

- Herders/Farmers Conflicts in Nasarawa State, Nigeria. *American International Journal of Contemporary Research* 4(2): 76-88.
- Ozoemena, P. O. (2016). The education issues: A national security crisis in Nigeria. *International Journal of Education and Research*, 4(12), 189-197.
- UNESCO (2014). *Right to Education. Scope and Implementation*. General comment 13. On the right to Education. UNECO Economic and Social Council. Retrieved 20, October, 2013 from <http://portal.unesco.org/educational/file/download.Php/c/44c/a8c/6875ae>

## **RE-THINKING SOCRATIC METHOD AS A SIGNIFICANT FACTOR FOR PROMOTING CRITICAL THINKING AMONG STUDENTS OF NIGERIAN TERTIARY INSTITUTIONS**

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### **Abstract**

*Critical thinking is an important factor in learning, particularly in the universities and other tertiary institutions in Nigeria. One of the methods that promote critical thinking is questioning method. This method is traced to Socrates; and it is known as Socratic Method. This study focused on re-thinking this Socratic Method as a significant factor for promoting critical thinking. The purpose of the paper was to establish that Socratic Method is a significant factor in promoting critical thinking among students in Nigerian tertiary institutions, and ascertain its adaptability and applicability to the modern day learning process in these institutions. The study was a qualitative one. It made use of conceptual framework, philosophical reflection and literature review in its approach. Areas of discussion included teaching method, Socratic Method and critical thinking. Also considered was how Socratic Method can be adapted and applied in this modern era. The findings of the study showed that Socratic Method is catalytic to critical thinking. In other words, Socratic Method is a significant factor for promoting critical thinking among students of Nigerian tertiary institutions. It was also discovered that the method can be adapted and applied to today's learning process. Based on this, it was suggested, among other things, that greater emphasis be placed on this adaptation and application of Socratic Method. Lecturers in Nigerian tertiary institutions are therefore urged to make*

*use of this method, following the two principles underlying it: Socratic didactic method and Socratic irony.*

**Key words:** Re-thinking, Socratic Method and Critical thinking

### **Introduction**

Thinking faculty is a distinguishing characteristic of humans among all the created beings in this world. Only human beings have the capacity to think, and this is what sets them apart from the lower animals. It is in the nature of human beings to think; so, every human being thinks, in the ordinary sense of it. However, much of human thinking is usually prone to bias, prejudice, partiality, and distortion. That is why lots of things go wrong in the society, because what we do and the way we live and interact with our environment depend heavily on the quality of our thinking. To overcome this inherent weakness requires the cultivation of critical thinking, the purpose of which is objectivity in every aspect of human endeavours. In the institutions of learning, especially in higher institutions, critical thinking is truly critical. This is because this is the final level of education, after which the learners transit to real life in the society with its multifaceted expectations and challenges.

In Nigerian tertiary institutions, there is no doubt that critical thinking is of paramount importance for effective learning and objective analysis of issues in education, since the products of these institutions will definitely have effects on the society at large. Learning has been part of human experience at all times and throughout the entire globe. In their efforts to learn, human beings use various approaches or methods that would enhance their knowledge and increase their thinking and reasoning capacity. These methods have been in use from the ancient times, though in informal and non-formal ways, sometimes even without the teachers or instructors being conscious of the fact that they are using this or that method.

Things started taking shape from the times of the ancient Greek philosophers and educators, notably Socrates, Plato and Aristotle, among others. They contributed greatly to the development of education. Socrates used a method of dialectic or dialogical questioning, known as Socratic Method. Plato used play method which, for him, was the only way to discover new truth. Aristotle made use of inductive and deductive methods, both in objective and subjective discourses. This earned him the sobriquet of father of modern sciences. He also used the peripatetic method, in which he, while teaching, walked around with his students out of respect for dialogue (Gikas, 2019) and interaction. The point to be delineated from these ancient methods is that teachers and students should be seen as companions in search of knowledge for mutual enrichment and social benefits.

Since the time of these early Greek philosophers, exploring various methods of teaching has been one of the preoccupations of educators. In this modern time, such teaching methods include questioning, lecture-based, demonstration, doing, story-telling, play and discussion methods, among many others. Each of the methods is designed to achieve particular aims, while the overall aim of all the methods is to facilitate learning. Of all these

methods, questioning is traced to the Socratic Method, which propels critical thinking. It is hoped that re-thinking and applying Socratic Method will enhance critical thinking. In Nigerian tertiary institutions, there is an apparent diminution of students' capacity for critical thinking. This may not be so surprising, given the spate of distractions that have invaded our university environments, especially those emanating from social media, quest for excess freedom and material pursuits. Moreover, in Nigerian tertiary institutions, lecture method is the most used. This method does not encourage students' active participation and critical thinking, since their major role is to listen and take notes where necessary. One of the ways to arouse students to active participation and critical thinking is asking them questions. It is against this backdrop that the paper focuses on re-thinking Socratic Method so as to stimulate critical thinking among students. To achieve this, the paper employs conceptual framework, theoretical framework and literature review. The paper discusses the concept of teaching methods, Socratic Method, critical thinking, steps in critical thinking, benefits of Socratic Method, benefits of critical thinking, and application of Socratic Method. The aim of the paper is to encourage lecturers to apply the Socratic Method so as to stimulate and enhance students' capacity for critical thinking, which will in turn help them to be objective in their approach to issues, both within the school environment and in the wider society.

## **Conceptual Framework**

### **Teaching Method**

Teaching method refers to the way teachers teach their students that would enhance their understanding of whatever they are being taught. According to Teach.com (2023), the term teaching method refers to the general principles, pedagogy and management strategies for classroom instruction. This means that teaching methods are carefully planned and accepted as a guide for effective teaching and learning in the process of disseminating knowledge. Teaching method comprises the principles and methods used by teachers to enable student learning, and these methods are partly determined by the nature of the subject matter and the nature of the learner (Pruitt, 2015). The emphasis of this definition is on the intention, for which methods come into play, that is, the enablement of students' learning. Also, it is important to study the subject matter and the nature of the learner before making use of a particular method of teaching. Bello (1981) is of the view that teaching method is a systematic way in which a teacher uses to transfer or receive or share information, and it also implies theories of instructions, and can include class participation, demonstration and recitation. Teaching methods can also be understood as ways to instruct students in the classroom, so as to help them comprehend and remember what they have learned (Indeed Editorial Team, 2023). Right teaching methods help teachers to impart knowledge to learners with greater clarity. This would make it easier for learners to understand the teaching better.

There are various concepts and explanations of teaching methods, just as there are many kinds of teaching methods. However, all the concepts and explanations point towards the same directions, and have almost the same attributes. There is a consensus among all the views that teaching methods are systematic and principled in nature. They are well organized with the interests of the learner in mind, and their aim is to help students to learner better and do better in their academic endeavours. From the views under consideration, one can unarguably state that teaching method is a way or manner in which teachers systematically and carefully transmit knowledge, skills and values to students in order to help them easily understand what they are being taught and also be able to recall and put them into practice when and where necessary.

### **The Teacher and the Choice of Method to Use**

To decide on what teaching method to use, the teacher has to put a lot of things into consideration. Such considerations as the teacher's philosophical ideas, academic standing, intuition and instinct, the structure of the classroom, the subject areas to be taught, the vision and mission of the school, the age and interest of the learner, are very vital to the choice of teaching method in any teaching-learning encounter. According to Westwood (2008), a teaching method should take into consideration the learner, the nature of the subject and the expected learning outcomes. The choice of teaching method is very necessary, for it is also meant to make learning lively, interesting, inspiring and engaging for students. In teaching-learning episodes, students' mental, emotional and social developments are usually at stake. This is also a point to be considered before deciding on the type of teaching method to adopt and apply, so as to provide proper guide to students in these aspects.

Although instructors may prefer one teaching method to another, it often happens that several methods can be made use of even in one teaching-learning episode. In view of this, knowing many teaching methods places the teacher at an advantage, since exigencies may require a change of method even in the middle of a lecture. Learning to use a variety of methods by teachers is very important so as to take care of a wide range of learning needs as they present themselves within the classroom environment (Ojumu, 2016).

### **Socratic Method**

Socratic Method is a system or manner of teaching which originated from Socrates. It was an alternative method in response to the sophists' way which was characterized by their use of philosophical argument and rhetoric to make impressions on the audience and persuade them to accept the view of the speaker. What the sophists were saying might not be true, but they capitalized on their fluency in language speech and manipulation of words to prod people, especially the not-so-critically-minded, to accept their sophistry as truth. Socratic Method is an educational technique where a teacher poses questions for students to answer, focusing on the dialogue between the teacher and the students (Mastrangelo, Serva & Airth, 2022). The reason for this type of question is to enable students to think and

come up with answers by themselves. Upon giving the answer, further question is asked, based on the answer, or some words, concepts or phrases used. This follow-up question is for the purpose of clarification, to be sure of the meaning being conveyed. Questions and answers would continue until a correct, clear and convincing answer is reached through the efforts of both the teacher and students working together.

Socratic Method is also known as method of Elenchus, Socratic debate, dialectical method of inquiry, or elenctic method. It is a form of cooperative argumentative dialogue among or between individuals, characterized by asking and answering questions so as to stimulate critical thinking and to draw out ideas that underlie propositions (Pruitt, 2015). The purpose of the method is to sift precise definitions that are latent in the participants' beliefs and opinions, and help them to deepen their understanding. In this method, ambiguities and contradictions are persistently and carefully identified and removed until the truth of proposition stands out convincingly clear to the disputants. This commonly held truth will now shape the participants' viewpoints and beliefs, and also ascertain their consistency in relation to other beliefs or opinions.

The method originated from Socrates, and he used it to help people to clarify their beliefs, and understand their assumptions, reasons and evidence employed to support them. In this method, any inconsistency, fallacy, or contradiction that clings to individual's or group's thinking is exposed.

### **Steps in Socratic Method**

Elenchus (ελεγχος in Greek), is the key technique used by Socrates in his Socratic method. It is the argument of disproof or refutation which involves cross-examining, testing, and scrutinizing, for the purpose of refutation (Liddell, Scott & Jones, n.d.). Vlastos (1983) identifies the following steps used by Socrates in examining concepts:

1. Socrates' interlocutor asserts a thesis, for example "Courage is endurance of the soul".
2. Socrates decides whether the thesis is false and targets the refutation.
3. Socrates secures his interlocutor's agreement to further premise, for example "Courage is a fine thing" and "Ignorant endurance is not a fine thing".
4. Socrates then argues, and the interlocutor agrees, these further premises imply the contrary of the original thesis; in this case, it leads to: "Courage is not endurance of the soul".
5. Socrates then claims he has shown his interlocutor's thesis is false and its negation is true.

In the light of these steps, it can be seen that one examination leads to another, and the movement continues until the end becomes a sort of puzzle, referred to as "aporia" – an improved state of knowledge, but one in which there is still no certainty. However, there is more refined scrutinization of the subject under consideration, and examination of a further claim can be invited, such as "courage is informed endurance of the soul", since ignorant endurance is not a fine thing, as seen in the steps above. "Informed courage" as endurance of the soul is clearer and more reasonable than just "courage" as endurance of

the soul. While these steps may not be suitable to this modern age in their entirety, they help the interlocutors to come to terms with their own ignorance and shortcomings regarding knowledge claims, and so they should leave no stone unturned in their efforts to arrive at the true knowledge, rather than stopping at the periphery.

### **Two basic principles underlying the Socratic Method:**

For practical purposes and profitable use of Socratic Method, it is important to bear in mind the principles on which rests the method. These principles also play guiding roles in the application of the method in the classroom setting or any formal learning encounter between the teacher and students. There are two such principles: Socratic didactic method and Socratic irony.

**1. Socratic Didactic Method:** Under this principles, it is believed that knowledge is a result of dialogue. In other words, knowledge should be interactive and not one-way dimensional. This belief is informed by the idealists' concept of innate ideas, which holds that there is seminal knowledge in every human being right from birth. As such, no one is completely devoid of knowing something. Through questioning, these innate ideas are tapped and activated in the students. The teachers do not pose as 'I know it all'. They are really to learn even from their students.

**2. Socratic Irony:** In this principle, the teacher assumes the position of knowing nothing or knowing much. This stance, though unknown to students, paves the way for others (the students) to be inspired and motivated to discover knowledge by themselves. This motivation comes by questioning method. This questioning will propel the students to think and figure out possible answers.

The understanding behind the above principles is that students should not be taught to accept knowledge as a dogma, without questions, doubts or objections; they are to be taught how to think rather than how to accept (Gikas, 2019). This is not the case regarding lecture method, where students are expected to accept the lecturer's views. Usually much time or consideration is not given to students to air their own views or ask many questions. Lectures do not always allow students to have a direct interaction with the learning material (Mastrangelo, Serva & Airth, 2022), hence they are not well equipped and adequately informed in a way that would enable them to air their own views, and actively participate in the discussion of the subject matter.

### **Philosophical Reflection and Critical Observation on Socratic Method**

Despite the acceptance that Socratic Method enhances critical thinking and creativity, some scholars hold that there are some disadvantages found in the method. For instance, Delic, Becirovic, Haris, and Senad (2016) argue that those who use this method are intent on pointing out the students' mistakes, and this can give rise to negative feelings among students. Such students may feel they are being exposed to ridicule, embarrassment and humiliation. However, this may not be the intendment really. Again, fear of public speaking is common among students. Also there is often no right answer, and it is sometimes difficult

to handle multiple answers for a single question (Scholle 2020). However, some scholars have different opinions. According to Furman (2013), and Mangrum (2010), Socratic circles, practised within the Socratic Method as Socratic seminar, specify three types of questions, thus:

1. Opening question, which generates discussion at the beginning of the seminar in order to elicit dominant themes.
2. Guiding questions, which help deepen and elaborate the discussion, keeping contributions on topic and encouraging a positive atmosphere and consideration for others.
3. Closing questions, which lead participants to summarize their thoughts and learning and personalize what they have discussed.

In this form of setting, it can be seen that the class is discursive, and that whatever questions and answers generated belong to the entire class as a body. Again, since every person is given the opportunity to participate, there is no room for singling a particular person out for any possible ridicule or embarrassment. The method is rather intended for mutual exploration, understanding and intellectual growth. There is no doubt that this method generating questions and answers is helpful in improving critical thinking, without which there can be no refinement in knowledge. In addition to these, gaining active learning and listening skills, as well as promotion of critical thinking, learning how to face challenges and discovering many ways to approach a problem and examine issues with in-depth thought (Scholle, 2020) lend credence to the need for Socratic method.

### **Benefits of Socratic Method**

From the discussions so far, it is clear that Socratic Method has many advantages or benefits, which can be stated as follows:

It helps in clarification of ideas, opinions and beliefs. Human beings normally have their opinions and convictions, and beliefs about things around them. They also exhibit some evidences to back them. The evidence and reason adduced may be porous and fallacious. These are eliminated through this method of asking and answering questions.

Unlike the lecture method where students are passive, this method makes students active participants in the teaching and learning encounter. It also enhances critical thinking. It again improves the students' ability to ask questions that are relevant, constructive and thought provoking.

Socratic Method exposes students to their ignorance and the extent they know whatever they claim to know. Intellectual humility is one of the hallmarks of an educated person. This method helps people to achieve that. It helps human beings to be aware of their limitations.

The method encourages cooperation, where the teacher and students work together both in asking and answering questions, thereby encouraging further dialogue and mutual understanding. Moreover, it reduces sense and feeling of superiority and inferiority, "I am

here you are there” syndrome between teacher and students. Socratic Method not only improves critical thinking, but also helps people in discover their shortcomings in particular courses or topics of discussion. It helps students to be fast and intelligent thinkers, with increased understanding.

### **Critical Thinking**

Critical “thinking” is based on thinking. The term thinking is “skepsi” in Greek, and it means questioning, re-examining, re-considering, or re-evaluation. “Critical” is “kritikos” in Greek, meaning ability for sound or discerning evaluation or judgment, to make sense of, to analyze. The Greek “Skepsi kritikos” is therefore translated “critical thinking” in English. It is difficult to grasp a precise definition of critical thinking. It has rather been defined and explained in various ways. However, attempts have been made at giving some technical definitions by some scholars. According to Paul and Scriven (2003), critical thinking is an intellectually disciplined process of actively and skillfully conceptualizing, applying, synthesizing, and /or evaluating information gathered from, or generated by observation, experience, reflection, reasoning or communication, as a guide to belief and action. The emphasis of this definition is on the use of the intellect in a systematic and consistent manner in all aspects of thinking so as to eliminate all possible errors, and this is an ongoing activity, hence it is a process. For Facione (1990), critical thinking is a purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of evidential, conceptual, methodological, criterial, or conceptual considerations upon which the judgment is based. Facione’s view indicates that critical thinking is more of personal efforts than anything else. It does not leave anything to chances, but digs into all possible sources of error to ensure that any judgment or conclusion reached is valid and correct.

Critical thinking is an organized thoughtful manner of carefully considering any matter of importance as if affects human knowledge and other activities. It is being responsive to variables in the subject matter, issues and purposes (Onuoha & Amadi, 2017, p. 226). Critical thinking is most often constructive, unlike criticism which can sometimes be destructive (Lau, 2011). For Giancarlo and Facione (2002), critical thinking is conceptually connected with reflective judgment, framing of problems, higher thinking order, logical thinking, informed decision making problem solving and scientific method. On their own part, Watson and Glaser (2000) see critical thinking as a blend of knowledge, attitude and performance in each individual which include ability in comprehension skills, identifying hypothesis, inference, analysis and evaluating rational arguments. Critical thinking is also known as high order thinking, or complex thinking. This is far beyond the ability to recollect past events or pieces of information. It is the capacity to go beyond the surface and the ordinary to a deeper level of constructive reasoning and arguments. Critical thinkers do not just accept information, but endeavour to analyze it, determine its validity and fittingness to a wider context.



Critical thinking rests on the objective analysis and evaluation of issues before reaching a judgment. Critical thinking is devoid of emotional entanglements, and focuses only on the measurable evidence and facts in real life situations. Critical thinking requires quick thinking and decisiveness in actions, self-evaluation and proof of one's own opinions, arguments, beliefs and assumptions (Valenzuela & White, 2022). For John Dewey (1910, pp. 74, 82), who is regarded as the father of critical thinking, critical thinking is an active process which requires students to think through, raise questions and search for information to address their queries rather than learning passively from someone else. Critical thinking is self-guided, self-disciplined thinking which attempts to reason at the highest level of quality in a fair-minded way (Elder, 2007).

From the different definitions, views and explanations, it is good to note that critical thinking has many connotations, such as the ability to engage in deep reflections, asking deep-rooted questions on issues of importance, questioning and probing the existing assumptions or conclusions taken for granted for the purpose of arriving at a better clarification of meanings and a better understanding. It involves a painstaking examination of ideas, beliefs, knowledge and points of view so as to expose some flaws which otherwise would not be noticed, and thus could lead to errors in thought and judgments.

### **Steps in Critical Thinking**

Many philosophers, educators and scholars have discussed and offered a good number steps in cultivating critical thinking. Some presented four steps (Kavanaugh, 2018), some five (Collins, 2016), six, seven (Vaishali, n. d.), or eight (Tomaszewski, 2023); and there can be more. For this paper, the 8 steps of Tmaszewski are adopted, and they are stated as follows:

- 1. Analysis:** This is one's ability to gather and process information and knowledge.
- 2. Interpretation:** Here the meaning of the gathered and processed information is sought.
- 3. Inference:** This involves ascertaining whether the knowledge obtained is adequate and reliable.
- 4. Evaluation:** Evaluation in this context is the ability to make decisions based on the information.
- 5. Explanation:** This entails communicating the findings and clearly reasoning through them.
- 6. Self-Regulation:** This step consists of the impetus to steadily monitor and correct one's ways of thinking.
- 7. Open-Mindedness:** Here one is ready to consider the possibility of other viewpoints than one's own.
- 8. Problem-Solving:** This is the final step, and it is the ability to tackle problems and resolve conflicts, even when they are unexpected.

The above steps are meant to be practised with consistency and carefulness. The steps show that a great deal of efforts is required for one to cultivate critical thinking. The process may

appear to be cumbersome, but it is worth the price, cognizant of the benefits that accrue from critical thinking, especially among students of tertiary institutions, who are the leaders of tomorrow, and who are on the threshold of life of reality in the wider society, worlds apart from school life.

### **Benefits of Critical Thinking**

A popular saying has it that thinking makes a man. If thinking makes a man, then, it stands to reason that critical thinking makes a higher man. It elevates people to a higher level of existence, because it is a thinking in a higher level. There are many benefits of critical thinking. Among the benefits are the following, as presented by JetLearn (2023).

Critical thinking encourages creativity and curiosity, promotes research skills, elevates autonomous learning, enhances good communication, promotes problem-solving, facilitates sense of information, provides capacity for decision making, helps in analyzing arguments, helps students to ask right questions, and fosters independent thinking, and equips for a life-long learning.

Creativity and curiosity go together. They complement each other. Curiosity is a very important factor in human life, for it brings about creativity. Without curiosity, learning would be fruitless. Curiosity is the eagerness to know, and to know the right thing, the correct thing, the truth. Curiosity paves way for a deeper understanding of the various topics of learning and various areas of interest in the process of education. With curiosity, further inquiries are carried out in virtually all areas of human life, such as cultures, beliefs, politics, and so on. Critical thinking helps people to be always eager to know more, and never satisfied with the current situation of things. Critical thinkers always ask questions such as Why? What? Who? When? Where? How? These questions lead to more constructive reasoning and creative input to improve the situation at hand.

With regard to research, critical thinking is very relevant to improving skills. Such important factors as observation, analysis, synthesis, experiment and evaluation, which are indispensable in the field of research, are greatly enhanced by critical thinking. With these factors properly organized and implemented, research findings become more valid, objective and reliable.

Critical thinking also elevates autonomy in learning. This has to do with self-confidence and self-reliance. This means that critical thinking empowers thinkers for independent thinking, thereby increasing self-worth and output. In a similar manner, critical thinking enhances good listening habit, which makes communication with others easier and more meaningful. This is because critical thinking makes the thinker more open-minded and amenable to the views of others.

The essence of education is to acquire knowledge for the purpose of solving personal and social problems. Critical thinking equips thinkers with the ability to dedicate themselves to solving perceived problems, both on the individual and social levels. Those who want to profit from critical thinking should learn to be persistent in dealing with issues of

importance. Problem-solving requires endurance and consistent attention. Most of the challenging problems facing the world can more advantageously be addressed through critical thinking than ordinary approaches. If the world is to be better transformed than what we witness today, stronger emphasis should be placed on critical thinking in the process of education.

Every information we receive usually contains some core elements and other elements that may not be so important. It takes critical thinking to sift such core elements from the less crucial ones. Critical thinking, therefore, equips thinkers with a keen sense of information, and this entails the reception, analysis and proper application of information.

Those who practice critical thinking find themselves in better positions to make good decisions. This is because critical thinking gradually builds into the subconscious, so that the thinker can easily and almost effortlessly come up with the best amidst many alternatives. We are daily confronted with issues as we carry out our daily activities. So, critical thinking can help us to be in touch with our true selves so that even our instincts do not deceive us in matters of decision making.

In matters of arguments, critical thinkers usually gain upper hands than the rest, since they are always open-minded and ready to listen, analyze and understand the viewpoints of others. This is an advantage. It makes the thinker to focus on the issue of discussion rather than pursuing irrelevances. Arguments are based on logical and correct reasoning, among other things. Since critical thinking enhances reasoning, it definitely promotes valid arguments.

It is unarguable that questions are veritable ingredients for the growth of knowledge. The important thing, however, is not just asking questions, but asking correct and relevant questions. To ask correct and relevant questions requires deep thinking. Asking many questions and attempting to provide answers to them are products as well as handmaids of critical thinking. This also encourages the ability to analyze situations and topics of discussion by the students. Finally, critical thinking helps people to think faster and to think widely. The more one thinks critically the more they generate various ideas which can be applied to the solutions of diverse problems.

## **Literature Review**

### **Socratic Method and Critical Thinking**

Critical thinking has continued to be seen and prized as an important factor in learning. According to the findings of a study by Jensen (2015, p. 19), “Socratic improves instruction, instructional dialogue, and continued development of critical thinking skills for all students”. “The Socratic method is made up of a teaching and assessment strategy. When both are used together, critical thinking skills are developed” (Jensen, 2015, p. 29).

In the qualitative study carried out by Facione (1990), in which he used forty-six people consisting of researchers, scholars and educators it was discovered that critical thinking

skills can be grouped into six characteristics; interpretation, analysis, evaluation, inference, explanation and self-regulation. These characteristics show how people receive information, how they react, and what they do with the information. Invariably questions do arise in these characteristics, leading to further strengthening of critical thinking.

For Bowne and Keely (2001), critical thinkers are like those panning for gold. First, they get big bundle of material, then they tore all the material, searching for gold within, until they find it. In like manner, when critical thinkers get a piece of information, they dissect it, analyze and probe all of its aspects, searching for answers to all the why, how, where, when and what contained in the information. This approach opens a vista of avenues to approach the issues involved, which in turn leads to an increase of knowledge based on deep thinking.

Using Socratic Method improves one's thinking, since one can assess one's own levels of thinking. In this method, the quality of questions and answers are thoroughly examined. In this way the precision, clarity, depth, accuracy, relevance and validity of students' reasoning can be ascertained (Paul & Elder, 2007).

From the view of scholars so far reviewed, it can be noted that there is scarcity of literature on the matter under discussion as it relates to Nigerian tertiary institutions and students. Nevertheless, it is unarguably clear that questioning promotes critical thinking on the part of the students. Hence the need to re-think the Socratic Method in this connection, which is the focus of attention in this paper. Based on the foregoing, it can be convincingly argued that Socratic Method is intricately tied to critical thinking. One of the issues about this method is how to apply it in this modern era, the age of information and communications technology, where trends are constantly changing and lots of new ideas evolving in the field of learning.

### **Application of Socratic Method**

There are certain requirements for the application of Socratic Method, for it to be effective and rewarding. The first requirement is that both the teacher and students should be interested in knowing the truth. They have to be curious querulous in seeking the truth. They should equally be ready and willing to cooperate, and be disposed to ascertain whether the reason they have for their assumptions or beliefs are genuine, and be ready accept the truth and give up such in the face of clear contradiction or inconsistency.

There is also the need to be intellectually honest. The participants should be sincere in asking genuine questions and proffering reasonable answers to the best of their ability, without pretending or making bogus claims of any sort. They should endeavour to remove contradictions and inconsistencies in their thinking and arguments. The learning environment should be made comfortable for the participants, who should feel at home with one another and be willing to open up regarding their views on the issues under consideration. The time at which the method is applied is of importance. It should be done

when students have not become tired. This will make them participate actively, both in generating and answering questions.

Using Socratic Method should be laced in genuine sense of respect. It should be dialogical, not interrogatory. Socratic questions should always be open-ended. This will arouse curiosity and give room for answers from various perspectives. The questioner should not interrupt the answerer or help them in answering. They should rather wait till the end, then further exploits on the issue can continue, such as asking more questions, seeking clarifications or substantiations. Socrates used his method where there were no definite definitions of key concepts, especially those pertaining to virtues of piety, wisdom, courage, justice and temperance. In the days of Socrates, many people claimed deep knowledge of these concepts. A close examination revealed the inadequacy of such claims. On his own part, Socrates claimed ignorant, which allowed him to discover his own shortcomings and errors. The Delphic Oracle affirmed that no man was wiser than Socrates, and Socrates used this as the foundation of his moral admonition. For instance, he claimed that wealth does not bring goodness, but goodness brings wealth and all other blessings, both to the individual and the society.

In this modern era, Socratic Method can also be effectively used, even with the touch of modern techniques. Application of Socratic Method presupposes that all new knowledge has connection to prior knowledge that all thinking comes from asking questions, and that asking one question should lead to further questions (Copeland, 2010). Further questions will definitely lead to further answers, and further answers will lead to further discoveries. In this context, a lecturer can point at a student at random and ask them to give a summary of a previous lecture. The student's response can trigger further questions from both the lecturer and other students. Other students should also be allowed to air their views on the issue. The lecturer can equally divide the students into groups and give them questions for discussion under a time frame. After the group discussion, all will come together again and each group would present their results. Questions and answers can be generated from these presentations, and so the students' capacity for critical thinking will be broadening. This encourages collaborative learning, which is of great importance in today's world.

The above modern approach is an outcome of re-thinking Socratic Method. It encourages a formulation of questions that present students with a specific idea or set of ideas. It does not rely solely on the answers given by students, but rather exposes them to exciting engagement in the discussion of issues, and so helps them to actualize their potentials to think deeply, open-mindedly and independently so as to come up with relevant questions and answers, or proffer solutions to identified problems. Being thus helped to be engrossed in the subject matter, students will hardly forget what they learn, as is often the case with pure lecture method where they easily forget after examinations, since they are not active participants during lectures.

## **Conclusion**

From the findings gathered in this discourse, it can be concluded that critical thinking is very crucial in the process of education, since it empowers people with the ability to delineate important and relevant issues for decision making. It enhances creativity, and provides guidance in the maze complex information-laden world of ours. Without critical thinking, one can easily get lost in the midst of conflicting views, beliefs and tenets, due to the volumes and sources of information we have today. It has also been clear that questioning is one of the factors that are strategic to enhancing critical thinking. The application of Socratic Method with a touch of modern techniques is, therefore, sure to improve critical thinking among students of tertiary institutions in Nigeria.

### **Recommendations**

Based on the study, the following recommendations were made:

1. Greater emphasis should be placed on using questioning methods in Nigerian tertiary institutions.
2. Lecturers in Nigerian tertiary institutions are urged to adapt and apply Socratic Method in their teaching and learning episodes.
3. Following the principles of Socratic Method, namely, Socratic didactic method and Socratic irony, will be of immense help in adapting and applying the method.
4. Students should be encouraged to be active participants in learning by being disposed and willing to ask and answer questions as well as airing their own views on issues or topics of discussion.

### **References**

- Bello, J. Y. (1981). *Basic principle of teaching*. John Willey and Sons.
- Browne, M. N., & Keeley, S. (2001). *Asking the right questions*. Prentice Hall.
- Collins, A. (2016). "5-Step Critical Thinking". Available at <https://mystudentvoices.com/5-stepincritical-thinking>.
- Copeland, M. (2010). *Socratic circles: Fostering critical and creative thinking in middle and high school*. Stenhouse.
- Delic, Becirovic, Haris, & Senad. (2016). "Socratic Method as an Approach to Teaching". *Russian Federation European Researcher*. 111: 511 - 517
- Dewey, J. (1910). *How we think*. Lexington, MA: D.C. Health and Company. <https://doi.org/10.1037/10903-000>.
- Elder, L. (2007). Defining Critical Thinking. <https://www.criticalthinking.org/pages/defining-critical-thinking/766>
- Facione, P. (1990). "Critical thinking: What it is and Why it Counts: College Level Report". Sancta Clara University.
- Facione, P. (1990). *Critical thinking: A statement of expert consensus for purpose of educational assessment and instruction, research findings and recommendations*. American Philosophical Association.
- Furman. (2013). "Socratic Seminar". <https://en.m.wikipedia.org/Socratic-method>

- Giancarlo, A. C., & Facione, P. A. (2001). "Critical Thinking". *The Journal of General Education*, 50 (1), pp. 29 – 55.
- Gikas, D. (2019). 3 Ways to improve your teaching skills using Ancient Greek Philosophy. <https://www.linkedin.com/pulse/3-wys-improve-your-teaching-skills-using-ancient-greek-gikas>
- Jensen, R. D. (2015). Socratic Method in Critical Thinking Skills. <https://files.eric.ed.gov/fulltext/ED557162.pdf>
- JetLearn (2013). "The importance of Critical Thinking for a Student's Career and Life in 2023" <https://www.jetlearn.com/blog/importance-of-critical-thinking-for-students>.
- Kavanaugh, J. (2018). "The 4 steps of critical thinking". <https://www.controleng.com/articles>.
- Lau, J. Y. (2011). "An introduction to critical thinking and creativity: Think more, think better" <https://www.wiley.com/Home/Mathematics&Statistics/Logic&Foundations>
- Liddell, Scott & Jones (n.d.). *Greek-English lexicon*, 9<sup>th</sup> Edition.
- Mangrum, J. (2010). "Sharing Practice Through Socratic Seminar". *Kappan*, 91 (7), pp. 40 -43. Doi: 10.1177/0031721711009100708
- Mastrangelo, G., Serva, C., & Airth, M. (2022). Socratic Method: Overview and Examples. <https://study.com/learn/lesson/socratic-method-overview-examples.html>
- Ojumu, B. (2016). Teaching Methods: Advantages and Disadvantages. <https://passnownow.com/teaching-methods-advantages-disadvantages/>
- Onuoha, K. K., & Amadi, C. C. (2017). "Developing Recipients' Critical Thinking and Creative Abilities: The Missing Link in Nigerian Science Education". *Nigerian Journal of Educational Philosophy*, 8 (2), pp. 225 – 230.
- Paul, R., & Elder, L. (2007). "The Art of Socratic Questioning, Part 11". *Journal of Developmental Education*. 31 (2).
- Paul, R., & Scriven, M. (2003). *Ideas to action*. University of Louisville. [Louisville.edu/ideatoaction](http://Louisville.edu/ideatoaction).
- Pruitt, S. (Ed.) (2015). "Teaching method". Wikipedia. <https://en.m.wikipedia.org/wiki/Teaching-method>
- Scholle, C. (2020). "Understanding the Socratic Method of Teaching". <https://www.alu.edu/laublog/understanding-the-socratic-method-of-teaching/>
- Teach.com. (2023). Teaching Methods. <https://teach.com/what/teachers-know/teaching-methods/>
- Tomaszewski, M. (2023). "Top 8 Critical Thinking Skills and Ways to Improve Them".
- Vaishali, S. (n. d.). Important Steps in Critical Thinking Skills". <https://learfromblogs.com/what-are-the-7-steps-of-critical-thinking-skills?>
- Valenzuela, A., & White, D. (2022). "Critical Thinking Steps and Examples". <https://study.com/learn/lesson/critical-thinking-steps-theory-examples.html>.