Promoting Students' Critical Thinking through Socratic Method: Views and Challenges

Siti Fairuz Dalim[1*], Aina Sakinah Ishak[2], Lina Mursyidah Hamzah[3]

Faculty of Education, Universiti Teknologi MARA,
42300 Puncak Alam, Selangor, Malaysia
sitifairuz3325@uitm.edu.my
ainaishak88@yahoo.com
linamursyidah@uitm.edu.my
[*]Corresponding author

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Abstract: Critical thinking skills (CTS) is one of the main focuses of the educational system around the globe as a means to equip students with 21st century learning. In parallel, Malaysia too highlights critical thinking skills with the curriculum transformation witnessing more emphasis on student-centred learning approaches. These include constructivism, mastery learning and inquiry-based learning. However, most teachers find difficulties in embarking on these new ways of teaching. Hence, this qualitative study sought to explore teachers' views and the challenges when implementing a subset of inquiry-based learning called the Socratic method in classrooms. The researchers employed a purposive sampling method to select five (5) teachers teaching various subjects to be involved in the semi-structured interviews. Thematic analysis of the data revealed that most of the teachers had positive views on the application of the Socratic method specially to enhance the critical thinking skills. Despite that, there were a few challenges faced by the teachers particularly on their content knowledge, knowledge on questioning methods, class participation, topics and time constraints. Based on the challenges extracted, this study concluded that the teachers require due support particularly in terms of their subject knowledge and teaching skills in carrying out the Socratic method in classrooms effectively. Thus, this study proposes further actions to be taken in helping teachers by providing professional training and developmental programs to effectively implement Socratic questioning in the classrooms.

Keywords: Critical thinking skills (CTS), 21st century learning, Student-centred, Socratic method

1. Introduction

Critical thinking skills (CTS) are among the most important skills needed to survive in the new era of globalisation and 21st century. As stated by Schleicher (2012), the 21st century era requires people to think creatively and critically, solve problems skilfully, make important decisions as well as communicate and collaborate in group activities. Henceforth, many related parties especially teachers, researchers and relevant stakeholders strive to explore the best possible teaching strategies for students to acquire the said aims. Simultaneously, in Malaysia, the Ministry of Education has religiously reviewed and transformed the national curriculum by focusing on students' critical thinking. As highlighted in the Malaysian Education Blueprint (2013-2025), several active instructional strategies such as inquiry method, constructivism and mastery learning are among the teaching strategies that should be practised by teachers in classrooms to develop students' critical thinking skills. Despite all

the proposed strategies, teachers still face difficulties in implementing these strategies and fostering critical thinking skills among students (Mahmud et al., 2021).

The lack of critical thinking skills among students specifically in Malaysia has been widely discussed in many studies. At the tertiary level, the studies showed that students of higher education in Malaysia still have low and moderate levels of critical thinking, which resulted in lower employability (Fadhlullah & Ahmad, 2017; Hong & Jacob, 2012 and Cheah, 2014). At the secondary education level, a study conducted by Mohd, Suhaida & Mohd (2018) on fourteen-year-old students at a public school showed that more than 50% of students have low critical thinking skills. Thus, there is a need to internalise the issue based on the methods and approaches used by teachers in secondary schools. This is particularly significant as Terpstra-Tong & Ahmad (2018) found that the lack of critical thinking and inquisitive mind at the secondary level leads students to greater difficulties in adapting the learning process later at the university level. All these findings serve as an urgency for educational institutions at all levels to seek for more effective ways in fostering critical thinking skills among students. In relation with the empowerment of critical thinking through various levels of education, constructivist learning strategies which include problem-based learning, project-based learning and inquiry-based learning have been found to give desirable effects on students' thinking (Wiggins, 2015; Eggen & Kauchak, 2012; Bender, 2012; Dobrin, 2019 and Anstey, 2016). More specifically, Jensen (2015) discovered that the Socratic method as a subset of inquiry-based learning (Lam, 2011) has proven its relation towards the enhancement of critical thinking.

The Socratic method has been used at various levels of education ranging from primary to higher education. It also covers multidisciplinary educational settings such as political science, science nursing education (Makhene, 2019), law, English (Acim, 2018) and mathematics. Socratic method focuses on questioning and answering techniques to generate ideas and connect the thinking ways through different types of questions and stages in stimulating participants to think critically. In this method, teachers' abilities in questioning determines its success (Bulent, Erdal, Ceyda, Betul, Nurgul,& Cevahir, 2016). While using the Socratic method, learners can be assisted through a few thinking stages to make new discoveries that can possibly help them to reason their thoughts (Zare & Mukundan, 2015). Cleveland (2015) previously explained that a series of questioning techniques used in the Socratic method can improve students in developing their own rational thinking as they know how to connect the existing ideas into new ideas.

The use of Socratic method among Malaysian educators is not recent. Most teachers who apply this method in their classrooms find that it gives positive results on their students' critical thinking (Zare, 2016). Another positive impact reported is it boosts students' self-confidence to pose questions and ideas. However, one of the critical issues that must be given serious attention while using Socratic method is the teachers' abilities to pose good questions. Delić & Bećirović (2016) asserted in their studies that poor questions and inappropriate techniques of asking may lead to unnecessary misunderstanding. A couple of studies (Saad, Saad & Dollah, 2012; Nadara and Chew, 2018) also report similar findings were the lack of questioning skills among teachers becomes the major hindrance towards practising the Socratic method in classrooms. This also includes the teachers' inability to pose appropriate high-level open-ended questions. It seems challenging to apply and implement effective teaching strategies to foster student's critical thinking even among teachers with years of teaching experience (Miri, David & Uri, 2007).

The issues mentioned above show that there is an implementation gap in practising the Socratic method among teachers. Therefore, this study intends to further explore teachers' views on the Socratic method and the challenges they face when using it to teach their students. The outcome of this study will provide significant insights on how to deal with the implementation challenges so that the use of the Socratic method can fully benefit all relevant parties involved in teaching students. Thus, the research objectives are as follow: 1. To identify teachers' views on the relevancy of implementing the Socratic method in teaching; 2. To investigate the challenges faced by the teachers in applying the Socratic method in a classroom.

2. Literature Review

2.1 Critical Thinking

Many studies have discussed the importance of critical thinking skills for the younger generations to face the complexity of the 21st century (Changwong, Sukkamart & Sisan, 2018). Critical thinking has been defined in many ways; however, the concept is believed to originate from the teachings of Western philosopher Socrates (469-399 BCE) (Oyler & Romanelli, 2014). Socrates observed that through appropriate and repeated questioning, students can eventually manage to develop self-generated knowledge and regulate their own thoughts. Those students with the critical thinking skills are also said to have mastery abilities in various aspects (Youens, Smethem & Sullivan, 2014) as shown in Figure 1 below:

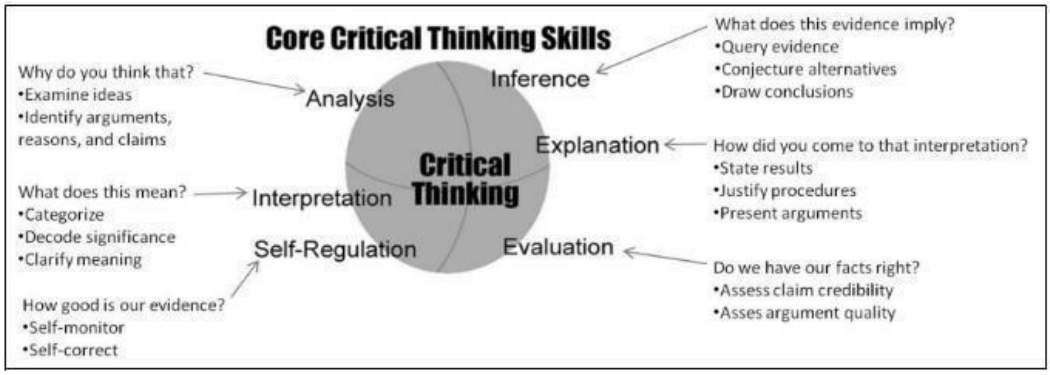

Fig.1 Core of Critical Thinking Skills

More recent researchers (Nicholas & Roths, 2016 and Karakoc, 2016) defined critical thinking as the skill to evaluate and explain something based on research, analysis, justifications, and logical reasoning prior to making decisions. It is also one of the skills deemed important in the job sector (Changwong, Sukkamart & Sisan, 2018).

2.2 Socratic Method and Socratic Questioning

Socratic method is a well-known method that helps in the development of learner's thinking through a justified conclusion (Sorvatzioti, 2012). There are a few definitions used for this method. Scott (2012) defined Socratic method as the method that uses questioning pedagogy that differs from the lecture's form. Soccio (2015) further explained that the Socratic method is a form of inquiry dialectic method by asking questions with the facilitator's guidance. Socratic method aims to help learners collect their thoughts according to their understanding with the assistance of the instructor (Zare & Mukundan, 2015). Such method has been approved as a great contributor in critical thinking since it applies continuous questioning of thoughts, methods and judgement together with internalisation and operative listening (Oyler & Romanelli, 2014). The method goes beyond questioning as it provides knowledge to learners in distinguishing between reasonable and unreasonable arguments (Acim, 2018). Undeniably, teachers or instructors play important roles during Socratic discussion or questioning because they are responsible in making students feel that the latter does not only generate ideas, but are accountable to their answers by providing relevance and evidence. Paul & Elder (2018) has classified the Socratic questions into seven (7) types and applications as shown in Table 1.

The positive effects of using Socratic questioning on students' critical thinking have been reported in many studies (Al-Darwish, 2012; Jensen, 2015, Copelin, 2015 and Edwards 2019). Among them are studies that reported the benefits of using questioning in developing students' communication skills (Chorzempa & Lapidus, 2009 and Knežić, Elbers, Wubbels, & Hajer, 2013). Besides, Paul & Elder (2008) found that Socrates ' questioning is useful to stimulate the thinking process and encourage the development of cognitive, affective and meta-cognitive domain. However, there are also some

studies that revealed teachers face challenges to apply this method. These challenges include teachers' lack of knowledge on the subject content (Al-Darwish, 2012) and knowledge on questioning (Riffel, 2014, and Vincent Hogshead, 2017). The lack of knowledge in these aspects pose difficulties for the teachers in looking for appropriate follow-up questions and facilitating the discussion. Other studies also reported some critical issues such as negative students-class participations (Copelin, 2015; Chan & Zahar, 2012, Riffel, 2014 and Acim (2018), suitability of topics (Copelin, 2015) and time constraints (Riffel, 2014 and Vincent Hogshead, 2017).

Table 1. Types of Socratic questions

Example of Questions	Pedagogical Implications
Could you give us an example? Could you explain further?	Questions for clarification
Why this word is important? Why do you think that?	Question about initial question or issue
Why would someone make this assumption? What could we assume instead?	Question for assumption
What would be an example? Why do you think this is right?	Question for evidence and reason
Where did you get the idea? What caused you to feel that way?	Question for origin or source
What effect could that have? What is an alternative?	Question for implication or consequence
How would other groups of people respond this question? Why?	Question for opinion

3. Methodology

3.1 Research Design

This study used a qualitative research method that employed semi-structured interview protocol to collect the qualitative data. The qualitative approach is deemed appropriate to satisfy the objectives of the research which is to obtain an in-depth understanding of teachers' views on the relevancy of implementing the Socratic method and its challenges in teaching (Merriam, 2016). This qualitative research design was chosen because it provides flexibility for the researchers to modify and alter the respondents' level of language and the order of questions to suit the situations and respondents during the interviews (Piaw, 2016). Hence, during the interview stage, the researchers altered the language according to the respondents' comfort as well as gave encouraging phrases. Furthermore, due to the Standard Operating Procedure restriction during Covid-19 pandemic, the interviews were conducted via phone calls.

There were five (5) respondents selected in this study via purposive sampling method which comprised two (2) male and three (3) female teachers. The participants selected were those teaching various subjects at a public secondary school in Melaka. These teachers were selected because they practise the Socratic method in their classrooms and possess relevant teaching experiences for more than eight (8) years. As for ethical considerations, the researchers took note of two aspects. Firstly, the researchers explained the purpose of the interviews to the informants. Secondly, the researchers assured the participants that their names would not be revealed to anyone during the interviews. For example, the names were changed to codes in the interview reports as shown in Table 2.

Table 2. Details of Participants in the Study (by code name)

Code Name	Gender	Teaching Experience	Teaching Subject
Respondent 1	Female	18 years	Science
Respondent 2	Female	9 years	Bahasa Melayu
Respondent 3	Male	14 years	Pendidikan Islam
Respondent 4	Male	10 years	Biology
Respondent 5	Female	20 years	English

3.2 Data Collection & Analysis

The individual interviews of 10 to15 minutes were conducted at different times, depending on the availability of the respondents. During the interview, the researchers used the interview forms and voice recorder to record the sessions in securing all information. There are a total of nine (9) questions used to elicit the information regarding the teachers' views on the relevancy and challenges of implementing the Socratic method in teaching. Thematic analysis was used to analyse the interview transcriptions. In order to understand and familiarise with the data, the transcriptions were read several times before the researchers proceeded with the open-coding process (Saldana, 2013). Besides, the screening and cleaning process were conducted to identify the themes emerging from the analysis.

4. Findings

4.1 Teachers' Views on the Relevancy of Implementing Socratic Method in Teaching

Based on the interview sessions, the respondents reported two (2) positive effects of using the Socratic method in their classroom which are developing critical thinking skills and promoting communication skills.

4.1.1 Developing Critical Thinking Skills

All respondents shared the same belief that the Socratic method helps to enhance and develop the critical thinking skills. Respondent 1 who has frequently used the method throughout her 18 years of teaching in science subject, stated that it is very useful in stimulating students' critical thinking while they relate the knowledge with real life experiences. She also believed that the Socratic method can ensure students find alternative ways of thinking. Similarly, Respondents 2, 3 and 4 agreed that the Socratic method is beneficial in enabling students to expand their thinking from the existing knowledge they have. In other words, students become more creative in their thinking if they use Socratic method.

> *"This method helps to train students to think thoroughly and give opportunity for them to find other solutions or use their own thinking methods. It helps them to generate new ideas and relate them with the Science concepts and real-life experiences. This method is also very efficient to be used as students can try to find various solutions for the given situations. Thus, it helps them to understand the Science concept better."*
>
> (Respondent 1)

> *"I usually use this method during the induction set in class. Also, sometimes in other parts of my lessons. It helps to stimulate the students' critical thinking when we give questions and situations.*
>
> (Respondent 2)

> *"When teachers use this method, they help the students to find solutions on the situations given. This helps students to think more openly and critically thus promote advantages to their work life*

later. Students can relate their existing knowledge with other aspects of knowledge or ideas. This provides more experience on ways to solve problems."

(Respondent 3)

"This method is more to ask questions to students and make them think critically, deeply and widely on a topic. Then, they relate the topic with their own life. This method is good to be applied as it helps students to think more creatively and critically. They can use the ideas in the discussion and relate them with the real-life experience. With that, they can expand the knowledge and create new ideas."

(Respondent 4)

Respondent 5 mentioned that through the continuous questioning, students can give more reliable, supportive and evidential answers.

"As what I had learnt and used during my studying years, the method really suits the English subject. This is because it can be applied in all topics. The English subject itself really needs teachers to encourage students to think as much as they can."

She also added,

"When I give questions for students to think and keep prompting them with other related questions, they can give more effective answers. They get to train their thinking in giving better validated or solid responses with reliable supporting elaborations and thus, help them to have critical thinking. For me, I use the method not only in oral discussion, but also in written form."

(Respondent 5)

4.1.2 Promoting Communication Skills

Another benefit of applying the Socratic method was mentioned by Respondent 4 who stated that it helps to enhance students' communication skills.

"This method can help students in terms of their communication skills as they feel more confident to talk. This will be helpful for both passive and eloquent students"

(Respondent 4)

Respondent 2 also believed that the use of Socratic method helps in creating an active environment for discussion among students.

"I believe the Socratic method is an active communication method as it involves discussion among students, as well as interaction between students and teachers. Through the various ways of communication, students can relate the ideas collected to other ideas or make inferences"

(Respondent 2)

4.2 The challenges faced by teachers in applying the Socratic method.

There (3) main themes emerged when the informants shared their opinions about the challenges that they face when they use the Socratic method in their classrooms, namely teachers' lack of content knowledge, teachers' lack of questioning techniques and students' participation.

4.2.1 Teachers' lack of content knowledge

The teachers shared a few challenges when they apply the Socratic questioning method in their teaching and learning process. Respondent 3 and 5 stated that their concerns were regarding the lack of mastery in the content knowledge. The respondents mentioned the following challenges:

> *"Usually, before class, I would read about that topic first, but sometimes I don't fully understand it. Students from the high-achieving classes like to ask many questions, so I am afraid that if I use the questioning method, they may ask me on aspects I do not really master."*
>
> (Respondent 3)

> *"It is quite challenging to use the method when the teacher lacks of knowledge on certain topics."*
>
> (Respondent 5)

4.2.2 Teachers' lack of questioning techniques

Respondent 4 raised the issue of the lack of understanding in questioning techniques among teachers. He shared that,

> *"Students who are from the excellent class usually do not have much difficulties in giving responses if I want to use the method. However, for weak students, most of them seem to find answering the questions as challenging. As a result, they resort to playing in class and not paying attention during the lesson. So, it is a bit challenging to pose the questions and how I can apply the questioning techniques that suit them."*
>
> (Respondent 4)

4.2.3 Students' participation

To encourage class participation during the teaching and learning sessions is another concern. Respondent 2 claimed that students' cooperation and self-esteem affect their participation during lessons. Respondent 2 noticed that,

> *"Sometimes when I ask questions, the same students would answer. If I want the passive ones to voice out and answer, I end up providing the answers because they remain irresponsive, even if they are students from the good class. It makes the learning time delayed. I assume that the ones who do not participate may have lower confidence. They are usually the ones who remain silent throughout the class. Students who do not want to answer the questions mostly because they are afraid in making mistakes even though I emphasise that any answer is fine as long as they try."*
>
> (Respondent 2)

She added that,

> *"Sometimes their friends would laugh at them when their answers are different or irrelevant. Maybe that is the reason why they choose not to get involved because they are ashamed if others react negatively towards their answers."*
>
> (Respondent 2)

Respondents 3 mentioned that unequal participation and low self-confidence also inhibit the success of the use of Socratic questioning in the classroom. He noticed that,

> *"When I use the method in groups, some students do not want to cooperate. Some of them dominate the session especially the active students."*
>
> (Respondent 3)

He added that,

> *"Students who do not participate might feel afraid that their friends would laugh at their answers. Some students claim that they are afraid that their answers are unsuitable or wrong. They also feel shy because they are not the ones who usually speak up in class."*
>
> (Respondent 3)

Respondents 1, 2 and 5 shared the same perspectives where the student's readiness is another contributing factor that influences the participation of students.

> *"There are unprepared students because the questioning method is vague and unpopular among other teachers. They do not find the significance to brainstorm and hence take the brainstorm sessions lightly.*
>
> (Respondent 1)
>
> *"It is possible that the students are not ready to use the method or the questioning techniques. Sometimes they do not even know how this method helps them because they have not been exposed to this kind of questioning method.*
>
> (Respondent 2)

> *"When I execute the Socratic method questioning in written form, I can see that many students do not even understand the relations between questions. This is especially among the Form 1 students who experienced English subjects that was dominantly on comprehension level and only required them to give direct answers during primary school years. So, most of the time they just needed to refer to the given text for direct answers. When I use the Socratic questioning, they cannot understand the questions and fail to answer."*
>
> (Respondent 5)

According to Respondents 1 and 4 who are in the field of Science and Biology respectively, they stated that the syllabus is too wide to cover which causes them having limited time to complete. Respondent 1 mentioned that,

> *"The use of Socratic method requires a lot of time. However, there are many topics that need to be covered for every class. Therefore, teachers have only limited time to cover all the topics."*
>
> (Respondent 1)

Respondent 4 claimed that,

> *"Sometimes I only give a short time for students to answer the questions because I need to cover other topics as well. So, there is insufficient time for them to think and they could not give their best answers. The time given for each class period is also limited, plus with the many topics, I decide to use the short time given to finish them."*
>
> (Respondent 4)

He also added that,

> *"Besides, there are other school activities which disturb the class period. This results in lesser time for teaching. So that is why this method cannot be used regularly."*
>
> (Respondent 4)

Echoing this response, Respondent 5 has reported the same issue. She stated that not all classes have sufficient time to use the Socratic method.

> *"Students from weak classes take longer time to adopt the Socratic method. This is because in English class, they spend time to learn to speak in English. They also do not have enough English*

vocabulary, and I cannot afford to split the vocabulary consultation and topics into different times. So, during the discussion of using the Socratic method, I tend to correct their vocabulary at that time making the process a bit longer and suddenly the class period ends."

(Respondent 5).

5. Discussion

Overall, in terms of teachers' views, the respondents in this study are positive in using Socratic questioning in enhancing students' critical thinking and communication skills. Most of the respondents shared the same belief where Socratic questioning serves as an excellent technique to encourage students to think more deeply about an issue while generating and connecting the ideas with other aspects in life. Asides from that, the questioning method provides a pathway for students to think widely and make strong judgments about their thoughts. Furthermore, students can also develop good communication skills as the method encourages students to speak up during discussion, thus helping them in gaining more confidence.

Such teachers' views seem to be in line with the study carried out by Jensen (2015) which found that the continuous questioning and answering can possibly create students with both better comprehension and critical thinking as they go beyond restating the factual knowledge but also expanding it. Another advantage of the questioning was highlighted by Copelin (2015) and Edwards (2019) who found that Socratic method is a good approach to use in teaching and learning as it focuses on both active and passive students to get involved in discussion which in turn helps them to develop more critical thinking skills (Copelin, 2015). Mason (2011) and Delić,& Bećirović (2016) further explained that the various types of questions and stages used in the Socratic method provide effective platforms for students to justify, analyse and synthesise their ideas towards finding answers. The continuity of questioning of thoughts, methods and judgement together with internalisation and operative listening (Oyler & Romanelli, 2014; Blake, 2019) is another great contributor to critical thinking. Moreover, in the Socratic method, a teacher's role in conveying knowledge shifts to the learners in collecting their thoughts according to their understanding with guidance from the teacher (Zare & Mukundan, 2015). Students also become more independent in their learning where they are encouraged to explore their own thinking through justifications and relations (Al-Darwish, 2012).

As for communication skills, one of the respondents in this study commented that the Socratic method could help students in gaining more confidence to speak when practising using this method. Effective or good communication skills goes beyond the ability in answering but also to understand the messages communicated to them (Albalawi & Nadeem, 2020), how meaningful they communicate or reply to others which consists of the context and emotions (Alrabai, 2016) and the interrelations with other aspects of life. Socratic method indirectly helps in the development of the communication skills because through the practices, students learn to understand and listen carefully to the questions as well as evaluating them before answering. The different types of questions posed develop students that think carefully about the differences and connections of each answer. When they understand the first step in effective communication is understanding that the content communicated matters, they would be confident in generating the answers.

Consequently, the findings in this research showed that the teachers understand the concept of critical thinking and how to direct the student's thinking during the teaching process. One of the teachers even mentioned that critical thinking skills are important for the students in meeting the needs of the country in the future working life. Most teachers are also aware about the Socratic method as one of the effective practices in teaching and learning. Some of the teachers had even been exposed to the method during their own schooling years. This, in turn, provides them with the experience on how the Socratic method works and its benefits.

On the other hand, there are a few challenges in practising the Socratic method in classrooms related to themselves, students, topics and time. In the aspect of themselves as teachers, they addressed the lack of mastery in the content knowledge can result in them to be less confident as they struggle to find good questions to ask the students. They also expressed the fear of any unexpected questions from the students which were beyond their personal content knowledge. This concern is not something new. Similarly, Al-Darwish (2012) found that teachers struggle with the content questioning. For instance, they are unable to provide immediate feedback to students' questions and also fail to ask follow-up

questions that initiate critical thinking skills among students. According to Rollnick and Mavhunga (2016), content knowledge or subject knowledge is a core in teaching and should be the first component that teachers master. Teachers who have extensive knowledge or expertise in the subject content can possibly encourage their students to participate actively in class as they can face any questions that might arise from the students. An expert teacher can indeed encourage effective follow-up questions with great content accuracy (Stohl, 2016). In contrast, teachers with poor content knowledge can easily be demotivated to pose proper questions and provide successful feedback (Watson, 2017).

Another issue on teachers highlighted by the respondents in this study is the lack of knowledge and skills on questioning methods, especially when they deal with different groups of students. Faizah (2016) stated that teachers should improve and equip themselves with adequate knowledge on effective ways of using Socratic questioning and techniques. In Socratic practices, teachers' role is to ensure the continuity of discussion, help in directing the focus and be able to guide the students towards the objectives of the lesson (Cleveland, 2015). Misunderstanding on the Socratic method can be avoided when teachers have a breadth of knowledge on its principles and how to apply the questioning method (Delić,& Bećirović, 2016). Teachers who do not understand how Socratic method works, might give questions without assisting the students and do not celebrate enough waiting time for the latter. Lack of experience and knowledge of Socratic practices may sometimes lead the teachers to continuously ask questions on personal experiences and thoughts without directing into inferences or relations between the contents (Farmer, 2018) which eventually cause students to become clueless about the focus of the discussion. Similar findings were reported by Vincent Hogshead (2017) and Edwards (2019) where teachers are found to be struggling to facilitate discussion and use Socratic questioning methods effectively.

The next challenge is on class participation. Vincent Hogshead (2017) reminded that class participation contributes to successful Socratic method as the teachers ensure and encourage students to participate willingly and actively during lessons. Zare and Mukundan (2015) in addition, stated replying to points or questions and being open minded to other perspectives as also a significant factor. It is also the teachers' role to ensure that the discussion progresses. The purpose of getting students to engage with the session is to initiate them in exploring the content (Multani, 2018), making connections among the contents (Copelin, 2015) and progressing their thinking from time to time on different perspectives (Delić,& Bećirović, 2016). When unequal or low participation occurs, the purpose and aim of the Socratic method to enhance most of the student's thinking tends to spread unevenly. Lack of participation among students can interrupt and disconnect the flow of Socratic practices because teachers should allocate ample time to encourage students' responses (Delić & Bećirović, 2016). Attending the unresponsive students however is unavoidable even though it is time consuming and challenging. In this study, the teachers mentioned that students are less motivated to participate in the questioning and answer sessions due to low self-confidence and readiness. This is especially more frequent for students from the low achieving classes. Other reasons include the fear of giving incorrect answers and being laughed at by classmates. In terms of students' readiness, these teachers claimed that students are not well-prepared for the learning session which causes them to fail to answer questions and choose to remain silent. There are also situations where good students dominate the sessions and leave minimal chances for participation to the other class members.

The final challenge faced by the teachers during the implementation of the Socratic method is limited time in class due to heavy syllabus. Many teachers in this study are tied to finishing the syllabus, thus giving them limited time to do other activities. There are certain days where teachers give way to their contact teaching hours for other formal school activities. The effective implementation of the Socratic method requires quite a lot of time. Acim (2018) explained the Socratic approach as consisting of 5 minutes of warm up session followed by 30-50 minutes of discussion. The discussion within the given time is allocated for prompting students to create and understand their own meaning, analysing different perspectives or concluding the statements (Cleveland, 2015). As for teachers, their role as facilitators requires more time spent on creating good questions that can help to encourage students' thinking (Makhene, 2019). In larger classes, more students mean longer time is needed for the discussion (Vincent Hogshead, 2017). Therefore, adequate time is vital for an effective Socratic session that involves most students. In Malaysia, one of the most cited educational issues that puts teachers in dilemma is meeting the requirements of the 'Finish Syllabus Syndrome' (Goh & Matthews, 2011). The fact that teachers and students are being forced to finish the syllabus and get prepared for the

examinations minimises the room for extra learning activities (Vincent Hogshead, 2017; Stanley,2017; Hunter, 2019).

6. Conclusions

In conclusion, despite the challenges faced in implementing the Socratic method in classrooms, the teachers remain highly positive that such method has great potential in enhancing students' critical thinking skills. Most of the teachers seem to generally understand the concept of critical thinking and the ways to stimulate student's thinking during the learning and teaching process by applying the Socratic method. Through the effective use of the Socratic method, the teachers believed that students can be actively involved in giving and discussing ideas as well as making relations and justifying their answers. Other important skills that can be developed among students by executing the Socratic method in class include communication skills and self-confidence. All these skills are vital to equip students for 21st century learning and their working life in the future.

On the other hand, the teachers still face challenges in carrying out the Socratic method effectively in their classrooms. The findings from the study showed that the challenges encompassed both internal and external factors. The internal factors include the teachers' and students' readiness and motivation whereas the external factors include the teachers' skills and knowledge, students' participation and time constraints. As a result, the students are yet to fully benefit from a proven method believed by the teachers in developing the students' critical thinking skills.

Consequently, in dealing with the implementation challenges by teachers in terms of their readiness, motivation, skills and knowledge, some studies have suggested a few measures to further empower the teachers in carrying out the Socratic method effectively in classrooms. Importantly, teachers should consider the students' background and capabilities while designing the questions to encourage more active participation from students and minimise the participation gap (Stoddard & O'Dell, 2016). Besides, teachers may facilitate or assist the students through various questioning techniques, listen actively and attentively and avoid giving direct answers (Vincent Hogshead, 2017). The active listening may also include the non-verbal gestures that teachers can show while listening to their students. This is very crucial as it portrays positive encouragement to the students (Sahamid, 2016).

Therefore, the study proposes prompt actions by related parties including teachers, researchers and relevant stakeholders to bridge the gap to implementing the Socratic method effectively in classrooms among teachers. The actions should look into increasing the teachers' solid subject knowledge and teaching skills so as to enhance their capabilities in executing the Socratic method effectively in classrooms and thus, creating the present young generation with critical thinking skills. With regard to the findings of the study, it is suggested that more professional training and development programs should be given to academicians to provide them with understanding and practical use of the Socratic method in the classrooms. Besides, the teachers themselves should be well informed about their students especially when the teaching and learning processes are taking place. This is to ensure that they can find ways to improve their skills towards the betterment of the learning process (Sahamid, 2016).

7. Co-Author Contribution

The authors confirmed that there is no conflict of interest in this article. The first author contributed to the writing of introduction, discussion and overlooked the write-up of the whole article, the second author wrote the literature review and contributed to the findings and the author 3 wrote the research methodology and made an overall checking.

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