The Role of Socratic Questioning in Promoting Students' Critical Thinking in EFL Classrooms at the University of Basra: A Qualitative-based Study

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Introduction:

The major aim of this paper is to introduce the notion of Socratic questioning method (henceforth SQ) and its value in teaching, learning and thinking. It also investigates the effects of utilizing SQ to enhance students' critical thinking (CT) skills in reading and rhetoric discussions at the Department of English – the University of Basra (BU)/Iraq. This empirical research examines two discrete, substantial areas: (1) the efficacy of integrating SQ into curriculum in the English program at BU, with continuous teaching and modelling of SQ, and (2) the possibility that students' critical thinking skills are developed will be investigated. The overall research results indicate (1) the constant curriculum-based teaching and modelling of SQ method –based on Paul and Elder's questioning taxonomy – brings about a notable change in the students' analytic and evaluative abilities. As research results indicate, promoting students' critical thinking skills requires critical questioning; and such (2) Modelling can be

The epistemological foundation that guides the current research project entails a constructivist inquiry, which is based on the fact that knowledge is not given or transferred from one to another. Rather, knowledge is the individual's unique construct within a certain social milieu. According to Larochelle, Bednarz and Garrison, knowledge "cannot be transmitted, it cannot be neutral either" (1998: 8). Instead, learners formulate their own realities, understanding and knowledge about the world by means of negotiating the stated beliefs, reflecting on their own experiences and ideas.

Widely cited research in education indicates that the ultimate aim of education and more specifically in higher education is to educate students for "reasonableness" which is "the most important characteristic of the educated person" (Lipman, a powerful tool in the cultivation of teaching, learning and thought.

Accessibility of Primary Data: All primary data will be made available for further examination or research upon request.

1. Introduction: Premises

"Stop searching. Start questioning"

Geert Lovink (qtd. in Schlesinger, 2009: 11)

One substantial premise is that educators who are concerned with the development of the students' minds should emphasize the role of questioning in teaching and learning, because it is only through questions that we understand "the world…the subject matter… academic disciplines", and we "express our intellectual goals and purposes… think superficially or deeply" (Paul and Elder, 2007: 60).

questions, in this sense, define "tasks, express problems, and delineate issues" (Paul and Elder, 2007: 62). Paul and Elder also reason that answers, on the contrary, mark "a full stop in thought. Only when an answer generates a further question does thought continue" (ibid). It has been argued that educating for inquiry/questioning seeking-minds is conducive to teaching, learning and thinking. Overholser (1992) affirms that Socratic method can be used as a powerful tool for active learning in classrooms in which students learn to 'evaluate information' and develop 'sophisticated approaches' to resolve problems (18). In terms of teaching, Paul acknowledges that the Socratic questioning method is "the only defensible form of teaching"; "it teaches us the difference between systematic and

fragmented thinking… to dig

1987: 153), or as Paul stipulates, an education that promotes inquiry-seeking minds (Paul, 1986). In this context, reasonableness is viewed as "rationality tempered with judgement" (Lipman, 2003: 11). So we are left with the following question: "Can we educate with reasonableness without educating for thinking?" (ibid: 12). In this sense, the educational institutions should transfer classrooms into an "association of thinking" or into a "community of inquiry" (Lipman, 1987: 153), through which reflection and social negotiation are induced. It has been asserted that most instructors depend heavily on course "coverage" over "engaged thinking" simply because they think that answers are taught separately from questions (Elder and Paul, 1998: 297; Paul and Elder, 2007: 62). Paul and Elder assert: "thinking is not driven by answers but by questions" as

education seems to have been "obsessed with answers – both correct an incorrect" more than questions (Copeland, 2005: 7; Overholser, 1992). Teachers, most of the time, ask questions in a hope to reach answers, which is thought to be the final destination of thought and learning, "a kind of educational checklist where either "yes," this learning has occurred, or, "no," this learning has not occurred" (ibid). Iraqi higher education is mainly concerned with feeding students with endless content to rote-memorize, with pre-digested (right) answers to questions. This passive learning of content does not emphasize "analysis, synthesis or other forms of knowledge application" (Alwan, 2004: 40). Alwan, Faour Muasher, and Jager point out that teaching in Iraq continues to foster rote memorization and recall of

beneath the surface of our ideas… [and] the value of developing questioning minds in cultivating deep learning" (ibid: 2). Given all these above-mentioned postulations, Paul and Elder believe: "a mind with no questions is a mind that is not intellectually alive. No questions (asked) equals no understanding (achieved)…. If your mind is not actively generating questions, a [mind] is not engaged in substantive learning." (2010b: 3). So cultivating for a critically educated mind requires a critical questioning technique that could substantially promote higher order thinking skills.

2. Background to the research Problem Many students enter in higher education without their ability to think for themselves, to use questioning as a powerful tool for learning; they simply rely on their teachers to think for them. Modern

change their educational practices, stands as the most constraining factor. Costenson and Lawson remark that there are countless reasons that hinder the use of inquiry in classrooms, among which are: students are too immature to learn enough, discomfort, class time and energy, units coverage not quality is what concerns the administrative policy, and the teaching habits are outdated (1986: 151).

Moreover, the reasons might be that: (1) the existent curricula are highly centralized, politicized, and lack emphasis on questioning, reflective classes, reasoning, analysis, synthesis evaluation and application (Alwan, 2004; Harb, 2008). (2) even more experienced teachers are unwilling to change their traditional (didactic) teaching to teaching that stimulate thought. (3) Iraqi (college) instructors of English are not knowledge, which does not enhance critical thinking abilities, questioning, and independence of thought (Alwan, 2004: 41; Faour and Muasher 2011: 5; Jager, 2012: 1374). Al-Juboury attributes this passivity of learning to major factors, among which are the following: (1) the students' attitude is that their teachers are the ultimate source of knowledge in the classroom, (2) the instructional design is teacher-centered, focusing on teaching (not on learning) at all levels, with the students mere passive attendees, (3) the students are less motivated to learn how to think, and (4) the precarious situation in Iraq has significantly affected the students' classroom participation and thus, hindered their capabilities for effective thinking and active learning (2008: 301-302). Moreover, an existing institutional problem, namely the faculties' unwillingness to

3. Research Questions The main guiding research question is: Will students of English at BU improve their learning and critical thinking skills after participating in the Socratic Method of inquiry; a six-month intervention conducted by the researcher/instructor using a series of modelled and structured discussions in academic reading and rhetoric?

4. Literature Review

4.1. Socratic questioning method and higher order thinking skills

4.1.1. Socrates and the questioning method

A broad swathe of philosophers and thinkers, such as Socrates, Francis Bacon, Immanuel Kant,

Edward Glaser, John Henry Newman, John Dewey, and more recently Matthew Lipman and Richard Paul have stressed the concerned with the students' analytical and evaluative abilities, assuming that these skills will improve over the course of time. Instead, teachers concentrate heavily on the course content coverage and course items, which do not require any thinking abilities (ibid). Unfortunately, this coverage of "large chunks of content" will send into the community students with no intellectual virtues (Paul, 1995: 256). There is the fear that, if the educational goals are not set up clearly, consumerism within education will increasingly have a series of negative effects upon students, their teachers and their universities. Education is a social act, which is meant to prepare responsible citizens who can ethically serve their society at all levels.

most effective pedagogic tool in the West (1985: 185). This vision has widely been recognized by philosophers and scholars of the 18th and the 19th centuries and later, like François-Marie Arouet (Voltaire), John Henry Newman, Sumner, Robert Ennis, Matthew Lipman, and Richard Paul, who believe in the discernment of truth supported by evidence (Lewis and Smith, 1993: 131). One of the modern formulations of Socrates' insights is that there are always effective ways than lecturing. This is based on the fact that there is "often-untapped reservoir of knowledge" within the students' mind-set. Only through helping students examine their hidden beliefs can they develop and improve their reasoning. This metacognitive process implies that thinking well, and hence bring forward the (unsubstantiated) held beliefs and ideas, involves asking significance of education in acquiring a disciplined and reasonable life; education that promotes thinking as an ideal (Hale, 2008); and in another context, educating minds for "reflective inquiry" (Lipman, 2003: 20). A special focus on Socrates' seminal works reveals that he is an originator of the foundation of critical thinking theory in terms of two major themes: the call for living a virtuous and ethical life by thinking well, and the establishment of the importance of asking probing questions before accepting ideas as being worthy of belief (Paul, Elder, and Bartell, 1997: 8). His method forced his shrewd but arrogant interlocutors to rationalize what they claim to know. His method of questioning is now known as Socratic questioning, and it is the best ever-known critical thinking teaching classroom strategy since then (Meyer, 1980: 282). Fishman stipulates that SQ was and still the

instruction, Socratic teaching/learning method or strategy, Socratic inquiry, and Socratic circles. It is also named as a Socratic Seminar, coined by Scott Buchanan (Copeland, 2005: 8; Paul and Elder, 2007: 64). Given all these terms, Socratic questioning method implies a systematic and "disciplined questioning" numb to critical thought (Paul and Elder, 2007: 2). It is also defined as "a systematic process for examining the ideas, questions, and answers that form the basis of human belief" (Copeland, 2005: 7). Paul and Elder observe:

Socratic questioning is disciplined questioning that can be used to pursue thought in many directions and for many purposes, including: to explore complex ideas, to get to the truth of things, to open up issues and problems, to uncover assumptions, to analyse concepts, to mind-provoking questions that lead to "the asking of further questions." (Lewis and Smith, 1993). This continuous intellectual quest for knowledge and meaning-making embodies "the true ideal of education" (ibid). Socratic questioning serves as an intellectual map in examining the students' minds conducive to critical thought. Based on this intellectual thread, Socratic Method has always had and continues to have valuable pedagogical implications in education (Finocchiaro, 1989: 483; and Fishman, 1985).

4.1.2. Terminology, definition and significance

The Socratic questioning method has received many terms over the years of the intellectual history of thought. It is called Socratic dialogue and Socratic dialectic method. It is also given the following names: Socratic

out that SQ brings "all the areas of the curriculum and instruction together into a cohesive whole" (2005, 11). With the help of SQ circles, teachers are better able to incorporate the curricular activities into "a seamless package", in which students rigorously develop and improve a variety of skills in the following areas: critical thinking, creativity, critical reading, speaking, listening, writing skills, and critical reflection (ibid, pp 11-19). Besides the academic package, SQ circles also made a major contribution to the social, personal and interpersonal skills such as: team-building skills, conflict resolution, and community-building skills (ibid, 19-22). In a world of accelerating change, students need better opportunities for changing lives. They need the skills and processes to rely upon for the rest of their life. To meet this end, the academic institution and distinguish what we know from what we do not know and to follow out logical implications of thought (2007, 2). According to them, this type of questioning – unlike other kinds of (merely) questioning per se – is that it is "more systematic, disciplined, and deep", which usually focuses on concepts theories and issues more systematically, comprehensively, and with a breadth of vision (Elder and Paul, 2010b: 46; Paul and Elder, 2007). So the word 'Socratic', in its widest sense, adds "systematicity, depth, and a keen interest in assessing the truth of plausibility of things" to the ordinary questions (ibid).

Copeland places an immense value on Socratic Method of inquiry. He stresses that SQ circles are an effective means for developing students' academic and social skills. As for the development of students' academic skills, Copeland reasons

method is the heart of thinking critically. Following the same line of reasoning, Thomas (1998) argues that critical thinking requires critical questioning in a more disciplined fashion. Put differently, critical thinking establishes "a disciplined 'executive' level of thinking to our thinking, a powerful inner voice of reason, to monitor, assess … our thinking, feeling, and action". Paul and Elder claim that Socratic questioning revisits and cultivates "that inner voice" (ibid: 3) by putting forth a model for it. Under this underlying assumption, this paper argues that the constant remodelling of Socratic questioning can bring about an essential change in the students' metacognitive abilities, advocated by Paul and Elder. This section places an emphasis on the foundational concepts underlying Paul and Elder's approach.

individual teachers should change the classrooms into a reality that produces self-reliant and self-directed learners necessary for a fundamental reform.

4.1.3. Socratic questioning method and critical thinking (CT) based on Paul and Elder's framework?

Socratic questioning method and critical thinking have much in common. SQ is essential to understand critical thinking. Paul views that the art of questioning is essential to "excellence of thought" (Paul and Elder, 2007: 2). Critical thinking, on the one hand, provides a wide view of the functioning of the mind in pursuit of meaning, truth and "plausibility of things". The Socratic method seeks to "frame questions essential to the quality of that pursuit" (Elder and Paul, 1998: 298). In another context, Paul (1995) holds the belief that SQ

5. Identifying domains within complex questions (focusing on questions we would need to answer within different subject areas or disciplines to adequately address a complex issue). Paul and Elder's conceptual model rests on the idea that any type of thinking has a logical structure, which reveals the reasoning underlying it. It also expresses that reasoning is no more no less than interconnected beliefs, whose purpose is to uncover the logic of someone's reasoning. All thinking is, thus, based on some assumptions, claims, implications and consequences, concepts or ideas, problems, and some facts; and is "relatively clear or unclear; is relatively deep or superficial; is relatively critical or uncritical; is relatively elaborated or underdeveloped; is relatively monlological or multi-logical." (Paul

According to Paul and Elder's critical thinking approach, it is necessary to understand the conceptual tools critical thinking brings to SQ. Paul and Elder believe that when one utilizes these fundamental concepts of critical thinking in the heart of the questions one asks, one's level of reasoning will become higher (Paul and Elder, 2007). The following points strictly outline the indicated relation between CT and SQ method (ibid: 4):

1. Analyzing thought (focusing on the parts of thinking)
2. Assessing thought (focusing on the standards of thinking)
3. Analyzing questions by system (distinguishing between questions of preference, fact and judgment)
4. Developing prior questions (focusing on questions we would need to answer before we could answer more complex questions)

reasoning, the intellectual standards, the intellectual skills and abilities and the intellectual virtues. The first three parts "characterize what it means to think critically", and the last part "characterize[s] what it means to be a critical thinker" (Reed, 1998: 247). Thus, Paul and Elder's elements, standards, and intellectual virtues become the basis on which the current study rests. Each conceptual set will be explicitly investigated in the course of the current research.[1]

1. The universal elements of reasoning (the parts or structures of thinking, reasoning or thought used interchangeably) are present wherever and whenever reasoning occurs and whether one is reasoning well or poorly.

2.The universal intellectual standards (standards of reasoning, or thinking used interchangeably)

6. et al., 2008: 24). According to this belief, thinking can develop as a result of such a kind of mind-stimulating questions that dig beneath the surface of the unexamined assumptions.

This section presents the core theory of Paul and Elder's CT and SQ method based on this approach. Paul and Elder's CT is concerned with everyday reasoning, and is about any subject, content, or problem in which the thinker "improves the quality of his or her thinking by skilfully analysing, assessing, and reconstructing it" through the consistent application of intellectual standards to the elements of reasoning with a "view to improve" as a well-cultivated critical thinker (Elder, 2007; Paul and Elder, 2009). Paul and Elder's critical thinking model has, four foundational parts: the elements of

in the following lines:

…it is through the analysis and assessment of thinking that critical thinking occurs. To analyze thinking we must be able to take thinking apart and scrutinize how we are using each part. Once we have done so, we apply the standards for thinking to those parts (standards such as clarity, accuracy, relevance, logicalness, fairness, etc.). Once we have a clear understanding of th parts of thinking (or elements of reasoning) and the intellectual standards, and once we begin to use them in our thinking on a daily basis, we begin to see the quality of our lives significantly improve. (2002: 65)

They, moreover, state that "success in thinking depends, first of all, on our ability to identify the components of thinking by asking essential questions based on those components" (ibid : 5). The value or are standards of quality used to assess reasoning through the consistent application to the elements of reasoning in order to develop;

3. The traits (virtues or habits) of mind that help one become a fair-minded intellectual character. Critical thinkers routinely apply intellectual standards to the elements of thinking in order to develop the intellectual traits of mind (Paul and Elder, 2002: 66)

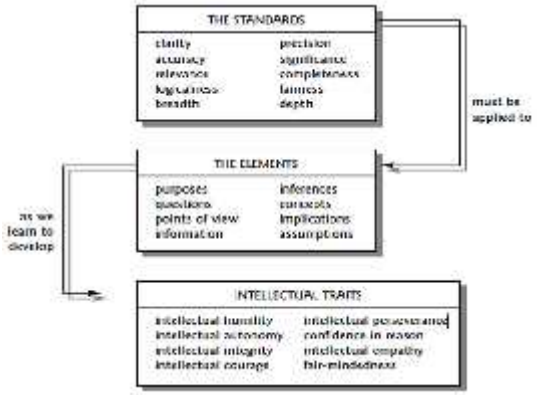


Figure 1 Paul and Elder's tri-polar model of critical thinking

Paul and Elder show how the process of thinking critically occurs

quality of something or someone depends on "our ability to effectively evaluate what is going on and how to act in a situation is directly determined by the quality of the questions we ask in the situation" (ibid: 21). Achieving excellence in thought requires students to question the structure, and methods of assessment, of thinking. As Elder and Paul write:

> assume that you do not fully understand someone's thought (including your own) until you understand the agenda behind it […] the question that gives rise to it […] the background information (facts, data, experiences) that supports or informs it […] the inferences that have shaped it […] the concepts that define and shape it […] what it takes for granted […] the most important implications and consequences that follow from it […] and the point of view or frame of reference that places it on an intellectual map. (2010b: 5-7)

In another context, they reveal that there are eight structures present in 'all thinking'. Paul and Elder spell out that "Whenever we think, we think for a purpose within a point of view based on assumptions leading to implications and consequences. We use concepts, ideas and theories to interpret data, facts, and experiences in order to answer questions, solve problems, and resolve issues." (Elder and Paul, 2010a: 5). So questioning those parts of thinking (i.e., questions that focus on purpose, question, information, implication, etc.) in the author's reasoning, by and large, improves and sharpens the students' analytical skills.

In addition to interrogating a text analytically, one can question it by

questioning is related to thinking:

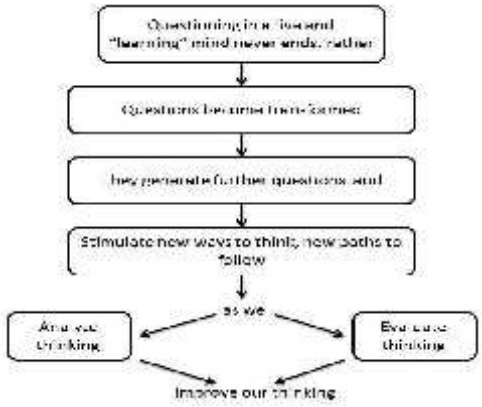


Figure 2 Questioning and thought

Besides the questions that are based on the elements and standards of thinking, the researcher instructed the students to focus on three kinds of questions: (a) questions with one right answer, (b) questions that are a matter of subjective preference, and (c) questions requiring reasoned judgment. These three ways of asking questions helped students generate questions that lead to a disciplined type of thinking. Elder and Paul (2010b: 8-9) propose the following figure which displays different ways of approaching a routinely asking questions that target the standards of thinking, or by applying the intellectual standards to the parts of thinking, so as to improve its quality. Paul and Elder imply that all "thinking is always more or less clear [...] precise [...] accurate [...] is always capable of staying from the task [...] can function either at the surface of things or probe beneath that surface to deeper matters and issue [...] can be broad or narrow [...] is more or less logical [...] and can be more or less fair" (Elder and Paul, 2010a: 22-23). As such, improving the quality of one's thinking requires one to question the quality standards of reasoning. The analysis of results at this level of the test assesses the students' ability to formulate analytic and evaluative questions that target the parts of thinking. The following conceptual map, adapted from Elder and Paul (ibid: 4), shows how

qualitative, not a quantitative, design is best addressed for the project aims. Qualitative research does not make generalized hypotheses but rather mainly seeks to explore meaning, individual experiences, feelings and perceptions of the participants, exchange multiple viewpoints, and make sense of their learning process (Lodico, Spaulding, and Voegtle: 2010). In most qualitative studies, the researcher is the 'primary measurement tool' of analyzing the subjective experiences of the participants, and types of data are "filtered through the researchers eyes and ears" (ibid: 112). The reasoning is that knowledge is created within a social menu within which realities are constructed in a viable fashion (ibid; see Larochelle, Bednarz and Garrison, 1998: 8). The researcher used the triangulation method in this study to question.

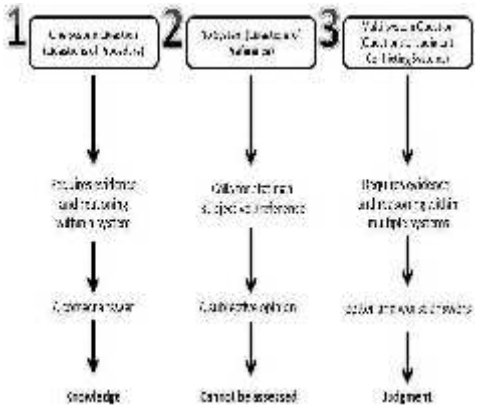


Figure 3 Types of Questions

5. Methodology

The methodology employed in this action-based research is qualitative in the form of interpretive and inductive method of analysing data, but it includes some quantitative data. Because the main focus of this study is on understanding the students' experiences and on tracing of the development of critical thinking skills as a result of the effectiveness of the teaching intervention of the Socratic questioning method, the

because qualitative research is much concerned with meaning and understanding experiences of the informants (2003).

7. Methods of Data Collection

This research study cloaks a variety of multiple methods relevant to the main guiding research question including: students' demographic survey which is used to collect data about the participants and about their critical thinking skills, critical thinking interviews, Socratic questioning interview profile, pre-, during and post focus group discussions, students' perception form, and exit attitude survey. The independent variable is the explicit instruction of Paul and Elders' taxonomy of Socratic questioning method based on Paul and Elder's critical thinking concepts. The dependent variables were the scores obtained from the pre-during and post-tests, the focus group (FG) cross-validate data.

6. Population and Sample

The population sampling of this research study is the undergraduate students of the Department of English, college of Arts at Basra University. The research sample is the intact class of the second year students from the department of English (10 males and 10 females, mostly aged between 20 and 22). The rationale behind using such a small sample size is necessitated by the time allotted, classroom size, and is to ensure more students' participation. The sample size in qualitative research is generally smaller than in quantitative studies. Ritchie, Lewis, and Elam believe that such sampling strategy lies in the idea that the frequencies are not so important in qualitative studies, as one occurrence of a code is as useful as many in comprehending the process behind a topic. This is

was made between January and May fall 2016. Twenty students were enrolled for a five-month training program. This group received 135 minutes of instruction; three sessions per week (45 minutes a day).

This treatment implementation consisted of a two-phase plan:

1. Concepts internalization phase: Teaching the SQ taxonomy, which in turn consists of two sub-phases:

a. Critical thinking concepts internalization phase based on Paul and Elder's concepts.

b. Integration of the Socratic taxonomy into the heart of the classroom discussions.

2. The reflective phase in which the students monitor their own questioning habits and the change of attitude, values and understanding of critical thinking in terms of analyzing and evaluating their ideas.

As for the instructional model and interview profiles, the students' perception form, and the exit attitude survey. Thus, the study examines multiple relationships between variables, including the intervention, the development of students' skills, and their experiences and perception, of the impact of the teaching intervention on their studies and lives.

8. Procedures and Materials

As indicated earlier, the primary aim of this qualitative action-based research is to enhance and develop students' critical thinking skills as a result of a focused SQ teaching. More specifically, it intends to enhance the students' analytic and evaluative abilities by utilizing Socratic questioning dialectic method based on Paul and Elder's conceptual approach to critical thinking.

A one-semester teaching program

thinking concepts via Socratic dialectic method of inquiry. To help students foster disciplined questioning, the researcher/teacher utilized a SQ checklist adopted from the Foundation for Critical Thinking (See Appendix A).

9. Structuring Socratic Dialogue

Since Socratic questioning method places an emphasis on exploring the "intellectual conversation centered on a text", one of the essential elements for a well-organized SQ method is a certain text which students are asked to read critically requiring them to think through its concepts, and to analyze, evaluate and apply these concepts to their lives (Copeland, 2005: 9). Throughout the main due course, the teacher/researcher has structured SQ in the following way: two main concentric circles were organized; the inner circle and the outer circle of students. The inner materials, Paul and Elder's Socratic taxonomy was used as a general model for assessing the students' reasoning abilities. The research focuses on three basic parts of the model: the eight elements of reasoning and intellectual standards as fig.1 shows. In addition, the researcher utilized the 21st thinker's guide to critical thinking co-authored by Paul and Elder as an instructional material such as The Aspiring Thinker's Guide to Critical Thinking (2009), The Thinker's Guide to The Art of Asking Essential Questions (2010b), and The Thinker's Guide to The Art of Socratic Questioning (2007). Some other pamphlets, leaflets, and posters were used as primary sources for students to use, practice with and apply a wide range of the model concepts.

The teaching intervention consists primarily of a package of lessons that fosters and develops critical

(ibid: 9). So the constructivist philosophy on which both concentric circles are founded suggests that it is the students who construct "meaning and understanding" in a more collaborative fashion "with their peers" (ibid: 10).

In addition, the teacher/researcher has adopted three distinct kinds of SQ that can be used to probe students' critical thinking: spontaneous or unplanned, exploratory, and focused; each can be uniquely facilitated at any level of instruction (Paul and Elder, 2007: 48). Spontaneous discussion is used to help teachers as well as students to "find out if something is true, logical, or reasonable" through "listening critically" and provide more opportunities for students to become "self-correcting" (ibid: 48). Such a kind of facilitation can occur at many different unplanned moments or

circle, on the one hand, focuses and explores the meaning and concepts of the text; and the outer circle observes the conversation on the other hand. After the inner circle had discussed the text and questioned its elemental structures and concepts, the outer circle used Socratic questioning checklist or guidelines to trace the quality of questions on the part of the students. Reflecting on 'questioning' quality of the text, the two circles changed roles to facilitate a new dialogue with new voices and ideas. Socratic questioning can take many different reiterating forms in leading discussions, but what is essential is that SQ should maintain what is called "discussion-feedback-reverse pattern", a kind of "interaction between the inner and the outer circles that enables students to control the direction and process of dialogue taking place"

probe a concept or an issue deeply and further allows students to "clarify, sort, analyze, and evaluate thoughts and perspectives" (ibid: 50). This dialectic method of questioning, furthermore, helps identify issues, concepts, a complex set of implications, inferences, consequences, premises for conclusions, and it requires students to formulate assumptions, identify relevant and or irrelevant points (Ibid; Thomas: 1998).

During the teaching intervention, the researcher has used a combination of spontaneous and exploratory designs at different occasions. The teacher has given 15 to 20 minutes to the inner circle to simulate students' thinking by reasoning out ideas and concepts extracted from some randomly selected reading passages. Then, the explorative method was followed to deeply explore a debatable issue. The wonderings by means of questioning the text analytically and evaluatively. There is a set of intellectual moves that the spontaneous Socratic questioner intentionally uses to promote his/her thinking by asking for clarification, reasons, evidence, logicalness, providing an analogy or parallel examples, and rephrasing what others say (ibid: 49).

Exploratory Socratic questioning is used to probe students' thinking on a variety of issues. This questioning method is used –with preplanning or thinking– to analyze and evaluate a topic under scrutiny by forming discussion groups. Such kind of discussion, Paul and Elder assert, "can be used in introducing a subject, in preparing students for a later analysis of a topic, or in reviewing important ideas before students take a test" (ibid: 49). The third type of Socratic questioning is the focused method that is used to

like a guide or coach in this mutual process of inquiry/controversy and help students develop the habits of questioning the foundational elements and quality standards of their own reasoning and the reasoning of others. The teacher has explicitly taught and modelled SQ methods based on Paul and Elder's concepts. This was followed by students' own practices and reflections without the teacher's facilitation.

9.1. Taxonomy of Socratic Questioning

The teacher used the following SQ taxonomy[2] to help students examine their reasoning through critical questioning:

1. Questions that target the parts of reasoning (elements of thought): Questioning someone's reasoning analytically is conducive to critical thinking. Here, Paul and Elder assert students were provided with Paul and Elder's critical thinking concepts so that they bring it to the heart of their discussion. The elements of thought help them to reason analytically through the ideas and concepts of the text in question. After reasoning out the text analytically, the students were stimulated to evaluate their ideas and their peers' by developing the quality standards of the text in terms of clarity, precision, accuracy, relevance, logic, fair-mindedness, significance, depth, and breadth. The individual and group circles require students to reason through complex issues and ideas following analysis and evaluation. Constantly modelled discussions and continuing engagement were all required for students to lead effective dialogues.

Most importantly, the teacher in Socratic-leading discussions acts

- What is your central aim in this line of thought?

b. Questioning questions: questions that focus on questions in reasoning include:

- What is the question I am trying to answer?
- What important questions are embedded in the issue?
- Is there a better way to put the question?
- Is this question clear? Is it complex?
- I am not sure exactly what question you are asking. Could you explain it?
- What would we have to do to settle this question?

c. Questioning information, data, and experiences: questions that focus on information in reasoning include:

- What information do I need to answer this question?
- What data are relevant to this problem?

that when one analyzes reasoning, one should break a "whole into parts" because a problem in the whole is no more no less than a problem in "one or more of its parts" (Paul and Elder, 2007: 4, Elder and Paul, 2010: 5). So, excellence in thought reflects one's ability in identifying the structures embedded in one's/someone's thinking which can only be made explicit through disciplined questioning of those components, as the following shows (Elder and Paul, 2010b: 5-7, 22-23 & Paul and Elder, 2007:4-9):

a. Questioning goals and purposes: questions that focus on purpose in reasoning include:

- What is your, my, their purpose in doing_____?
- What is the objective of this assignment (task, job, experiment, policy, strategy, etc.)?
- Should we question, refine, modify our purpose (goal, objective, etc.)?

- What is the main hypothesis you are using in your reasoning?
- Are you using this term in keeping with established usage?

f. Questioning assumptions

What am I assuming or taking for granted?

Am I assuming something I shouldn't?

What assumption is leading me to this conclusion?

What is being presupposed in this theory?

g. Questioning implications and consequences

If I decide to do "X", what things might happen?

If I decide not to do "X", what things might happen?

What are you implying when you say that?

What is likely to happen if we do this versus that?

Are you implying that…?

- Do we need to gather more information?
- Is this information relevant to our purpose or goal?
- On what information are you basing that comment?

d. Questioning inferences and conclusions

- What conclusions am I coming to?
- Is my inference logical?
- Are there other conclusions I should consider?
- Does this interpretation make sense?
- Does our solution necessarily follow from our data?
- Given all the facts, what is the best possible conclusion?

e. Questioning concepts and ideas

- What idea am I using in my thinking? Is this idea causing problems for me or for others?
- I think this is a good theory, but could you explain it more fully?

during the reasoning process: reasoning with purpose, with question at issue or some problem to be resolved, with information or data, with some concept, inferences, implications, etc. Thinking about these elements can become a constant in one's reasoning, and will bring more insight.

2. Questions that target the quality of reasoning (intellectual standards): Questioning someone's reasoning analytically is not a sufficient condition of the evaluation of reasoning. Evaluating reasoning requires knowledge of a set of universal intellectual standards, which "highlight the qualities signalling strengths and weaknesses in thinking" (Paul and Elder, 2002: 96). For example, it is a strength, in reasoning, to be relevant; a weakness to be irrelevant; a strength to be precise, and a weakness to be imprecise (ibid). So, these standards

How significant are the implications of this decision?

h. Questioning viewpoints and perspectives

How am I looking at this situation? Is there another way to look at it that I should consider?

What exactly am I focused on? And how am I seeing it?

Is my view the only reasonable view? What does my point of view ignore?

Which of these possible viewpoints makes the most sense given the situation?

Am I having difficulty looking at this situation from a viewpoint with which I disagree?

Do I study viewpoints that challenge my personal beliefs?

In conclusion, these elements of reasoning are evidently present in all reasoning of all subjects in all cultures (Paul and Elder, 2002). It is always crucial to ask questions

include clarity, precision, accuracy, relevance, depth, breadth, logic, and fairness. It is only through questioning these elements evaluatively can students improve their critical thinking quality.

a. Questioning clarity

- Could you elaborate?
- Could you illustrate what you mean?
- Could you give me an example?

b. Questioning precision

- How could we check on that?
- How could we find out if that is true?
- How could we verify or test that?

c. Questioning accuracy

- Could you be more specific?
- Could you give me more details?
- Could you be more exact?

d. Questioning relevance

- How does that relate to the problem?
- How does that bear on the question?
- How does that help us with the issue?

e. Questioning depth

- What factors make this a difficult problem?
- What are some of the complexities of this question?
- What are some of the difficulties we need to deal with?

f. Questioning breadth

- Do we need to look at this from another perspective?
- Do we need to consider another point of view?
- Do we need to look at this in other ways?

g. Questioning logic

- Does all of this make sense

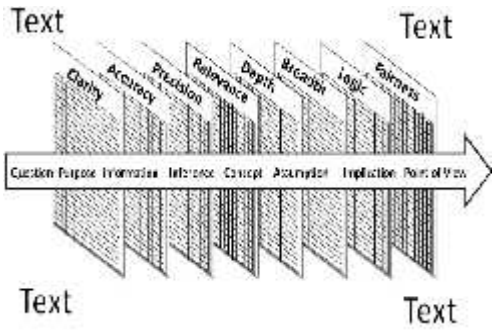


Figure 4 The function of the standards of critical thinking (adapted from Nosich, 2012: 134)

10. Data Analysis

To address the research question, an inductive and thematic analytical approach is used in this study. Some quantitative aspects are also included. The analysis of the qualitative data is conducted at the individual and group levels so as to gain an understanding of the informants' experience and perception of critical thinking after remodelling Socratic questioning as the main intervention. In other words, the analysis of data comprises an interpretive study of the students' knowledge and

together?

- Does your first paragraph fit in with your last?
- Does what you say follow from the evidence?

h. Questioning fairness

- Is my thinking justifiable in context?
- Are my assumptions supported by evidence?
- Is my purpose fair given the situation?
- Am I using my concepts in keeping with educated usage or am I distorting them to get what I want?

The aforementioned standards of reasoning are viewed as a "set of screens or filters that screen out reasoning that is not clear, not accurate, or not sufficiently relevant, deep, broad, or precise" (Nosich, 2012: 134). The following figure shows clearly how they function in reasoning about a text, a problem, a question, an argument, etc.

development of critical thinking concepts embedded in the model, their views on the experience of the intervention, and their views on the effectiveness of Socratic instruction on their ability to analyze and evaluate reasoning. The following analytical instruments are used in analyzing data obtained from the multiple methods:

1. The data gathered from the students' demographic survey is thematically analyzed and categorized into major themes.
2. The data gained from the students' critical thinking and Socratic questioning group interviews, and exit attitude survey or students' perception of SQ instruction are addressed by analyzing, describing, and categorizing data into major themes and sub-themes to trace the development of the students' critical questioning abilities and hence the promotion of critical thinking skills.
3. The data obtained from the pre-during-and post-tests is addressed, transcribed, categorized into analytical and evaluative (critical) questions that target the parts of thinking and are then compared using tables in a word document, excel sheets, and illustrative figures to give further insights into emerging themes and methodologies, considering the development and improvement of students' metacognitive skills.

Thus, procedures of qualitative analysis of data are as complex as the data itself. In this research paper, the emerging results are left to the resonation of the reader, which is considered an "essential form of validation in qualitative research" (Elliott and Timulak, 2005: 156).

concepts, etc. analytically and evaluatively determines reliability and genuineness of their articulation and perception of critical thinking. For instance, in the "thinking through a text" test, the students were asked to question one of its concepts by generating a chain of related questions targeting the elements of reasoning. If students, in this particular context, clearly, precisely, accurately, relevantly, etc. examine their reasoning and others' propositions, this presumably indicates genuine, reliable and authentic understanding of CT, which marks students as beginning skilled, skilled, or highly skilled questioners, and vice versa. Thus, the students' questions were marked by codes whereby the (−) indicates uncritical and the (+) indicates critical, as the table below shows.

12. Data Analysis, Discussion and Results

11. Assessment Criteria

Qualitative in nature as it may have explicitly been shown, the research participants will be categorized as unskilled questioners, skilled questioners, or highly skilled questioners. The development of each skill level is determined by a series of rubric assessments of the participants' handling of the constructs of reasoning, in which the more the students manage to bring the elements and standards of reasoning to the heart of their questioning appropriately, the higher their thinking level is, and the more sound their reasoning will be.

The assessment criteria of the data and findings adopted depend, by and large, upon their degree of reliability and genuineness. The students' perception and articulation of critical thinking skills are grounded in their responses. Put differently, the extent to which students question the text,

The main guiding research question is: Will students of English at BU improve their learning and critical thinking skills after participating in the Socratic Method of inquiry; a six-month intervention conducted by the researcher/instructor using a series of modelled and structured discussions in academic reading and rhetoric??

This part of research analyzes the collected data and discusses the results as they are related to the main research question. It overviews each method of data collection, categorizes it into major themes, reflectively discusses those themes and associates each method to the research question.

12.1. Students' Demographic Survey

The survey, composed of 30 questions, was developed by the researcher; it was mainly inspired by the FCT. Students' demographic survey is employed to collect data about the participants and about their general critical thinking and questioning skills including questions about personal information. It also provides some information about the pre-course(s) in critical thinking or critical reading which students might have taken. Other questions, moreover, focus on students' experience in critical thinking skills and dispositions, as tables 2 & 3 show (Appendix B):

As the pre-survey shows, there are three major categories: students' demographic characteristics, language skills and the courses studied and/or tests taken, and students' critical thinking and critical reading abilities. As for the first category, 20 (50% males and females) is the accessible research sample. Students have different

dependent variable – is adapted from the Foundation for Critical Thinking. The type of questions centers on students' general critical thinking skills and dispositions (Appendix C). Ten students have participated in conducting the first focus group discussion. Their responses are analyzed and discussed according to 6 organizing categories:

1. CT perception
2. CT conceptual elements
3. Analysis
4. Evaluation
5. Application to other contexts

Students' responses on the FGs interview profile are measured using a 1-4 Likert-type scale in the following manner: 4 points = deep understanding of the idea/concept, 3= little understanding, 2= limited understanding, and 1= no understanding/conceptualization.

As the primary results of the FG academic and social backgrounds and majors. Students' responses show 11 students whose academic major – pre-college entry – is science and 9 students whose academic major is humanities/social sciences. The second major category provides information about participants' language skills and courses or tests, which students might have had. Around 16 students said that they did not take any courses in subjects like critical listening and reading, and critical thinking abilities either during pre-college, in college or in any other private institutions. Only four students, however, reported they had taken tests in listening, critical reading, and critical thinking during pre-college and in college.

12.2. Students' Perception of Critical Thinking: Focus Group Interviews (FGs)

The FGs interview profile –the

analysis and evaluation, and applications. The table does not indicate any thoughtful (limited) perception of critical thinking.

12.3. Discussion and Results of Socratic Questioning Interview Profile

SQ interview profile – the dependent variable – mainly comprises questions focusing on students' realization of the importance of disciplined questioning to their understanding and learning. This interview is originally a part of the students' FG interviews. I have, with intent, put the analysis of results in a separate section (Appendix D). The students' responses were also analyzed and discussed according to six major categories:

1. Perception of SQ
2. Differences between SQ and questioning per se
3. Importance of SQ to developing

As the primary results of the FG interview profile show, the first column of the students' responses (n=39) indicate no perception of what CT means, identify its conceptual elements, levels of analysis and evaluation, as defined by the elements and standards of thought, and applying CT skills to their daily academia and life. Thus, the total sum of scores (39) 78% for the research participants show a clear lack of conceptualizing CT across all categories, with a high mean score (3.9) out of (5) total. The total sum of scores showing little perception is 7 (14%), with a mean score of 0.7. The total score showing limited perception is 4 (8%), with a mean 0.4, which is very low. The last category shows that no one single student reported a clearer and deeper perception of CT, its conceptual elements, levels of

student's response showed deeper understanding of the role of a disciplined questioning in academic and life.

12.4. Discussion and Results of the SQ Pre-test

The first SQ pre-test is about an intellectual conversation, which centers on a text. It examines the primary results of the students' habits of questioning by reasoning out ideas and concept(s) of the text analytically and evaluatively. Two circles were organized for this purpose. Both concentric circles were composed of 20 students (10 students each). Based on this test, the more students manage to bring the elements and standards of reasoning to the heart of their questioning appropriately, the higher their thinking level is, and the more sound their reasoning will be. The inner circle students have chosen the concept of "education" and arguments and promoting CT

4. Level of analysis
5. Level of evaluation
6. SQ as a powerful tool for learning and life

Using the 1-4 Likert-type scale, 78.5% of the students' responses indicated that students showed no perception of SQ, did not differentiate between SQ and questioning per se, did not recognize its major processes, did not identify its significance to promoting critical thinking and developing arguments, analysis and evaluation of reasoning, and its benefits in life. The mean value shows 5.5 out of 7 total, which is rather high at this level of analysis of data. The total sum of scores showing limited perception is 9 (12.8%), with a mean score of 0.9. The total score showing little understanding across all categories is 5 (7.1%), with a mean of 0.5, which is very low. Only one

questioning; questions that dig deep beneath the surface of the matter. This is a result of the lack of any questioning abilities. Students' skill level is also marked as 'unskilled questioner', 'beginning skilled questioner', and 'highly skilled questioner' in terms of students' analytical and evaluative levels, based on SQ taxonomy. As the figures show, the number of unskilled questioners is high at both the analytic and evaluative levels.

12.5. Discussion and Results of the Progress Test

Following the same criterion of analysis of data in the previous section, this test empirically seeks to measure the students' progress at their analytical and evaluative levels of questioning. Measuring students' disciplined way of questioning is facilitated by adopting a second Socratic circle in which students started adopting the method of (systematic) questioning. Students' responses were analyzed and evaluated by using a coding scheme for this purpose (see table 1).

Analysis using a 0–10 point scale for the students' analytical and evaluative questioning abilities shows that the number of students indicating negative responses is high at their analytic and evaluative levels of questioning, as indicated in the two figures below. The 16 conceptual elements – the hallmark of Socratic dialectic method – are used to guide students to strictly follow a deep questioning method in the reasoning process in general and in analysing the concept of "education" in particular. We can infer that both the structure of the Socratic questioning circle and the quality of the leading discussion show an explicit lack of disciplined

data analysis and evaluation discussed so far, the research results show that students, having been exposed to the direct instruction of the Socratic Method during the third phase of the teaching intervention, have gained a better view of how to lead a discussion socratically. The research evidence shows that most of the participants have intensively and consciously brought the elements and standards of reasoning to their discussion in analyzing most of the concepts and ideas in a more comprehensive sense. Seeking to generate questions and further questions rather than answers have shown a better improvement in the students' reasoning or the reasoning of others. The third test gives a better view of how deep and systematic the third discussion was. The students have become better Socratic questioners, as questioning explored the idea "friendship" in a text they were asked to read. The following table and figure disclose a better progress in terms of the students' analytic and evaluative levels of questioning. In this test, students were better able to bring the elements and standards of reasoning into the heart of their discussion than in their first Socratic circle. They were aware that those conceptual elements could invulnerably guide the discussion in a systematic and deep way. The table and figures below show little progress in the second assignment after an intensive and explicit instruction of the Socratic Method. The number of beginning skilled questioners becomes a bit higher in this test, and more specifically at the analytic level of questioning.

12.6. Discussion and Results of the Post Test

Based on the same principles of

throughout the tests. The results are encouraging in terms of the growth of their analytic level of questioning and understanding of CT key concepts, as advocated by Paul and Elder (2007).

12.6.2 Students' total score and mean gains at the evaluative questioning of reasoning

The following table and figure show how the students' total score and mean value have improved throughout the tests. The results are encouraging in terms of the growth in terms of their evaluative level of questioning and understanding of CT key concepts, as advocated by Paul and Elder.

12.8. Students' Perception of Critical Thinking: Discussion and Results of the Post-FGDs Interviews

An analysis using (1-4) Likert-scale, students' responses in the post-interview are analyzed and the elements and standards of reasoning is a habit of mind that could be, with a continuing practice, developed and improved over time. The following table and figures show the constant progress of the students' questioning habits in analyzing and evaluating the ideas/concepts under scrutiny. The number of beginning skilled and skilled questioners has significantly increased in this the third test. The next section will highlight/compare the total gains of mean values and scores obtained throughout the three tests.

12.7. Comparison of the Students' Scores and Mean Value: Total Gains

12.6.1 Students' total score and mean gains at the analytic questioning of questioning

The following table and figure show how the students' total score and mean value have improved

perception is 10 (20%), with a mean 0.4, which is very low. The last category shows that 60% of the students' responses reported a clearer and deeper perception of CT, its conceptual elements, levels of analysis and evaluation, and broader applications. The table indicates some thoughtful perception of critical thinking.

12.9. Discussion and Results of Socratic Questioning Post-interview Profile

Based on the same criteria discussed in SQC pre-interview section (12.3), the following part analyses the students' responses in the light of six major categories:

1. Perception of SQ
2. Differences between SQ and questioning per se
3. Importance of SQ to developing arguments and promoting CT
4. Level of analysis
5. Level of evaluation

discussed according to six organizing categories:

1. CT Perception
2. CT conceptual elements
3. Analysis
4. Evaluation
5. Application to broader contexts

Analysis of results of the students responses in the post-interview (n=8) indicates – a cross all five categories – no perception of what CT means, identify its conceptual elements, levels of analysis and evaluation, as defined by the elements and standards of thought, and applying CT skills to their daily academia and life. Thus, the total sum of scores (٨) ١٦% for the research participants shows a clear lack of conceptualizing CT across all categories, with a high mean score (0.8) out of (5) total. The total sum of scores showing little perception is 2 (04%), with a mean score of 0.2. The total score showing limited

10 (14.4%), with a mean score of 0.1. The total score showing little understanding across all categories is 9 (12.8%), with a mean of 0.9, which is rather higher than the students total score and mean in the first interview (7.1%, with a mean of 0.5). 60% (with a mean of 4.2 out of 7) of the students' responses show deeper understanding of the role of SQ Method in the above-mentioned areas of inquiry, compared with the responses in the first interview, which shows a rather low score in understanding SQ at a deeper level. The results are encouraging at this level of analysis.

12.10. Discussion and Results of the Students' Attitude Survey

Students' attitude or perception survey is also one of the qualitative techniques of data collection in this research study. This survey, on the one hand, provides a diversity of

6. SQ as a powerful tool for learning and life

Analysis using a 1-4 Likert-type scale shows that students have achieved notable progress in the SQC post-interview. Analysis of results indicates that 12.8% (mean 0.9) of the students' responses shows no perception of SQ, did not differentiate between SQ and questioning per se, did not recognize its major processes, did not identify its significance to promoting critical thinking and developing arguments, analysis and evaluation of reasoning, and its benefits in life, which is very low, compared with their first interview which showed 78.5% of the students' responses across all categories indicated above. The mean value shows 0.9 out of 7 total, which is rather low at this level of analysis of data. The total sum of scores showing limited perception is

upon the ideas from the Foundation for Critical Thinking (Appendix E).

The current paper assumes that modelling a disciplined way of questioning is an effective tool for promoting critical thinking. This part of survey centers primarily on the students' attitudinal dimension of the empowerment of their questioning habits during the intervention. The students were asked to provide information and feedback on the quality and effectiveness of the instruction, and to express their perception of the way their critical thinking skills were developed during a one-semester teaching intervention. The students' responses are marked on a 1-5 scale for 1 (=lowest score) and 5 (=highest score). The meaning of each circled value is expressed in the following manner: 1 (= teaching impact and the development of their critical questioning is ineffective or of research participants' experiences and perception of intellectual inquiry: analytical and evaluative questioning and their role in maximizing students' critical thinking skills and attitudes. One the other hand, this instrument helps minimize the researcher's bias in the interpretation and reflection of any possible influence on the students' responses during the interviews. The survey was given to 15 students. Only 10 students could be able to complete it. The students were asked to answer the question, tick or circle the response that best reflects their knowledge, thoughts, behaviors, and attitudes. They were also asked to provide additional views of developing as better questioners and rate the effectiveness of the instruction on a 1-5 scale. The form is primarily based on Paul and Elder's evaluation form and is further developed by the researcher, relying

their thinking through questioning; ask powerful questions, learn the art of Socratic questioning, learn to ask analytical and evaluative questions, etc. 49% of the students' responses indicate that the intervention is between ineffective and effective or above the low quality average in helping them understand and develop most of the areas mentioned above. Further analysis reveals that 41% of the students' responses show that the teaching intervention has been highly effective in helping them develop and improve their analytic and evaluative questioning abilities, ask deep questions, and pursue thought in many directions. As the following diagram shows:

Part II: Students' shared thoughts and attitudes/experiences of the empowerment of their CT skills through disciplined questioning (Item 3).This aspect of the survey reflects

low quality); 2 and 3 (= between ineffective and effective or above the low quality average), and 4 and 5 (= highly effective or of high quality). This section, thus, falls into two organizing parts:

Part I: Students' ratings of the impact of the teaching intervention on promoting their analytic and evaluative questioning (Items 2 and 3).

Results

The above table displays the students' responses, which indicate whether or not students have developed as better thinkers as a result of a constant remodelling of Socratic questioning instruction. Analysis of the students' responses shows that 10% of the students' responses indicate that the intervention has been ineffective in helping them learn how to improve

intervention. Regarding the teaching program, some students commented: it has helped them to "analyze and evaluate each word" by "asking open-ended questions". Another student responded: "starting discussion with more than one question". This student has realized the importance of approaching a question by further exploring sub-questions in leading discussions. One student has mentioned: "with the course, we learned that everything should be questioned: our behavior, friends, teachers, fathers, etc…." and in other context, she stated, "we learned to be logical, and to achieve it, we have learned to be better questioners". In connection with this, "it is through Socratic questioning", we have developed our questioning abilities, one of the students replied.

The students further explore their shared experiences, attitudes, and the students' perceptions and shared experiences obtained as a result of learning Socratic questioning method. The general impression is that the teaching intervention last year 2016 has affected and developed the students' abilities to think critically. The students were asked during the second interview whether they had developed their CT skills through a dialectic method of instruction. The students' shared attitudes and experiences are illustrated in the following comments[3]:

The researcher asked the students whether the teaching intervention has maximized their questioning habits or not. Most of their answers show that students express their happiness in learning how to question analytically and evaluatively in terms of utilizing a set of intellectual constructs they had already learnt during the

reflections after they had left the intervention in May 2016. Some of their responses are:

Researcher: Describe your experiences, which you believe may have contributed to the development and promotion of your critical thinking abilities and skills through Socratic questioning.

SQ1: "Socratic question makes me think in a different way, analyze the question before I answer. It is not limited only to my study but also reflect on my daily life."

SQ2: "I think that my experience after the Socratic questioning course becomes much better through questions… I have learned how to use and ask questions and analyze the ideas in a different way."

SQ3: "After joining the fist sessions of Socratic questioning, I started to be a critical thinker unconsciously. For example, I started to ask myself questions before taking any decision and put in my consideration the consequences… I began to raise effective and critical questions while studying novel, drama, and poetry." She also added: "I got a lot of benefits from this valuable experience and it changed my way of thinking and my perspectives."

SQ4: "It becomes a lot easier. Now I have the ability to ask more effective questions and be a part of an argument."

SQ5: "It helped me in the development of myself, not in the highest level but it is good by analyzing and evaluating my thoughts."

SQ6: "It is the first experience for me. The first time I feel my opinion is important and discuss… It also helped me in a successful way to

develop the insights of a better thinker. Not only have students explained the effectiveness of asking powerful questions on their academia but on their life and change of attitude as well.

13. Conclusions

The major focus of this study was to empirically assess the effectiveness of teaching Richard Paul and Linda Elder's Socratic questioning method on the students' abilities to think critically. This study presupposes that students' critical thinking skills can only be developed by asking critically analytical and evaluative questions. The study wraps up with the following significant findings:

1. Enhancing students' critical questioning can improve over a one-semester teaching program if adequate training is provided.
2. Critical thinking begins only with asking questions, since questioning is an important tool of thinking. Thus, study by asking critical questions. I

am so happy and proud to join this program."

SQ7: "Socratic questioning has been a great change in my life; it has helped me to study in a deeper useful way by asking questions and further questions… It has also been great in… in my life."

SQ8: "This is what I got from the course: I become more reasonable, more disciplined. I started using critical and fundamental questions… I can say that the course made me a better thinker. It made a difference in my social and academic life."

Undoubtedly, in these instances, the students have expressed their contentment that the SQ intervention has helped them improve their thinking by following a disciplined method of critical/effective questioning. Most students express their enthusiasm to continue learning more about critical questioning to

change; of those who will be most affected by this changing world" (2006: 9). It is clear that creating a sense of change requires one to critically question one's or someone's (surrounding) sources of beliefs before accepting them as being true. It is only though questioning can one stimulate thought.

14. Recommendations for Future Implementations

The research results revealed that modelling a focused Socratic questioning, as a teaching strategy, could bring about a considerable improvement of the higher order (critical) thinking skills and development of the students' cognitive and social skills. There is an ample evidence, throughout the teaching intervention, which indicates that the Socratic discussions format were significantly effective in the questioning method is important in the development and enhancement of critical thinking skills and stimulates inquiry. The language of thinking or of critique enhances knowledge of critical thinking.

3. A mind, with a rigorous practice and intellectual commitment, can be trained to be critical, and hence thinking improves.

4. Fostering questioning abilities and inquiry should be the organizing elements through course subjects for the enhancement of the students' higher order thinking skills.

5. Asking reflective questions is one of the benchmarks of the development of critical thinking and a door to deep understanding.

6. Scanlan stipulates: "critical thinking is the instrument of social change, and it is imperative that it gets into the hands (and minds) of those who most desperately need

skeptical through questioning could be potentially a source for improving their critical thinking skills.

3. Maximizing opportunities for teachers to take part in workshops and sessions that explicitly show how SQ circles could be integrated into their classes as a source of inquiry.

4. Modelling and designing SQ method has proven its value in the current research during the one-semester teaching intervention. To maximize the opportunities for students to develop their metacognitive skills, it is proposed that SQ formats are to be adopted as an inquiry-based learning and teaching strategy.

5. One of the most stimulating issues is the relation between the individual student and the group interplay, proposed by the Socratic seminar. The relationship between individual 'thinking' and group 'thinking' is worth engaging students in a variety of activities that called upon their critical thinking skills, that helped students to change their attitudes with their peers in a more respectful manner. Given the notable progress of the Socratic questioning method modelled at the Department of English –BU, the current research offers some recommendation for future implementations:

1. Planning disciplined Socratic circles across all course subjects and at all academic levels could develop the students' metacognitive skills.

2. Utilizing focus group and seminar discussions as a classroom design more often than a traditional class could positively change students' learning habits. Utilizing SQ as a curriculum-based method of instruction changes the classroom into a more inquiry-based fashion.

3. Encouraging students to be

and longer teaching program is designed for larger sample.

examining. Very positive (surprising) results may be obtained if intensive

الهوامش:

1 For more comprehensive view on the elements and standards of reasoning and intellectual virtues, see Elder and Paul (2008, 2009, 2010a); Paul and Elder (2002: 65-127, 17-36); Paul and Nosich (1995: 78-123; 124-135), Paul (1995a).
2 SQ taxonomy is adapted from (Elder and Paul, 2010b: 5-7, 22-23 & Paul and Elder, 2007:4-9).
3 The informants' literal responses are written. No changes are made.
4.This coding scheme is adapted from the Foundation for Critical Thinking and Paul and Elders' The Art of Socratic Questioning, 2007.
5.This protocol is adapted from the Foundation for Critical Thinking, www.criticalthinking.org

Table 1: Coding Scheme for Analyzing the Taxonomy of Socratic Questioning[3]

Indicators	Description of question quality
Purpose +/−	The (+) indicates that the elements of thought implied by all reasoning are articulated in the Socratic discussion, whereas the (−) indicates that the elements of thought are not stated in the questioning process.
PoV +/−	
Assumptions +/−	
Implications +/−	
Information +/−	
Inferences +/−	
Concepts +/−	
Question at issue +/−	
Clarity +/−	Socratic questioner (SQer) has/has not asked for clarity
Accuracy +/−	SQer has/has not asked for accuracy in reasoning
Precision +/−	SQer has/has not asked for precision in reasoning
Relevance +/−	SQer has/has not asked for relevance in reasoning

Breadth +/−	SQer has/has not asked for breadth in reasoning
Depth +/−	SQer has/has not asked for depth in reasoning
Logicalness +/−	SQer has/has not asked for logicalness in reasoning
Fair−mindedness +/−	SQer has/has not asked for fair−mindedness in reasoning

Table 2: Students' demographics

Criteria	No. of students
Pre−college tests taken	
Listening	0
Speaking	0
Reading	4
Critical Thinking	0
None	16
College Courses Taken	
Critical Thinking	4
Philosophy	0
None	16

Critical Thinking and Critical Reading Courses	
Pre-college Education	0
Higher Education	3 (one is left unanswered)
None of the Above	16
(Critical) Reading Courses	
Yes	3
No	17

Table3: Students' Critical Thinking Skills

Metacognitive Skills	Students' Responses		
	1 (Usually)	(Sometimes)	3 (Never)
Author's denotative and connotative meaning		1	
Consider author's purpose		1	
Alternative PoV	1		
Author's information	1		

Evaluate sources			
Understand author's PoV			
Difficultly in differentiating between assumptions and facts			
Void overgeneralizations			
Analysis and evaluation of arguments			
Consider opposing view points			
Seek relevant evidence			
Apply what has been learned to real life			
Recognize contradictions			
Fair–mindedness in reasoning			

Table 4: Students' Interview Profile

Categories/ Scale	CT Perceptio	CT Elements	Analysis	Evaluation	pplication	Total Points	Mean ٥
1	7	9	7	10	6	39	3.9
2	2	1	2	0	2	7	0.7
3	1	0	1	0	2	4	0.4
4	0	0	0	0	0	0	0

Categorie Sca	S Percepti	SQ ar uestioni	S Process	SQ, Critic Thinking Argumer	Analysis Reasoni	valuation Reasoni	Discipline uestioning academ And life	Total	M 5
1	9	7	10	7	9	9	3	55	5.5
2	1	2	0	2	1	1	3	9	0.9
3	0	1	0	1	0	0	3	5	0.5
4	0	0	0	0	0	0	1	1	0.1

Table 5: Socratic Questioning Interview Profile

ategories Scale	Perceptic Questioning	SQ and rocesses	SQ Thinking & Arguments	SQ, Critical Reasoning	nalysis o Reasoning	valuation c uestioning i cademia an life	Disciplined	Tot	M 5
1	9	7	10	7	9	9	3	55	5.5
2	1	2	0	2	1	1	3	9	0.9
3	0	1	0	1	0	0	3	5	0.5
4	0	0	0	0	0	0	1	1	0.1

Table 6: SQ Pre-test Concept Analysis "Education"

No.	SQ Focus	Indicators	No. of Students' (+) Responses	No. of Students' (-) Responses
1	The Elements of Thought (analytical questions)	Purpose +/-	2	18
		PoV +/-	3	17
		Assumptions +/-	0	20
		Implications +/-	1	19
		Information +/-	5	15
		Inferences +/-	2	18
		Concepts +/-	8	12
		Question at issue +/-	4	16
2	The Standards of Thought (evaluative questions)	Clarity +/-	3	17
		Accuracy +/-	1	19
		Precision +/-	3	17
		Relevance +/-	4	16
		Breadth +/-	0	20
		Depth +/-	0	20
		Logicalness +/-	1	19
		Fair-mindedness +/-	2	18

Figure 5a Students' analytic level of questioning

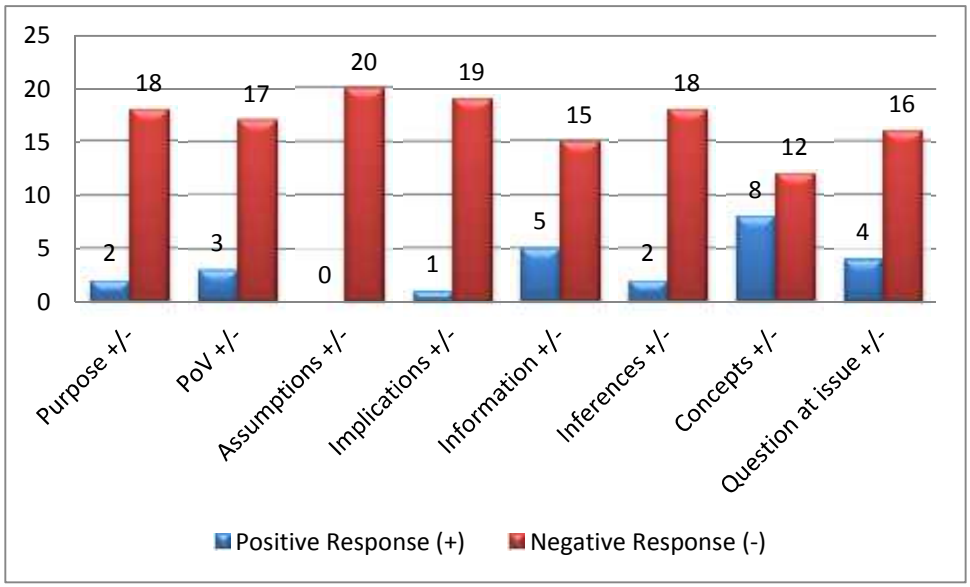


Figure 5b Students' evaluative level of questioning

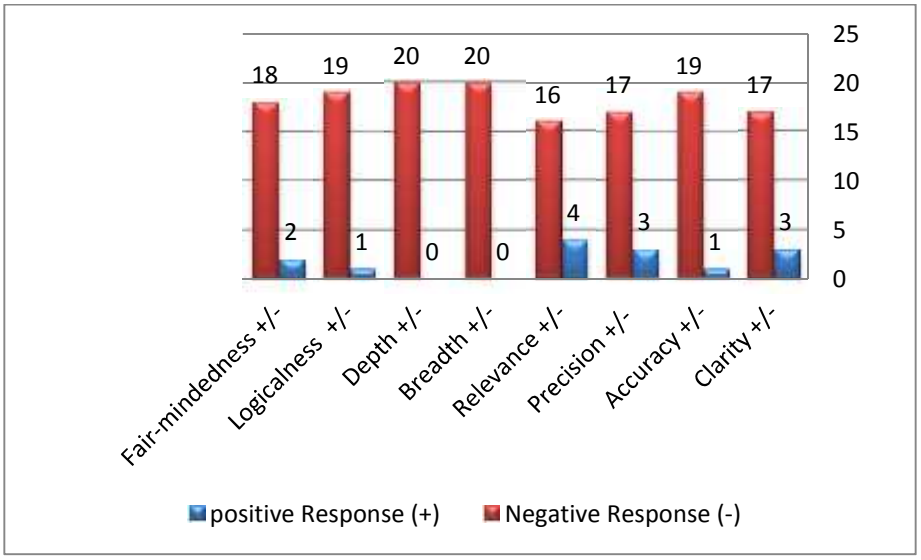


Figure 6a Students' analytic level of questioning

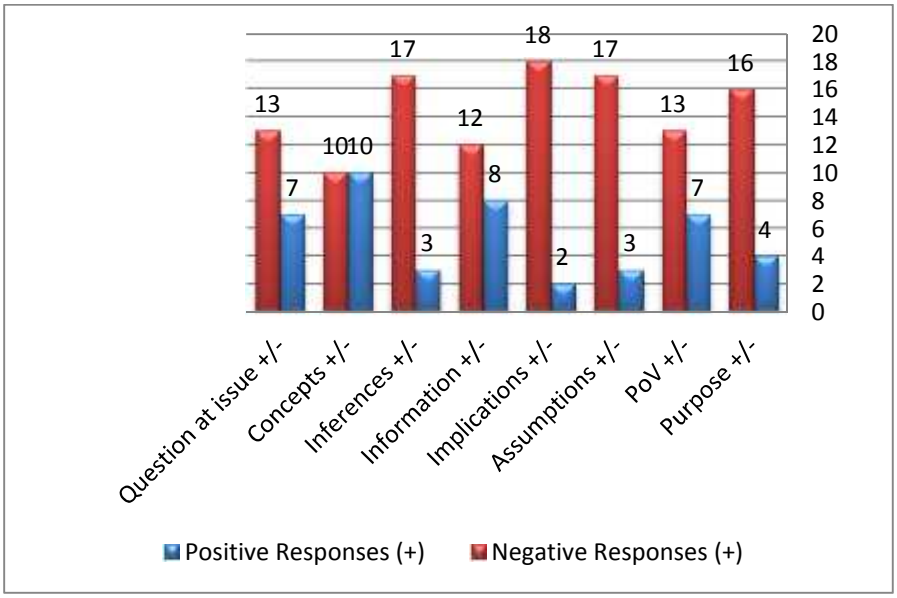


Figure 6b Students' evaluative level of questioning

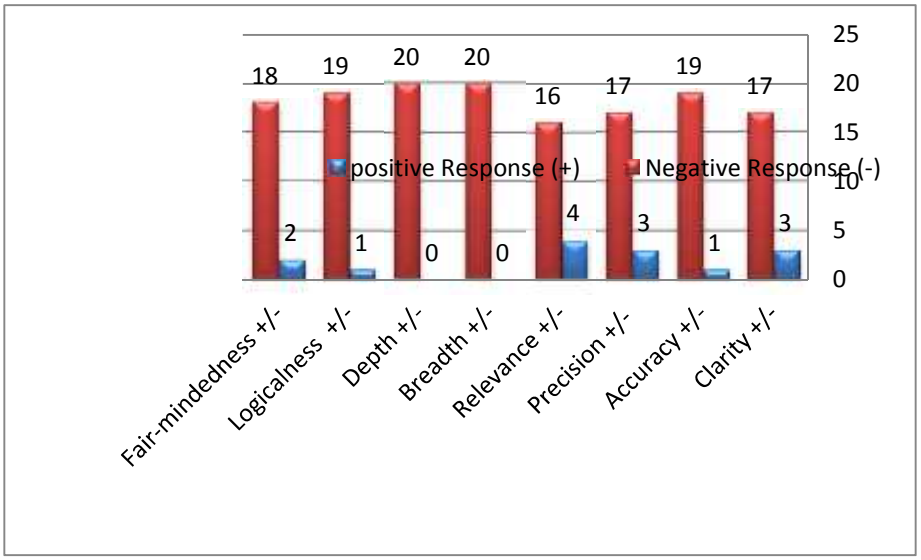


Table 6: SQ Progress Test Concept Analysis “Friendship”

No.	SQ Focus	Indicators	No. of Students’ (+) Responses	No. of Students’ (-) Responses
1	The Elements of Thought (analytical questions)	Purpose +/-	4	16
		PoV +/-	7	13
		Assumptions +/-	3	17
		Implications +/-	2	18
		Information +/-	8	12
		Inferences +/-	3	17
		Concepts +/-	10	10
		Question at issue +/-	7	13
2	The Standards of Thought (evaluative questions)	Clarity +/-	5	15
		Accuracy +/-	3	17
		Precision +/-	4	16
		Relevance +/-	4	16
		Breadth +/-	1	19
		Depth +/-	2	18
		Logicalness +/-	1	19
		Fair-mindedness +/-	2	

Figure 7a Students' analytic level of questioning

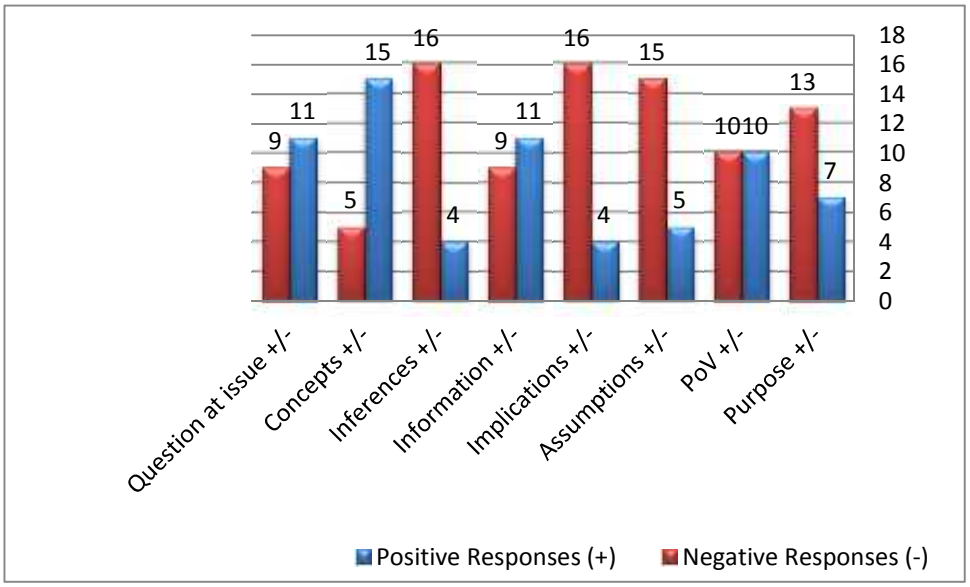


Figure 7b Students' evaluative level of questioning

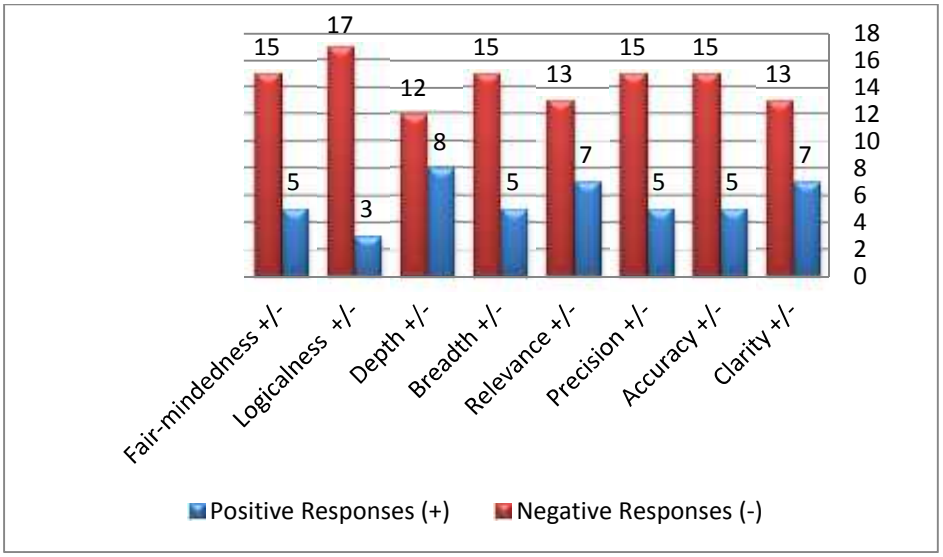


Table 8: Students' total score and means at the analytic level of questioning

Elements of Thinking	Pre-test	Progress test	Post-test
Purpose +	2	4	7
PoV +	3	7	10
Assumptions +	0	3	5
Implications +	1	2	4
Information +	5	8	11
Inferences +	2	3	4
Concepts +	8	10	15
Question at issue +	4	7	11

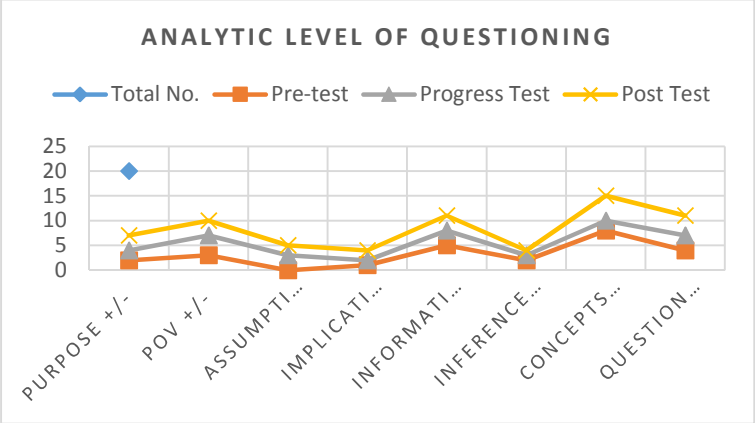


Figure 8 students total score and mean at the analytic level of questioning

Table 9: Students' total score and means at the evaluative level of questioning

Standards of Thinking	Pre-test	Progress Test	Post-test
Clarity +	3	5	7
Accuracy +	1	3	5
Precision +	3	4	5
Relevance +	4	4	7
Breadth +	0	1	5
Depth +	0	2	8
Logicalness +	1	1	3

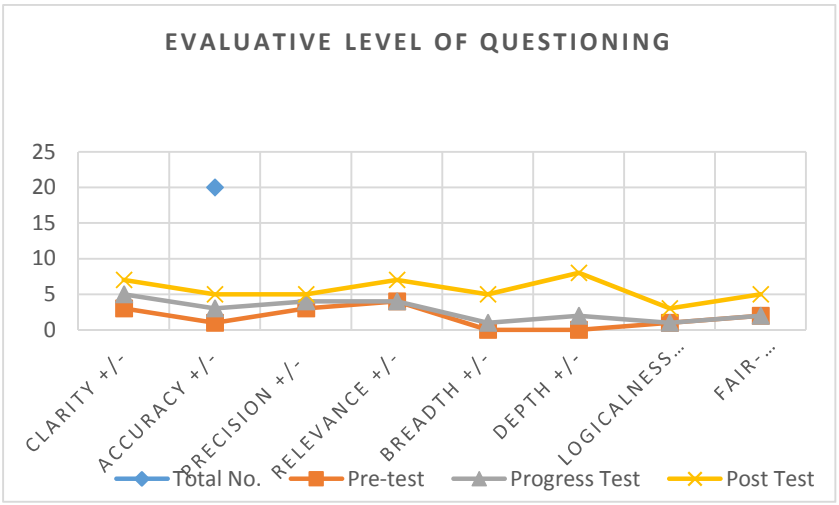


Figure 9 students' total score and mean at the evaluative level of questioning

Table 10: Students' Interview Profile

Categorie	T Perceptio Sca	CT Conceptual Elements	Level of Analysis	Level of Evaluation	plication Broader Contexts	Total	Mean 5
	2	1	0	3	2	8	0.8
	0	1	1	0	0	2	0.2
	1	2	1	2	4	10	1
	7	6	8	5	4	30	3

Categories/ Scale	Q Perceptio	SQ and Questioning	SQ processes	SQ, Critica Thinking & Arguments	analysis o easoning	valuation O Reasoning	isciplined estioning ademia ar life	Total	M
	0	0	1	3	2	1	2	9	0.9
	1	3	1	0	2	2	1	10	0.1
	2	1	0	3	0	2	1	9	0.9
	7	6	8	4	6	5	6	42	4.2

Table 11: Socratic Questioning Post Interview Profile

ategories	Q Perceptio	SQ and	Q Process	SQ, Critical	nalysis of	valuation o	Disciplined	Total	M
Scale		Questioning		Thinking & Arguments	Reasoning	Reasoning	uestioning i cademia an life		
1	0	0	1	3	2	1	2	9	0.9
2	1	3	1	0	2	2	1	10	0.1
3	2	1	0	3	0	2	1	9	0.9
4	7	6	8	4	6	5	6	42	4.2

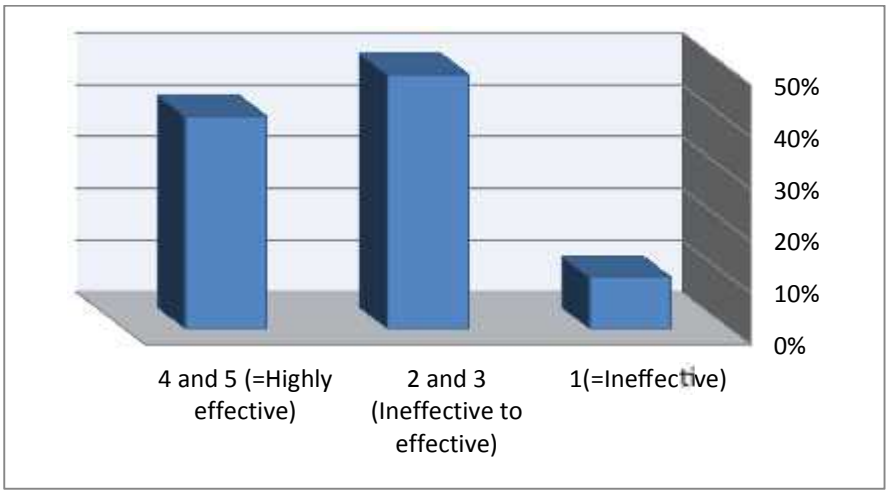
Table 12: Students' reported responses (perception) of the impact of teaching on promoting students' Socratic questioning and empowerment of thought

Theme No.		Students' Responses				
Scale	To what extent does your instructor teach so that you…	1	2	3	4	5
1.	learn how to improve your thinking through questioning?			5	4	1
2.	ask powerful questions?			6	4	
3.	learn the art of Socratic questioning?			3	7	
4.	understand that a full stop does not constitute a thought? It is only through questioning thought generates.		2	6	2	
5.	learn and understand to ask analytical questions?		1	4	5	
6.	learn and understand to ask evaluative questioning?			3	7	
7.	break down a question into many sub-questions in order to understand and solve a problem or understand ideas deeply?			5	3	2

8. understand concepts deeply through Socratic questioning?		1	4	4	1
9. recognize and understand the type of question: a question with one definite answer, or the one that calls for a subjective preference, or the one that considers competing answers (judgment)?		3	5	1	1
10. use the Socratic questioning checklist which fosters disciplined questioning?		3	2	4	1
11. engage actively in the discussion?		2	2	4	2
12. use different directions to pursue thought?	1	3	5		1
13. question the questions by identifying prior questions?			4	5	1
14. promote your thinking by means of probing questions?		1	3	3	3
15. wonder aloud about truth and meaning through questioning?		1	3	5	1
16. understand, analyse and evaluate your sources of belief through questioning?		2	1	3	4
17. understand that the quality of your thinking is given in the quality of your questions?		3		4	3

18. learn that questioning in a live and learning mind never ends, rather questions become transformed, generate further questions, and stimulate new ways to think, new paths to follow as you analyse and evaluate thinking in a way to improve your thinking?			4	2	4
19. understand and learn that one powerful way to listen, speak, read and write well is to questions of analysis and assessment?		2	3	3	2
20. learn and generate ethical questions in all realms of life?			6	4	

Figure 10 Students' Perception of SQ Modelling



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Appendix A: Socratic Questioning Checklist

The following checklist helps foster disciplined and thoughtful questioning on the part of students. Students might take leads in Socratic discussions in either in small groups called Socratic questioning circles. Some students, during the process, must be observing the other leading the dialogue and make use of the following general guidelines to provide feedback (each student should have a copy during the dialogue).

1. Did the questioner respond to all answers with a further question?----------.

Template (1): Keeping Participants Focused on the Elements of Thinking

1. Did the questioner make the goal of the discussion clear?----------.

(What is the goal of the discussion? What are we trying to accomplish?)

2. Did the questioner pursue relevant information?----------.

(What information are you basing that comment on? What experience convinced you of?)

3. Did the questioner question inferences, interpretations, and conclusions where appropriate or significant?----------. (How did you reach that conclusion? Could you explain your reasoning? Is there another possible interpretation?)

4. Did the questioner focus on key ideas or concepts?----------.

(What is the main idea you are putting forth? Could you explain that idea?)

5. Did the questioner note questionable assumptions?----------.

(What exactly are you taking for granted here? Why are you assuming that?)

6. Did the questioner question implications and consequences?----------.

(What are you implying when you say…? Are you implying that…? If people accepted our conclusion, and then acted upon it, what implications might follow?)

7. Did the questioner call attention to the point of view inherent in various answers?--------.

(From what point of view are you looking at this? Is there another point of view we should consider?)

8. Did the questioner keep the central question in focus?---------.

(I am not sure exactly what question you are raising. Could you explain it? remember that the question we are dealing with is...)

9. Did the questioner call for a clarification of context, when necessary?----------.

(Tell us more about the situation that has given rise to this problem. What was going on in this situation?)

Template (2): Keeping Participants Focused on Systems for Thought

1. Did the questioner distinguish subjective questions from factual questions, from those requiring reasoned judgment within conflicting viewpoints?--------

(Is the question calling for a subjective or personal choice? If so, let's make that choice in terms of our personal preferences. Or, is there a way to come up with a single correct answer to this question? Or, are we dealing with a question that would be answered differently within different points of view? If the latter, what is the best answer to the question, all things considered?)

2. Did the questioner keep the participants aware of alternative ways to think about the problem?----------.

(Can you give me another way to think about this problem?)

Template (3): Keeping Participants Focused on Standards for Thought

1. Did the questioner keep the participants aware of alternative ways to think about the problem?----------.

(Could you elaborate further on what you are saying? Could you give me an example or illustration of your point? Let me tell you what I understand you to be saying. Is my interpretation correct?)

2. Did the questioner call for more details or greater precision, when necessary?--------.

(Could you give us more details about that? Could you specify your allegations more fully?)

3. Did the questioner keep participants sensitive to the need to check facts and verify the accuracy of information?----------.

(How could we check to see if it is true? How could we verify these alleged facts?)

4. Did the questioner keep participants aware of the need to stick to the question on the floor; to make sure their "answers" were relevant to the question being addressed at any given point?----------.

(I do not see how what you said bears on the question. Could you explain what you think the connection is?)

5. Did the questioner keep participants aware of the complexities in the question on the floor? Did the questioner ask participants to think deeply about deep issues?----------.

(What makes this a complex question? How does your answer take into account the complexities in the question?)

6. Did the questioner keep participants aware of multiple points of view when dealing with broad questions?----------.

(We have looked at the question from a linguist's point of view. Now let's look at it from a psycholinguist point of view. We have taken a linguistic position on that issue? What would sociologists say? We have considered what you think about the situation, but what would your parents think about it?)

Template (4): Keeping Participants Actively Engaged in the Discussion

1. Did the questioner think aloud along with the participants?----------.

(I understand you to be saying… I think this is a very complex question, and so I am not sure how to answer this. I would summarize the discussion thus far in the following way…)

2. Did the questioner allow sufficient time for the participants to formulate their answers?

3. Did the questioner ensure that every contribution as sufficiently dealt with in some way?

4. Did the questioner periodically summarize where the discussion was in accomplishing its agenda? What questions had been and what questions had not been answered?

5. Did the discussion proceed smoothly with the various contributions being effectively blended into an intelligible whole?

Appendix B: Students' Demographic Survey

The following information is only for statistical purposes and will not in any way affect your grade in this critical thinking course. Please, circle the choice that best suits your answer.

Questions 1-5 relate to your personal information

1. Gender:

a. Female

b. Male

2. Age

a. Under 20

b. 20-22

c. 23-25

d. 26-29

e. None of the above

3. Social Background

a. Rural Area

b. City (Downtown)

c. Evacuated

4. Which academic branch did you study before you joined college?

a. Humanities

b. Scientific

c. None of the above (please specify)

5. Describe your English language skills

a. Excellent

b. Very good

c. Good

d. Fair

e. In need of improvement

6. Describe your reading skills

a. Excellent

b. Very good

c. Good

d. Fair

e. In need of improvement

Questions 7 & 8 concern the pre-courses and entry tests students might have taken

7. Did you take any of the following entry tests before you joined the department of English?

a. Listening

b. Speaking

c. Reading

d. Writing

e. Critical thinking

f. None of the above

8. Did you take any of the pre-college courses or even during college?

a. Psychology

b. Philosophy

c. Critical thinking

d. None of the above

9. Which of the following statements best describes your progress in English reading requirements?

a. I have passed either college reading I & II (during first two years) or their equivalents, thus I have completed my English reading requirements.

b. I have not yet begun my English reading requirements.

c. I am currently taking college reading course.

d. I have passed college reading course or its equivalent at another educational institution, but I am not currently enrolled in college reading course.

e. I have passed college reading or its equivalent at another educational institution, and I am currently enrolled in college reading course.

Question 10&11 relates to critical thinking and critical reading courses

10. Did you take (learn) any critical thinking and critical reading college courses?

a. I have not yet begun taking (learning) any critical thinking and reading courses.

b. I have not completed yet my college critical thinking and reading requirements.

c. I have taken one or more college courses in critical thinking and reading skills.

d. No critical thinking and critical reading courses are being offered.

11. How many semesters of critical reading have you completed and passed at BU or at another two year college or University? (please do not count)

a. I have not taken any critical thinking & reading course. (This course is my first one).

b. I have taken one, but I failed.

c. I have completed and passed one course of critical thinking & reading skills.

d. I have completed and passed two (and more) courses of critical thinking & reading skills.

Questions 12-15 refer to courses you might have taken in critical thinking skills

12. Have you ever taken a critical thinking course (or a course similarly labelled) that was devoted to teaching critical thinking skills?

a. I have never taken a course of how to think critically.

b. I took one or more courses in primary, mid or high school devoted to learning how to think critically.

c. I have taken one or more courses at a college (Department of English) designed to learning how to think critically.

d. I have taken one or more courses devoted to learning how to think critically, but this course was not in high school or college.

13. Did you take one or more pre-college courses that explicitly taught critical thinking skills while incorporating them into regular course work? (For instance: in linguistics and or literature assignments, the teacher fostered critical thinking skills into class activities)

a. Yes

b. No

14. Have you taken one or more college courses during the first and the second year that explicitly taught critical thinking skills within and across any content area while incorporating them into regular course work? (For instance: in linguistics and or literature assignments, the teacher fostered critical thinking skills into class activities?

a. Yes

b. No

15. Have you taken one or more separable courses in college or otherwise that explicitly fostered critical thinking skills?

a. Yes

b. No

Questions 16-30 refer to the critical thinking skills

Rate the following statements using a 3-point scale as indicated below:

1=true 2=false 3=do not know

16. _____I can recognize the connotative and denotative meaning of words when I read.

17. _____I can recognize the author's purpose for writing a specific piece of literature.

18. _____Considering alternative points of view is helpful in problem solving.

19. _____Evaluating information for its relevance is a valuable critical thinking ability.

20. _____When exploring an issue, I frequently evaluate the credibility of the sources of information.

21. _____I can accurately comprehend one's point of view or frame of reference.
22. _____I have difficulty recognizing the difference between assumptions, beliefs, and facts.
23. _____I avoid generalizations and oversimplifications.
24. _____I analyse and evaluate arguments, interpretations, beliefs, or theories.
25. _____I have difficulty comparing perspectives, interpretations, or theories.
26. _____I have difficulty taking into account opposing points of view.
27. _____I find it easy to offer relevant, constructive evidence to support my points of view.
28. _____I frequently compare or transfer insights learned in the classroom to real life situations.
29. _____When exploring an issue, I sometimes have difficulty recognizing contradictions..
30. _____I consider myself to be fair-minded.

Appendix C: Critical Thinking Interview (Group Interviews)[3]

Thank you for agreeing to this interview. The purpose is to look into your development as a student and thinker. More particularly, the purpose is to determine the extent to which the tools and language of critical thinking have come to play an important part in the way you go about learning, in school and in everyday life.

• What is critical thinking?
• Are there any components of critical thinking?
• If so, what are they?
• If you were asked to analyze thinking, how would you do so?
• What standards do you use when you evaluate someone's thinking?
• What is your favorite subject and how does critical thinking apply to it?
• How does critical thinking apply to reading any content area?
• How does critical thinking apply to the study of language?
• How does critical thinking apply to the study of literature?
• Could you give me some examples of your use of critical thinking in your life?
• To what extent have your teachers encouraged you to think critically? Explain.

Appendix D: Socratic Questioning (SQ) Interview Profile

1. What do you know about Socratic questioning discussion?
2. What are the benefits of SQ?
3. What processes does SQ involve?
4. How does SQ help you to develop and improve your critical thinking skills?
5. How important is SQ circles in improving your discussion/, reading and developing your arguments?
6. What is the difference between Socratic questioning and questioning?
7. How does SQ help you analyse the author's reasoning while reading?
8. How does SQ help you evaluate the author's reasoning while reading?
9. To what extent do your teachers encourage you to question socratically in your academia?
10. Do what extent do you use deep questioning in your life?

Appendix E: Students' Attitude Survey

Dear Participant,

This attitude survey is part of the teaching intervention on how to develop your analytic and evaluative abilities through a disciplined method of questioning at Basra University. There is no right or wrong answer in this survey. Answer the questions as honestly as you can. It is all about how your attitudes, experiences, and values of critical questioning might have changed as a result of this teaching program.

Age:

Gender:

1. Which of the following areas have you learnt during the SQ teaching intervention?

Socratic questioning		Higher order thinking skills	
Analytical questioning		Evaluative questioning	
CT skills		Disciplined questioning habits	
Self-reflection		Elements of reasoning	
Standards of reasoning		None of them	

2. Now circle the appropriate number for each of the following items:

Attitude Questions	Low Score				High Score
21. To what extent does your instructor teach so as to help you learn how to improve your thinking through questioning?	1	2	3	4	5
22. To what extent does your instructor teach so as to enable you to ask powerful questions?	1	2	3	4	5
23. To what extent does your instructor teach so as to help you learn the art of Socratic questioning?	1	2	3	4	5

24. To what extent does your instructor teach so as to help you to understand that a full stop does not constitute a thought? It is only through questioning thought generates.	1	2	3	4	5
25. To what extent does your instructor teach so as to help you learn and understand to ask analytical questions?	1	2	3	4	5
26. To what extent does your instructor teach so as to help you learn and understand to ask evaluative questioning?	1	2	3	4	5
27. To what extent does your instructor teach so as to enable you to break down a question into many sub-questions in order to understand and solve a problem or understand ideas deeply?	1	2	3	4	5
28. To what extent does your instructor teach so as to help you understand concepts deeply through Socratic questioning?	1	2	3	4	5

29. In approaching a question, to what extent does your instructor teach so as to help you recognize and understand the type of question: a question with one definite answer, or the one that calls for a subjective preference, or the one that considers competing answers (judgment)?	1	2	3	4	5
30. To what extent does your instructor teach so as to help you use the Socratic questioning checklist which fosters disciplined questioning?	1	2	3	4	5
31. To what extent does your instructor teach so as to help to engage actively in the discussion?	1	2	3	4	5
32. To what extent does your instructor teach so as to help you use different directions to pursue thought?	1	2	3	4	5
33. To what extent does your instructor teach so as to help you question the questions by identifying prior questions?	1	2	3	4	5
34. To what extent does your instructor uses types of questioning during instruction that help you in many different ways to probe your thinking?	1	2	3	4	5
35. To what extent does your instructor teach so as to help you wonder aloud about truth and meaning through questioning?	1	2	3	4	5

36. To what extent does your instructor teach so as to help you understand, analyze and evaluate your sources of belief through questioning?	1	2	3	4	5
37. To what extent does your instructor teach so as to enable you understand that the quality of your thinking is given in the quality of your questions?	1	2	3	4	5
38. To what extent does your instructor teach so as to help you learn that questioning in a live and learning mind never ends, rather questions become transformed, generate further questions, and stimulate new ways to think, new paths to follow as you analyze and evaluate thinking in a way to improve your thinking?	1	2	3	4	5
39. To what extent does your instructor teach so as to help you understand and learn that one powerful way to listen, speak, read and write well is to questions of analysis and assessment?	1	2	3	4	5
40. To what extent does your instructor teach so as to help you learn and generate ethical questions in all realms of life?	1	2	3	4	5

3. Mention four features of the teaching intervention that might have contributed to maximize your questioning habits:

1.

2.

3.

4.

4. Describe your experiences which you believe may have contributed to the development and promotion of your critical thinking skills and abilities through Socratic questioning

Thank you for taking part in this survey!