's unique definition. Glaser alludes to 'evidence' instead of 'grounds' however in any case the subsequent sentence is a lot of the equivalent. The principal sentence talks about an 'attitude' or manner to be astute about issues and perceives that you can apply what he calls 'the techniques for sensible enquiry and reasoning' pretty much 'skill'. The custom has gotten on both these components, perceiving that critical thinking is somewhat a matter of having certain reasoning abilities, however isn't simply an issue of having these aptitudes: it is additionally a matter of being arranged to utilize them. (Fisher 2001)

Probably one of the most succinct and least demanding to comprehend definitions is that offered by Beyer (1995): "Critical thinking. means making reasoned judgments."(p.8). Essentially, Beyer considers critical thinking to be as utilizing measures to pass judgment on

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the quality of something, from cooking to a conclusion of a research paper. Generally, critical thinking is a disciplined way of thinking that an individual use to evaluate the validity of something (arguments, reports, statements, research... etc.).

As it were, we don't simply bounce to a determination or a judgment. We legitimize and legitimize our decisions. A second essential segment of critical thinking, at that point, includes questioning. Basic scholars have to address everything that stands up to them. Similarly, significant, they have to address themselves and ask how their own inclinations or suppositions impact how they judge something.

Paul (2008) defined CT as "That mode of thinking - about any subject, content, or problem in which the thinker improves the quality of his or her thinking by skilfully taking charge of the structures inherent in thinking and imposing intellectual standards upon them." (as cited in Fisher, 2001, p.5)

This definition is fascinating on the grounds that it causes to notice a component of CT on which instructors and specialists in the field appear to be generally concurred, that the main reasonable approach to build up one's CT capacity is through "pondering one's reasoning" (what is called 'metacognition'), and intentionally intending to improve it by reference to some model of good intuition in that area. (Fisher, 2001)

The definitions above, while centres around the reasoning, do not concentrate much on the analysis. In CT, the reasoning is just a technique to arrive at educated analysis, which itself is a beginning pointing for understanding one's self and additionally your general surroundings. While in function it can run corresponding to the logical technique, science means to show up a fair, impartial, and zero-human conclusion. In basic intuition, there is no end; it is a steady connection with changing conditions and new information that takes into consideration more extensive vision which takes into consideration new proof which begins the procedure once more. CT has at its centre crude feeling and tone.

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Perhaps one of the most used definitions is that by Paul & Elder (2006) "Critical thinking is the art of thinking about thinking while thinking in order to make thinking better. It involves three interwoven phases: It analyses thinking; it evaluates thinking; it improves thinking." (p.13). It analyses thinking by concentrating on the parts of thinking in any circumstance: its question, its purpose, data, deductions, suppositions, ideas, assumptions, and perspectives. It evaluates thinking by finding out its strengths and weaknesses: the degree to which it is clear, exact, precise, logical, relevant, profound, broad, consistent, and reasonable. It improves thinking by expanding on its qualities while diminishing its shortcoming

Paul & Elder (2006) explained that to think critically, we must be ready to examine our reasoning and put it to some harsh tests. We must be willing to dismantle our intuition (to consider it to be something built out of parts). We must be able to distinguish weaknesses in our reasoning (while at the same time perceiving whatever qualities it might have). And finally, we must be willing to creatively rebuild our thinking to improve it (defeating the characteristic inclination of the mind to be inflexible, to need to approve one's current contemplations as opposed to improving them). To think critically, we grow exclusive expectations for our thinking. We figure out how to step once again from it and make it fulfil those standards.

1.1.2. The Values of Critical Thinking

What the historical backdrop of CT and its examination convention uncovers is that CT isn't value free. "it seeks to distinguish the sound from the unsound, the logical from the illogical, the clear from the vague, the relevant from the irrelevant" (Paul et al.,1997, p.23). It pushes us to question the world, not to acknowledge things as they seem to be, yet ceaselessly to look for approaches to dissect, survey, and improve things. Critical thinkers, truly, have been people of scholarly mental fortitude who were eager to address what others acknowledged without question. They showed airs or worth responsibilities that inspired their inclusion in critical thinking. (Paul et al., 1997)

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The scholars who have profoundly contemplated CT have verbalized these values to some degree in an unexpected way, be that as it may, in any case, plainly concur on the normal centre. For instance, Robert Ennis (1985) characterizes the values responsibilities or dispositions in the accompanying manner. Critical thinkers:

- State the question clearly
- Use reasoning
- Have a grasp on the whole information
- Mention sources.
- Look at the whole picture
- Be relevant to the previous points while still keeping in mind the basic idea or concern
- Be open minded
- Always consider alternatives and other points of view
- Collect enough evidence and reasons then produce judgment
- Be precise
- Take into consideration others' degree of sophistication and level of knowledge.

Harvey Siegel (1988) summarizes the qualities and duties of the critical thinker with the expression having the critical spirit, with the critical spirit one perceives the privilege of everybody to address furthermore, request reasons and is anxious to put together their conduct with respect to valid justifications. Having the critical spirit, one is ready to subject all beliefs and practices to scrutiny and to confront oneself sincerely. Such an individual is focused on honestly appraising the power of all reasons given and ready to have his or her reasons exposed to autonomous assessment. To be a critical thinker, Siegel (1988) contends, requires a profound responsibility to carry on with a rational life, a life in which the critical question for reasons is a dominant and integrating motive.

1.1.3. Critical Thinking Skills

CT guidance is predicated on two suppositions: (a) there are plainly recognizable and quantifiable thinking skills that students can be instructed to perceive and apply fittingly, and (b) whenever perceived and applied, the students will be increasingly successful thinkers. In this way, one piece of the model for figuring out how to improve as a better thinker is figuring out how to utilize the skills of CT and how to perceive when a specific skill (or set of skills) is required. (Halpern, 2014).

According to Halpern (2014) a critical thinker will have these set of skills:

- (1) Seek out contradictory evidence.
- (2) Make risk: benefit assessments.
- (3) Generate a reasoned method for selecting between several possible courses of actions.
- (4) Recall relevant information when it is needed.
- (5) Use skills for learning new techniques efficiently and relate new knowledge to information that was previously learned.
- (6) Use numerical information including the ability to think probabilistically and express thoughts numerically.
- (7) Understand basic research principles.
- (8) Present a coherent and persuasive argument on a controversial, contemporary topic.
- (9) Synthesize information from a variety of sources.
- (10) Determine credibility and use this information in formulating and communicating decisions. (p. 19)

Paul and Elder (2010) also contends that habitual utilization of the intellectual traits produces a well-cultivated critical thinker who is able to:

- Ask and formulate clear and precise questions
- Be relevant to the problem
- Be reasonable

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- Identify assumptions
- Draw inferences
- Evaluate arguments
- Conduct clear conclusions
- Be open-minded
- Take into consideration implications and consequences
- Be an effective communicator
- Produce arguments

Evaluating the writing on the subject of critical thinking (for example Bensley, 1998; Birjandi and Bagherkazemi, 2010; Diesther, 2001; Fisher, 2001; Halpern, 2003; Levy, 1997; Rezaei, Derakhshan, and Bagherkazemi, 2011) represents that critical thinkers are the individuals who:

- (1) try to think about substitute explanations for different states; (2) restrain from showing any emotional reactions to arguments between others; (3) can make a distinction between valid and invalid inferences; (4) precisely make clear their decisions, comprehend the distinction between logical reasoning and rationalizing; (5) are able to make a distinction between plausible and non-plausible sources of information; (6) set apart evidence from opinion, common sense; (7) are very curious to know more; (8) can even judge themselves and their behavior; (9) tell apart opinions from facts and do not treat them the same way; (10) are so longing to prove statements; (11) accept criticisms and welcome them; (12) devise and inquire suitable types of questions; (13) can infer inferences from the situation they are in. (as cited in Fahim & Rezanejad, 2014, p.130)

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In improving as a thinker, it is imperative to have an enormous collection of CT skills and to be eager to participate in the effortful procedure of utilizing them. The issue in getting the hang of thinking skills that are required in various settings is that there are no conspicuous signs in the setting to trigger the review of the thinking skill. Critical thinkers need to make the review signs from the basic angles of the issue or contention with the goal that when the auxiliary perspectives are available, they can fill in as prompts for recovery. At the point when critical thinking skills are found out so they move fittingly and immediately, critical thinkers can concentrate on the structure so the hidden qualities become notable rather than the space explicit surface attributes. (Halpern, 2014)

1.1.4. The Disposition of These Skills

Studies show that somebody can have a skill which they decide not to use or not to use a lot. On account of CT, plainly somebody could have the important aptitudes yet may not trouble or decide to utilize them in proper circumstances; for instance, they may show they had the ability by raising the correct validity inquiries in an assessment, yet they probably won't make a difference this ability in their other work or in regular circumstances. In fact, numerous individuals who have worked in the CT convention have thought there was something inherently amiss with such a mentality to great reasoning. (Fisher, 2001)

1.1.5. The Attitudes Required to Think Critically

In an observational trial of the connection between a manner to think critically and real execution on a trial of CT, Butler (2012) found that grown-ups who revealed that they were bound to participate in the effortful procedure of thinking (e.g., more averse to depend on gut choices or to lean toward one guide to a very much led investigation and bound to examine items before purchasing) had higher scores on a CT appraisal and really occupied with less negative practices that were characteristic of poor thinking (e.g., leased a film yet needed to return it without watching it, purchased new garments however never wore them, got bolted out

of the house) than the individuals who were less disposed to think critically . (as cited in Halpern, 2014)

According to Halpern (2014), Numerous mistakes happen not since individuals can't think basically, but since they don't. One of the major contrasts between great and destitute thinkers, and correspondingly between great and destitute students, is their demeanour. A critical thinker will display the taking after dispositions or attitudes:

1.1.5.1. Willingness to Plan

Halpern (2014) talked about how when she was teaching and watched students during exams, how the moment the exam paper is in their hands they start writing without thinking, resulting in jumbled answers with little relevance to the question, that's why it's important to plan and outline a response before answering.

Planning, the imperceptible to begin with step in CT, is fundamental. Planning appears to be a critical component for changing numerous behaviours. Notwithstanding the substance, it is valuable to arrange how you will think and act. Plans are prescriptive depictions approximately what to do and they avoid periodic reactions which will not work. With a rehased hone, anybody can create the propensity of planning. (Halpern, 2014)

Bednall and Kehoe (2011) pointed that Self-regulation may be a prevalent concept within the psychological research literature. It may be a complex term that has different components, which incorporates utilizing feedback, checking comprehension, surveying advance towards an objective, and making judgments almost on how well something is learned. Analysts instructed college understudies how to utilize self-regulatory behaviours, and they found that when compared with control groups, understudies who learned how to self-direct performed way better on a test that required recognizing and clarifying considering false notions. (as cited in Halpern, 2014)

Phan's 2010 research found that There's voluminous writing appearing that self-regulation is critical in learning. It is presently clear that basic thinkers are self-regulated learners. (as cited in Halpern, 2014)

1.1.5.2. Flexibility

A lot of people respond negatively to new ideas without even considering them because they are close minded. This sort of close-minded reaction cuts off thought of unused ideas. By differentiate, an attitude of flexibility is checked by a readiness to consider unused alternatives, try things another way, and re-evaluate ancient issues. Dennis & Wall (2010) defined cognitive flexibility as the capacity to change how we consider something—to see things from someone else's perspective, think about various choices, think about a few different ways to react, and look for data that may not be promptly accessible. (as cited in Halpern, 2014)

A receptive individual is happy to suspend judgment, assemble more data, and endeavour to explain troublesome issues. This doesn't imply that all suppositions are similarly acceptable or that judgment should take a rearward sitting arrangement to transparency. It doesn't mean tolerating each jabber sentiment that is advertised. It means, however, that a critical thinker is eager to think in new manners, audit proof, and stick with an undertaking until all sensible choices have been thought of. (Halpern, 2014)

1.1.5.3. Persistence

Anderson & Bergman (2011) said that There are many factors that influence academic and career success, but persistence may be the most important one (as cited in Halpern, 2014). Schoenfeld (1985) defined Persistence as the readiness and capacity to keep at an assignment. It is a key factor in fruitful CT. Firmly identified with persistence is the readiness to begin or participate in a mindful assignment. A few people take a gander at an apparently troublesome undertaking and select not to try and start the thinking procedure. They are vanquished toward the beginning. Great thinking is difficult work that requires tireless persistence. It can make you

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as worn out as any physical work, however can be considerably more fulfilling. In a correlation of understudies who were unsuccessful in mathematics with the individuals who were effective, scientists found that a significant part of the contrast in progress rates was legitimately inferable from contrasts in attitudes. The unsuccessful students accepted that if an issue couldn't be fathomed in under 10 minutes, at that point they would not have the option to understand it. By differentiate, the successful students continued dealing with troublesome issues. (as cited in Halpern, 2014)

1.1.5.4. Self-Correction, Admitting Errors and Openness to Change

Anyone can commit a mistake, but rather than getting protective about mistakes, great thinkers can recognize them and gain from them. Sadly, there is widespread inclination to legitimize our slip-ups, our defective convictions, our terrible choices. (Halpern, 2014)

Tavris and Aronson (2007) review numerous political and private slip-ups. A fundamental impediment to conceding botches is Self-justification. Self-justification is incredibly solid since it keeps our picture of ourselves flawless. For instance, married couples each advocate a conviction or activity in any event, when there is acceptable proof that the conviction or activity wasn't right, litigants being investigated for an assortment of violations, administrators and the individuals they regulate, etc. The manner to be self-critical (evaluative) and think about when as a slip-up is a learnable second and not a period for the autopilot of Self-justification is a sign of critical thinkers. (as cited in Halpern, 2014)

It is intriguing to take note of that the overall population as a rule doesn't care for it when an open figure alters their perspective, particularly when the change is away from an end that was well known. In any case, if an individual is available to a reasonable assessment of new data, at times that data will prompt a distinctive end. It is foolish to hold to an old end or conviction when it did not warrant anymore. The capacity to change one's conclusion when new or better data becomes known isn't "waffling" or some other negative term that is utilized

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to portray somebody whose sees change as promptly as the moving direction of the wind. What is required is a new term that has positive meanings to be utilized for critical thinkers who are happy to change ends when sound proof warrants a change. Tragically, this is one attitude of CT that is still very uncommon. (Halpern, 2014)

1.1.5.5. Being Mindful

So as to create fundamental thinking skills, it is important to guide your focus toward the procedures and results of your own contemplations. Langer (2000) characterizes mindfulness as the straightforward demonstration of drawing novel qualifications. It is something contrary to the "automatic pilot" that we use for schedule errands like setting the supper table, getting the opportunity to class or work each day, or sitting in front of the TV at night. As indicated by Langer, learning requires a mindful commitment with the errand and materials. For whatever length of time that we react in a careless or routinized way, issues worth illuminating will never be perceived, and innovative arrangements will be missed. (As cited in Halpern, 2014)

1.1.5.6. Consensus-Seeking

Committee and gathering organizational structures are regularly the standard in the universe of work. Critical thinkers should be inclined to look for routes in which consensus among bunch individuals can be accomplished. They keep up an attention to the social real factors that should be survived so that thoughts can become activities. Consensus-Seekers need elevated level relational abilities, yet they additionally need to discover approaches to bargain and to accomplish understanding. Without this aura and related relational skills, even the most splendid thinkers will find that they can't change over thoughts to actions. Consensus-seeking doesn't mean giving in to larger part conclusion, and it doesn't mean constraining others to concur with you. It is an attitude that permits people to acknowledge what is acceptable or valid about an elective situation as a method for picking up help for one's own position.

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Consensus-seeking alludes to a receptiveness in thinking that permits individuals from a gathering to concur on certain parts of an answer and differ on others—however the objective is to permit others and yourself to communicate questions while progressing in the direction of an answer that can be accomplished. (Halpern, 2014)

1.1.5.7. Metacognitive Monitoring

Halpern (2014) defined metacognition as "our knowledge of what we know (or what we know about what we know) and the use of this knowledge to direct further learning activities." (p. 27)

While taking part in CT, you should screen your thinking procedure, check whether progress is being made toward a fitting objective, guarantee exactness, and settle on choices about the utilization of time and mental exertion. Metacognition is the official or "chief" work that guides how grown-ups utilize distinctive learning procedures and make choices about the allotment of restricted cognitive assets. Various contemplates have discovered that great students and thinkers participate in more metacognitive exercises than poor students and scholars, and that the skills and mentalities of metacognitive exercises can be taught and learned with the goal that students can coordinate their own learning systems and make decisions about how much exertion to designate to a cognitive task. (Halpern, 2014)

1.2. CRITICAL THINKING IN HIGHER EDUCATION

Higher education considers critical thinking as a highly sought-after goal to achieve and to develop, Yet, to build up a profound comprehension of the foundations of critical thinking includes a drawn-out way to deal with learning and applying those foundations.

1.2.1. Critical Thinking in EFL Classes

Hashemi and Ghanizadeh (2012) in their research on CT demand that it ought to be agreed need in the curriculum. It is in this manner imperative to examine the viability of

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teaching basic reasoning. Different consequences of exact examinations have given proof of the adequacy of educating thinking aptitudes to students of any age in the L1 and in L2 classes at school level. (as cited in Lin, 2018)

An examination by Williams (1993) uncovered gains in children's understanding capacity, thinking conduct, certainty and ingenuity in CT in the wake of encouraging thinking in a L1 class. Correspondingly, the aftereffects of an examination by Dyfed County Council (1994) likewise indicated gains in students' thinking, language abilities and self-assurance. In Campbell's (2002) study, children were seen as ready to give more motivations to clarify their conclusions. They were additionally seen as all the readier to talk before the class and were progressively open minded of the thoughts of others. (as cited in Lin, 2018)

Studies finished in L1 secondary school classrooms have additionally uncovered positive impacts. Miri et al. (2007) advanced higher-request thinking aptitudes in secondary school science classes. A comparison of California CT Skill Test (CCTST) and California CT Disposition Inventory (CCTDI) results appeared that the improvement in CT and in the demeanour towards utilizing it in the test group was fundamentally more noteworthy than in the control group. Lizarraga et al. (2010) endeavoured to animate thinking among secondary school students through directions concentrating on 'thinking effectively in an academic context' in a social science class. The outcomes demonstrated that guidance in thinking could upgrade Reasoning, imagination and academic accomplishment. (as cited in Lin, 2018)

As indicated by Ozturk et al. (2008), problem-based learning empowered university students to turn out to be increasingly dynamic and receptive critical thinkers. The students likewise demonstrated an expanded attitude to assess data. In Yang et al's (2008) study, CCTST results indicated that Web-Based Bulletin Board conversations added to upgrades in CT among college students, who revealed inspirational perspectives towards the guidance and further clarified that connection between peers permitted them to request help, share ideas and inspect

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their own perspectives. In a similar report, the researcher additionally found that students were all the readier to share thoughts and assess their own conclusions in the wake of getting guidance in CT. (As cited in Lin, 2018).

Experimental examinations have additionally upheld the adequacy of educating CT to college L2 classes (Gorjian et al. 2012; Gibson 2012; Shahini and Riazi 2011; Rao 2007). The aftereffects of these examinations demonstrated that teaching thinking could help L2 students improve both thinking and language aptitudes, and it likewise empowered students to perceive their cognitive and linguistic confinements. In these examinations, the students were likewise seen as progressively dynamic and persistent in performing errands. (as cited in Lin, 2018)

With respect to the improvement of EFL students' CT capacity, a few instructional methodologies have been endeavoured as of late. In the examination by Tung and Chang (2009), they joined a couple of systems in course configuration to inspect the viability of using reading to develop CT. One of their instructional procedures is guided in-class conversation with Socratic questioning aptitudes. So also, Khatib and Nazari (2012) led an examination to explore the impact of poetry on students' CT capacity. The outcomes from information investigation demonstrate that it helps upgrade understudies' CT capacity. In the investigation directed by Khatib and Alizadeh (2012), utilizing literary texts to prepare understudies' CT has end up being a successful instructional methodology. Another investigation is that Yang, Newby and Bill (2005) utilized Socratic questioning to advance understudies' CT abilities. The creator of this investigation likewise firmly holds a conviction that fusing higher-order questioning into EFL classes is a successful way to deal with reinforcing students' CT. Browne and Keeley (2007) stressed that the way into this instructional methodology is that EFL instructors need to figure out how to "ask the right questions" (as cited in Feng, 2014)

1.2.2. Teaching Critical Thinking

As indicated by Walsh and Paul (1988) CT is not equivalent to intelligence and does not really create with development. It must be instructed to be improved. Diminishes (1967, referred to in Garrison, 1991) contends that there is no natural inclination to think critically, nor is it simple to secure it. All in all, there are two ways to deal with teaching CT, the process approach and the content approach. Process approach is agreeable to managing CT as a different and autonomous course while content methodology votes in favour of teaching it inside set up courses. The individuals who bolster the process approach (e.g., Lipman, 1988) accept CT is an empowering train and merit separate guidance. Backers of the content approach, then again, keep up that encouraging such intellectual abilities is progressively successful given the guidance is given in setting (Ashton 1988). A few researchers, for example, Presseisen (1988) bolster a bound together view and figure CT can be shown all the more viably if the two methodologies are combined. (as cited in Fahim & Bagheri, 2012)

As to educating of CT as the instructing of a lot of conventional thinking abilities, for example, deductive and inductive thinking, Solon (2003) led an experimental study and found that It is imperative to engage students effectively in diverse CT procedures, for example, investigation of thoughts, conversation and reflection through writing just as making express to understudies the importance of CT. (as cited in Rezaei et al, 2011)

Yuretich (2004) featured that giving students a CT opportunity, for instance, permitting them an opportunity to delay, ponder, examine and talk about an issue in a setting that supports CT, is the correct way to teach CT. Children figure out how to think critically whenever they have the chances and motivation to think in critical manners; when they see (or on the other hand hear) others take part in CT; and when they are conceded into contentions, difficulties, and debates dependent on respect as opposed to power or misuse. (Smith, 1990)

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A few teachers have articulated not just the requirement for students to effectively take an interest in the CT procedure, yet in addition the requirement for understudies to know about what they are learning and why they are learning it (Bourdillon and Story, 2002). In a comparable line of request, Mayfield (2001) stressed the significance of this mindfulness in students' CT development, pinpointing that instructors should clarify to students the forms that they are occupied with and the points they want to reach through CT. Undoubtedly, Mayfield (2001) proceeds to explain that a potential method to raise students' consciousness of CT is to include them unequivocally in CT chances and in discourse with others so they could mull over upon their own reasoning and be discerning of their reasoning forms through posing inquiries and conversation. (as cited in Rezaei, 2011).

It has been found that for different reasons, educators despite everything draw on traditional teaching approaches. They confer information to their students, denying them of the chance to truly talk about and trade thoughts in the class. The educators were still impacted by the conventional method for instructing, that is, they were excessively principled in bestowing information to students and offering the right responses and students were not given an excessive amount of space for free conversation. Now and again, when they couldn't help contradicting the appropriate responses given by educators, there was insufficient time for them to talk about this distinction. (Folk, 2002). It calls attention to that outfitting students with some simple thoughts in separating facts from opinions, for example the "pure skills" conception, is the most sufficient for CT instruction (Siegel, 1988, p.6). Rather students need to create different CT aptitudes just as thinking perspectives so that they would have the option to assess critically their own conclusions and opinions and pose critical inquiries about the world they are in. What is increasingly significant is to build up students' disposition as a critical thinker: that is, to assess their own thoughts and opinions to pose inquiries about their convictions and decisions. This is the most significant and the most troublesome part. (as cited in Rezaei, 2011).

Conclusion

This chapter was devoted to the introduction and explanation of some basic concepts relevant to critical thinking. It has been revealed that thinking is rooted in all aspects of human life, and therefore developing the capacity to think critically is crucial segment of genuine significant teaching and learning. Critical thinking assists students solve issues, make decisions and arrive at their objectives; thus, thinking is an active process rather than passive. The next chapter will be devoted to teacher questioning and how it can be used to develop students' critical thinking skills.

CHAPTER TWO: TEACHER QUESTIONS AS A WAY TO DEVELOP STUDENTS CRITICAL THINKING

TEACHER QUESTIONS AS A WAY TO DEVELOP STUDENTS CRITICAL THINKING

Introduction

Questioning is the core of teaching learning process, through the craft of questioning the educator can exploit the concealed possibilities of students. Socrates believed that knowledge and awareness were a characteristic piece of every student (Lindley, 1993). In this way, in practicing the art of good questioning an instructor must venture into the student's concealed degrees of knowing and awareness so as to enable the student to arrive at new levels of thinking and reach the possibility of thinking critically. In this chapter, we will first review teacher questioning by attempting to define it and discuss its functions, application and types. Then, move to focusing on the process of questioning, we will go through Bloom's Taxonomy and Socratic Questioning and how they both play a significant role in developing critical thinking skills.

2.1. TEACHER QUESTIONS AND CRITICAL THINKING

When observing any classroom, one will no doubt observe a discourse among students and teachers, even if short, with a great part of the exchange being made out of questions and answers. Questioning is a basic component of effective instructing. Teachers and students will both profit from questions that are deliberately designed as students will procure the capacity to make associations with earlier learning as well as make meaning of their general surroundings. Through the arranging and usage of questions that require higher level of thinking, teachers cultivate the sort of commitment and critical thinking abilities that students should process.

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2.1.1. Definition of a Question

According to the English language Longman Dictionary "question is a command or interrogative expression to ask for information or a response, or to test knowledge." (as cited in Lynch, 1991, p. 201). This definition recognizes that not all questions are interrogatives "Tell me how you make chicken soup", and that, on the other hand, not all interrogatives are questions "How do you do?". This second part of the definition "the potential utilization of questions as a method for estimating information instead of procuring it" is significant to any conversation consisting of questions asked in the classroom; since one of the contrasts between what occurs there and what occurs in the world outside is that in non-instructive settings individuals don't normally inquire questions to which they definitely know the appropriate responses. There are special cases, obviously, for example, jokes ('What's the contrast between . . .?'); tests ('Which country will have the following Olympics?'); and court talk ('What is the defendant's statement?'). Yet, as a rule, questions are utilized to get data of different sorts. (Lynch, 1991). "questioning is defined as the instructional cues or stimuli that convey to students the content elements to be learned and directions for what they are to do. Questioning is very useful for teaching and learning processes" (Astrid et al., 2019, p. 93).

2.1.2. The Function of Teacher Questions

Questions have assumed a significant role in teaching, originating even before Socrates. The asking of questions is one of the ten significant practices remembered for Flanders' (1970) inventory of classrooms, with different examinations proposing that instructional questions involve as much as 80% of the class time (Riegle, 1976). The examination benefit of cantering on classroom questions is that they are the essential unit basic for most instructional methods. Additionally, when appropriately built, verbal questions presented by the instructor can lead to learners' motivation, problem solving, autonomous, and CT. For the learning of authentic data, there seems, by all accounts, to be little distinction with regards to whether an educator directs

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a talk or takes part in a discussion with students. For CT and basic reasoning, accomplishment has been found to connect with teacher student dialogues. (as cited in Astrid et al., 2019).

Eisner (1965) takes note of the urgent connections among questions and thought and between thought and activity:

If it is axiomatic that all great quests commence with a question (note Harvey's wondering why blood circulates, Newton's sense of bewilderment at an apple's plunging to earth, and Freud's query, do people really forget?), then it is important that the desire to raise seminal questions be fostered by the school.

(as cited in Hamblen, 1984, pp. 3-4)

Blosser (2000) points out that educators use the questioning technique to assist students with creativity, to animate CT, to stress a point and to check comprehension, and for different reasons and purposes. Questioning methodology is one of the most significant components of instructing and learning forms. Guest (1985) contends that questioning procedure is one of the significant apparatuses to broadening students' learning which can help instructors to build up their own techniques to upgrade understudies' work and thinking. (as cited in Astrid et al., 2019).

Correspondingly, Elder and Paul (2006) bring up that transforming understudies into dynamic questioners is a significant piece of CT instruction. They surrender that it is significant for students to continue posing questions in the learning process, focusing on that "to learn well is to question well" (p.88). They additionally point out that questions characterize tasks, express issues, and portray problems. Answers, regularly signal a full stop in thought. Just when an answer creates a further inquiry does a thought proceed with its life. Students are truly thinking and learning when they have questions. It is conceivable to give students an assessment

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regarding any subject by simply soliciting them to write all the questions that they have about a subject, Instructors will in general pose questions just to get thought-halting answers, not to produce further questions. This is why students don't ask thought stimulating questions, instead they ask questions that are more of the lines of 'is this going to be on the exam?'

Teachers questions produce more effective thinking and learning, they stimulate students to ask questions themselves, developing their questioning abilities. Any instructor interested in the improvement of the student's mind must be interested in the role of questions in educating and learning, for it is through our questions that we comprehend the world and everything in it, comprehend academic disciplines, express our scholarly objectives and purposes. It is through our questions that we think superficially or profoundly. (Paul & Elder, 2006)

2.1.3. Questions in The Classroom

In the classroom, questioning is viewed as one of the most well-known teaching methods (Brualdi, 1998) and furthermore it is one of the most much of the time utilized instructional procedures because of its benefits seeing as Zepada (2009) states that questions can evoke students' reactions which can go from straightforward review of data to extract procedures of applying, incorporating, and assessing data. What is much increasingly significant is that thinking is frequently determined by questions (Elder and Paul, 1998). In this manner, EFL educators can utilize inquiries to assist students with building comprehension and think fundamentally and critically. Through questioning, EFL instructors can open the shrouded possibilities of students and stimulate their thinking to be more critical. Great thinking is incited by questions as opposed to address answers. In the event that students thoroughly consider or re-examine anything, they have to ask themselves thought-invigorating questions. Questions help in characterizing tasks and conveying issues. Conversely, answers frequently put a stop to thought. According to Elder and Paul (1998), questions produce answers which evoke new

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questions and so forth thinking never stops. Consequently, it's safe to state that only students who have ongoing questions can truly think and learn. What is more is that students' CT is determined by the quality of questions the teacher asks. The act of asking questions in class indicates effective teaching. (as cited in Feng, 2014)

Hamblen (1984) states that an abundance of data demonstrates that the sort of questions presented in a classroom and the reactions given not just directs what is being instructed and in this way learned, yet that there is an equivalency between the two, remarks made by students are affected by the kinds of questions they are asked. Atwood & Stevens (1976) in their study also point out that »asking questions at levels above memory is an effective method for getting students to operate at cognitive levels above memory" (p. 253).

In addition; a questioning exchange among teachers and students has been corresponded with students' cooperation and inspiration, they become effectively associated with the development of significant content and results. The presenting of higher-level questions permits students to find data and define meaning rather than being exclusively dependent upon predefined information. Through the exploratory idea of a questioning exchange; students can develop and improve abilities in CT and problem solving. (as cited in Hamblen, 1984)

Newton (1978) addresses that albeit for all intents and purposes each arrangement of instructive rules incorporates the objectives of CT and the involvement of students in the discussions; most of classroom questions are centre ed around the less complex subjective procedures of recalling memorized information and comprehension; for example, recalling or paraphrasing recently learned data. A mistake; rapidly gets clear in looking at teachers' expressed objectives for successful study hall guidance to expressive information on the real factors of study hall guidance. (as cited in Hamblen, 1984)

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Gall, Morse & Davis (1970) documented in their research both the high recurrence of questions in the classroom and the practically all out absence of questions represented that require CT. In 1893, Rice viewed an overwhelming dependence upon recalling of information also, in the regularly referred to 1912 examination done by Stevens; in which questions were recorded in 100 secondary school study classes, it was discovered that educators posed a mean of 395 inquiries for every day, with 66% of those inquiries requiring recalling of previous information. Specialists directing free examinations with broadly varying methodologies; just as the individuals who have reproduced contemplates, have reliably organized an overabundance of lower level intellectual questions. (as cited in Hamblen, 1984)

In 1936; Haynes discovered that 77% of the questions in a 6th Grade-history-class require recollection of memorized information (Lucking, 1975). Moreover, Corey (1940) saw 71% of the inquiries as verifiable in a secondary school science class; In an investigation of questions presented by student educators in science and social studies classes, Arnold et al. (1973) recorded 61% memory level questions with a large portion of the staying 39% requesting comprehension. At the point when this examination was repeated on the high school level with understudy instructors in science 70% were memory level questions, with the staying 30% being understanding and application questions (as cited in Atwood & Stevens 1976).

2.1.4. Application of Teacher Questions

The application of the question asked by the teacher (at the beginning of the class/in the middle/at the end) depends on the type of the question asked, on the purpose behind this question.

2.1.4.1. At The Beginning of the Class

Asking questions before teaching the material is compelling for students who have/are high capacity, as well as known to be interested in the topic. Eble (1988) contends that a few

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instructors ask questions before starting the lecture in order to help students who have inquiries concerning past lessons, readings or test arrangements. In the start of a class, giving question as opening questions in a discussion can make it easy for the students to understand, and doesn't compel them to uncover a lot about themselves. Questioning before teaching can be in composed structures as a test or oral questions. (as cited in Astrid et al., 2019)

2.1.4.2. In the Middle of the Class

Asking questions in the middle of the class is exceptionally viable in delivering achievement, it is more impact fulfilling than a lecture carried out without questioning, according to Eble (1988), students perform better on lessons that are recently asked as recitation questions than on things they have not been presented to previously. An oral questioning is reasonably utilized during educating and learning forms since it is more successful in cultivating learning than are composed questions. Which means Questions bring about better lesson appreciations than no questions. Posing questions during instructing and learning forms is emphatically identified with learning facts. (as cited in Astrid., 2019)

2.1.4.3. At the End of the Class

Asking questions at the end of the class is generally utilized by educators since it is fundamental to know students' understanding, to survey their learning, to test the input and assess the instructing quality and the teaching learning process whether they have been running admirably or not. In this area, it is fundamental for educators to apply recall question, a referential question to check students' understanding. Eble (1988) contends that open/closed questions, or different kinds of questions can likewise be utilized by educators in finishing the learning objective. (as cited in Astrid et al, 2019)

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2.1.5. Questions Classification System

Since questions have different functions, they can be divided into different categories, urged by their syntax, so according to Feng (2014), questions may be classified into four kinds: Yes/no, either-or, tag, and wh- questions. As per the investigation of Celce-Murcia and Larsen-Freeman (1999), yes/no questions are fundamentally used to look for new data or explain or affirm given or shared data. Conversely, wh-questions are utilized to inspire specific sorts of data. The idea of the data conditions the choice of the question word which starts with wh-. Meanwhile the tag and alternative questions are not used to look for information. (as cited in Feng, 2014).

The display or factual questions are what an EFL teacher knows or may give the responses to, as viewed from the instructional purposes. Referential or open-ended questions on the other hand are the questions which the teacher doesn't have the answer to. Kubota (1989) points out that display questions require accurate recall of previously learned information as opposed to higher level of thinking. In differentiate, referential questions are utilized to push students to think and react at more significant levels of cognition, to animate creativity and to include students by requesting their insights. Nunn's analysis (1999) showed that teachers use display questions just to provoke students to give information that is already known to the teacher. Referential questions are the questions which the teacher doesn't know the answer to, coordinated towards the "real world of the students ". Badger (1992) contends that open-ended questions are utilized to look at students' understanding, thinking capacity and how to apply information in less customary settings. All in all, open-ended questions require complex and CT. Teaching thinking requires a high frequency of open-ended questions in the classroom. Nunan and Lamb (1996) found that display questions are the most common questions in classrooms of various kinds. As per the examination discoveries of Blosser and Patricia (1995),

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around 60 percent of educator questions require just recalling of information, 20 percent expect students to think, and 20 percent are just procedural. (as cited in Feng, 2014)

There's another way of classifying questions, either into convergent or divergent questions:

- *Convergent Questions*

These questions are regularly utilized in textbooks; they require the exchange of data in an anticipated manner. Convergent questions require from students to be aware of certain facts, be ready to make associations and give clarification. (Feng, 2014)

- *Divergent Questions*

This type of question encourages any possible answer, it doesn't have a permanent answer which makes it less predictable, when answering a divergent question, students need an environment wherein they may investigate thoughts without strain to give a "right" answer. In responding to this sort of questions, students may need to build a plan to tackle issues, find solutions and provide a hypothesis built on previous knowledge or experience. Because this kind of question demands a higher level of thinking, it might take more time for students to come up with answers. (Feng, 2014).

Likewise, Shaunessy (2000) firmly advises a few sorts of questions to provoke students' CT. The first type is the divergent questions which tests past one-right answer to a question to dive all the more profoundly into thoughts. Extra kinds of questions, for example, synthesis and evaluation which stress on provocation and hypothesizing. They encourage listening and reading and push students to find new connections. (as cited in Feng, 2014).

Notwithstanding different classifications, the previously mentioned sorts of teacher questions are very amazing in their assortment. Except for question types, for example, tag, either-or, administrative, and structural inquiries, most different sorts of instructor questions fall into Bloom's Taxonomy, which can advance higher level thinking. (Feng, 2014)

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2.2. BLOOM'S TAXONOMY

In 1956, Benjamin Bloom worked with a group of psychologists to compose the levels of cognition which is significant in learning. The levels were consecutive of a hierarchical plan, with the goal that one level must be accomplished before the following level can be accomplished. The order that Bloom and his associates made concentrated on the levels of questions that were seen in an assortment of instructive settings. Through his perceptions, Bloom noticed that over 95% of the questions that were presented to college students just required memorization (recall of information), the most minimal degree of thinking. (Nappi, 2017)

Bloom, Englehart, Furst, Hill, and Krathwohl (1956) built up a taxonomy that gives a significant system to instructors to utilize when creating questions of all levels. The taxonomy is spoken to as a pyramid starting from lower order thinking at the bottom and going up to higher order thinking (cognition) at the top. The taxonomy created by Bloom et al. (1956) orders educational objectives into three areas: cognitive, affective, and psychomotor. The cognitive area includes the improvement of knowledge and intellectual aptitudes (Bloom et al., 1956), the affective area deals with emotions (Krathwohl, Bloom, and Masia, 1973), and the psychomotor space (Bloom et al., 1956) includes physical development and motor abilities. The taxonomy gives a platform to posing questions that become continuously all the more testing and gives a structure to teachers to show complex thinking that, at last, can direct students to become autonomous thinkers who can build up their own perspectives. (as cited in Nappi, 2017)

The taxonomy shows that degree of learning results is controlled by lower level questions (knowledge, comprehension and application) and more elevated level questions which urge students to analyse, synthesize and evaluate. Through higher level questions students are required to control recently learned material or data to make an answer or give

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logical thinking to an answer. Remark on Bloom's scientific classification, Tarlinton (2003) guaranteed that higher level questions are handier for urging students to think further, for invigorating them to look for data on their own, however lower level questions are suitable for assessing students' readiness or revision. (as cited in Qashoa,2013)

2.2.1. Lower Level Questions

Lower order questions are those that require "brief idea" and an essential measure of comprehension of a previously learned subject or zone. These sorts of questions are intended to urge understudies to review or recollect fundamental data. (Ex. What are the initial ten corrections of the Constitution known as? or on the other hand What are the five stages of...?) These questions are fantastic when used to cover a procedure or step underscored in the course, in any case, questions, for example, these require constrained exertion and do little to support commitment. Consequently, these sorts of questions are extremely useful in as much as they are not utilized excessively, the perfect time to utilize Lower Order Questions is when to have students review previous data. To expect students to show basic thought and comprehension of a subject. To check understudies' capacity to learn, review, and show information on explicit ideas. (Khan & Inamullah, 2011)

2.2.1.1. Knowledge

Questions are asked exclusively to test whether a student has increased explicit data from the exercise. For instance, have they retained the dates for a specific war or do they know the presidents that served during explicit times in American History? It additionally incorporates information on the fundamental thoughts that are being educated. The educator would request that students describe, list, or name the factual data they've learned in class. The Bloom group stated that this level would be the least demanding for the teacher to build and score; all things considered, he found that questions of this sort include over half of test or exam questions. (Huitt, 2004)

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2.2.1.2. Comprehension

This level has students go past essentially reviewing facts and rather makes them comprehend the data. With this level, they will have the option to decipher the facts. Rather than basically having the option to name the different kinds of clouds, for instance, the students would have the option to comprehend why each cloud is shaped that way. The descriptors that are ordinarily utilized at this level are translate, discuss, contrast, construe, interpret, and extrapolate. Bloom's team perceived that this holds more difficulty than the first level and found that about 20% of the questions on science examinations fall into this classification. (Huitt, 2004)

2.2.1.3. Application

These questions are those where students need to really apply, or use, the information they have learned. They may be approached to tackle an issue with the data they have picked up in class being important to make a practical solution. For instance, a student may be asked to tackle a legal inquiry in an American history class utilizing the Constitution and its amendments. When composing application questions, the words most commonly used are complete, illustrate, show, examine... Etc. Bloom pointed out this type of questions comprises 12% to 15% of college exams questions. (Huitt, 2004)

2.2.2. Higher Level Questions

In contrast to Lower Order Questions which require just a short measure of thought, Higher order Questions order a more noteworthy showcase of comprehension and thought. These questions are intended to urge students to exhibit their comprehension by summing up point by point ideas. (Ex. Would anyone be able to sum up what the creator is attempting to state?) These questions are indispensable so as to get students to explain their comprehension to the teacher just as themselves. In any case, similar to all questions it's simply a question of finding the correct time to utilize them. the perfect time to utilize Higher Order Questions is

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when: To Comprehend given data. To have understudies decipher and portray ideas and thoughts in their own words. To have students sort out realities and different kinds of data. To have understudies utilize CT abilities to: Analyse data, derive connections and associations, anticipate results, decipher realities, put earlier information into new settings, gathering data, etc. To Apply learned data: To utilize strategies, thoughts, and ideas in new settings. To take care of issues which require information and aptitude. To utilize acquired information. (Khan & Inamullah, 2011)

2.2.2.1. Analysis

Students will be required to go past information and application and really observe patterns that they can use to examine an issue. For instance, an English teacher may ask what the thought processes were behind the protagonist's doings during a novel. This expects students to analyse the character and arrive at a resolution dependent on this examination. Questions in this category are far more difficult than the ones in the preceding levels Because students must perceive a sensation that they are unfamiliar with, it requires interpretation, so because of its difficulty it is not used that frequently in the construction of tests. Questions in this category usually contain terms like deduce, and survey. (Huitt, 2004)

2.2.2.2. Synthesis

In this level, it is required from students to utilize the offered facts to make new speculations or make expectations, to combine what they experience into what is viewed as a novel sensation. They may need to pull in information from numerous subjects and synthesize this data before arriving at a resolution. For instance, if an understudy is approached to concoct another item or game they are being approached to synthesize. Such unique idea dwells high on a learning progressive system and is only sometimes observed on course tests. (Huitt, 2004)

CHAPTER TWO: TEACHER QUESTIONS AS A WAY TO DEVELOP STUDENTS CRITICAL THINKING

2.2.2.3. Evaluation

Here students are relied upon to evaluate data and arrive at a resolution, for example, it's worth or the predisposition behind it. For instance, if a student is finishing a DBQ (Document Based Question) for an AP US History course, they are relied upon to evaluate the inclination behind any essential or optional sources so as to perceive how that impacts the focuses that the speaker is making. Here understudies are compelled to evaluate their experiences as they relate their understandings to a real-world issue. Such questions can be incredibly hard for students. (Huitt, 2004)

Table 2.1. Bloom's Taxonomy with Definitions and Illustrated Verbs and Questions

Level of question	Definition	Question words
Knowledge	Eliciting factual answers, testing recall and recognition of information.	Define, tell, list, identify, describe, select, name, point out, label, and reproduce. Who? What? Where? When? Answer 'yes' or 'no'.
Comprehension	Interpreting, extrapolating.	State in your own words, explain, define, locate, select, indicate, summarize, outline, and match.
Application	Applying information heard or read to new situations.	Demonstrate how to, use the data to solve, illustrate how to, show how to, apply, construct, and explain. What is.....used for? What would result? What would happen?

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Analysis	Breaking down into parts, relating parts to the whole.	Distinguish, diagram, chart, plan, deduce, arrange, separate, outline, classify, contrast, compare, differentiate, categorize. What is the relationship between? What is the function of? What motive? What conclusions? What is the main idea?
Synthesis	Combining elements into a new pattern	Compose, combine, estimate, invent, choose, hypothesize, build, solve, design, and develop. What if? How would you test? What would you have done in this situation? What would happen if.....? How can you improve.....? How else would you.....?
Evaluation	Making a judgment of good, bad, right or wrong, according to some set of criteria, and stating why.	Evaluate, rate, defend, dispute, decide which, select, judge, grade, verify, and choose why. Which is best? Which is more important? Which do you think is more important?

Note: as cited in Brown (2001, p. 172)

2.2.3. The Revision of Bloom's Taxonomy

Anderson and Krathwohl (2001) amended Bloom's taxonomy to fit the more result centred present-day instruction objectives, including changing the names of the levels to verbs, and turning around the order for the two highest levels. The lowest order level (Knowledge) turned to Remembering, in which the student is approached to recall or recollect data. Understanding replaced Comprehension, in which the student would clarify or portray

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ideas. Application became Applying, or utilizing the data in some new way. Analysis was changed to become Analyzing, requiring the student to separate between various segments or connections, showing the capacity to compare and contrast. These four levels continue as before, same as Bloom's taxonomy. Research, in the course of the most recent 40 years has affirmed these levels as a chain of importance (Anderson and Krathwohl, 2001). Notwithstanding modifying the scientific categorization, Anderson and Krathwohl included a conceptualization of information measurements inside which these handling levels are utilized (conceptual, factual, procedural, and metacognition). (as cited in Nappi, 2017)

The two most elevated, most complex levels of synthesis and Evaluation were switched in the new model, and were renamed Evaluating and Creating (Anderson and Krathwohl, 2001). As the creators didn't give experimental proof for this inversion, it is thought that these two most significant levels are basically equivalent in level of complexity. Both rely upon analyzing as a fundamental procedure. Be that as it may, synthesis or creating require revising the parts in another, unique way, while Evaluation or Evaluating requires a correlation with a standard with a judgment as to great, better or best. Which is like the differentiation between critical and creative thinking. Both are important while nor is unrivalled. In certainty, when either is overlooked during the CT process, effectiveness decays. (as cited in Nappi, 2017)

Research has demonstrated that the initial four degrees of the two scientific categorizations (Anderson and Krathwohl, 2001; Bloom et al., 1956) are various levelled in nature; in any case, debate exists in regards to the two most significant levels (Hummel and Huitt, 1994). Krathwohl suggested that Evaluation is less complex than Synthesis, while Lutz and Huitt (2003) recommended that both levels are difficult yet are prepared in a different way. Huitt (1992) recommended that Evaluation is CT while Synthesis is more of creative thinking. and both are used to solve problems. (as cited in Nappi, 2017)

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2.3. SOCRATIC QUESTIONING

The Socratic method may summon pictures of harsh graduate school teachers peppering ill-equipped students with a progression of progressively mind boggling—and once in a while scary question. As a general rule, this approach is an engaged, organized style of questioning planned for creating an exchange so as to develop learning and hone thinking. Socratic questioning has its underlying foundations in a style of discussion starting with old Greek philosopher Socrates. He asked "uncomfortable questions " of those around him, including his adversaries, in request to incite bits of knowledge and detailed thoughts for himself as well as other people. (Burger & Starbird, 2012)

Socratic questioning can be utilized to seek after thought in numerous ways and for some reasons, including: to investigate complex thoughts, to get to reality of things, to open up issues, to reveal suppositions, to break down ideas, to recognize what we know from what we don't know, and to follow out sensible ramifications of thought. The way to recognize Socratic questioning from normal questioning is that Socratic questioning is efficient, trained, and profound, and typically centres on critical thoughts, standards, speculations and problems. Socratic questioning shows us the significance of questions in learning (Socrates himself believed that questioning was the main solid type of educating). It shows us the contrast between deliberate and fragmented thinking. It instructs us to burrow underneath the outside of our thoughts. It shows us the benefit of creating questioning minds and developing profound learning. (Paul & Elder, 2006).

2.3.1. Socratic Questioning Samples

Paul & Elder (2006) identified different types of Socratic questions:

- (1) Questions of purpose force us to define our task.
- (2) Questions of information force us to look at our sources of information.
- (3)

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Questions of assumption force us to examine what we are taking for granted. (4) Questions of implication force us to follow out where our thinking is going. (5) Questions of point of view force us to examine our point of view and to consider other relevant points of view. (6) Questions of relevance force us to discriminate what does and what does not bear on a question. (7) Questions of precision force us to give details and be specific. (8) Questions of consistency force us to examine our thinking for contradictions. (9) Questions of logic force us to consider how we are putting the whole of our thoughts together. (p. 89)

2.3.1.1. Questions That Probe Goals and Purposes

All ideas mirror a purpose or a reason. Expect that you don't completely comprehend somebody's idea (counting your own) until you comprehend the motivation behind it. Teachers need to question students' purpose of thinking in a particular way. Paul & Elder (2006) illustrate some of the numerous questions that emphasize purposes:

- What is the purpose behind your comment?
- Why are you writing this...?
- What is our central purpose in this line of thought?
- What is our central goal?
- What are we trying to accomplish?

2.3.1.2. Questions for Information, Data and Experiences

All thoughts surmise a database. Accept that you don't completely comprehend the idea until you comprehend the background information (facts, information, experiences) that supports it. (Paul & Elder, 2006)

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Questions that emphasis on data and information include:

- On what data are you basing that comment?
- How do you know that...?
- How does that information can be applied to this case?

2.3.1.3. Questions for Clarification

These questions get understudies to ponder what they want the answer to or what they're thinking, demonstrate the ideas driving their arguments, and get them to go further. Thinking includes the application of concepts. Expect that you don't completely comprehend a concept until you comprehend the ideas that characterize and shape it. (Paul & Elder, 2006)

Questions That attention on concepts incorporate:

- What does this mean?
- Can you give more examples?
- Can you explain further?

2.3.1.4. Questions That Probe Assumptions

Thinking settles upon assumptions. Expect that you don't completely comprehend an idea until you comprehend what it underestimates. These questions make students consider the presuppositions and unchallenged convictions on which they are establishing their argument. (Paul & Elder, 2006)

Questions that attention on assumptions incorporate:

- What else could you assume?
- Why are you holding on to that assumption in particular? Shouldn't you be assuming...?
- What alternative assumptions can we make?

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2.3.1.5. Questions That Probe Inferences and Conclusions

All ideas require the creation of inferences, the reaching of conclusions, the formation of meaning. Accept that you don't completely comprehend an idea until you comprehend the inductions that have formed it. (Paul & Elder, 2006)

- How did you come to that conclusion? Is there an alternative conclusion?
- What do you think is the most possible conclusion?
- How can we interpret these data?

2.3.1.6. Questions That Probe Viewpoints and Perspectives

Most arguments are proposed from a specific position. So the teacher needs to question that position. He needs to show that there are other, similarly legitimate, perspectives. (Paul & Elder, 2006)

- From what perspective are you looking at this?
- Why did you choose that perspective rather than that perspective?
- Can you give an alternative?

2.3.1.7. Questions That Probe Implications and Consequences

All ideas are going in a specific direction. It does not just start some place (laying on assumptions), it is additionally heading off some place (has implications and outcomes). The argument that a student presents may have legitimate implications that can be gauged. (Paul & Elder, 2006)

- What were you implying when you said...?
- Are you implying...?
- What consequences would that have?
- How does... conform with what we learned before?

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2.3.1.8. Questions About the Question

The teacher likewise can get reflexive about the entire thing, turning the inquiry on itself.

Ricochet the ball once more into the student's court. (Paul & Elder, 2006)

- What was the point behind this question?
- What does... mean?
- Should we put the question this way... or that way...?

2.3.2. Three Forms of Socratic Questioning to Probe CT

Paul & Elder (2006) categorized three general forms of Socratic questioning that can be used with different levels (from elementary to graduate school): spontaneous, exploratory and focused.

2.3.2.1. Spontaneous or Unplanned Socratic Questioning

When teachers keep up their interest and feeling of wonderment, they will spontaneously ask students questions that will test their thinking. Such unconstrained, spontaneous conversations promote listening critically as well as investigating the convictions communicated. On the off chance that something said appears to be misleading or incorrect. Socratic questioning gives a method of helping students become self-correcting, as opposed to depending on the teacher's corrections. Spontaneous Socratic questioning can be particularly valuable when students become intrigued by a subject, when they raise a significant issue, when they are near the very edge of getting a handle on or incorporating a new knowledge, when conversation gets impeded or confounded. Socratic questioning gives explicit moves which can productively exploit students' intrigue and interest. It can help you approach a significant issue. It can help incorporate and expand knowledge, push a troubled conversation ahead, explain or sort through what seems confusing, and diffuse dissatisfaction or outrage. (Paul & Elder, 2006)

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Despite the fact that by definition there can be no preplanning for a specific spontaneous conversation, teachers can set themselves up by getting comfortable with spontaneous Socratic questioning, by building up the specialty of asking probing questions and by giving empowering and accommodating responses. For example, asking the students if they agree with a point a student made. Ask them to give examples or suggest a parallel example...etc (Paul & Elder, 2006)

2.3.2.2. Exploratory Socratic Questioning

This form is suitable when teachers need to discover what students know or think and to test their thinking on an assortment of issues. Teachers may utilize it to survey students' thinking regarding a matter toward the start of a semester or unit. They could utilize it to investigate and reveal dangerous zones or potential biases. They can utilize it to find areas of controversy or debate, or to discover where and how understudies have coordinated academic material with their thinking. Such form can be utilized in presenting a subject, in getting students ready for later examination of a subject, or in looking into significant thoughts before students step through an examination. Teachers can utilize it to figure out what students have gained from their investigation of a unit or subject, or as a manual for future assignments. After an exploratory exchange, teachers can have students take an issue brought up in conversation and write their own perspectives on the issue. Or form groups to additionally talk about the issue or subject. (Paul & Elder, 2006)

With this sort of Socratic questioning, teachers raise and investigate an expansive scope of interrelated issues and ideas, not only one. It requires insignificant pre-planning or pre-thinking. It has a moderately free request or structure. Teachers can plan by having some broad questions prepared to raise when suitable by thinking about the subject or issue, related issues, and key ideas. They can likewise get ready by foreseeing students' likeliest answers and setting up some subsequent questions. Keeping in mind that once students' idea is invigorated there is

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no anticipating precisely where the conversation may go. Exploratory discussions can contain the following questions: why is there a difference between a friend and a best friend? Why do we have friends? What's the difference between want and need? (Paul & Elder, 2006)

2.3.2.3. Focused Socratic Questioning

Focused Socratic questioning is when approaching students with a certain topic or issue to cover. This form is used to test an issue or idea in depth, to have students explain, sort, dissect and assess contemplations and viewpoints, recognize the known from the obscure, incorporate important components and information. This sort of questioning offers students the opportunity to seek after points of view from their most fundamental presumptions through their uttermost ramifications and outcomes. These conversations give students involvement with taking part in an all-encompassing, requested, and incorporated discourse in which they find, create, and share thoughts and bits of knowledge. It requires pre-planning or thoroughly considering potential points of view on an issue, reason for ends, problematic ideas, suggestions, and results. Teachers can additionally get ready by thinking about those subjects pertinent to the issue: their strategies, measures, fundamental qualifications and ideas, and interrelationships purposes of cover or conceivable clash. In planning follow-up questions, teachers ought to consider, ahead of time, the likeliest students answer to unique questions. (Paul & Elder, 2006)

Conclusion

Developing EFL students' CT should normally be part of classroom teaching. So as to accomplish this reason, EFL teachers ought to be specialized in asking thought-provoking-questions and utilizing fitting strategies. Among a wide range of questions, asking higher level questions is important to the improvement of EFL students' CT abilities. Somewhat, teacher questions decide the heading wherein their students' thinking goes. Just when students' thinking heads off somewhere do students learn anything of significant worth. Higher level questioning

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can drive students to think out of the box, constraining them to manage unpredictability and complexity. So as to accomplish adequacy in developing CT by using the questioning method, EFL teachers need to realize how to use good questioning techniques. The next chapter will describe the methodology and procedures used in the study which consists of research instruments, data collection and data analysis.

PRACTICAL ISSUES**Introduction**

After having presented the theoretical part in which critical thinking can be promoted through teacher questioning in EFL classes, the current chapter aims to investigate whether teacher questioning can be used as an essential tool for developing critical thinking based on Bloom's Taxonomy. In this respect, the methodology will be discussed providing a detailed description of the research design. It consists of the purpose of the study, research questions, hypotheses, samples, research tools, and analysis. The data collection procedure will be described and the results will be discussed. They will pave the way to relate the main findings to the hypotheses formulated previously.

3.1. Research Methodology

In this section, the researcher is going to show that asking higher level questions in the classroom has its impact as it develops the critical thinking skills. To reach our objective the need of an appropriate method is a must. The choice of a method depends largely on the topic, its aims and the samples which is under our investigation. Presenting both the population and the gathering data tools.

3.1.1. Case Study

The study case chosen for our present study is both teachers and students from the department of English at The University of Ibn Khaldoun Tiaret.

3.1.1.1. Hypotheses

It is worth to restate our hypotheses:

1. Students' critical thinking skills can be developed through teacher questioning, more specifically, through asking higher level questions.
2. EFL teachers ask both lower level and higher level questions.

3. Teacher questioning can shape the thinking process and creativeness in EFL learners and therefore help them solve language problems.

3.1.1.2. Population

a. Teachers

The questionnaire was sent to 16 English only teachers from the Department of English at The University of Ibn Khaldoun Tiaret. This sample was selected in order to examine teachers' use of the questioning technique inside the classroom. More precisely, to find out what type of questions EFL teachers ask, and if they use these questions to develop students critical thinking skills.

b. Students

In order to collect data and test our hypothesis we opted for a sample of 65 English students at The University of Ibn Khaldoun Tiaret, 33 students were Master students from both specialties (Didactics and Linguistics), and 32 License students. The reason behind this selection is to take into consideration different perspectives and attitudes, and because of the high intellectual and linguistic level University students are more likely to have.

3.1.2. Research Tools

For the present study we opted for the quantitative method by using two online questionnaires as the main tools for gathering data on the topic of research. Both questionnaires contained different types of questions (multiple choice, yes/no, and open-ended questions). The results of the questionnaires serve to investigate types of questions EFL teachers ask in English only classrooms, and also to examine whether EFL teachers use the questioning technique to develop students critical thinking skills.

3.1.2.1. Teachers' Questionnaire

The teachers' questionnaire is made up of 12 anonymous questions with the exception of the first question where the teachers are asked about when they started teaching English. The questionnaire contained questions of different types: closed questions (Q2 3.5.7.8.10.11), open-ended questions (Q4.9.12) and clarification questions (Q6.8).

The questionnaire was designed to examine the types of questions EFL teachers ask in English only classrooms, and also to investigate if teachers aim at developing students critical thinking skills and which strategy do they use.

3.1.2.2. Students' Questionnaire

The questionnaire contained 14 questions. all the questions are closed ended questions, multiple choice questions (Q1.3.4.5.7.8.11.12.13.14), yes & no questions (Q2.6.9) and one clarification question (Q10). This questionnaire was designed in order to investigate EFL students' attitudes towards critical thinking and teacher questioning.

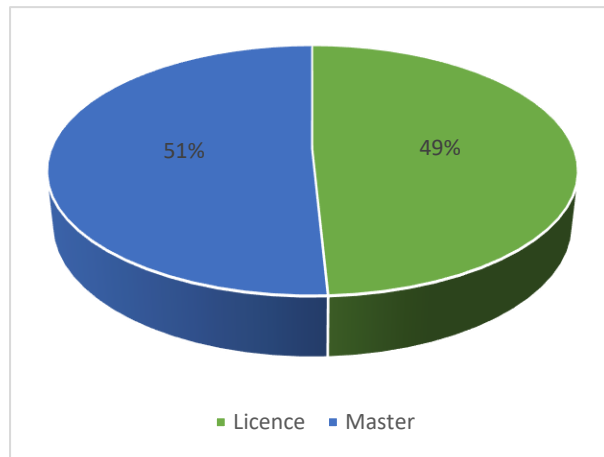
3.2. Data Collection and Analysis

3.2.1. The Analysis of Students' Questionnaire

Question One: Level of Education

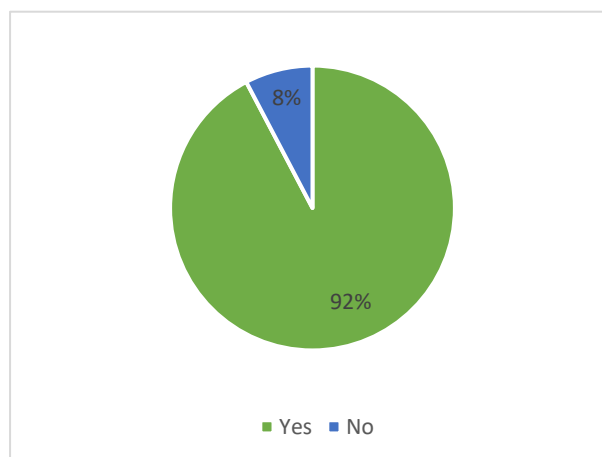
According to the figure 3.1., 51% of the participants were Master students and 49% were students from License level.

Figure 3.1. Students' Level of Education



Question Two: Are you familiar with the concept critical thinking?

Figure 3.2. Students' Familiarity with The Term Critical Thinking



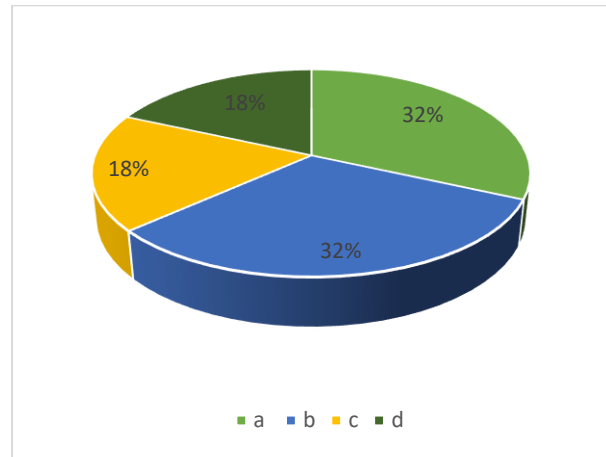
The aim behind this question was to see if students ever heard of the term critical thinking before. The figure indicates that 92% of the students confirmed that they are actually familiar with the concept critical thinking while the rest 8% said they never heard of the concept before.

Question Three: If your answer is yes, how?

- a. You read about it
- b. Your teacher mentioned it

- c. You had it as a lesson/lecture
- d. Another source

Figure 3.3. How Students Came to Know Critical Thinking

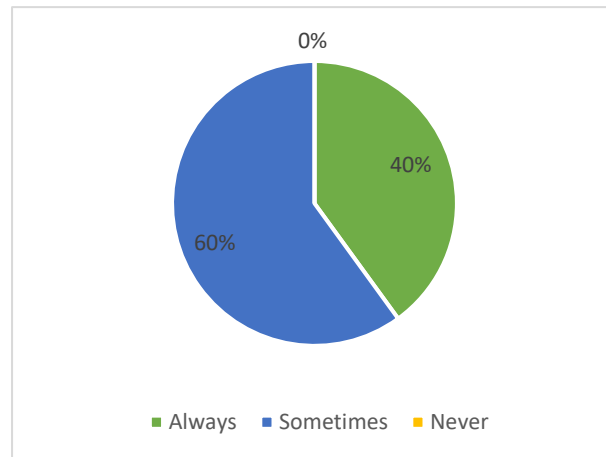


This question was a follow up to the previous question for the students who said that they are familiar with the term critical thinking as to how exactly they got introduced to this term. 32% of the respondents said they came to know critical thinking through reading about it, another 32% said they heard it through the teacher. While 18% chose option C saying they had it as a lesson, and the rest 18% said it was a different source. This proves that teachers played a big role in introducing Critical Thinking to learners.

Question Four: Have you ever critically questioned what you are being taught?

We aimed behind this question at finding out whether the respondents ever think critically about what they learn.

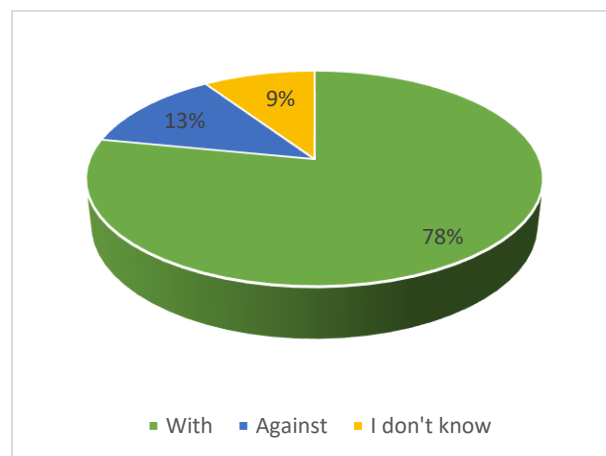
Figure 3.4. Whether Students Question What They Are Learning



. According to figure 3.4. 40% of the participants said they always question what they are being taught while 60% said they only sometimes question what they are learning, and none of the learners chose the third option which says never, this comes to show that EFL learners are not afraid to ask critical questions about what they are learning.

Question Five: What do you think about devoting a whole subject for developing students' critical thinking skills?

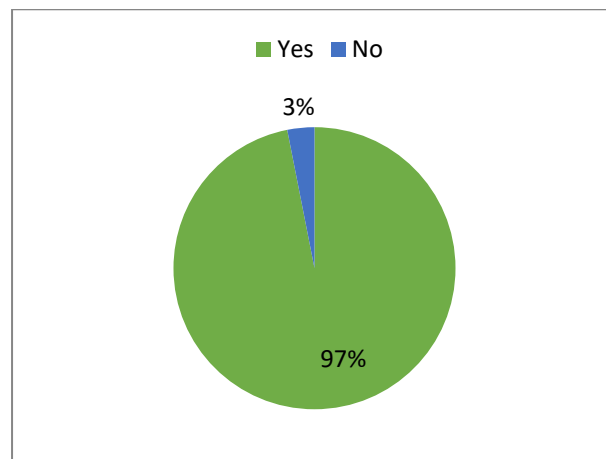
Figure 3.5. Students' Opinions On Adding a Critical Thinking Subject



According to figure 3.5., 78% of the students are open to the idea of adding a subject that is devoted completely to developing their critical thinking, 13% were against the idea and 9% did not know how to feel about it.

Question Six: Do your teachers ask questions during the lecture?

Figure 3.6. Teachers' Questions in The Classroom



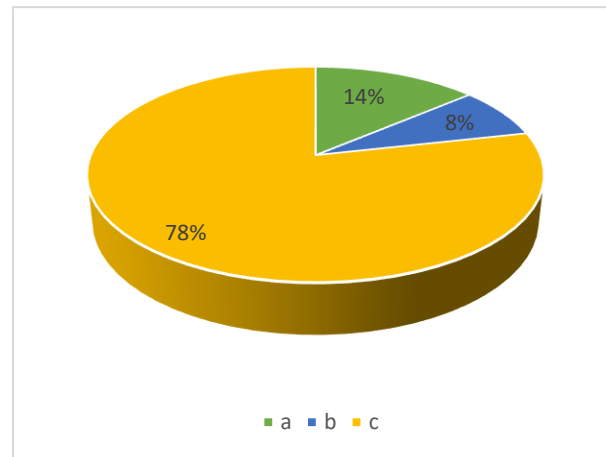
The aim behind this question was to find out whether EFL Teachers implement questions in their lectures. The results showed that 97 % of the respondents answered yes while the rest said no.

Question Seven: What type of questions does your teacher ask?

- a. Questions asked to recall memorized information
- b. Questions to analyse/interpret/evaluate/synthesize/predict...etc.
- c. Both

CHAPTER THREE : PRACTICAL ISSUES

Figure 3.7. Types of Questions EFL Teachers Ask

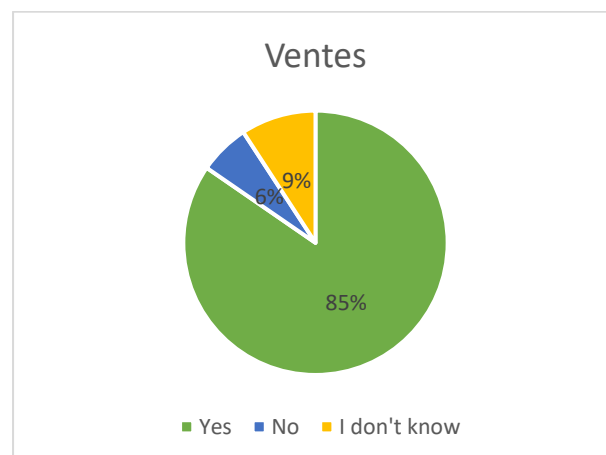


The aim behind this question was to find out what type of questions do EFL Teachers use. 14% of the respondents said they're always asked lower order questions while 8% said their teachers ask them higher order questions, and 78% said that the teachers use both higher and lower order questions in the classroom. This comes to prove that EFL teachers do not only ask questions to recall information but also to motivate critical thinking.

Question Eight: Do you think teacher questioning is helpful to your learning?

- a. Yes
- b. No
- c. I don't know

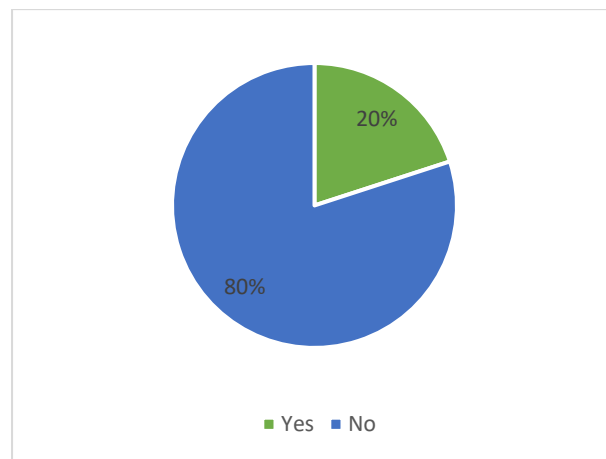
Figure 3.8. Students' Opinions On the Importance of Teacher Questioning



The aim behind this question was to investigate students' opinion on the importance of teacher questioning. As the figure indicates, 85% of the students think that teacher questions are helpful to their learning, 6% of the respondents think it's not important, and only 9% chose the third option. This makes it clear that learners are aware of the importance of the questions asked by the teachers to their learning.

Question Nine: Do you prefer studying without being questioned by the teacher during the lecture?

Figure 3.9. Students' Opinions On Being Asked Questions by The Teacher



The aim behind this question was to investigate students' opinions about being taught without the teachers asking questions. The majority of the respondents (80%) replied with no while 20% said yes i.e. they prefer studying without being asked questions by the teacher. This further confirms the results of the previous question, that the majority of the students realize the importance of teacher questioning by preferring to be asked questions during the lecture.

Question Ten: Explain.

Students' viewpoints from the previous question became clearer when we asked them to justify their opinions. What they accounted for most was that teacher questioning can help in developing their thinking skills, by allowing them to share opinions and learn new

perspectives to think about and analyse, while some students explained that teacher questions help them understand the lesson, and only a few of the respondents thought that teachers' questions were a waste of time. Therefore, the participants' answers can be divided into three categories:

- **Category A:** Teacher questions help with the students' understanding and memorization of information (60%).
- **Category B:** Teachers questions help in developing students thinking skill (20%).
- **Category C:** Teacher questions are a waste of time and a tool for embarrassing the students (20%).

Table 3.1. Students' Opinions On Teacher Questioning

Categories	of N	%
answers given		
Category A	39	60%
Category B	13	20%
Category C	13	20%

Question Eleven: Which category fits you?

- **Category A:** you understand the teacher's question but you can't answer
- **Category B:** you understand the teacher's question, and you know the answer but you don't answer
- **Category C:** you don't understand the teacher's question and you don't answer
- **Category D:** you understand the teacher's question and you answer it

Table 3.2. Types of Students When Answering Teacher Questions

Categories	Category A	Category B	Category C	Category D
N	15	29	01	20
%	23%	45%	1%	31%

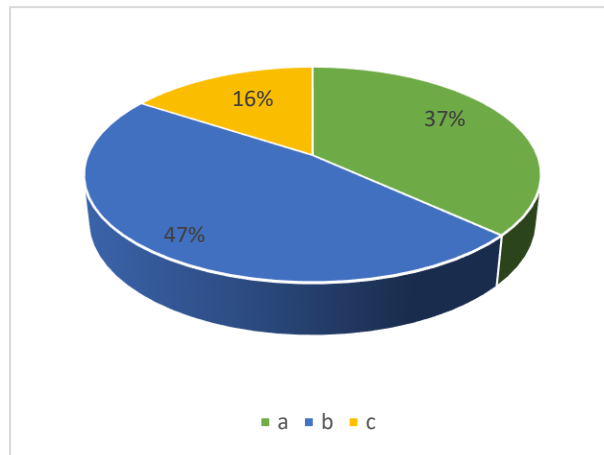
The aim behind this question was to know whether students answer teacher questions or not. 23% of the participants said they understand the teacher's question but they can't answer, 45% said they understand the question, they know the answer but they don't answer, 1% said they don't understand the teacher's question, and 31% said they understand the question and they answer it.

Question Twelve: You chose Category A because

- a. You can't put ideas into words
- b. You don't have the knowledge required by the question
- c. The teacher did not give enough time to formulate the answer

The aim behind this question was to find out students' justification for choosing Category A in Q10. 37% said they don't answer questions because they can't put ideas into words, 47% said they don't answer because they don't have the knowledge required by the question and 16% said that the teacher did not give enough time to formulate the answer.

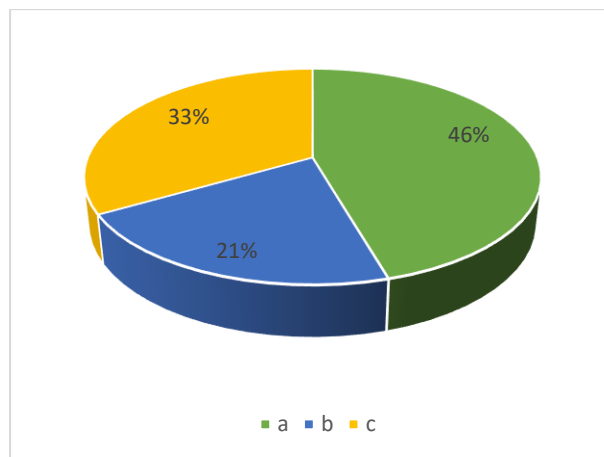
Figure 3.10. Students' Justification for Choosing Category A



Question Thirteen: You chose Category B because

- a. You are shy
- b. Teacher's questions were not challenging
- c. You did not want to answer the question which required your opinion

Figure 3.11. Students' Justification for Choosing Category B



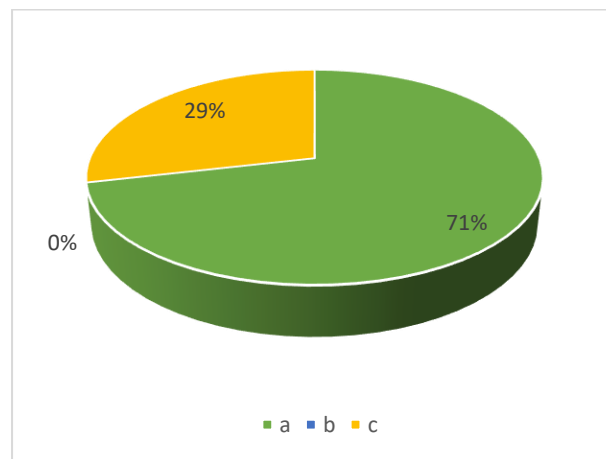
The aim behind this question was to know students' justification on why they chose category B. 46% of the students who chose category B said they don't answer teacher's

questions because they are shy, 21% said they don't answer because the questions are not challenging, and 33% said they don't want to answer the question that requires their opinion.

Question Fourteen: You chose Category C because:

- a. The questions were too difficult and complex
- b. You could not keep up with the pace of the teacher's question
- c. The teacher used complex grammar and vocabulary

Figure 3.12. Students' Justification for Choosing Category C



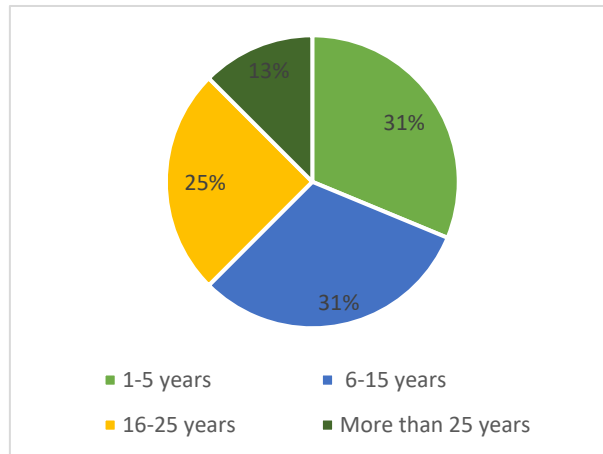
This question aims at finding out students' justification for selecting Category C. 71% said the questions asked by the teacher are too complex for them, 29% said the teacher uses complex vocabulary and grammar.

3.2.2. The Analysis of Teachers' Questionnaire

Question One: Years of experience in teaching English

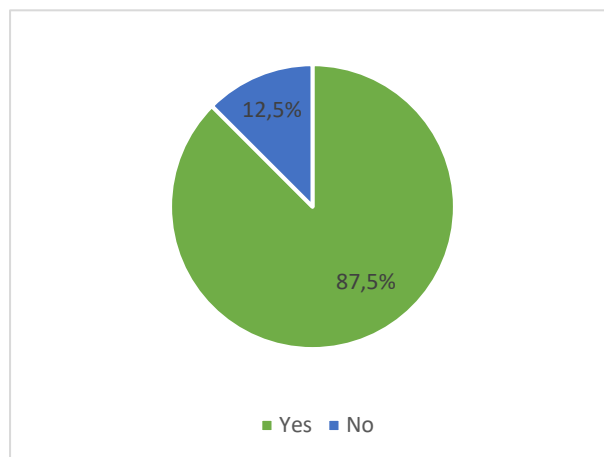
According to figure 3.13., 31% of the teachers have from 1 to 5 years of experience, another 31% have from 6 to 15 years of experience, 25% have from 16 to 25. And 13% of the teachers have more than 25 years of experience.

Figure 3.13. Teachers Experience in Teaching English



Question Two: Are you acquainted with the term teacher questioning?

Figure 3.14. Teachers' Familiarity with Teacher Questioning



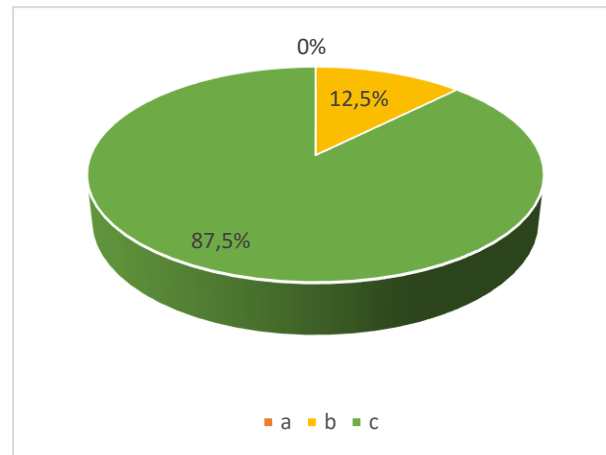
According to the figure, 87,5% of the teachers are familiar with the term teacher questioning, while 12,5% don't know what it is.

Question Three: When designing lesson plans do you implement questions for students to:

- a. Recall memorized information
- b. Evaluate/analyse and synthesize
- c. Both

CHAPTER THREE : PRACTICAL ISSUES

Figure 3.15. Types of Questions Teachers Ask



According to figure 3.15., 12,5% of the teachers ask higher level questions while the majority 87,5% asks both higher and lower level questions.

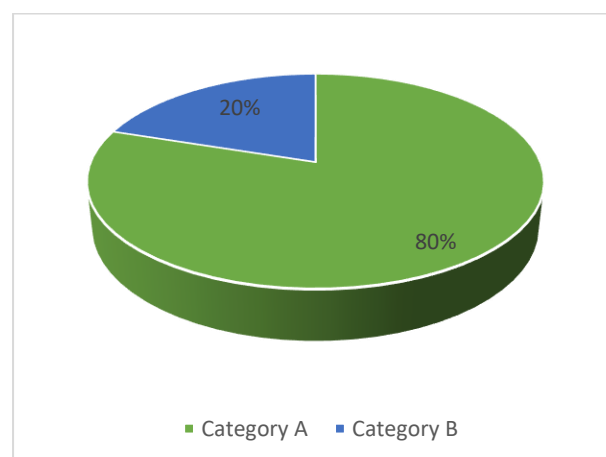
Question Four: When (before/during or after the lesson)?

- Teachers' answers for this question can be categorized into two categories:

Category A: Before and after the lesson (80%)

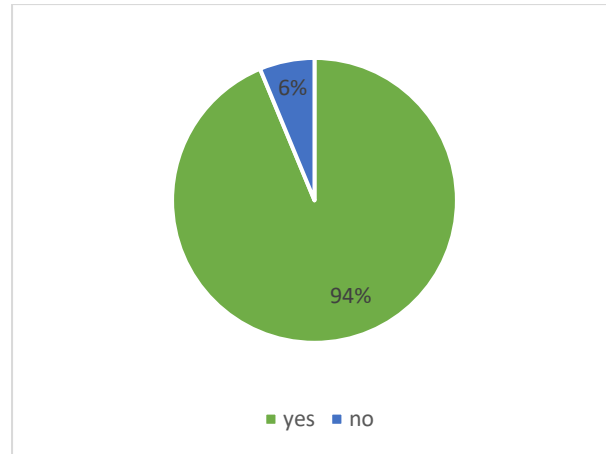
Category B: During the lecture (20%)

Figure 3.16. When Do Teachers Ask Questions



Question Five: Does your questioning tell you more about your students' way of thinking?

Figure 3.17. Students' Level of Thinking According to Teachers' Questions

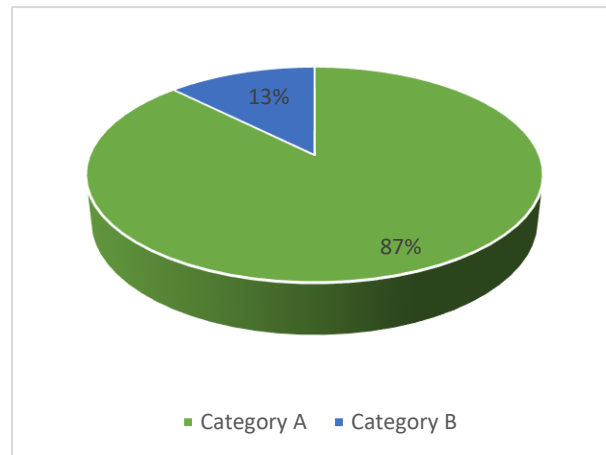


The aim behind this question was to investigate teachers' opinions about the relationship between teacher questioning and students' way of thinking. According to Figure 3.17., 94% of the teachers agree that their questions tell them more about their students' way of thinking and only 6% think it doesn't.

Question Six: How so?

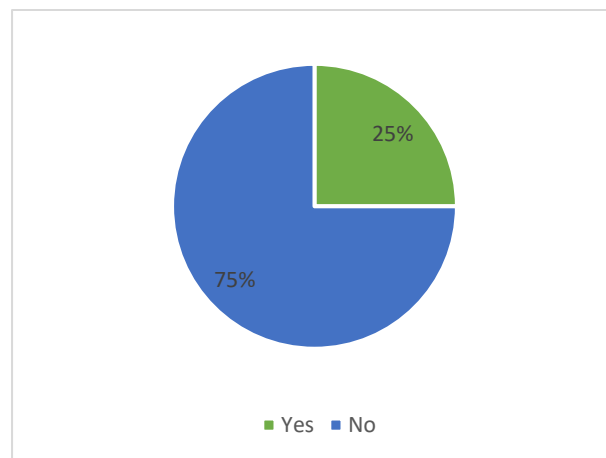
Teachers' answers could be organized into two categories, 87% of the teachers say that students' answers reflect their cognitive levels, abilities, beliefs and their way of thinking (Category A), the rest 13% say that their students do not respond to their thought provoking questions due to complete reliance on memorization (Category B).

Figure 3.18. How Teachers' Questions Help in Figuring Out Students' Way of Thinking



Question Seven: Do you think that English Master Students of the University of Tiaret have the required skills to think critically?

Figure 3.19. Master Students' Level of Thinking



According to figure 3.19., 75% of the teachers believe that English Master students at the university of Tiaret do not have the required skills to think critically, and only 25% think they do.

Question Eight: Why?

According to the results of this question, Four Categories of answers were found, 12% of the teachers think that master students can't think critically because they are grades oriented

learners(Category A), 25% think it is because of lack of motivations on students part (Category B), while 44% think it is due to the shallow and fact based teaching process (Category C), and 19% of the teachers think that Master students do have the necessary skills to think critically because they are often asked to do research and analyse (Category D).

Table 3.3. The Causes Behind Master Students’ Lack of Critical Thinking Skills

Categories	N	%
Category A	2	12%
Category B	4	25%
Category C	7	44%
Category D	3	19%

Question Nine: What strategies do you think would be helpful in building students’ critical thinking capacities?

The results of this question can be divided into three categories: 44% of the teachers suggest asking higher level questions (Category A), 31% suggest using debate and problem-solving activities (Category B), while 25% think it is best to use the student-based approach of teaching (Category C).

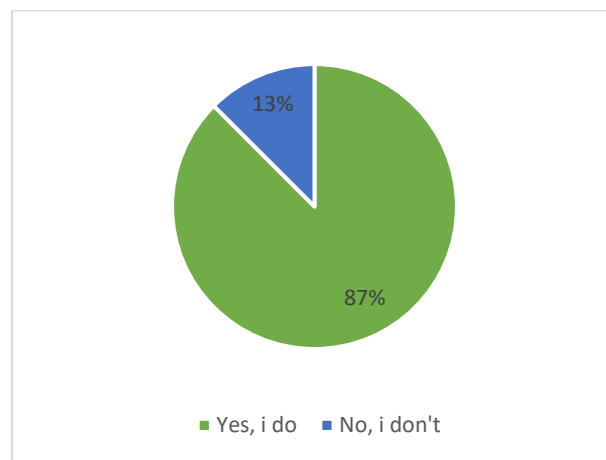
Table 3.4. Helpful Strategies in Developing Critical Thinking

Categories	N	%
Category A	7	44%

Category B	5	31%
Category C	4	25%

Question Ten: Do you believe that asking students more questions at the beginning/during/at the end of the lecture will develop their critical thinking?

Figure 3.20. Teachers’ Opinions On Using Questions to Develop Critical Thinking Skills

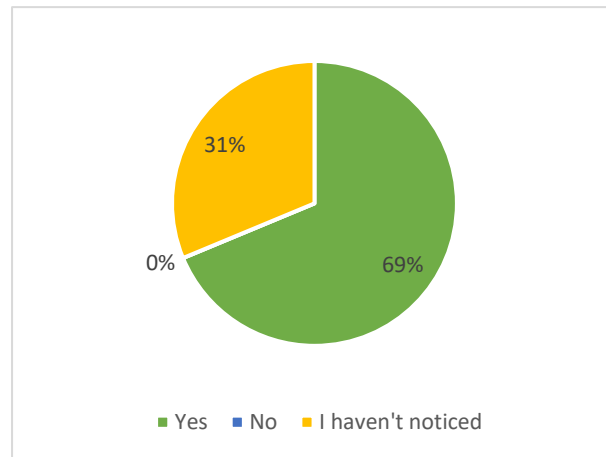


The figure shows that 87% of the teachers agree on the fact that asking students questions will help in developing their critical thinking skill while only 13% think it doesn't.

Question Eleven: Have you experienced any changes in your students’ way of thinking when using questions?

According to Figure 3.21., 69% of the teachers said there was a change in their students thinking after they used questions, while 31% say they haven't noticed any changes.

Figure 3.21. Changes in Students' Way of Thinking.



Question Twelve: In your opinion, what are the most significant obstacles to teaching critical thinking in EFL classes?

- The results of this question revealed different opinions including:
 - A. Lack of language proficiency (6%)
 - B. Shallow and fact based teaching process (13%)
 - C. Time and curriculum restriction (12%)
 - D. Lack of motivation (44%)
 - E. Overcrowded classes and lack of materials (25%)

Table 3.5. Obstacles to Teaching Critical Thinking

Answers	N	%
A	1	6%
B	2	13%
C	2	12%

D	7	44%
E	4	25%

3.3. Discussion of Findings

In this study we suggested a hypothesis about the relationship between Critical Thinking and teacher questioning and how the latter can be used to improve the former, more accurately, if the questions asked were higher level questions according to Bloom's Taxonomy, students' critical thinking will be improved.

In analysing both questionnaires' results it is obvious that both students and teachers realize the importance of teacher questioning in developing students' both understanding and critical thinking skills. Accordingly, students even showed great excitement about the idea of adding a whole subject completely devoted to developing their critical thinking skills.

However, the majority of the participants showed low critical thinking characteristics by admitting that they only sometimes question what they learn. The skill that characterizes best critical thinkers is the habit of questioning every information they receive. The teachers confirmed this fact by admitting that EFL master students at the University of Tiaret do not have the necessary skills to think critically due to lack of motivation, lack of language proficiency and also the teaching method followed by the Algerian Educational system which is characterized by being fact based and shallow in terms of cognitive development.

Focusing on the procedure of questioning, data analysis showed that EFL teachers ask both lower level questions (knowledge, comprehension and application) and higher level questions (analysis, synthesis and evaluation) throughout the lecture, which according to Bloom's Taxonomy is a helpful technique with both student's understanding of the lesson as well as the development of their creative and critical thinking. Because the levels can be

depicted as a stairway, where the teachers can start asking knowledge questions and arrive at evaluation.

Through the questionnaire, teachers confirmed that their questions help them in understanding and developing their students thinking. They ask questions because it tells them more about their students' level of thinking and therefore helps them determine their thinking capacities. When asked questions, their students answers reflect their cognitive levels, abilities, beliefs and their way of thinking. This confirm our hypothesis that teacher questioning can be used in improving both students' learning and critical thinking skills.

The teachers suggested other strategies to help promote critical thinking like problem-solving activities, starting debate-based sessions, using the student-oriented method of teaching. But what they stressed on most is asking higher level questions in order to promote students analyzing, synthesizing and evaluation skills in accordance to what Bloom's taxonomy is based on.

Ultimately, data analysis confirmed that both students and teachers recognize the importance of teacher questioning in developing Critical thinking skills, however, the majority of the students do not answer or engage with teachers' questions for varying reasons: being shy, lack of language proficiency and unwillingness to answer questions that requires their personal points of view. Likewise, the teachers also listed varying reasons that block their attempt at developing students' critical thinking skills including: lack of language proficiency, the shallow and fact-based teaching process, time and curriculum restrictions, lack of materials and overcrowded classes.

3.4. Suggestions and Recommendations

The challenges of the day and globalization which impose English as the international language require students to cope with the world and apply their skills purposefully, therefore

the curriculum would give more importance to critical and creative thinking because they are fundamental to successful, effective and autonomous learning.

In reality, although incorporating critical thinking in English classes is important, the difficulty of implementing such higher order thinking skills may be a concern of language teachers. Although both teachers and learners hold positive views on higher order questions in classrooms in this study, most learners admit that they do not engage with teacher questions for varying reasons, which explains why the learners don't have the necessary critical thinking skills because they are not used to such questions, and therefore they hesitate to answer, and even teachers are not trained appropriately to ask such thought provoking questions.

Stroupe (2006) suggested a set of example questions at different cognitive levels of Bloom's Taxonomy which is level appropriate for lower-level classes. For example, at the analysis level, teachers can ask what is similar or different comparing a learner's favorite movie and his/ her partner's favourite one. At the synthesis level, teachers can ask learners to investigate the movie's director and main characters' life stories reporting back to a group by synthesizing information from multiple sources. In addition, learners can practice thinking at the evaluation level if teachers ask learners to explain why the learners like particular movies (Stoupe, 2006). In those example questions, the topic is a movie, which is simple and easy for even lower proficiency learners to talk about. Although the material dealt with is simple, the question examples by Stroupe (2006) indicate that teachers can still incorporate higher-order thinking skills in lower proficiency classes.

Mixing different cognitive levels questions might be likewise significant. In terms of critical thinking skills development among students, higher level questions are important, and yet, lower level questions are likewise significant, Questions at all levels are significant, contingent upon the objective for which they are planned (Wilén, 2001). In the short run, asking lower level questions can be of greater significance since lower level questions are useful for

educators in diagnosing how much their students are prepared to climb to more elevated level understanding. If learners lack the essential knowledge upon which further opinions are based, their discussions may not be reflective and meaningful. What students learn by responding to lower-order questions form the basis for answering higher-order questions that lead to learning at higher-order levels (Wilén, 2001). Higher-order questions are important. However, at the same time, knowledge and comprehension questions are important because all higher-order thinking is based on knowledge and principles. In addition to the importance of asking different levels of questions in terms of critical thinking skills, mixing lower-order and higher-order questions in a lesson may be able to help learners to achieve higher order thinking. (Wilén, 2001).

Providing sufficient time to think is another factor that influences learners' responding behaviour in language classes. In the questionnaire, a small number of learners chose "the teacher did not give sufficient time to think" when the learners could not answer even though the learners understood the teachers' questions. This may imply that a longer time to think is necessary, especially when learners are asked to exercise cognitively more demanding thinking skills. Therefore, the time that teachers provide so that learners can think may play an important role in question-answer interactions in language classrooms.

Wait time is a factor of great influence in the language classroom. Teachers provide a certain amount of time between an initial question and the next action such as calling on a learner or rephrasing the initial questions (Goodwin et al, 1983). These pauses are called wait time which holds a significant part of teachers' questioning skills (Ma, 2008). The wait time influences the type of responses elicited from learners. In Tan's study (2007) the researcher claimed that the disparity between learners' ideas and their English competence was found especially when cognitively demanding questions were concerned. The researcher argued that although the participant learners were young adults who were able to think in depth, their

English competence to express what they wanted to express was limited, relating this disparity to insufficient wait time or therefore lack of it by some teachers (as cited in Tan, 2007).

Research on questioning and learners' information process shows that at least three seconds are necessary in order to understand the question, consider necessary information, construct answers, and start responding. Studies show that a wait time of three to five seconds (Goodwin et al, 1983) or two to four seconds (Ma, 2008) positively contributed to learners' responses. Inappropriately long wait times, for example a 20-second wait time, is, however, detrimental to learner interactions in classrooms (Goodwin et al, 1983). The levels of teachers' questions are one of the factors on which the length of wait time is dependent (Goodwin et al, 1983). For recitations of previously learned knowledge, wait time is not needed in most cases (Wilen & Clegg, 1986). In general, relatively shorter wait-time such as only three seconds is needed for lower-level questions. In contrast, five seconds or more may be necessary for learners to answer higher-level questions. For more complex higher-level questions, sometimes a few minutes of wait-time can be provided for learners to consider a question and note their ideas. (as cited in Tan, 2007).

Group work can also be of great use. As researchers (Brown, 2007; Davis, 2001; Larsen-Freeman & Anderson, 2011) claim, the use of group work can be helpful in lowering students' anxiety, and allow learners to talk more actively in English. According to the learner interview results, group work can function as a factor for lowering anxiety and therefore encourage learners' participation. In addition, the use of group work can provide more sufficient thinking time during which learners can construct their ideas. Providing thinking time may be a significant benefit of using group work because thinking time and the difficulty of putting thoughts into English were major concerns that learners described in their interviews. Learning from each other was mentioned in learner interviews, and this may also be a benefit of group

work that can encourage learners to participate in question-answer interaction between teachers and learners. (as cited in Tan, 2007).

Conclusion

This chapter was entirely devoted to methodology of this research, the findings and suggestions and recommendations. There is very little research on critical thinking skills in the EFL context in general and in relation to teacher questioning in particular. The analysis of the results revealed that teacher questioning is a useful tool in developing students' critical thinking skills, however, there are many factors that may affect the process of using the questioning technique. Despite students' awareness of teacher questioning and its importance, they hesitate to answer most questions asked in the classroom.

GENERAL CONCLUSION

On account of language learning, particularly learning English as a foreign language, where a blend of cultural, historical, social, and political centred issues is included, the significance of improving students' critical thinking skills is considerably increasingly noticeable, and should be truly thought over. Unfortunately, there is a lack of research to show the need of enhancing critical thinking in EFL classes. Especially in The Algerian context where there is an extensive reliance on the traditional, fact based and shallow teaching method.

The present dissertation is built on the fact that asking students higher level questions from bloom's taxonomy and encouraging explanations can help them develop important critical thinking skills. So, by modelling good questions, teachers can help improve students both learning and their thinking skills.

The study began with a review of the available literature that provided information about critical thinking, teacher questioning and the relationship between the two. It showed that promoting critical thinking has become an explicit and indispensable part of educational curricula in many universities. Using thinking skills in the classroom requires the collaboration of well-trained teachers and learners who are aware of this skill. Hence, teachers will provide different types of higher level and lower level questions that challenge and instruct learners, who, in return, will show more interest and desire to promote their thinking.

After analysing the data collected via the questionnaires, the researcher came up with a number of conclusions with reference to the hypotheses and research questions provided earlier. The results obtained show that both teachers and learners are aware of the importance of developing Critical thinking skills and that they fully recognize the crucial role teacher questioning plays in the classroom. The interpretations of the results confirmed that teacher questioning can be used to develop students critical thinking skills, more importantly, asking different cognitive levels of questions based on bloom's taxonomy (lower-order and higher-

order questions) can be a helpful tool in promoting both students' learning and critical thinking skills.

All in all, the results of the study show that promoting critical thinking skills in EFL classes through asking higher level questions is a very demanding job but fruitful if well done. It requires efforts from all parts of the teaching and learning operation especially the teacher who should be well prepared and the learner who has to adopt the appropriate learning strategies that would help him be aware of the goals behind learning in a given subject.

This study has got some limitations in terms of the population as its results cannot be generalized, unless other studies are carried on a larger scale and with a larger sample population. The other limitation is concerned with the use of questionnaires; the data would have been substantially accurate if the questionnaires were linked with classroom observation. Further studies could be conducted to experiment with the difference of asking higher level and lower level questions on students' critical thinking skills. More inclusive, exhaustive studies may fully examine students' critical thinking level by using a critical thinking test, for example by using the Watson Glaser Critical Thinking Appraisal Test (WGCTA). We highly recommend further qualitative and quantitative studies about the strategies used by teachers when asking questions such as repetitions, probing, wait time, and a further investigation is needed to examine the correlation between different wh words in teacher questions and the length of students' utterances and syntactical complexity. It is recommended to read some related literature such as Bloom's work and Paul and Elder's books on both critical thinking and Socratic Questioning.

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Appendix 1

Students' Questionnaire

Dear students,

We would like to ask you to help us by answering the following questions, this questionnaire serves as a data collection tool for Master's Dissertation concerning the use of teacher questioning in developing Critical thinking in EFL classes. We are interested in your personal opinion, so please give your answers sincerely as only this will guarantee the success of the investigation. We personally want to thank you for every second invested in our research

1. Level of education

L1

L2

L3

M1

M2

2. Are you familiar with the concept "Critical Thinking"?

Yes

No

3. If your answer is yes, how?

You read about it

Your teacher mentioned it

You had it as a lesson

4. Have you ever questioned what you are being taught?

- Always
- Sometimes
- Never

5. What do you think about devoting a whole subject for developing students' critical thinking skills?

- With
- Against
- I don't know

6. Do your teacher ask questions during the lecture?

- Yes
- No

7. What type of questions does your teacher ask?

- Questions asked to recall memorized information
- Questions to analyse / interpret/ evaluate/ synthesize...etc.
- Both

8. Do you think teacher questioning is helpful to your learning?

- Yes
- No
- I don't know

9. Do you prefer studying without being questioned by the teacher during the lecture?

Yes

No

10. Explain

.....
.....

11. Which category fits you?

Category A: you understand the teacher's question but you can't answer.

Category B: you understand the teacher's question, and you know the answer but you don't answer.

Category C: you don't understand the teacher's question and you don't answer.

Category D: you understand the teacher's question and you answer it.

12. You chose category A, because

You can't put ideas into words.

You don't have the knowledge required by the question.

The teacher did not give sufficient time to formulate the answer.

13. You chose Category B, because

You are shy.

The teacher's questions were not challenging.

You did not want to answer the question which required your opinion.

14. You chose Category C, because

- The question was too difficult and complex.
- You could not keep up with the pace of the teacher's question.
- The teacher used complex grammar and complex vocabulary.

Appendix 2

Teachers' Questionnaire

Dear teachers,

We would like to ask you to help us by answering the following questions, this questionnaire serves as a data collection tool for Master's Dissertation investigating The use of teacher questioning in developing Critical thinking in EFL classes. Whatever your qualifications and experience in the field, your answers will be of a great help to us. We thank you in advance for your answers and the time invested in our questionnaire.

1. Years of experience in teaching English?

.....

2. Are you acquainted with the term Teacher Questioning?

Yes

No

3. When designing lesson plans, do you implement questions for students to:

Recall memorized information

Evaluate/analyse/synthesize

Both

4. When? (before/during or after the lesson)

.....

5. Does your questioning tell you more about your students' way of thinking?

Yes

No

6. How so?

.....

7. Do you think that English Master students of the university of Tiaret have the required skills to think critically?

Yes

No

8. Why?

.....

9. What strategies do you think would be helpful in building students' critical thinking capacities?

.....

.....

.....

10. Do you believe that asking students more questions at the beginning/during/at the end of the lecture will develop their critical thinking?

Yes, I do

No, I don't

11. Have you experienced any changes in your students' way of thinking when using questions?

Yes

No

I haven't noticed

12. In your opinion, what are the most significant obstacles to teaching critical thinking in EFL classes?

.....

.....

.....

.....

Résumé

Le présent travail vise à étudier dans quelle mesure le questionnement des enseignants peut être utile pour promouvoir les compétences de pensée critique des élèves, en conséquence, l'objectif principal est d'examiner les niveaux cognitifs des questions que les enseignants d'anglais posent aux apprenants d'EFL à l'Université de Tiaret sur la base de la taxonomie de Bloom. Pour augmenter la validité de notre recherche, deux questionnaires en ligne ont été envoyés à un échantillon de 16 professeurs d'anglais et de 65 étudiants de Master et de licence d'anglais à l'Université d'Ibn Khaldoun Tiaret. Les données obtenues ont été comparées à la taxonomie de Bloom, afin d'examiner les types de questions posées en classe selon les six niveaux cognitifs de la taxonomie de Bloom consistant en questions de niveau plus simple (la connaissance, la compréhension et l'application) et des questions de niveau plus complexe (l'analyse, la synthèse et l'évaluation). Les résultats montrent que tant les enseignants que les élèves sont conscients de l'importance du questionnement des enseignants dans le développement de la pensée critique des élèves.

ملخص

العمل الحالي يهدف إلى التحقق من مدى فائدة اسئلة المعلم في تعزيز مهارات التفكير النقدي لدى الطلاب، وبالتالي فإن الغرض الرئيسي هو فحص المستويات المعرفية للأسئلة التي يطرحها مدرسو اللغة الإنجليزية على متعلمي اللغة الإنجليزية كلغة أجنبية في جامعة تيارت بناءً على تصنيف بلوم. لزيادة صحة بحثنا، تم إرسال استبيانين عبر الإنترنت إلى عينة مكونة من 16 مدرساً للغة الإنجليزية و65 طالباً للماستر والليسانس في اللغة الإنجليزية في جامعة ابن خلدون تيارت. تمت مقارنة البيانات المكتسبة بتصنيف بلوم، من أجل فحص أنواع الأسئلة المطروحة في الفصل الدراسي وفقاً للمستويات المعرفية الستة لتصنيف بلوم والتي تتكون من أسئلة ذات مستوى أدنى (المعرفة، الاستيعاب والتطبيق)، وأسئلة ذات مستوى أعلى (التحليل، التركيب والتقويم). تظهر النتائج أن كلاً من المعلمين والطلاب على دراية بأهمية استجواب المعلم في تنمية مهارات التفكير النقدي لدى الطلاب.