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THE SOCRATIC QUESTIONNING METHOD, A PORTAL TO FOSTERING EFL LEARNERS' CRITICAL THINKING AND AUTONOMY.

The case of first year LMD students at the department of English, Ahmed Salhi University Center, Naama

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DEDICATIONS

For those who believe they can make a change even with the simplest deed.

Specifically **Adam**, **Achwaq**, **Najet**, **Marwa** and **Romaissa.**

Skål

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Abstract

At the heart of language learning, lies the ability to think and reflect adequately on the knowledge seated in the mind, germinating the faculty of analyzing, probing beneath the surface of ideas, infer and deduce conclusions. which as observed is not the case of most EFL classrooms, in fact, thinking is seldom neglected by teachers where deductive lecturing is most dominant, reducing learners' chances to participate, share their ideas and engage in challenging activities, to become passive and dependent on teachers. In an endeavor to address some changes in the pedagogical practice, the Socratic method is thought to be most suitable, which through a line of stimulating questions generated either from the teacher or the learners, labeled in a form of a dialogue, learners will trace the roots of their own knowledge, construct their own input, analyze and draw conclusions thus, become autonomous. This study investigates the effectiveness of using the Socratic Method in fostering EFL learners' critical thinking and autonomy. With the aid of using a set of research instruments which are: classroom observation, students' questionnaire, and teachers' interview, the findings advocated that there barely exists any teacher-student relationship in traditional classrooms, where teachers are lecturers, and learners are the passive receptors. In addition to that, learners are hardly engaged in tasks that require mental abilities, if so, they are usually questions or presentations which have their roots in online resources, simply put, learners are not the source of knowledge, but depend on teachers or outside factors to find answers. However, with the treatment of the Socratic method on the experimental group, results have shown that through probing questions, learners are guided to knowledge until reaching a deep understanding of the topic, through analyzing, synthesizing, and drawing conclusions, to become as a result critical thinkers and autonomous.

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General Introduction.

GENERAL INTRODUCTION:

Linguistics has set upon itself through a set of theories in explaining how language learning effectively takes place, illustrating that the knowledge students bring into the task, already exists in their minds, (Chomsky,1957) or is constructed through exposure to the environment (Vygotsky,1978), henceforth input is but stimulated by the aid of teachers, which is not the case in the majority of EFL classrooms, learners do not construct their own understanding of what is being learned but rather it is provided for them. Thus, it is more than expected that learners become cognitively passive and dependent on teachers. As a remedy, certain elements must be investigated as to how can learners be guided into their own thinking, bringing the Socratic method at the core of pedagogy, which aims at addressing learners with stimulating questions that trigger them to ask further questions, ponder in depth what is being learned through tapping into their own reservoir of knowledge, developing their abilities to evaluate, problem solve and draw conclusions, hence, accompanying them to more autonomous performance in the process.

At the level of the institute of foreign languages department section of the English at Ahmed Salhi University Centre of Naama, the present study attempts to investigate the effects of the Socratic Method as an alternative pedagogy in fostering EFL learners' critical thinking and autonomy. The bulk of this study thus seeks to achieve specific aims, namely:

1. To investigate the co-relation between questions, critical thinking and autonomy.
2. To introduce learners as well as teachers to the art of asking question,
3. Foster deeper learning, through engaging learners in a set of stimulating questions to guide them to input discovery and self-knowledge, empower them to connect ideas, interpret, form logical judgments, and problem solve, becoming self-reliant.

Therefore, the present research work endeavors to answer the following questions:

1. In what manner do teachers address questions in the classroom?
2. How does the Socratic Method help in enhancing learners' critical thinking and autonomy?
3. Is the learner's independent thinking stimulated in the classroom?

Trying to answer these questions, the next hypotheses are advocated:

1. It has been observed that most addressed questions in traditional classrooms are non-thought stimulating, teachers tend to ask questions only to get thought stopping answers not to generate further questions.
2. It is hypothesized that questioning is intimately connected with critical thinking, it is important for the excellence of thoughts. Questions define tasks, express and outline problems, and through critical thinking, most logical solutions are provided, therefore, learners master the power of their own minds to pursue understandings of the content using their own thinking, which ultimately provides space for autonomy.
3. It has been remarked that most traditional classrooms are dominated by teacher-centered methods; learners are highly passive and dependent on teachers, thus, learners lack autonomy.

This research is divided into two chapters. The first chapter aims at defining basic concepts related to the literature review such as critical thinking, autonomy, the Socratic Method, its historical roots, and its characteristics. The second chapter attempts to show what, where, when, and how the data were collected in addition to the analysis and the interpretation of the collected data.

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1.1 Introduction

Learning and thinking correlate with each other, to learn without thinking is like a leaking boat which will soon drown and be forgotten, and to think without learning is an utter desolation, to combine both is to improve the mind and move with learners to the next level, where they are able to examine, analyze, synthesize and draw conclusions by their own efforts. The Socratic Method, the primary concern of this research, aims at achieving the aforementioned goals, thus it is important to know what this method is, but before that, it is also vital to know what its constituents are, critical thinking and autonomy, in order to create the necessary conditions for its development.

1.2 What is Critical Thinking?

"Critical" like most words, is found in Greek origins, which is "Kritikos", meaning to judge, arose out from Socratic argument comprised thinking (McGregor, 2007), to be later on borrowed by Latins to become "'Criticus'' and passed on to other cultures until it became universal . Thinking is to reason, deliberate, rationalize, calculate, problem solve, to work something out. It is also to attend to, pay heed to, have regard to, have the notion of, to bear in mind. It is to consider, meditate, ponder over, to reflect, and to picture in the mind, conceive, create, and imagine. According to Critical Thinking Cooperation (2006) critical thinking is an ability which is beyond memorization. Philosophers such as Facione (1990;2015), went " Critical thinking is a purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation and inference, as well explanation of the evidential, conceptual, methodological, criteriological or contextual considerations upon which that judgment is based". Much in line of thought ,Scriven and Paul, 2003 (as cited in Petress, 2004) stated "Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from

or generated by observation, experience, reflection, reasoning, or communication as a guide to belief and action."

Despite the diversity in defining critical thinking among scholars, Dewey the pioneer of CT concluded that the below-mentioned steps are the main features and characteristics assigned for CT.

1. Suggestions, in which the mind leaps forward to a possible solution.
2. An intellectualization of the difficulty or perplexity into a *problem* to be solved, a question for which the answer must be sought.
3. The use of one suggestion after another as a leading idea, or *hypothesis*, to initiate and guide observation and other operations in the collection of factual material.
4. The mental elaboration of the idea or supposition as an idea or supposition (reasoning, in the sense on which reasoning is a part, not the whole, of inference).
5. Testing the hypothesis by overt or imaginative action. (Dewey 1933: 106–107; italics in original).Critical thinking has a crucial role in learning a language, and a qualified teacher knows the relation between them in shifting learning from being passive to active along with improving learners' minds.

1.3. Critical thinking in relation to language learning and teaching:

"If he (the professor) is indeed wise, he does not bid you enter the house of his wisdom, but rather leads you to the threshold of your own mind"

Khalil Gibran (1923)

One cannot mention critical thinking without accounting for John Dewey's contributions, Benjamin Bloom's taxonomy, and the cognitivists'

concept of metacognition. John Dewey throughout his life and books had invested to give a precise meaning to what thinking means and its value if allocated within the realm of learning and teaching. He writes "no one doubts, theoretically, the importance of fostering in school good habits of thinking". Dewey (1916, p.159), further argued that "thinking is the method of intelligent learning, of learning that employs and rewards the mind". Thus "thinking originates in situations where the course of thinking is an actual part of the course of events and is designed to influence the result….The object of thinking is to help reach a conclusion, to project a possible termination on the basis of what is already given" (Dewey, 1916,p.154). And "since the situation in which thinking occurs is a doubtful one, thinking is a process of inquiry, of looking into things, of investigating". For Dewey then, "all thinking is research, and all research is native, original, with him who carries it on, even if everybody else in the world already is sure of what he is still looking for"

Supporting the testimony of Dewey, the rationalists and the constructivists had also associated in explaining the relationship between thinking, teaching, and learning.

The rationalists such as Chomsky (1959), ,Lyons (1970), cook and Newson (1995), believed that the mind and everything related to it as thoughts and consciousness are a decisive part of language learning rather than just human behavior.

The constructivists like Vygotsky (social) and Jean Piaget (mental), although they may disagree on from where knowledge originates, both agree on the power of thinking in developing knowledge.

1.3.1 Bloom's Taxonomy

Thinking cannot be separated from the idea of Benjamin Samuel's Taxonomy (1956), better known as Bloom's taxonomy, which focused on the cognitive domain. Whereby, the emphasis is placed on the hierarchical nature of knowledge and providing the strategies required in teaching to develop thinking which he perceived as a vital component to knowledge to take a place.

His hierarchy consists of five interconnected categories: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. Or as updated by theorists and instructional researchers in 2001: remember, understand, apply, analyze, evaluate, and create. Bloom takes learners through a journey to critical thinking, where they have to pass by those stations until arriving to the determined destination, accompanied with teachers' instructions to guarantee the safety of the journey. Teachers as believed by Bloom must integrate and ask the right questions and plan the activities that dig deeper into learners' hidden knowledge to attain the one goal that is constructing knowledge individually through the patterns already mentioned rather than passively receiving it from teachers.

1.3.2 Metacognition

To engage in critical thinking one must undergo some specific metacognitive skills that researchers regard as vital to be nurtured in learners. Metacognition is the ability to be aware of, monitor, and evaluate one's thinking. Metacognition does not occur automatically; it is the result of long-term development of the cognitive system [Jacobson, 1998]. According to Mat lin [1989], metacognition is "the knowledge of and awareness about our own cognitive processes." This self-understanding of how one learns to develop to include domains other than just the cognitive domain. (Schoenfield, 1987) considers beliefs, attitudes, and self-regulation subject to the metacognitive process. In the realization that each individual makes a number of decisions between the stimulus and the response, cognitive psychologists have described the "power" that directs the learning to short-term memory or long-term memory as the "Executive Controller" or metacognition. (Ashcraft,1989) states that this awareness of the learning process metacognition is a power that can be learned. This seems quite analogous to the old adage: One must learn to think in the manner appropriate to the discipline, or the Socratic admonition to "know thyself".

As mentioned above, learning, teaching, and thinking are closely correlated with one another in a fairly complex structure. Thinking incorporates reasoning, evaluating, analyzing, judging, and problem solving, learning occurs when the mind of the learner can connect the current level of knowledge with the prior one during learning. And teaching thinking means indulging all the necessary cognitive skills within classroom activities to enhance learning and teaching. Moreover, learners become able to recognize their own thoughts and others, choose which strategy is most needed to improve which language skill, they learn how to evaluate, synthesize, and choose what to take in, what to change and what to leave, shifting what was based on memorization and short term memory to long term cognitive system development that nourishes dependency and autonomy within them.

1.4 Autonomy

In order to fully understand the concept of autonomy, one must first tackle its' emergence.

1.4.1 The Emergence of Autonomy

Although autonomous language learning has existed for as long as humans have used language to communicate with the environment, the concept has received conscious attention in the field of language education only for a few decades, but increasingly so. The emergence of autonomy as associated with learning can be dated back to the wider social changes concerning politics, education, and psychology in the 1960s (Gremmo and Riley 1995: 152-154). Since then the interest in learner autonomy has grown, and currently the concept intrigues numerous scholars around the world, and it can even be seen as one of the most important goals of education. Autonomy first began to be addressed in the foreign language (FL) teaching field with the emergence of the communicative approach. Before that, autonomy was allowed no space within the classroom, considering that the teacher commonly controlled all learning activities and the students' rights were limited to the choices made by the

school. Even though learner autonomy has received interest in the field of education, and in language learning in specific, its definition tends to vary in the literature.

1.4.2. What is Autonomy?

Various definitions are used in the literature to refer to learner autonomy with nuances based on versions of it such as learner autonomy, learner independence, self- direction, autonomous learning, and independent learning. With all these references to autonomy notwithstanding, there is consensus on the basic definition of autonomy as being "the ability to take charge of one's own learning" (Holec, 1981:3). Many definitions have since been given to the term, depending on the writer, the context, and the level of debate educators have come to. It has been considered as a personal human trait, as a political measure, or as an educational move. This is because autonomy is seen either (or both) as a means or as an end in education. Dickinson (1987:27) sees autonomy as "a mode of learning, one in which the individual is responsible for all the decisions connected with her learning, and undertakes the implementation of these decisions". Freire (1997) on the other hand understands autonomy as the learner's capacity and freedom to construct and reconstruct the taught knowledge. Although the concept of freedom is still an important issue, Freire does not disregard the importance of the teachers whose role, in his view, is not to transmit knowledge, but to create possibilities for the students' own production or construction of knowledge. (in Borg and Al-Busaidi, 2012:4) states that: "It is not self-instruction/learning without a teacher, it does not mean that intervention or initiative on the part of a teacher is banned; it is not something teachers do to learners; i.e. a new methodology; it is not a single easily identifiable behavior; it is not a steady-state achieved by learners once and for all", defining autonomy in terms of what it is not rather than what it is. Another key contribution to autonomy was that of Little (1991), who claims that "autonomy is a capacity for detachment, critical reflection, decision making, and independent action." For him, this capacity includes the

planning, monitoring, and evaluating of learning activities and involves both the content and process of learning. Benson (2001) further emphasizes the fact that the way teachers organize the practice of teaching and learning will influence, both positively and negatively, the development of autonomy among students. The learner's own thinking has to be respected, and students must always see the point of what they are learning and be free to pursue their own conceptions of this in their own ways. In other words, autonomy means the ability to take charge of one's own learning, independently or in collaboration with others. An autonomous learner will take more responsibility for learning and is likely to be more effective than a learner who is reliant on the teacher, by setting his own goals, reflecting on his progress, and seeking opportunities to practice outside the classroom.

1.4.3. Characteristics of an Autonomous EFL Learner

According to Lowry (2008), autonomous learners:

1. Have insight into their own language learning styles and preferences as well as the nature of the task itself.

2. Take an active approach to learning tasks, selecting the learning objectives for themselves.

3. Are willing to take risks, using any means at their disposal to convey meaning.

4. Are good guessers. They use clues effectively and make legitimate inferences.

5. Are prepared to attend to form as well as to the content, (placing importance on accuracy as well as appropriacy)

6. Willing to revise and reject hypotheses and rules that do not apply

7. Have a tolerant and outgoing approach to the target language.

After having tackled critical thinking and autonomy, it is worth knowing what is the advocator of such outcomes, that is the Socratic Method.

1.5. The Socratic Method

To possess the four language skills alone is not of so much use if someone does not know how to process what he is being addressed, think critically about it to deliver the appropriate answer, or revisit the prior one. As observed, most schools place a strong focus on developing learners' linguistic skills, without paying much attention to teaching them how to think. The majority of educators would agree that their learners' cognitive skills are hardly involved in the face of receptive lectures which tells a lot about the role of the teacher and the environment learners acquire knowledge from.

In the light of challenging the odds to encourage learning beyond memorization, and helping students to invest their cognitive potentials in learning a language and develop higher-order thinking skills and autonomy in the process, the Socratic Method fits nicely as a remedy to recitation-like sessions.

As a rule of thumb: "Tell me, and I will forget. Show me, and I will remember. Involve me, and I will understand." The Socratic Method is an exploratory dialogue centered (Copeland, 2005) praises inquiry and interaction with a text, serving as a basis for discussion (Strong, 1997), whereby participants through asking questions, especially open ended ones, end up articulating and developing their voices (Ball & Brewer, 2000).

In this section, the researchers highlighted the merit role of the Socratic Seminar in the treatment of the traditional classroom by identifying what is the Socratic Method, its historical roots, and main components, offering in-depth an explanation of each. Afterward, present the cause-effect relationship between the Socratic Method, critical thinking, and autonomy, and lastly, the advantages and disadvantages of the Socratic Method are attained.

Everything is only apparent and exists when related to its' root, one catches flashes of the Socratic Method only with regard to Socrates.

1.5.1. The Origin of the Socratic Method

Rewinding the clock, to the Greek era where once lived an omniscient philosopher known as Socrates, who had a belief that each human being is born with a purpose in life, and it is his duty to fret out the truth of his essence in oneself or others. His journey of pursuing the truth began by asking deeper probing questions such as" what is a good life?" " What is virtue?", "can someone learn about virtue?" nurturing his disciples' minds with his beliefs of examining life and infecting them with his delight of learning. Socrates' ways of teachings could be summarized in his quote "I cannot teach anybody anything but I can make you think". Throughout his life, he encouraged people to look inside themselves to find answers, to dig beneath the surface of ideas, revive the dormant speculations they have, examine them by using logic and reason before regarding them as the truth. His hypothesis about the nature of the physical world started by his frustration of asking deeper stimulating questions, namely his dialogues with the young men of Athens(the Apology). He feigned ignorance and pretended to have no answers himself so as to let his respondents think, examine, probe, analyze and explore their already existing knowledge to eventually reach full, deep, and self-understanding of life, oneself, and others. He stressed the powerfulness of self-understanding when he said;

> **"It is clear that they do this, not because they have ever learned anything from me, but because they have found in themselves many beautiful things and have brought them forth. But the delivery is due to God and me"** . **(Ball & Brewer, 2000, p.2)**

Although Socrates' method and philosophy had a significant impact on Greek and Roman thoughts, his ideas were largely forgotten during the Middle Ages, however, it was until the twentieth century that they were resurrected

from Plato's dialogues, by Neo-Kantian German philosopher Leonard Nelson who advocated in indulging the methodology to the field of education.

1.5.2. Going Backward to Move Forward With Education

Out there among the residues of history, in an attempt to sync Socrates and his beliefs into a method to move forward with education, the term *The Socratic Seminar* was manufactured by Scott Buchanan in1937 in his work with St. John's College New Program. The term continued to appear in other organizations such as: The Center for Socratic Practice, The Touchstones Project, Junior Great Books, the National Paideia Center, and the Coalition of Essential Schools (Strong, 1996, p.5).

The period that spans between 1910 and 1940, colleagues in the world of education began implementing The Socratic Seminar (Copleand, 2005). In 1982 the method hit the mainstream in education when Mortimer Adler's Paideia Proposal: An Educational Manifesto was released. Adler (1982) stressed the need for all students to be given an opportunity to receive an education of a democratic society, one that would give "preparation to go on learning, either at advanced levels of schooling or in adult life, or in both" (p. 15). Perpetuating in the same line of prosperity, the method was adopted by many educators in their classroom such as: Mortimer J. Alder (1982); Dennis Gray (1989); Lesley Lambright (1995); Michael Strong (1996); Margaret Metzger (1998); Wanda H. Ball &Pam Brewer (2000); Victor J. Moeller & Marc V. Moeller (2002); and Matt Copeland (2005)….etc.

To frame more understanding of The Socratic Method, after having dealt with its roots, starting from Socrates until it gained attention within the field of teaching, the following is dedicated to provide its definition in details.

1.5.3. Defining the Socratic Method

Before proceeding with the definition, it is important to note that under the umbrella of The Socratic Method falls many pedagogies claiming their origin to be from Socrates' method including: Socratic Questioning, Socratic Case Method, Socratic Dialogue, and Socratic Seminar. Albeit the mere differences between them, they are not similar and are employed for differing applications and so defined with slight variations. Yang, Newby, and Bill (2005) described Socratic Questioning as using probing and clarifying questions in a discussion. Socratic Case Method, which is similar to Socratic Questioning, is best known for being the most popular teaching method for United States law schools and defined as having a primary goal to seek underlying principles through a teacher-led class discussion (Parkinson & Ekachai, 2002). Socratic Dialogue can be defined as:

> "**A philosophical group dialogue in which the participants guided by a facilitator and a number of ground rules strive to reach a consensus in answering a fundamental question on the basis of a real-life example or incident with the purpose of achieving new insights"**
>
> **(Knezic et al., 2009, p. 2).**

This study is concerned with the Socratic Dialogue, Questioning, and all together are referred to as the Socratic Method, which is named for the embodiment of Socrates' beliefs on the power of questions, which he believed that each person or learner, in this case, resided an untapped knowledge that could be stimulated through probing questions, in which premise by premise, he constructs a deeper block of input, further elaborated, the primary concern of the method is to elicit learners' voices, creative ideas, assumptions, beliefs, and thoughts regardless of their validity and accuracy, the teacher seeks assent for their hidden treasure to be communicated, altered and corrected by their own effort. Copeland (2005) points out, "it is the nature and process of that conversation that differs radically from the typical teacher-led, question-and-

answer discussion" (p. 9). Unlike a traditional lecture, which consists of a teacher pontificating information to students as they respond with answers, Socratic Seminar is student-centered (Polite & Adams, 1996; Strong, 1996), whereby learners engage in a collaborative inquiry led by students or the teacher, in simple terms, the teacher is like the midwife as Socrates had always described himself, whose role is to help learners give birth to their creative ideas. Strong (1997) went on defining Socratic seminar in a short paragraph:

> **" A Socratic seminar is a seminar that begins with a question, students must have the assigned text in their minds and on the table in front of them, address is polite and responsive, all should participate and support their opinions with arguments- when that has been said, all has been said- there is no further method. The rest develops as a living conversation"**
>
> **(Strong.p.42)**

Ball & Brewer (2000) argued that the Socratic seminar is an exciting and effective teaching strategy where participants instead of seating at desks arranged in straight rows facing their teachers, they sit in a circle facing their peers, thus, having the name of "Socratic circle". This kind of seminar provides plenty of opportunities for students to speak as comfortably as they wish by creating not only a convenient layout and rich environment in terms of shared knowledge, collaborative work, and authentic texts, but most of all, it provides a risk-free setting from any judgmental lens of their peers and teacher. Admittedly, it is generally acknowledged that learning thrives in the absence of fear, risk, and judgment (Kohn, 1993).In the same vein, Moeller & Moeller (2002) describes it as an active process that " begins with a problem (a prepared interpretative question), continues as a process of asking spontaneous follow-up questions, and results in a product of increased understanding and enjoyment".

The Socratic Method did not shift education alone, if looking up close, getting inside the classrooms, the method has indeed arranged the environment differently and imparted some major differences in the way learners used to learn and their behaviors to look distinct from traditional classrooms.

1.5.4. The Difference between the Socratic Method and Traditional Classroom Debate

Reaching for the most reluctant of learners and pushing them to share their voices by creating a comfortable environment free of judgment, and a dual of whom goes the honor of being right is one aspect that distinguishes a Socratic Method environment from traditional classroom debates.

Copeland (2005, p.47) categorized the major differences in the below table :

Table 1.1: Comparison of Dialogic seminar and Debate (Copeland, 2005,p.47)

Dialogic seminar	Traditional classroom debate
Dialogue is collaborative. Learners work in harmony to reach the intended goal.	Debate is oppositional; each learner is trying to probe the other wrong.
In dialogue, finding common ground is the goal.	In debate, winning is the goal.
Learners listen to the other side to understand, reach full meaning	Listens to the other side to find flaws and take the stage with his arguments
Dialogue causes introspection on one's own position.	Debate causes critique of the other position.
It is acceptable to change one's position.	It is a sign of weakness and defeat to change one's position.
Dialogue opens the possibility of reaching a better solution than either of the original solutions.	Debate defends one's own position as the best solution and excludes other solutions.

Dialogue strives for multiplicity in perspective.	Debate strives for singularity in perspective.
Dialogue creates an open-minded attitude, an openness to change	Debate creates a close-minded attitude, a determination to be right.
In dialogue, one submits one's best thinking, knowing that other people's reflections will help improve it rather than destroy it.	In debate, one submits one's best thinking and defends it against challenges to show that it is right
Dialogue involves a real concern for the other person and seeks to not alienate or offend.	Debate involves a countering of the other position without focusing on feelings or relationship and often belittles others
Dialogue assumes that many people have pieces of the answer and that together they can put them into a workable answer	Debate assumes there is a right answer and that someone has it.

The Socratic Method as observed is distinct from traditional classrooms, thus it stands upon different components.

1.5.5. The Components of the Socratic Method

Many authors had contrasting ideas on what are the building blocks of the Socratic Method, as the method itself has become a branch of different pedagogies. Very few have delineated its main procedural components in an adequate manner, which suggests the impediments of applying the Socratic Method in a reliable manner.

The researchers have collected the core shared components among researchers, in an attempt to facilitate the process for teachers and learners. The Socratic Method stands upon the following intertwined components:

1.5.5.1. Questioning

Socratic pedagogy focuses on questioning, especially in facilitating higher-level thinking by skillful inductive inquiry. In Socrates' endeavor to determine the quality and the capacity of his learners' knowledge help them seek the roots and structure of their thoughts along with developing their abilities to reason, evaluate, analyze complex issues, and assess the thinking of others, persistent inquisitiveness was his tool to reach learning of any kind. Those questions should be used to see the precision, accuracy, depth, clarity, relevance, breadth of the reasoning made by the student (Paul & Elder, 2007).

It has a number of characteristics which are:

- Thought stimulating questions.
- One question leads to another question until arriving to a logical conclusion.
- Open, concise, constructive, tentative, and purposeful.
- Originate from the teacher or learners.

(Paul& Elder, 2013):

- Raise basic issues.
- Robes beneath the surface of things.
- Pursue problematic areas of thought.
- Help learners discover the structure of their own thoughts.
- Help learners develop sensitivity to clarity, accuracy, relevance, and depth.
- Help learners arrive at judgments through their own reasoning
- Help learners analyze thinking; its purposes, assumptions, questions, points of view, information, inferences, concepts, and implications.

Multiple approaches to classifying questions exist, due to the radical impact, the manner of addressing questions has on processing knowledge and its outcomes. Among those approaches, are Paul and Elders' three types of Socratic questioning which are as follows:

a. Spontaneous

This type of Socratic Questioning can also be thought of as unplanned. A teacher asking questions to provoke deeper knowledge about the concept or idea being taught that were not planned demonstrates this (Paul & Elder, 2008). These types of questions are not developed ahead of time by the teacher, but rather are questions that emerge during instruction to explore the deeper meaning of an answer given by a student or an objective discussed during instruction.

b. Exploratory

This type of questioning involves activating prior knowledge and previous connections (Paul & Elder, 2008). The purpose is to explore the learner's mind to find what he/she may already know about the concept. This type of questioning is to be planned ahead by the teacher. In all areas of instruction, activating prior knowledge is essential during instruction. Exploratory questions allow teachers to ask specific questions to determine relationships students have formed between content objectives and concepts.

c. Focused

This type of questioning is one that looks specifically at a concept or topic and investigates it (Paul & Elder, 2008). Focused questions are planned ahead by the teacher, and challenge students to think about the concept at a higher level. The point of focused questions is not to just have students understand what the concept is, but to use, explore, and manipulate the concept.

Another important approach to classifying questions is William Wilen's. His simplified classification system is based on the taxonomy presented by Gallagher and Aschner's research from 1963 and takes into account Bloom's categories of learning (1956).

The taxonomy presented separates questions into four quadrants with paired criteria: Questions can be either high or low order and can be either convergent or divergent in their design.

a. Low Order Questions require the learner to simply recall a simple fact.

b. High Order Questions require learners to recall a fact to show comprehension and that he understands the relationship between the recalled knowledge and the one introduced to.

c. Convergent Questions refer to the limits placed on the response of a given question. These types of questions usually lead to a narrowed short answer and they can also be referred to as close-ended questions.

d. Divergent Questions are open-ended questions, they stimulate learners to trace back their previous input and connect it with the current one through analysis and evaluation. Divergent questions are broader in nature, can have multiple answers, and require a higher level of thinking on behalf of the student.

Since the primary concern of this study is the Socratic way of questioning, only higher-level convergent and divergent questions will be further elaborated in details in the below tables :

Table1.2: Higher Level Convergent

Emphasis	Reasoning and critical thinking which usually requires some direction from the instructor
What is required of the student?	Demonstration of understanding and ability to apply the information (students describe, compare, contrast, rephrase, summarize, explain, translate, interpret or provide an example).
What Cognitive Operations are involved?	Explaining, stating relationships, comparing and contrasting
What typifies these questions?	Students will look for evidence to support their response and may break ideas, situations or events down into their component parts
Signal Phrases	Why, how and in what ways
Example	In what way do plant cells differ from animal cells?"
Aligned to Bloom's taxonomy of learning	Comprehension and application levels
Pros	Helps students to make connections between facts and begin to understand relationships. Fosters critical thinking and skills such as comparing and contrasting
Cons	Can lead to digressions in the lesson plan, answers are longer and more elaborated and may not be easily anticipated by the teacher.

Table 1.3: Higher Level Divergent

Emphasis	Motivate students to higher levels of thinking and encourage creative thinking
What is required of the student?	Students produce original communications, make predictions, propose solutions, create, solve lifelike problems, speculate, construct, devise, synthesize, develop/judge ideas, problems solutions, express opinions, and make choices and decisions.
What Cognitive Operations are involved?	Predicting, inferring, performs original, creative and evaluative thinking
What typifies these questions?	Teachers are required to think of the content they are presenting a different ways by creating different contexts for learning the material.
Signal Phrases	Defend, Judge, Predict, If… then, Can you create, What is your opinion…
Example	"Suppose you are the President of USC. How would you devise a plan to increase the retention rate of minority first-year students?"
Aligned to Bloom's taxonomy of learning	Synthesis & Evaluation Levels
pros	Stimulate knowledge-seeking and hypothesis generation
cons	Difficult and more energy-intensive. Teacher must challenge his or her own way of thinking and encourage the learner to as well. More difficult to assign grades as the responses to these questions may be highly original or personal.

Albeit the range explanations of the Socratic method, still, some teachers and learners fail to lead a Socratic session, moreover, the manner of addressing questions if done at a proper pace and a proper tone has a vital role in shifting the outcomes.

To ensure that learners or the teacher are following the footsteps of Socrates' manner of asking questions, Paul & Elder designed the following checklist which according to them each teacher or learner should have during the discussion.

These are some of the questions listed by (Paul & Elder, 2013)

1. Did the questioner respond to all answers with further questions?
2. Did the questioner think aloud along with the participants?
3. Did the questioner allow sufficient time for the participants to formulate their answers?
4. What questions had been or had not yet been answered?
5. Did the discussion proceed smoothly with the various contributions being effectively blended into an intelligible whole?
6. Did the questioner keep participants aware of multiple points of view when dealing with board questions?
7. Did the questioner keep participants sensitive to the need to check facts and verify the accuracy of information?
8. Did the questioner keep the central question in focus?
9. Did the questioner focus on key ideas or concepts?

1.5.5.2. Participants

Participants are the foundation of a successful Socratic environment, that is to say, Socratic pedagogy breathes a sense of responsibility within learners, shifting the leadership from teachers to become learners tool to share their ideas, perspectives, inferences, and value to finally reach a mutual and deep understanding of the subject or material discussed by asking stimulating questions led by them. In other words, Unlike teacher centered traditional classrooms, the Socratic method places learners at the center of the learning process, learners become the constructors of their input, the leaders and the instructors in the classroom, and the creators of their own knowledge instead of the consumers they once have been, making the teacher the second source of knowledge and learners as the first one.

1.5.5.3. Classroom Arrangement

According to Espey (2008), students' learning may be affected by various physical characteristics of a classroom, not the least of which is the chair or seating style. In fact, ergonomically correct chairs and seating styles are an important element in the physical learning environment, The design of classroom spaces and students setting arrangement are significant factors that can either impede or maximize students learning process and engagement (Rands & Gansemer-Topf, 2017).it is also believed that "seating arrangements can impact how the instructor communicates with students and how the students interact with one another, impacting engagement, motivation, and focus" as stated by McCorskey & McVetta (1978). Therefore, instead of the traditional arrangement where the students are seated in straight rows, one behind the other, facing their teacher and the board, which fosters teacher-centeredness and minimizes students- students communication leading to less engaging environment, the Socratic seminar's physical setting fosters student-student communication which promotes active, participatory, collaborative and experiential learning environments (Harvey & Kenyon, 2013). Different

layouts can be used in order to arrange a Socratic seminar, All the Socratic seminar layouts take the circle format since having the students seated in a circle facilitates the eye contact between them during conversations, and as an imminent characteristic it makes the teacher down the stage to be at the same level as his students.

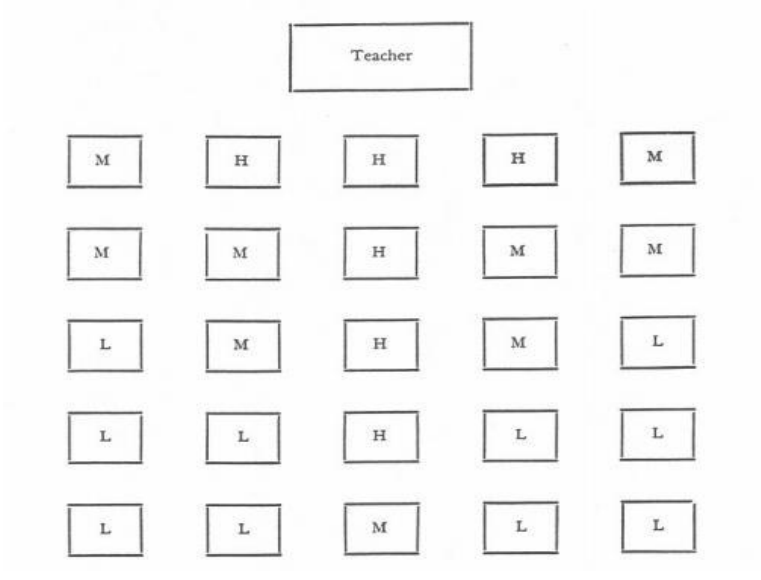
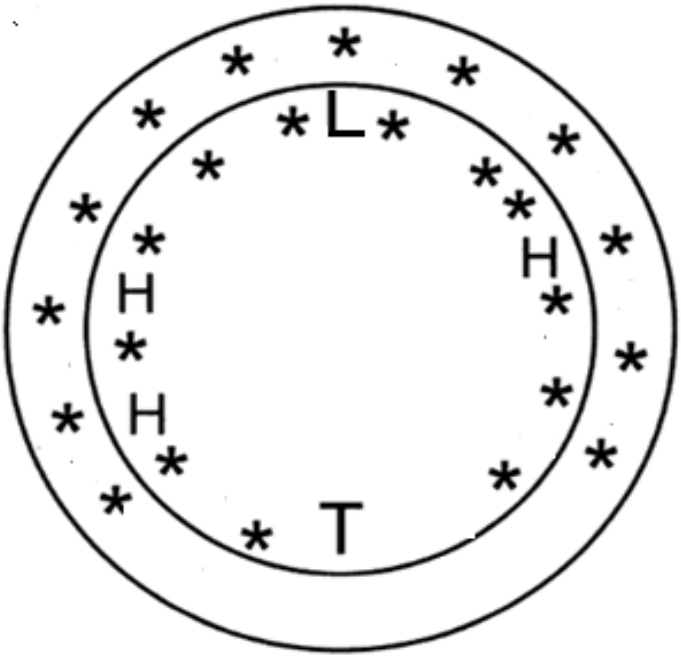


Figure 1.1: Traditional Classroom Arrangement (Rands & Gansemer Topf,2017, p.5)

A. Inner/Outer Circle or Fishbowl

It is used with a group of 25-30 students, in which students are randomly divided into two concentric circles with some empty chairs called hot seats (Copeland, 2005). Students in the inner circle are referred to as participants, in which they engage in a thoughtful dialogue asking and answering their peers' questions, and expressing their stands with textual and personal pieces of evidence. The outer circle, on the other side, are active observers who observe the participants' performance for later on feedback, while taking notes on the seminar and new understandings as a prewriting for their composition. If someone in the outer circle is willing to participate they can take what is called the hot seat and talk then they vacate it for others. Actually, it is up to the teacher to decide the outer circle tasks, such as swapping the roles with no

writing assignment, that is, those in the outer circle become the inner participants and the inner circle become the observers. Mostly, it is the leader's job to lead the dialogue by asking probing questions in addition to pausing and switching the roles. In this regard, all that matters is the student's engagement in the dialogue.



L Leader

* Participants

T Teacher

H Hot seats

Figure1.2: Inner/Outer Circle or Fishbowl (Copeland, 2005, p.30)

B. One Large Seminar Circle

The chairs can be arranged in a large circle where all of the students are considered as participants in the dialogue. There exist two particular chairs facing each other and marking halves of the large circle seminar (Moeller, V. J., and M. V. Moeller, 2002); one chair is for the teacher who only interrupts to guide the participants when they reach a dead end, and another chair for the leader whose leads the discussion and ensures its' success along with the participants. In this case, all students have the opportunity to contribute with their own ideas, share their points of view with their peers while showing

respect toward each other's ideas, thoughts, and questions, with no judgments or critics. If successfully implemented, this arrangement promotes community and teamwork.

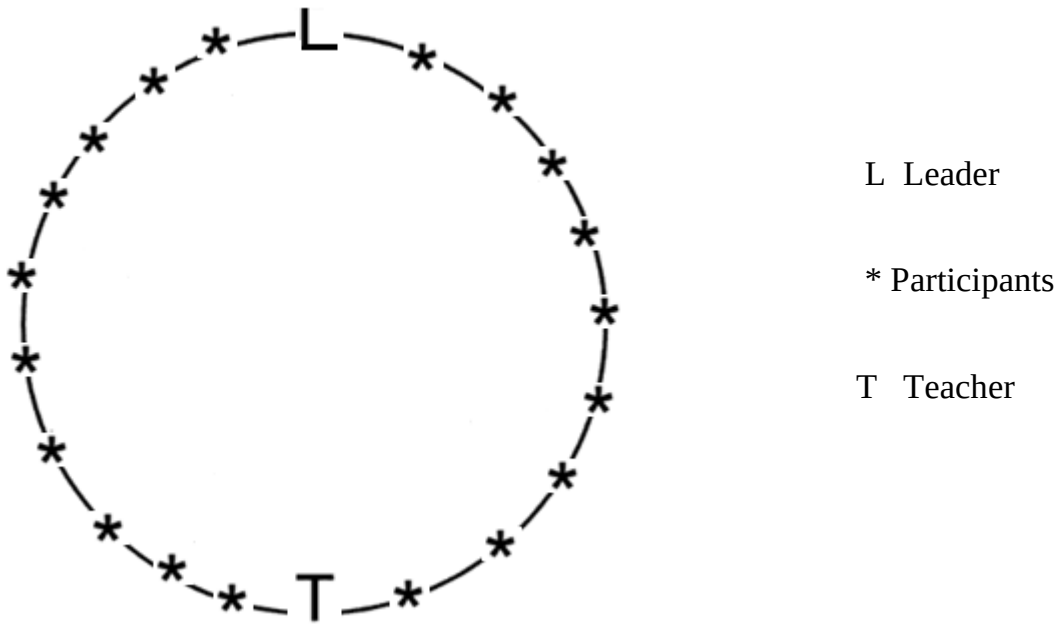


Figure 1.3: One large Seminar Circle (Moeller, V. J., and M. V. Moeller, 2002, p.14)

C. Triad

Another kind of seminar arrangement is referred to as Triad since it consists of a group of three students separated in two circles; the inner and outer. More specifically, each one student in the inner circle (who is called a "pilot") has two students sitting behind him/ her on the outer circle (called "co-pilots") (Ball& Brewer, 2000). The physical arrangement of the pilot and two co-pilots form the triad. In practice, the Pilots are those participants who talk about the topic, share their divergent views, and rise inquisitive questions that stimulate the group's inquisitive minds to either ask or answer bearing in mind that there are no wrong or correct answers. On the side, the Co-pilots are silent as they are taking notes on their Pilots, actively listening so as not to miss their

Pilot's ideas, questions, and answers for further discussion. At a certain point, the leader pauses the conversation and directs the triads to speak to each other forming a group of three (1 pilot and 2 Co-pilots) facing each other. The purpose is to give the Co-pilots the chance to speak about something that may be needed more in-depth exploration, share their views on particular issues discussed in the seminar, or even to come up with their own questions.

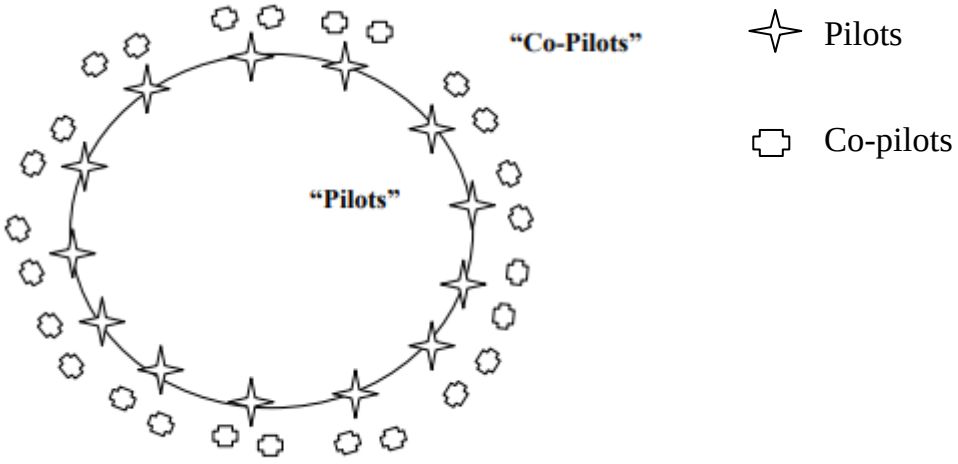


Figure1. 4: Triad (Ball&Brewer, 2000, p. 34)

D. Simultaneous Seminars

Participants are arranged in small group circles which are placed far from other group circles so as to avoid and reduce any noise interference while the groups are speaking (Valdez & Rodgers, 2013). This kind of layout is more applicable in big class sizes with a small number of participants. Besides, for more fruitful and imminent results it should be ideally implemented with experienced students who are capable of taking the lead of their seminar with minimal teacher assistance as a guide and facilitator. This format does not only increase students-students talk and face-to-face communication within the group but also engages reluctant participants to speak as some students feel reticent to speak in a large circle.

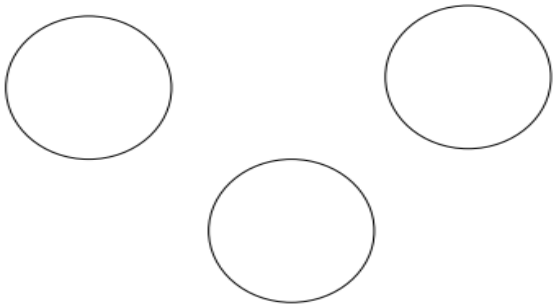


Figure 1.5: Simultaneous Seminars (Valdez & Rodgers, 2013, p. 15)

One crucial step to the successful initiation of the Socratic seminar being student-centered classroom environment is creating a safe and comfortable atmosphere that enables the students' engagement and encourages them to participate and share their ideas. The arrangement of chairs in circle format which. Maximizes the eye contact and the removal of any physical obstacles such as; tables, teacher‟ stage, rows…..etc. are to encourage students' interaction to reach a mutual understanding through collaborative work rather than an individualistic and competitive way of learning.

1.5.6. Advantages and Disadvantages of Socratic Seminar Practice

Socratic seminar as a prominent teaching technique has its benefits and drawbacks, therefore, we opt to demonstrate both to know how to utilize Socratic seminar's strength and deal with its weaknesses.

1.5.6.1. Advantages of Socratic Seminar

Copeland (2005, p 01) stressed the effectiveness of the Socratic Method describing it "as a unique alternative to traditional classroom discussion because, in seminar, students speak 97% of class time" which fosters their critical thinking and autonomy. According to Lammendola (2009), Socrates method has several advantages (as cited in Hardini, 2019), namely:

Socratic seminar guides learners to be able to think rationally and scientifically through stimulating their critical thinking in the process of analyzing and probing the presented material to deeper and wider comprehension.

Thanks to the quest nature of the Socratic Method to achieve a deeper and wider understanding of a subject matter, students are required to awaken their innate inquisitive mind as active participants taking a critical and analytical stance towards the topic being learned.

Raising effective questions for the purpose of understanding naturally engages them in an extended and thoughtful dialogue (Moeller & Moeller, 2013) thereby makes students active, not passive, participants in the classroom.

It establishes a supportive environment that encourages students "to tolerate opposing viewpoints rather than attacking, to defend with evidence and logic rather than with anger, judgment, and put-downs" (Ball & Brewer, 2000). Socratic seminar establishes a supportive atmosphere that appreciates students' multiple and divergent opinions, ideas, and thoughts to foster their self-confidence as speakers and let even shy and non-participating learners want to speak their voices and question the case under discussion.

It fosters an active inquiry-learning environment by shifting the ownership of the conversation to the learners, making them responsible for the quality of the discussion and the ideas explored to make them more engaged in the learning process.

All this elicits student participation and engagement to share collaboratively the responsibility of leading a thoughtful dialogue through open-ended questions (Caughlan, 2013; Juzwik 2013). Socratic seminar as a dialogic and exploratory practice provides adequate space for students‟ voices and authentic moments of 97% of classroom talk.

1.5.6.2. Disadvantages of the Socratic Seminar

Despite the advantages Socratic seminar offers, it still represents some challenges and disadvantages, some research findings have revealed its main

drawbacks as not to have any relation with its process, however; they deal with the followings points.

Time

According to both Lammendola (2009) and Cooper &Robinsons (2003), implementing Socratic seminars in EFL classes is more time-consuming than the lecture-based environment, in which in a Socratic seminar session the majority of learners show lots of eagerness and willingness to participate and express their voices share and speak more without any time-constraints, and possibly result in drifting too far from the topic and wasting too much time, which would oblige the teacher to postpone the dialogue to another session to complete it (cited in Hardini, 2019). Which can be "death to the process." as it dampens students' eagerness to share their ideas or makes them forget.

Risk of Uneven Chances to Speak

According to Copeland (2005), Socratic seminar can cause uneven chances to speak because some learners tend to be over-zealous speakers and monopolize the conversation at the expense of shy and introvert ones. Although the Socratic seminar offers a solution to that by pointing out a leader whose job is inviting students to speak, it may happen that some students prefer to remain silent.

Group Size

According to Lammendola (2009), When adopting the Socratic seminar technique in the classroom, teachers should take into consideration that the group size should not exceed25 participants, since a large classroom that exceeds 20 or 25 students minimizes the students' chances of speaking (Tredway,1995). "The larger the group, the less average time per person is available and the fewer opportunities each member will likely have to contribute to discussions" Venditti & McLean (2012).

Students

Although the success of the Socratic seminar partially relies on students' prior preparation of the previously provided topic, some students arrive to the seminar unprepared. For Canady and Rettig (2000) one of the main challenges and disadvantages of the Socratic seminar that some learners may come to the seminar not prepared or not well prepared. It is difficult to get the majority of students to prepare adequately prior to the seminar and this would affect the quality of the discussion, thus, Johnson (2003) asserted the importance of including and designing pre-seminar activities in class to ensure that all learners are well prepared and ready to participate in the seminar. Also having them complete a "replacement writing assignment" may greatly help since disqualifying students from the seminar may not seem the best solution.

1.6. The Cause Effect Relationship Between the Socratic Method, Critical Thinking and Autonomy

Humans are born with a limitless curiosity to explore the world around them, starting from using their senses to explore themselves, as babies when they show an expression of bewilderment when they become aware of their hands, until a little older when they start asking questions about everything that triggers them. Those questions involve what, when, where, how, and especially why, among those questions are "what is god?", "where is he?", however, as they grow old, their curiosity begins to decay, more specifically, when they are exposed to a curriculum designed to tell them what to learn instead of how to learn. Thus, it is their inquisitiveness and questioning that fuel their curiosity to learn and understand, in other words, reaching a full deeper understanding begins with wonder, and inquiry as a means to fulfill curiosity resides in Socrates' beliefs and strategies which are the driving factor of critical thinking.

"The Socratic method and critical thinking share a common end"(Elder,Paul2008), critical thinking means to judge, pay heed to , evaluate, interpret , infer and deduce and the Socratic Method praises inquiry, thus, it employs those components in framing questions that are essential to the pursuit

of deeper meaning and understanding that is the main goal of critical thinking. Simply put, the process is like a cycle in which Socrates probing questions move thought on and on until the thinker arrives at the most satisfying answer through reasoning and judgment, subsequently, learners on the process become autonomous, further elaborated, in Socratic sessions, learners' answers and thoughts are stimulated through probing questions, hence, they are empowered to share and reflect on their own thoughts or others using logic and reason; they are guided to the answer that already resides within them, in other words, instead of the teacher providing the answer, learners seek out the answer and make discoveries by their own effort.

1.7. Conclusion

From this chapters, it can be deduced that critical thinking is essential for the excellence of the mind, as well as in creating autonomous individuals, and the Socratic Method is believed to effectuate to both outcomes, that is to say, asking probing questions, the foundation of the method, guides learners to discover and formulate knowledge that generally exists within each individual by their own efforts, and " in frequently exercising the socratic method, students should become independent learners with curiosity and sensitivity toward new information, and gradually develop a mental habit of active inquiry and vigorous thinking"(L.B.Resnick 1987).

As far as this research is concerned with fostering learners' critical thinking and autonomy, and with the aim to confirm its hypothesis, the researchers will narrow the scope of the study in the practical field, with the aid of the following relevant research instruments: students' questionnaire, classroom observation, and teachers' interview.

CHAPTER TWO: Socrates' Method in Practice

2.1. Introduction

2.2. Research Objectives and Motivations

2.3. Research Methodology and Design

2.4. Research Instruments

2.4.1. Observation

2.4.2. The Students' Post-Experiment Questionnaire

2.4.3. Teachers' Interview

2.5. Data Analysis

2.5.1. Observation Analysis

2.5.2 Questionnaire Analysis

2.5.3. Teachers' Interview Analysis

2.6. Interpretation of the Findings

2.7. Limitations of the Study

2.8. Recommendations for Further Research

2.9. Conclusion

2.1. Introduction

This chapter attempts to bridge the theoretical framework with the practical side of the conducted study, unfolding which research methods and instruments are most appropriate to test the validity of the hypothesis aroused and answer the research questions, along with explaining the methodological procedures used and the description of the methods implemented, estimating their practicality at the university of Ahmed Salhi in Naama, precisely 1st-year English LMD students. Having said that, to arrive at the required goal, the researchers have divided this chapter into three segments, the first segment deals with the research design; which measuring instruments are applied to what population, the second segment attained the analyses of the findings, and finally the interpretation; the last segment is dedicated to recommendations and limitations of the study.

2.2. Research Objectives and Motivations

The overall aim of this study is to investigate the effectiveness of applying the Socratic Method on EFL classrooms to promote learners' higher-order thinking and autonomy.

The primary concern of this study is to foster deeper learning, through engaging learners in a set of stimulating questions to guide them to input discovery and self-knowledge, empower them to connect ideas, interpret, form logical judgments, and problem solve, in addition to becoming self-reliant.

2.3. Research Methodology and Design

This research is experimental in nature, adopting a non-equivalent control group design, to investigate the effectiveness of the Socratic Method (independent variable) in developing students' critical thinking and autonomy (dependent variable). Shadish, Cook, and Campell(2002) define experimental study as " a study in which intervention is deliberately introduced to observe its effects", this experiment is conducted by dividing the subjects into two groups,

one is experimental and the other is a focus group, and then introduce a change to the experimental group and not the control group, in which one or more variables are manipulated and the outcome of that manipulation is observed.

After observing both groups, a post experimental questionnaire is handed to the experimental group for the sake of exploring learners' attitudes and insights regarding the treatment, and finally, comparing between the results attained from both groups to determine the effectiveness of the change brought.

The study employed both quantitative and qualitative data collection techniques. According to Winberg (1997) case studies are primarily conducted using qualitative techniques, but do not exclude quantitative research methods. Qualitative research methods focus on discovering and understanding participants' experiences, perspectives, and thoughts. It is subjective in nature and useful when you want to determine the skills, opinions, and knowledge of people. On the other hand, the quantitative approach is a numerical-based approach and it is objective in nature. The reason for employing both approaches is due to the fact that some findings require personal assessment of the information obtained from people, while some conclusions need statistical and mathematical approaches such as percentages, mean, graph, and tabulation.

2.4. Research Instruments

The researchers used a number of research instruments which are:

2.4.1. Observation

In order to consider carefully the changes featured in the classroom and as a backup to the researchers' hypothesis, both participant and non-participant observations were adopted. The observation included observing two distinct groups in oral sessions. During both sessions of the focus group and the experimental group, the researchers used an observation checklist (check p58). To gain more information and a deeper understanding of both situations under study the researchers recorded both sessions.

The Content of the Experiment

The teacher was informed beforehand about the experiment, and collaboratively with the researchers, chose the topic to be tackled during the experiment. The topic included investigating learners' perspectives about "working women".

At the beginning of the session, the researchers explained the Socratic Method to the learners to evade any ambiguity and guarantee the success of the experiment.

2.4.2. The Students' Post-Experiment Questionnaire

By the end of the Socratic seminar treatment session, post-experiment questionnaires were distributed among learners, which were designed to reflect the learners' insights and perspectives regarding their experience with the treatment. The first section of the questionnaire covered demographical data about the learners, the second section was contended to explore learners' attitudes through a set of 8 five-likert scale questions, and finally, the third section treated learners' perceptions and recommendations.

2.4.3. Interview

Interviews provide the opportunity for participants to "share their story, pass on their knowledge and provide their own perspective on an array of topics" (Hess-Biber and Leavy, 2006 in Boeije, 2010; p. 62). In order to identify the existence of the research problem and specify the main components responsible for the raised issues by exploring the teachers' view points, the researchers used a structured interview with 6 English teachers from the department of foreign languages in Ahmed Salhi University Center in Naama and other universities from different cities. The interview consisted of 7 questions covering close-ended questions and open-ended questions.

2.5. Data Analysis

The previously mentioned instruments resulted in the following findings:

2.5.1. Observation Analysis

The analysis of the focus group observation is as follows:

In the course of observing the second group, first-year English learners and according to the results shown in the checklist the researchers have adopted, learners as well as teachers, have exhibited that during the session very few questions are addressed, generally originated from the teacher, while learners seemed to have very few to no questions. The latter is believed to indicate the impaired participation of learners and the dependency they have on teachers, which places the teacher as a lecturer and rescuer that learners rely on when encountered with difficult matters they fail to recognize. Although learners were ordered to form groups and work collaboratively, few have shown interest to engage in the process, those who participated, were mostly keen to impose their ideas on others and ignored other learners' perspectives, as their main concern was substantially to prove each other wrong and win the argument. Subsequently, learners did not show any signs of having evaluated and analyzed other points of view to self-correct the beliefs they have, which also led to the withdrawal of other learners to share their opinions for the fear of being judged.

The observation of the experimental group on the other hand resulted in the following:

During the Socratic seminar session, both the teacher and the students were participants, in which the teacher was not a lecturer but mostly a facilitator, only guiding the students in the right path to reach the aim of the session, leaving the chance for the students to be involved and engaged in the discussion by asking questions and responding to their peers regardless how

wrong or right their contributions are due to the absence of both negative and positive feedback, which made them more comfortable and enthusiastic to actively exchange their ideas. It has been also noticed that most of the participants were drawing conclusions based on the available evidence, and their previous knowledge and experience, in addition to examining and evaluating their own points of view and making corrections.

2.5.2. Questionnaire Analysis

Section one: the learners' attitudes regarding the use of the Socratic Questioning Method to develop their critical thinking and autonomy.

Table 2.1: The learners' attitudes regarding the use of the Socratic Questioning Method to develop their critical thinking and autonomy.

Note: F= frequency, **%**= percentages

Items	**Students' answers**											
	Strongly agree		Agree		Neutral		Disagree		Strongly disagree		Total	
	F	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**
The Socratic seminar questions helped me engage in deep thinking and become self-reliant.	**6**	**37.5%**	**8**	**50%**	**2**	**12.5%**	**0**	**00%**	**0**	**00%**	**16**	**100%**

Since both the teacher and student are participants, I get more chance to be involved and engage in discussions.	**9**	**56.25%**	**7**	**43.75%**	**0**	**00%**	**0**	**00%**	**0**	**00%**	**16**	**100%**
I felt encouraged to access and use my previous knowledge to reach a new one.	**7**	**43.75%**	**6**	**37.5%**	**3**	**18.75%**	**0**	**00%**	**0**	**00%**	**16**	**100%**
When reflecting on previous input, I am given the chance to examine and evaluate my own point of view, make corrections if needed and examine other relevant point of views.	**5**	**31.25%**	**10**	**62.5%**	**1**	**6.25%**	**0**	**00%**	**0**	**00%**	**16**	**100%**
When faced with difficulties, the teacher breaks down the issue by asking further questions until arriving at a deep conceptual understanding	**4**	**25%**	**10**	**62.5%**	**2**	**12.5%**	**0**	**00%**	**0**	**00%**	**16**	**100%**

Since there are no right or wrong answers, nor negative or positive feedback, I feel more enthusiastic and comfortable to participate and share my ideas.	**11**	**68.75%**	**4**	**25%**	**1**	**6.25%**	**0**	**00%**	**0**	**00%**	**16**	**100%**
Seeing that in the Socratic sessions, everyone is the leader, I am less reliant on the teacher and more of a dependent thinker.	**11**	**68.75%**	**4**	**25%**	**1**	**6.25%**	**0**	**00%**	**0**	**00%**	**16**	**100%**
By the end of the session, I expect to have understood, memorized, and stored what I have learned.	**3**	**18.75%**	**10**	**62.5%**	**3**	**18.75%**	**0**	**00%**	**0**	**00%**	**16**	**100%**

The results drawn from the first section of the questionnaire, indicated in the table above, designate that the majority of students agreed that the Socratic seminar questions helped them engage in deep thinking and become more self-

reliant. In terms of figures, 50% agreed and 37.5% strongly agreed. The results of the rest of the questions supported the credibility of the first question, in which 62.5% of the students agreed and 25% strongly agreed as reflected in the fifth question, that probing questions lead students to deep understanding when faced with difficulties, which allows students to be actively involved as shown in the results of the second question, as 56.25% strongly agreed on that. Another factor that makes students more active independent thinkers is their feeling of enthusiasm and comfort due to the absence of feedback as illustrated in the findings of the seventh and sixth questions whereby the majority of the participants strongly agreed on its factuality. Finally a great number of students agreed on leaving the classroom with better understanding and memorization of the content introduced during the session, since they were encouraged to access their previous input and make alternations to reach the intended knowledge through examining and evaluating their own points of view.

Section two: learners' perceptions and recommendations

Q1: During the session, do you feel less restricted to what the teacher provides and more free to make your own discoveries and draw your own conclusions?

Table 2.2: Students' freedom to make discoveries.

Variables	Frequencies	Percent
Yes	16	100%
No	00	00%
Total	16	100%

Q2: Through the questioning method, I am involved in tasks that sharpen my thinking

Table2.3: students' involvement in thought sharpening tasks.

Variables	Frequencies	Percent
Yes	16	100%
No	00	00%
Total	16	100%

Q3: In your opinion, does the Socratic Method reduce tension and create a more comfortable environment for students to share their ideas.

Table 2.4: the Socratic Method environment

Variables	Frequencies	Percent
Yes	16	100%
No	00	00%
Total	16	100%

Q4: How do you see the teacher?

Table 2.5: Teacher's role

Variables	Frequencies	Percent
Facilitator	16	100%
Lecturer	00	00%
Total	16	100%

All of the participants of the experimental group were in complete agreement that they felt more independent from what the teacher provides and free to make their own discoveries which sharpens their thinking, by creating a more comfortable environment that reduces their tension, where the teacher is more of a facilitator than a lecturer.

Q5: Regarding your perspective, how would you explain that through the Socratic Method, higher levels of thinking are achieved?

Learners annotated that due to the inquisitive nature of the seminar, they were instructed how to think, examine, evaluate different point of views, problem solve and come up to conclusions by their own efforts, which perpetuated their curiosity and urge to ask deeper questions until reaching full deep understanding.

2.5.3. Teacher's interview analysis

The results of the teachers' interview were as follows:

Item One: Teaching experience

Table 2.6: Teaching Experience

Experience	Number of Teachers	Percentages
6-9 Years	02	33%
10-12 Years	03	50%
More than 19	01	17%
Total	06	100%

The interviewed teachers' teaching experience has varied from six (06) years to twenty (20) years as shown in the table above. Half of the teachers' experience is estimated between ten (10) and twelve (12) years, which makes the researchers' data more reliable.

Item Two: How do you usually introduce new material in the classroom?

Regarding how teachers introduce new material in the classroom, the majority begin by a warm up usually through a quick revision of the previous lessons, followed by introducing the lesson. Others stated that they introduce new topics by asking a general question to examine the students' knowledge about the topic, which usually aims at defining the general concepts related to

the lesson. Some teachers on the other hand start by providing examples then explain the rules through the use of visual aids as a primary tool.

Item Three: How often do students ask questions during the session?

Table 2.7: Questions' frequency

Frequency	Number of Teachers	Percentages
Always	00	00%
Often	01	17%
Sometimes	03	50%
Rarely	01	17%
Never	01	17%
Total	06	100%

From the table above, it is fairly clear that students barely ask any questions during the session, since the majority stated that they only ask questions depending on their interest in the topics presented.

Item Four: Some, if not the majority of students, when addressed with questions they usually remain silent and wait until the teacher provides the answer, what is your opinion?

All the teachers agreed that the majority of students remain silent when addressed with questions until they receive the answer from the teacher, some stated that it is due to their lack of interest in the presented material, their reliability on the teacher, or their limited knowledge about the topic, in addition to their feeling of discomfort in the classroom due to the fear of judgment or negative feedback.

Item Five: If students face any difficulty in understanding the content being learned, how would you make it less complicated?

Most, if not all the interviewees unanimously acknowledged that they elaborate the difficult content the students are confronted with by paraphrasing and repeating the idea differently, along with illustrating with examples.

Item Six: If a student made a mistake how would you correct him or her?

Nearly all the teachers had a common answer that they correct the students' mistakes politely, while their main focus is on the psychological aspects and the students' feelings.

Item Seven: Some students hesitate to share their ideas and participate in the classroom, what may be the reasons?

Most respondents revealed that the fear of judgment and negative feedback, in addition to the students' personality traits such as shyness, lack of confidence and introversion are the main reasons behind the students' hesitation.

2.6. Interpretation of the Findings

The researchers' choice of instruments was indeed accurate and yielded the desired findings that are solid evidence to confirm this study's hypothesis. The study was conducted with the first-year English students of Ahmed Salhi Naama, whereby the researchers administered an observation with two different groups, along with a post-experimental questionnaire and teachers' interview. The analysis of the findings demonstrated the impacts of inductive questioning in the improvement of learners' critical thinking and autonomy which validates the researchers' aim of the study.

The researchers settled for observing both the teacher and the students along with the classroom environment which was an important step for the comparison between the results that will be obtained after the treatment that was used only with the experimental group, later on, students were handed a

questionnaire to mark their insights regarding the Socratic treatment session. Another important step that underwent during the accumulation of the findings was the teachers' interview, which consolidates the findings of the previous methods, by exploring the teachers' viewpoint.

First of all, the observation of the focus group has shown the significant importance of questions in learning. In teacher dominant classrooms, questions addressed are non thought stimulating, mostly concise to defining concepts related to the topic discussed, which requires the mere effort from students, where most answers are credited to online resources, therefore, only few learners are engaged due to loss of interest or lack of knowledge or fear of judgment, while the rest depend on the teacher to provide them with the answers. Consequently, it could be deduced that students are not challenged to use their mental capacities to engage in reflective thinking and become autonomous critical thinkers.

Unlike traditional classrooms, in the experimental group, where the Socratic Method has been implemented, both teachers and students are participants, shifting the role of the teacher from a lecturer to a facilitator, that is to say, questions asked in the classroom are thought stimulating questions, which fuel learners' curiosity to ask further questions, and develop their ability to analyze, evaluate, infer and draw conclusions, hence, become autonomous in the process. Since the main goal of the Socratic inquiry is to probe learners' answers regardless of being right or wrong, students feel comfortable to participate and share their ideas, which makes them more active than the non experimental group. The findings of the post experimental questionnaire in addition to the observation, have confirmed the researchers' hypothesis, therefore it can be concluded that this experiment yielded a significant improvement in the students' critical thinking and autonomy, which validates the researchers' aim of testing the effectiveness of the Socratic Method.

The next step that supports the previous findings is the teachers' interview, whereby the majority of answers correspond with the results of the

observation. Most of the teachers agreed on the fact that traditional classrooms are teacher-centered, only few deductive questions are asked during the session, generally generated by the teacher, which suggests the students' dependency, and withdrawal from participating which could be attached to various reasons such as lack of interest and fear of teachers' feedback. Another vital aspect to mention is that the manner teachers address questions plays crucial role in facilitating learning and reaching a deep understanding. In the case of traditional classrooms, as teachers have agreed, the questions asked are close-ended or convergent (check p.22) which lead to short narrowed answers and require learners but to recall information to show they have comprehended the topic, therefore, the session is built around rote learning and memorization.

To conclude, the findings of this study revealed that implementing the Socratic Method in EFL classrooms is useful and effective to develop learners' critical thinking and autonomy. Accordingly, the majority of learners showed positive attitudes and reactions towards being taught with Socratic pedagogy, as a result, the hypotheses of the study are confirmed and all the research questions are answered.

2.7. Limitations of the Study

This research work aimed mainly at inquiring the role of the Socratic Method in developing EFL learners' critical thinking and autonomy. Although the results revealed the effectiveness of this method, the researchers faced some difficulties and obstacles.

First, in this study, the Socratic Method was intended to be implemented not only with one isolated group but with different groups, and different modules, however, since teachers were confined by a syllabus and time limit due to the Covid-19, as well as the fact that classes began past their initial date, the method has been employed only once in oral session.

Second, the researchers faced the problem of attrition where the questionnaire's questions were not entirely answered.

Finally, since the study was conducted only once with a representative sample of first year LMD learners, namely, group one, which make 15% of the whole population, the results are not sufficient and cannot be generalized.

2.8. Recommendations for Further Research:

The present work can be used as a basis for further research in the field, taking into consideration the limitations mentioned above, as well as considering the following suggestions:

Because of time constraints as already mentioned above, this research was investigated only with one group for a very limited period, given that, further research could explore the effectiveness of the method with different contexts and modules.

The method has concerned only foreign languages department, specifically, the English department , With regards to the results it has imparted, other departments such as law department, could be a perfect environment to further test the validity of the researchers' findings, as critical thinking is the foundation to law teachings.

2.9. Conclusion

This chapter aimed to explore the role of the Socratic Method in boosting EFL learners' critical thinking and autonomy. Primarily, the researchers provided a review of the research methodology underlying this study. Besides, they presented the analysis of the collected data, followed by an interpretation of the major findings to confirm the hypotheses proposed at the beginning of this research work. .

General Conclusion

General Conclusion

Critical thinking plays a crucial role in developing deeper understanding and creating independent learners. In this respect, it is significant to say, that questions and the manner of addressing those questions, correlates deeply to the improvement of learners' minds and performance as a result. The Socratic Method is among the methods that emphasize inquisitiveness, and has a vital role in facilitating learning by breaking the whole into parts and instructing learners on how to think using reason and logic to gradually become independent learners.

It can be inferred that the Socratic Method has shifted teacher-centered classrooms which stand on memorization and rote learning into teacher-student and student-student centered environment, whereby, it assists and forces learners to think intensely through probing questions and intelligent analysis to come around meaningful learning. In addition to that, it intensifies learners' curiosity to participate and share their ideas, considering correct or incorrect answers are not among this method's recommendations. Consequently, learners detach from the teachers to be independent learners, placing teachers as facilitators.

Logic as well as emotions and feelings contribute to learning, if someone ignores one of them, learning will be affected. Since this research has tackled only the importance of thinking which is embedded in logic, the question that could be raised for further research is: "what is the influence of the Socratic method on learners' psychology?"

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Appendices

Appendix I: Observation Checklist

Observation	**Rate**				
	01	02	03	04	05
Learners asking questions					
Learners engaged in the tasks					
Active exchange of ideas					
Learners working collaboratively					
Learners are autonomous					
Learning is framed by essential questions					
The teacher is a facilitator of learning					
Learners are challenged.					
Learners are open to multiplicity of perspectives.					
Evaluating multiple ideas, considering alternative explanation.					
Learners' inference.					
Learners feel more comfortable to share their ideas.					

Appendix II: Students' Questionnaire

Dear students,

For the purpose of collecting data about the use of the Socratic Questioning Method in fostering EFL learners' critical thinking and autonomy, you are kindly requested to fill in the questionnaire by putting a tick✓where necessary and expressing your comments when needed. Thank you for your collaboration.

I. Part one: learners' attitudes regarding the use of the Socratic Questioning Method to develop their critical thinking and autonomy.

According to your own experience of the use of the Socratic Questioning Method in the oral session, please indicate how far you agree or disagree with the below statements by putting a tick✓ where you feel it suits best your description.

Items	**Students' answers**					
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
The Socratic seminar questions helped me engage in deep thinking and become self-reliant.						

Since both the teacher and student are participants, I get more chance to be involved and engage in discussions.						
I felt encouraged to access and use my previous knowledge to reach a new one.						
When reflecting on previous input, I am given the chance to examine and evaluate my own point of view, make corrections if needed and examine other relevant point of views.						
When faced with difficulties, the teacher breaks down the issue by asking further questions until arriving at a deep conceptual understanding						

Since there are no right or wrong answers, nor negative or positive feedback, I feel more enthusiastic and comfortable to participate and share my ideas.						
Seeing that in the Socratic sessions, everyone is the leader, I am less reliant on the teacher and more of a dependent thinker.						
By the end of the session, I expect to have understood, memorized, and stored what I have learned.						

II. Part Two: learners' perceptions and recommendations

1. During the session, do you feel less restricted to what the teacher provides and more free to make your own discoveries and draw your own conclusions?

Yes ☐ No ☐

2. Through the questioning method, I am involved in tasks that sharpen my thinking.

Yes ☐ No ☐

3. In your opinion, does the Socratic method reduce tension and create a more comfortable environment for students to share their ideas?

Yes ☐ No ☐

4. How do you see the teacher?

A facilitator ☐ A lecturer ☐

5. Regarding your perspective, how would you explain that through the Socratic questioning method, higher levels of thinking are achieved?

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Thank you.

Appendix III: Teachers' Interview

1. How many years have you been teaching for?
2. How do you usually introduce new material in the classroom?
3. How often do students ask questions during the session?
4. Some, if not the majority of students, when addressed with questions they usually remain silent and wait until the teacher provides the answer, what is your opinion?
5. If students face any difficulty in understanding the content being learned, how would you make it less complicated?
6. If a student made a mistake how do you correct him or her?
7. Some students hesitate to share their ideas and participate in the classroom, what may be the reasons?

Thank you.