

**THE EFFECTIVENESS OF SOCRATIC QUESTIONING  
METHOD IN DEVELOPING STUDENTS' CRITICAL  
THINKING: A PRE-TEST AND POST-TEST EXPERIMENTAL  
DESIGN IN EFL SPEAKING CLASS**

A Paper

Submitted to the English Education Program of Institut Pendidikan Indonesia as  
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2023**

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## DECLARATION

The researcher hereby declares that this paper entitled “*The Effectiveness of Socratic Questioning Method in Developing Students' Critical Thinking: A Pre-Test and Post-Test Experimental Design in EFL Speaking Class*” is the original work of the researcher and is acknowledged as his intellectual property. All data, figures, and text citations reproduced from any other source, including the internet, have been explicitly acknowledged as such.

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## **PERNYATAAN**

Peneliti dengan ini menyatakan bahwa makalah yang berjudul “*The Effectiveness of Socratic Questioning Method in Developing Students' Critical Thinking: A Pre-Test and Post-Test Experimental Design in EFL Speaking Class*” adalah karya asli peneliti dan diakui sebagai kekayaan intelektualnya sendiri. Semua data, gambar, dan kutipan teks yang telah direproduksi dari sumber lain, termasuk internet, telah diakui secara eksplisit.

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**Motto and Dedication:**

**A. Motto**

“Be your own boss & Always be a leader.”

**B. Dedication**

This paper is dedicated to the following;

*My lovely parents, my lovely Family, my lovely best friends, my lovely future wife,  
and myself.*

## **PREFACE**

All praises be to Allah SWT, the Most Gracious and Merciful. Who has been given the blessing to complete this research paper. Then, may Allah SWT bless our prophet Muhammad SAW. Peace be upon Him and His family, friends, and followers forever. With the blessing of Allah, the researcher has completed this paper entitled “*The Effectiveness of Socratic Questioning Method in Developing Students' Critical Thinking: A Pre-Test and Post-Test Experimental Design in EFL Speaking Class*”. This paper discusses the effectiveness of the Socratic Questioning method in developing students’ critical thinking in EFL speaking class. The purpose of writing this paper is to fulfill one of the requirements for the Sarjana Pendidikan Degree at IPI Garut. The researcher hopes this paper will be helpful, especially for the researcher and others. The researcher realizes that this paper is still far from perfect. Thus, corrections and constructive suggestions to its contents or linguistics are greatly appreciated.

Garut, July 25, 2023

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## ABSTRACT

Teaching and improving university-level students' critical thinking skills still poses a significant challenge for the educator. In response, many studies have been conducted regarding the most proper teaching method for improving such aspects. Nevertheless, only a few studies were conducted regarding the implementation and effect of Socratic Questioning method on critical thinking skills. Therefore, this study aims to examine the effectiveness of the Socratic Questioning Method in developing students' critical thinking in EFL speaking classes at the university level in Garut, Indonesia. This study adopted the quantitative design with tests as the instruments for this research. Independent & Paired T-tests with SPSS (Special Package of the Social Sciences) version 26 software were utilized to analyze the data. The result showed that the Socratic Questioning method improved students' critical thinking skills through the Socratic Seminar activity in terms of the aspects such as accurately interpreting evidence/statements/graphics to support the arguments, Identifying the salient arguments, analyzing significant opposing/alternatives viewpoints, formulating the reasonable and sound conclusions, justifies the key results and procedures, and fair-mindedly follows the evidence and logic to where it leads. In addition, the score of each critical thinking aspect component improved after the Socratic Questioning treatment.

**Keywords:** *Socratic Questioning Method, Socratic Seminar, Critical Thinking Skills.*

## ABSTRAK

Mengajar dan meningkatkan keterampilan berpikir kritis mahasiswa tingkat universitas masih merupakan tantangan yang signifikan bagi para pendidik. Menanggapi hal tersebut, banyak penelitian telah dilakukan mengenai metode pengajaran yang paling tepat dalam meningkatkan aspek tersebut. Namun demikian, hanya sedikit penelitian yang dilakukan mengenai penerapan dan pengaruh metode Socratic Questioning terhadap keterampilan critical thinking. Oleh karena itu, penelitian ini bertujuan untuk menguji keefektifan Metode Socratic Questioning dalam mengembangkan critical thinking siswa di kelas speaking EFL di tingkat universitas di Garut, Indonesia. Penelitian ini mengadopsi desain kuantitatif dengan tes sebagai instrumen penelitian. Uji T Independen & Berpasangan dengan perangkat lunak SPSS (Special Package of the Social Sciences) versi 26 digunakan untuk menganalisis data. Hasil penelitian menunjukkan bahwa metode Socrates Questioning meningkatkan kemampuan berpikir kritis siswa melalui kegiatan Socratic Seminar dalam hal aspek-aspek seperti menafsirkan bukti/pernyataan/grafik secara akurat untuk mendukung argumen, Mengidentifikasi argumen yang menonjol, menganalisis sudut pandang lawan/alternatif yang signifikan, merumuskan kesimpulan yang masuk akal dan masuk akal, membenarkan hasil dan prosedur utama, dan secara adil mengikuti bukti dan logika ke tempat yang dituju. Selain itu, skor masing-masing komponen aspek critical thinking meningkat setelah diberikan perlakuan Socrates Questioning.

**Kata kunci:** *Socratic Questioning Method, Socratic Seminar, Critical Thinking Skills.*

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## **CHAPTER I**

### **INTRODUCTION**

This chapter presents an introduction of the paper consisting of the background of the study, reasons for choosing the topic, research questions, research objectives, significance of the study, and definition of terminologies.

#### **1.1 Background of the Study**

In EFL classrooms, speaking is an essential English language ability. According to Rao (2019), speaking is the most important of the other four fundamental language abilities. Speaking ability also enables pupils to interact in the target language. Kadamovna (2021) argues that speaking proficiency requires an in-depth understanding of the functional elements of the target language. Students who speak and comprehend the target language have numerous advantages in life and education. It can offer students scaffolded support, chances for creative expression, real-world contexts for language use, proof of their proficiency (proof of learning), and, most crucially, confidence. (Sadiku, 2015). Therefore, speaking is an essential skill for language acquisition.

Critical thinking is required for the production of utterances. In order to help students argue and negotiate word meanings, critical thinking, dialogues, and discourse, teachers utilize CT (critical thinking) in language instruction to examine, question, synthesize, analyze, and cultivate skepticism about the subjects, information, and evidence covered in class. (Muhammadiyah et al., 2020). In this sense, CT is not just about acquiring knowledge, such as grammatical constructions and a list of words or collocations, but also about a complex set of skills and a process of coping with ideas' (Cromwell, 1992). In this regard, language instructors should implement objectives stimulating students' development of articulate, evidence-based ideas.

However, several barriers exist to developing critical thinking. These barriers are; University enrollment is thought to enhance students' critical thinking, in line with the widespread emphasis critical thinking abilities have

They have received (McMillan, 1987). Nevertheless, the student still lacks critical thinking skills (Amrous & Nejmaoui, 2016). The degree of students' critical thinking abilities and the expected results for graduate students differ significantly. Chouari (2016) asserts a sizable disconnect between what university students learn and how it is applied in the real world. The implementation of critical thinking education is hampered by several issues working together. Prior studies on the topic showed that the four main factors that inhibit the growth of critical thinking are: (1) academics' teaching and assessment practices; (2) students' motivation and knowledge; (3) the education system and institutional reforms; and (4) the sociocultural environment (Aouaf et al., 2023).

Implementing the Socratic questioning method to encourage students to speak English and strengthen their critical thinking skills is a promising strategy for addressing the issues associated with students' critical thinking development (R. Paul & Elder, 2008). One of the best methods for encouraging critical thinking in students and teachers alike is through Socratic questioning. A person's capacity for cognition can increase if their mind has been taught and disciplined to think in a specific way while adhering to the same rules. Jensen (2015) asserts that Socratic questioning entails employing inquiries to assess one's overall justification.

Socratic questioning employs three categories of questions: spontaneous, exploratory, and focused (R. Paul & Elder, 2008). The queries are intended to evaluate the quality of the response. This theory implies that in education, students critical thinking can be developed if teachers can conduct questioning and pose pertinent questions. This form of questioning aims to evaluate the precision, accuracy, depth, clarity, relevance, and breadth of the student's reasoning (Elder, 2007). Therefore, teachers' perspective in implementing the Socratic questioning method is deemed necessary for specifying and constructing a more effective and well-structured Socratic questioning method-based learning lesson.

There have been numerous relevant studies conducted. Some of them were conducted to examine the effect and effectiveness of the Socratic method in developing critical thinking skills in English (Hajar & Aray, 2020; Jensen, 2015; Kusmaryani, 2021). The findings show that using Socratic questioning to teach EFL students how to think critically seems to be an effective strategy. Teachers also reported that rather than just repeating facts, students were asking and responding to questions more frequently in ways that demonstrated a more profound grasp and capacity for manipulation of the material. Hence, many researchers were interested in the method's significant benefits, effectiveness, and limitations.

There is an intriguing area explaining the Socratic questioning method. First, some studies clarify the advantages of the Socratic questioning method (Nicholson, 2022; R. Paul & Elder, 2008). Second, some studies focused on the role of Socratic questioning in enhancing critical thinking skills (Balbay, 2019; Cromwell, 1992; Fika & Abidah, 2022; Kurniasari & Setyaningsih, 2020). Third, some correlate the implementation of Socratic questioning method with several areas of English learning (Holida Mahmud, 2023; Nissah, 2020; Putu & Suhardiana, 2019). Fourth, some conduct action research studies to implement Socratic questioning in developing critical thinking skills (Sahamid, 2016).

Based on the studies above, it is found that most of the previous studies focused on the effect and the role of Socratic questioning method toward cognitive development in several academic areas. However, no study has analyzed how the Socratic questioning method was implemented in the higher class. As a result, this study examines the effectiveness of the Socratic questioning method in developing students' critical thinking in EFL speaking classes. Therefore, the researcher bears the presented problem through this paper, "The Effectiveness of Socratic Questioning Method in Developing Students' Critical Thinking in EFL Speaking Class."

## **1.2 Reason for Choosing the Topic**

The researcher conducts this study due to the intuition to aid in selecting the most appropriate teaching method in EFL speaking classroom. The Socratic questioning method is considered the best option for the teacher to teach speaking skills and support students' critical thinking skills. The Socratic questioning method was implemented in the EFL-speaking classroom to give a better picture and further guidance on how the method can develop the student's critical thinking skills. Therefore, the researcher wants to know the effectiveness of the Socratic questioning method in developing students' critical thinking in EFL speaking classes.

### **1.3 Research Question**

This present study is about the effectiveness of the Socratic questioning method in developing students' critical thinking in EFL speaking class. Therefore, the researcher proposes a research question:

"Is the Socratic questioning method effective in developing students' critical thinking in EFL speaking class?"

### **1.4 Research Objective**

Regarding the research question stated above, this study aims to determine whether the Socratic Questioning method is effective or not in developing students' critical thinking in EFL speaking class.

### **1.5 Research Methodology**

This research employed a quantitative approach with a quasi-experimental design. Tests are used as the instruments for this research, with pre-test and post-test as the data collection tools. Independent & Paired T-tests with SPSS (Special Package of the Social Sciences) version 26 software were utilized to analyze the data.

### **1.6 Research Hypothesis**

Based on some descriptions in the review of related literature and some previously mentioned findings, the hypothesis is formulated as follows:

1) Null Hypothesis ( $H_0$ ): Socratic Questioning does not improve the students' critical thinking skills.

2) Alternative Hypothesis ( $H_a$ ): Socratic Questioning improves the students' critical thinking skills.

### **1.7 Research Assumption**

Based on the literature, Socratic Questioning correlates to developing and improving students' critical thinking. Socratic questioning utilizes three types of questions: spontaneous, exploratory, and focused, implicating the students' critical thinking (R. Paul & Elder, 2008). The purpose of these questions is to assess the quality of the response. This educational approach suggests that teachers can enhance students' critical thinking abilities by engaging in questioning and presenting relevant inquiries. The primary goal of this questioning style is to evaluate the precision, accuracy, depth, clarity, relevance, and breadth of students' reasoning, as Elder (2007) mentioned. As a result, teachers play a crucial role in implementing the Socratic questioning method effectively, ensuring a more efficient and well-structured Socratic questioning-based learning experience. Thus, the researcher assumed this research that there is a favorable and effective implication in implementing Socratic Questioning in developing students' critical thinking skills.

### **1.8 Scope and Limitation of the Study**

The scope of this study is conducted in one of the universities located in Garut, Indonesia. This university is chosen since there are EFL speaking classes in one of its education programs. The main focus of this study is the development of student's critical thinking skills throughout the implementation of the Socratic questioning method.

### **1.9 Research Significance**

The research is expected to give positive theoretical, practical, and professional significance as follows:

1. Theoretically, this study can provide helpful knowledge about implementing the Socratic questioning method in teaching English speaking skills.
2. Practically, it can be a practical guide for teachers regarding using Socratic questioning to teach English speaking skills and develop students' critical thinking.
3. Professionally, it can provide information and recommendations for future research, as well as have an impact on other researchers.

### **1.10 Definition of Terminology**

The researcher presents several specialized terms to avoid the controversial or ambiguous terminology used in this research. Those are:

#### **1. Socratic Questioning Method**

Socratic questioning is one of the most effective methods for fostering critical thinking through dialogue between students and the instructor (R. Paul & Elder, 2008). A person who trains and disciplines his mind to think in a prescribed manner, using the same set of procedures to guide that thinking, would be able to increase the quality of his thought processes. In education, this implies that students' critical thinking can be developed if teachers can conduct questioning and pose pertinent questions. (Sahamid, 2016).

#### **2. Speaking Skill**

The way to communicate effectively is to use speaking skills and provide the ability to convey information verbally that will be easily understood by listeners. (Lunenburg, 2010). The form of speaking in this study uses monologue and dialogue.

#### **3. EFL Classroom**

They are defined as the study of English by students who reside in areas where English is not typically spoken as a first language. Few opportunities exist for students to engage in conversational English outside the classroom (Gebhard, 2006).

#### 4. Critical Thinking

Critical thinking is the intellectual ability that enables people to query and assess the validity of communication in order to make rational judgments and prudent decisions. Critical thinkers are in charge of their thought processes. They are willing to query and reconsider prior convictions, evaluate the validity of communication, and consider new perspectives. (Aouaf et al., 2023).

## **CHAPTER II**

### **LITERATURE REVIEW**

This chapter contains some frameworks related to this study, and the theoretical concept is used to support the researcher's understanding. It included the Socratic questioning method, critical thinking skills, speaking skills, the value and significance of the study, and the previous related studies.

#### **2.1 Socratic Questioning Method**

The Socratic teaching method is based on the Greek philosopher Socrates and his approach to teaching through continuous questioning and challenging students' beliefs. This method is engaging and compelling, particularly in developing critical thinking. Socrates focused on challenging philosophical assumptions, whereas pharmacy education focused on challenging standard dosing and guidelines and developing critical thinking and clinical reasoning. (Kinney, 2022) The Socratic method of inquiry is founded on disciplined, reflective discourse. An ancient Greek philosopher and educator, Socrates believed that the disciplined practice of sharp questioning allowed students to scrutinize ideas logically and determine their validity. In this technique, the instructor feigns ignorance to engage students in conversation. This "acting ignorant" technique allows the student to acquire as much knowledge as possible about the subject. Socratic questioning involves using inquiries to examine one's overall thought process. The queries are intended to evaluate the quality of the response. This form of questioning aims to evaluate the precision, accuracy, depth, clarity, relevance, and breadth of the student's reasoning (Scriven & Paul, 2004). There are three primary categories of Socratic questions: spontaneous, exploratory, and targeted (R. Paul & Elder, 2008).

A spontaneous form of Socratic inquiry can also be considered unplanned, demonstrated when a teacher asks unplanned questions to elicit a deeper understanding of the concept or idea being taught. These questions are not created in advance by the instructor but emerge during instruction to probe

the deeper meaning of a student's response or an objective discussed during instruction.

Exploratory inquiry activates prior knowledge and connections. The objective is to determine whether or not the learner has prior knowledge of the concept. This form of inquiry is to be planned by the instructor. Throughout education, activating prior knowledge is essential in all subject areas. Exploratory questions enable teachers to ask specific inquiries to determine the connections students have made between content objectives and concepts.

A focused form of questioning investigates a particular concept or subject. The instructor prepares focused queries and challenges students to consider the topic at a deeper level. The purpose of focused questions is not only for students to comprehend the concept but also to apply, investigate, and manipulate it.

Socratic questioning is an effective method for investigating concepts in depth. It is applicable at all levels and a valuable resource for all instructors. It can be utilized at various stages of a unit or endeavor. Using Socratic questioning, instructors encourage independent thought and give students responsibility for their learning. While students consider, discuss, debate, evaluate, and analyze content through their own and those around them, they demonstrate higher-order thinking skills. As this approach may be novel, the teacher and the students may need practice with these queries. Effective teacher questioning demands a well-developed querying system. Paul provides this logic to reasoning and mental discipline by employing a "structure" (R. W. Paul & Binker, 1990) that instructors can readily adopt in the classroom. The structure provides a straightforward method for training their minds to respond to questions with reasoned arguments, and the ability to do so demonstrates critical thinking.

The six types of Socratic questions that students are encouraged to ask are detailed below.

**Table 1. R.W. Paul's six types of Socratic questions ("The six types of Socratic questions").** (R. Paul & Elder, 2008)

<p>1. Questions for clarification:</p>	<ul style="list-style-type: none"> <li>• Why do you say that?</li> <li>• What do you mean by...?</li> <li>• How does this relate to our discussion?</li> <li>• What do you think is the main issue?</li> <li>• Could you expand upon that point further?</li> </ul>
<p>2. Questions that probe assumptions:</p>	<ul style="list-style-type: none"> <li>• Why would someone make this assumption?</li> <li>• What could we assume instead?</li> <li>• How can you verify or disapprove of that assumption?</li> </ul>
<p>3. Questions that probe reasons and evidence:</p>	<ul style="list-style-type: none"> <li>• What would be an example?</li> <li>• What do you think causes this to happen...?</li> <li>• Why...?</li> <li>• What other information do we need?</li> <li>• By what reasoning did you come to that conclusion?</li> <li>• Is there reason to doubt that evidence?</li> </ul>
<p>4. Questions about viewpoints and perspectives:</p>	<ul style="list-style-type: none"> <li>• What would be an alternative?</li> <li>• What is another way to look at it?</li> <li>• How would other groups of people respond, and why?</li> <li>• What might someone who believed...think?</li> <li>• Would you explain why it is necessary or beneficial, and who benefits?</li> <li>• Why is it the best?</li> <li>• What are the strengths and weaknesses of...?</li> </ul>

	<ul style="list-style-type: none"> <li>• How are...and ...similar?</li> <li>• What is a counterargument for...?</li> </ul>
5. Questions that probe implications and consequences:	<ul style="list-style-type: none"> <li>• What generalizations can you make?</li> <li>• What are the consequences of that assumption?</li> <li>• What are you implying?</li> <li>• How does...affect...?</li> <li>• How does...tie in with what we learned before?</li> </ul>
6. Questions about the question:	<ul style="list-style-type: none"> <li>• Why is this question important?</li> <li>• What was the point of this question?</li> <li>• Why do you think I asked this question?</li> <li>• What does...mean?</li> <li>• How does...apply to everyday life?</li> </ul>

### 2.1.1 Socratic Seminars

Socratic seminars, also called Socratic Circles, represent a method of assessment. This approach involves facilitating a dialogue or discussion among students on the subject matter (Kenney, 2013). This technique can be implemented by dividing the students into two groups, contingent on the class size. In the proposed experimental design, two distinct groups are utilized, with the second group being visually represented by a smaller circle of students situated within a larger circle of students. Upon the instructor's introduction of the subject matter and subsequent addressing of any inquiries, each student circle would discuss the issue. The students direct their attention towards their ideas, with each group taking turns to speak before engaging with the arguments presented by the opposing group.

Students must possess pre-existing knowledge about the subject matter to be deliberated within the context of Socratic Circles. The instructor subsequently presents the initial question. The students within the smaller group

engage in deliberative discourse, wherein they discuss and analyze the given questions while generating additional inquiries. Subsequently, the larger circle engages in a deliberative discourse about the subject matter, addressing the inquiries posed by the smaller group and formulating additional inquiries for the smaller group to address. The iterative nature of this procedure fosters engagement and collaboration between the groups mentioned above. According to (Kenney, 2013), the instructor assumes the role of the facilitator for the Seminar after presenting the initial question.

The Socratic Seminar is a discussion format characterized by its distinct identity. The instructor may be required to allocate a significant amount of time toward the organization and expansion of the material. Nevertheless, when employed suitably, students acquire a more profound comprehension of the subject matter after being exposed to alternative perspectives. However, promoting imaginative thought and value is advocated (Selden & Bhaerman, 1969). In contrast to alternative forms of discourse, the primary aim of a Socratic seminar is to achieve a comprehensive understanding of hypothetical alternative perspectives rather than engaging in their refutation. Students are expected to engage with the subject matter conscientiously and respectfully communicate their viewpoints, devoid of hostile emotions. Seminars are commonly organized in a circular arrangement, wherein students are provided with a platform to express their perspectives on the concepts put forth by their peers.

### **2.1.2 Socratic Seminar Procedures**

The procedures of the Socratic seminar are as follows:

1. The teacher explains the process of the Socratic seminar and sets the parameter by reviewing the norms in the Socratic seminar.
2. The norms in the Socratic seminar are to respect everyone's thoughts, it is not necessarily to raise a hand to speak, but it could be done by signaling through eye contact and using the talking chips to deliver arguments and ideas, there is no fixed turn in delivering the argument or ideas, and the inner circle

should focus on discussing. The outer circle should remain silent and practice active listening.

3. The students are given a debatable topic for the seminar. Then, the teacher will ask a series of starting questions that probes the students' thought and initiate the seminar.
4. The class is split into two groups; the inner and outer circle. The splitting of the groups is done through the students choosing odd and even numbers, the inner circle will be the odd number, and the outer circle will be the opposite.
5. The students are given 5 minutes to prepare their thoughts on the topic and get ready to start the seminar.
6. All students were given five talking chips and two pieces of paper. The first piece of paper is for the arguments table. The second piece of paper is for critique and a note-taking table.
7. Each group gets four rounds to discuss and take notes, with the inner circle group discussing firsts and taking notes second and the outer circle taking notes first and discussing second.
8. After the final round, the inner and outer circles switch positions, reversing the roles.

### **2.1.3 The Ontology, Epistemology, and Axiology of the Socratic Method**

The Socratic Method (SM) is commonly regarded as a pedagogical approach that is an alternative to traditional instructional methods in education. It emphasizes the exploration and examination of students' beliefs and their cognitive processes related to those beliefs rather than solely relying on transmitting information or beliefs from teachers to students. The qualities that can be inferred from examining the numerous instances of the Socratic Method in Plato's works have been effectively condensed by Angelo Corlett. These qualities encompass epistemic humility, a communal quest for truth, curiosity, honesty, humor, and hope, among other notable attributes. Various philosophers have characterized the Socratic Method (SM) as comprising two essential

stages: the "gadfly" stage, during which students are prompted to question their assertions of knowledge, and the "midwifery" stage, in which students are guided to critically assess their beliefs and generate "enhanced" or "accurate" beliefs. (Davis, 2012). The ontology of the Socratic Method is the science of nature for whom and by whom the Socratic Method can be utilized.

The Socratic method employs a series of inquiries to scrutinize students' values, principles, and beliefs. By engaging in the inquiry process, the individuals involved in this study aim to initially ascertain and subsequently justify their moral intuitions of the world, which serve as the foundation for their respective lifestyles. Socratic inquiry does not focus on merely reciting facts. Instead, it requires participants to explain that the primary objective of Socratic inquiry is to uncover the underlying motivations and assumptions that shape how students navigate their lives. Advocates of the Socratic method contend that by independently arriving at solutions, students are more likely to retain both the answer itself and the cognitive processes that facilitated its derivation, as opposed to passively receiving a pre-determined conclusion. Moreover, individuals tend to exhibit more excellent receptiveness towards perspectives developed through rational deliberation. The Socratic method is particularly impactful in discussions about subjects that elicit solid personal beliefs, such as ethical dilemmas, matters of value, political ideologies, and principles guiding human existence. (Delić & Bećirović, 2016).

In contemporary times, a heightened significance exists in cultivating successive cohorts of exceptional intellectuals, surpassing any previous era in the annals of human civilization. Despite its ancient origins, the Socratic method possesses a notable advantage in that it can be seamlessly integrated into current curricula without necessitating additional instructional hours. In pursuing enhanced educational methods and procedures, the utilisation of the Socratic method can prove advantageous as it fosters the development of higher order thinking skills and facilitates a transformation in students' cognitive and learning patterns. The advantages of the learning orientation facilitated by the

Method are also apparent. The primary focus of individuals with a learning-oriented mindset revolves around enhancing their aptitude. (Lam et al., 2011).

Consequently, individuals with a growth mindset are inclined towards Socratic learning, as opposed to performance-oriented students who believe that personal aptitude dictates achievement and are preoccupied with evaluating their performance. The Method facilitates students in engaging in metacognitive activities and self-monitoring, enabling them to periodically step outside their current thought process and gain alternative perspectives on their progress. This method facilitates students in gaining a more comprehensive understanding of their progress within the educational journey. (Delić & Bećirović, 2016)

#### **2.1.4 Logical Fallacy of the Socratic Method**

The "Socratic fallacy" concept pertains to a cognitive error characterized by the erroneous belief that knowledge of specific instances necessitates the establishment of universal definitions. Since Peter Geach claimed to have identified this error in Plato's dialogues, the concept of the Socratic fallacy has been a recurring theme in scholarly literature. Numerous endeavors have been undertaken to justify Socrates against the allegation; however, none can be deemed entirely triumphant.

The term "Socratic fallacy" was introduced by Peter Geach in a 1966 article on *Euthyphro*. Geach applies the term to an incorrect style of thinking that comes from accepting two assumptions, which he finds exhibited in Plato's Socratic dialogues. (Geach, 1966) These assumptions are as follows:

- If you know you are correctly predicating a given term 'T' you must know what it is to be T in the sense of being able to give a general criterion for a thing's being T.
- It is useless to arrive at the meaning of 'T' by giving examples of T things.

In Geach's estimation, The Socratic fallacy occurs when argument (A) is employed to impede the introduction of a particular proposition into philosophical discourse. The author presents a compelling illustration of the Socratic fallacy by highlighting the reluctance to acknowledge that a proper

name functions as a word within a sentence unless a precise definition of "word" is provided. Similarly, the author emphasizes the refusal to accept that machines lack the attribute of being alive unless a definition of "alive" is provided. More precisely, the Socratic fallacy can be defined as the logical error of concluding that a particular statement cannot be known due to the speaker's inability to provide a criterion for it. In a broader context, however, the term conveys a concern regarding the potential negative impact of deploying (A) on the pursuit of knowledge. Without a pre-established criterion for classifying an object as T, the ability to formulate a definition based on examples (referred to as B) will be compromised. Hence, it can be observed that individuals who lack a pre-established standard for determining the quality of a specific attribute, denoted as T, are unable to embrace option (A) without risking the possibility of rendering their inquiry futile. (Futter, 2019).

## **2.2 Critical Thinking Skills**

The scholarly discourse surrounding critical thinking skills spans from the 1960s to the present. Prior to the 1990s, the discipline of education was characterized by a lack of a comprehensive and cohesive understanding of critical thinking abilities. In a study by (P. Facione, 1989), qualitative research was employed to investigate the optimal methods for teaching and assessing critical thinking skills within educational settings. For this qualitative study, Facione assembled a cohort of 46 experts in critical thinking theory and evaluation, including academics, teachers, and researchers. The expert group conducted extensive deliberations regarding the definitions of critical thinking skills. Since then, Facione has emerged as a prominent figure in critical thinking research and publication. He was the initial individual to document the accord of critical thinking capacities.

Critical thinking can alternatively be characterized as a form of reasoning that is of exceptional quality or accuracy. In other words, reasoning is not characterized by illogical thinking (Facione, 2015). critical thinking can be described as a deliberate and thoughtful assessment of one's actions and

beliefs. Critical thinking encompasses the processes of evaluation, introspection, and intent (P. A. F. Facione, 2000). Browne & Keeley (2001) assert that critical thinking can be likened to the process of mining for gold. The initial step in the process of gold panning involves the accumulation of the majority of the material. The individual subsequently engages in the process of sifting through the various materials in order to identify and extract the valuable gold. Equally relevant to individuals who possess critical thinking skills. These individuals carefully examine the information presented to them to uncover answers to inquiries regarding causality, importance, and interpretation (Browne & Keeley, 2001).

Critical thinking skills can be categorized into six discrete qualities or abilities. The abovementioned skills encompass interpretation, analysis, evaluation, inference, explication, and self-regulation, specifically in academic pursuits. The six primary specific skills are derived from understanding individuals' cognitive processes in approaching and reasoning with questions and their ability to comprehend and respond to problems or inquiries (P. Facione, 1989).

Interpretation encompasses assimilating the presented material, comprehending its significance, and faithfully reproducing it or its intended significance. In the study conducted by (Ignatavicius, 2001), the researcher examined a specific topic or issue. It is undeniable that numerous classrooms already employ this expertise. Frequently, educators deliver instructional materials and guidance to their students with the expectation that the students will subsequently generate a product that effectively integrates the provided content. Frequently, reproducing instructional content is commonly denoted as assignments or research projects.

According to P. Facione (2015), analysis is a cognitive ability that involves the examination of inferential connections within given information, leading to the formation of conclusions about the subject matter. Moreover, the analysis serves the purpose of establishing connections between queries, statements, and concepts. When the skill is utilized, the learner utilizes the

provided data to establish connections among the different statements to comprehend the overarching idea or meaning.

According to Ignatavicius (2001), evaluation can be defined as the process of assessing the significance or establishing the trustworthiness of an entity or an individual. In the given task, students are mandated to employ the skill of evaluation to assess the veracity of a given statement. The phenomenon under consideration arises when a student formally evaluates the importance of information and subsequently arranges it in a hierarchical order based on its relevance within a specific temporal context.

The inference process encompasses drawing logical conclusions, formulating predictions, and generating innovative ideas using available information (Ignatavicius, 2001). The competency in question is exemplified by students' endeavors to forecast the result of a film, which serves as a tangible illustration in real-life circumstances. The process of inferring information, also called identifying implicit information, involves comprehending concepts and data that are not explicitly stated. The concept of inference is closely associated with deductive reasoning, as it involves conclusions not explicitly articulated within the provided information.

Clarification is a cognitive ability employed in situations where there is necessary to provide a comprehensive rationale for a decision or response (P. Facione, 2015). An elucidation offers additional elucidation regarding the fundamental assumptions, motivations, or rationales of a specific occurrence, concept, or course of conduct. This particular aptitude is exemplified by a student who can provide a robust justification for a given response or elucidate the process by which they arrived at a solution.

Cognitive self-monitoring, also called self-evaluation, encompasses the process of self-regulation (Ignatavicius, 2001). Self-regulating activities include revising written papers, modifying problem-solving approaches, and reassessing strategic plans. Metacognition refers to the cognitive process of recognizing and conceptualizing one's learning and comprehension abilities.

Students acquire independence and assume responsibility for their education by effectively applying this skill.

### **2.2.1 Importance of Critical Thinking Skills**

Students' academic achievement and overall performance are contingent upon their capacity for critical thinking. In addition to engaging with concepts and ideas, students actively manipulate these concepts to assess their comprehension level. Students can acquire a more profound comprehension of these concepts by engaging with abstract ideas and actively applying them in practical contexts. Possessing critical thinking skills is a fundamental attribute imperative for every individual within a given community. In contemporary multinational, multicultural, and intricate challenges, individuals must effectively analyze substantial volumes of data to arrive at informed and judicious decisions (Colley et al., 2012). The professors mentioned above also referenced the work of Leibowitz, a researcher who asserted that in the current state of affairs, intricate cognitive processes, effective communication, and cooperative efforts would be integral facets of human activity (Colley et al., 2012; Klerman & Leibowitz, 1999)

Developing critical thinking skills is vital since many employers seek candidates with such abilities. According to the survey findings, most employers, precisely 81%, expressed a strong desire for supplementary critical thinking education for both their existing employees and potential future hires. The global reception of this appeal for enhancing student education has been extensive. According to Butler (2012), supplementary rationales exist for students to exhibit critical thinking skills in addition to the academic setting. Furthermore, employers actively seek candidates and prospective employees who possess these skills.

### **2.2.2 Teaching and Assessment of Critical Thinking Skills**

The scholarly discourse surrounding the pedagogy and evaluation of critical thinking abilities encompasses an array of theoretical frameworks. Prominent studies often utilize Socratic inquiry and various instructional

approaches to cultivate and enhance critical thinking abilities. (Elder, 2007; R. Paul & Elder, 2008) In the same way, scholarly investigations have been conducted to examine and endorse the utilization of Socratic Seminars and other instructional approaches as practical means of evaluating and fostering the advancement of critical thinking abilities (Kenney, 2013). Further research is needed in utilizing Socratic questioning as a pedagogical approach and employing Socratic Seminars to assess the acquisition or cultivation of critical thinking abilities. The evaluation of the effectiveness of these strategies is of utmost importance.

### **2.2.3 Holistic Critical Thinking Scoring Rubric.**

The scoring rubric (P. Facione, 2015) developed is valuable in assessing critical thinking skills during an evaluation activity. The rubric defines the necessary observations and outlines the process for identifying salient characteristics. Regardless of their instruction level, educators can effectively employ the rubric. Furthermore, the rubric includes clear and specific guidelines for scoring. According to (P. A. Facione & Facione, 1994), The rubric provides a comprehensive framework for assessing, utilizing, and fostering critical thinking abilities' attributes and distinct proficiencies.

### **2.3 Speaking Skill**

To communicate successfully, students need to master Speaking, which is a crucial language skill. According to (Brown, 2004), Speaking is an observable productive skill that depends on reliability and also tests the validity of oral production and requires that learners not only have to understand the grammatical rules, the vocabulary, and also the pronunciation but they have to understand the meaning of the context. The learners should have a degree of linguistic competence, and speaking skills can be an expected skill with a structure that can be acquired through practice.

Speaking may be characterized as a technique to express emotions verbally, as in a conversation with others, in line with (Graddol, 2006), who

stated that English is an international language of communication. English is a language that requires many students to speak and communicate in various scenarios. We can get the conclusion that learning to speak English is crucial. According to (Herlina & Holandiyah, 2016), speaking ability has a few key components that can be broken down into six categories: comprehension, vocabulary, pronunciation, fluency, Critical Thinking, and intonation or expression. Speaking is also used to communicate by talking and requesting when having jobs or other necessities. In learning speaking as a second language, students can use audio-visual technologies rather than textbooks (Madiyoh et al., 2018). From the explanation above, learning proper English speaking is crucial in many aspects of life.

### **2.3.1 Speaking Skills Type**

Speaking is a skill that can be objectively and measurably observed in terms of effectiveness. One of the two linguistic competencies associated with language production is the capacity for oral communication. According to (Brown, 2004), communication can be defined as generating and sharing significance through verbal or written modalities. The author enumerates six distinct classifications of oral communication proficiencies. The following are the six categories:

#### **2.3.1.1 Imitative**

This category encompasses the application of intonation in speech and the focused attention on particular aspects of language structure. This category represents a form of redundancy where a word, phrase, or sentence is repeated. The primary determinant of achievement in this context is the emphasis on pronunciation. The instructor employs the technique of drilling within the teaching and learning process. The practice of drilling enables students to engage in the process of observing and verbally reproducing specific words.

### **2.3.1.2 Intensive**

This category pertains to students' oral proficiency as they engage in exercises that focus on phonological and grammatical elements of the language. Students commonly engage in collaborative tasks as part of their academic responsibilities, often called group work. One example of the practice of reading aloud encompasses various activities such as reading a paragraph, engaging in dialogue with a partner, and interpreting information from a chart, among other related tasks.

### **2.3.1.3 Responsive**

Responsive performance refers to the ability to interact and demonstrate understanding, albeit to a restricted extent, suitable for concise conversations, customary greetings, casual conversations, simple inquiries, and remarks. This category comprises concise replies to inquiries or remarks presented by the instructor or student, encompassing guidance and instructions. The responses above generally exhibit satisfactory and significant qualities.

### **2.3.1.4 Transactional and Interpersonal (Dialogue)**

Transactional is carried out to convey or exchange specific information between two people or more with the same goal: delivering the message. Meanwhile, the primary interpersonal purpose is maintaining social relationships rather than transmitting facts and information. Interviews, role plays, discussions, conversations, and activities are the forms of interpersonal speech performance.

### **2.3.1.5 Extensive (monologue)**

The instructor assigns prolonged monologues to students through oral reports, summaries, and narratives. It can be concluded that certain factors should be considered when evaluating speaking. The students must have a minimum understanding of pronunciation, vocabulary, and language functions.

### **2.3.2 The Components of Speaking**

For somebody to speak English well, they must be able to master and comprehend various speaking elements. Without learning the elements of Speaking, oral communication cannot occur, and Speaking is one factor that affects his performance in oral engagement. According to Vanderkevent (1990), as cited in (Kurniati et al., 2015), there are three factors in speaking skills:

#### 1. The Speakers

The speakers are a person who creates the sound. They are essential to communicate views or emotions to the listener. Therefore, if there are no speakers, no opinions, views, or sentiments will be expressed.

#### 2. The Listeners

The listeners pick up or feel what the speaker is saying. Speakers will categorize their opinions in writing if there are no listeners.

#### 3. The Utterances

The utterances are words or sentences which are created by expressing the opinion through the speakers. The audio system and the listeners will employ signs if there is no speech.

### **2.3.3 Principles in Teaching Speaking in EFL Classroom**

The pedagogical approach to instructing oral communication skills in English as a Foreign Language (EFL) setting exhibits distinctions from the teaching methodologies employed in English as a Second Language (ESL) or native English contexts. (Nunan, 2003) identified and acknowledged five core principles on the instruction of speaking skills within the context of English as a Foreign Language (EFL). There are notable distinctions in language education between teaching communication skills in English as a Second Language (ESL) and English as a Foreign Language (EFL). English is extensively utilized for communication within the ESL context, affording students abundant opportunities to engage in English language usage beyond the confines of the classroom. In the English as a Foreign Language (EFL) context, English is primarily taught as an academic subject with limited opportunities for practical

application in real-life communication. Individuals studying English within an English as a Foreign Language (EFL) context may possess diverse objectives encompassing business, education, and other domains. The status and instruction of the English language exhibit variations across different countries. The term "EFL" encompasses multiple interpretations across different countries. English as a Foreign Language (EFL) instructors must consider various global, national, and local contextual factors when designing instructional strategies. Educators must comprehensively understand the contexts in which their students employ the English language and the specific methods and rationales behind their language usage.

Accuracy encompasses using robust critical thinking principles, precise articulation, and the judicious selection of vocabulary. Fluency encompasses the ability to articulate speech at a suitable pace, characterized by minimal interruptions and errors in delivery. Ensuring pronunciation, vocabulary, and sentence structure accuracy is crucial when addressing linguistic proficiency. This accuracy can be achieved through timely intervention during the speaker's discourse or by meticulously documenting errors and offering constructive feedback once the speaker has finished. Motivating students during fluency instruction is of utmost importance.

Students confidently communicate the intended message without apprehension regarding potential errors. It is imperative that the understanding of the meaning is achieved. In the context of learning English as a second language, students often encounter limited opportunities for verbal communication in the target language beyond the confines of the classroom. Consequently, the classroom setting represents a highly advantageous platform for engaging in language practice and development. Pair and group tasks are highly efficient and effective in optimizing classroom time utilization. This approach enhances the time allocated for student speaking while reducing the time dedicated to instructor-led activities. If pair and group work is conducted effectively, students will be provided with increased opportunities to negotiate

meaning, actively participate in authentic discourse, and develop the skill of taking turns. The act of speaking is also cultivated as a social activity.

This assignment aims to instruct students in the skill of elucidating meaning. Given the prevalence of miscommunication in interpersonal interactions, students must acquire the skills necessary to clarify and elucidate the intended meaning of messages or seek clarification from others involved in the communication process. Consequently, more assignments focusing on misunderstanding have been developed to promote students' utilization of this communication strategy as an integral aspect of their communicative competence.

According to (Halliday M.A.K., 2004), spoken language fulfills three fundamental functions. Initially, the currency is utilized to procure goods and services. Therefore, it is referred to as transactional. Moreover, it serves as a means of facilitating social engagement, thus rendering it interactional. Ultimately, it is utilized to derive pleasure. Incorporation of the first and second functions of language is imperative in our daily linguistic practices and should be integrated into our instructional approaches. Nunan replaces "interactional" with "interpersonal" because the latter is a more socially-oriented concept. Moreover, transactional communication is inherently characterized by its interactive nature. Engaging in the instruction and application of these functions enhances students' linguistic proficiency and facilitates their ability to communicate in various contexts effectively.

#### **2.4 Value and Significance of Study**

The available literature on the effective instruction of critical thinking in English language skills is scarce, and existing research fails to provide specific insights into the factors that enhance these skills or the specific areas in which students need improvement (Norris, 2003). Furthermore, there is a dearth of research on developing critical thinking skills concerning proficiency in spoken English. Hence, it is imperative to examine the most effective methods for instructing and evaluating critical thinking skills in oral English and strategies

for cultivating these proficiencies in English as a Foreign Language (EFL) learners.

This research will serve as a paradigm and reference for educators and school administrators in identifying, instructing, and evaluating critical thinking abilities. Educators will possess the capacity to replicate or modify the research methodology to align with their respective instructional settings, thereby fostering the enhancement of students' critical thinking skills, regardless of whether they are English as a Foreign Language (EFL) learners. The ultimate aim is to stimulate further investigation into the development of critical thinking abilities among English as a Foreign Language (EFL) learners.

## **2.5 Previous Related Studies**

There exist numerous prior studies that are pertinent to this research. Roger D. Jensen Jr. conducted the inaugural study in May 2015 in the state of Nebraska, located in the United States of America. The primary objective of this study was to assess the effectiveness of the Socratic method in promoting the development of critical thinking skills among individuals learning English as a second language. The present study examined the pedagogy and acquisition of critical thinking abilities in a cohort of seventh-grade students attending an urban middle school in Nebraska. The researcher determines the most effective methods and techniques for teaching English Language Learners to think critically. The study employs a qualitative methodology and is evaluated by two instructors who have received training in facilitating Socratic Seminars. The instructor kept track of the development of student's critical thinking abilities by assigning each student a score using the Holistic rubric. The theoretical section suggests teaching ELLs critical thinking skills using the Socratic method. This study's findings define critical thinking skills and their historical context, clarify the Socratic method, demonstrate that the Socratic method develops critical thinking skills in English Language Learners, and provide a guide for the Socratic method. (Jensen, 2015)

The second previous study was written by Seher Balbay in 2019 at Middle East Technical University, Ankara, Turkey. The study investigated the effects of Socratic pedagogy on the critical awareness skills of Turkish student instructors enrolled in a Spoken English course at the Foreign Language Education Department. The duration of the intervention in this qualitative study spanned an entire academic year and encompassed participants who were in their first year of study. Individual and focus group interviews and classroom observational notes were employed as data collection instruments. The results suggest that there has been an increase in students' level of critical awareness regarding the political, economic, and cultural aspects related to language teaching environments. The individuals acquired a more profound comprehension of various facets of English language instruction. (Balbay, 2019)

Husniah Sahamid wrote the third previous study in 2016 at Universiti Malaysia Pahang (UMP), Pahang, Malaysia. This action research study was conducted with 16-year-old Form 4 students from Malaysia. The duration of the course spanned five months and encompassed a total of sixteen literature classes, each lasting for one hour. These classes focused on the study of concise narratives derived from the Malaysian English Language Upper Secondary Level school curriculum. The present study elucidates the researcher's role as a teacher-as-researcher in facilitating students' ability to effectively address instructor inquiries using R. W. Paul and Binker's (1990) Socratic questioning framework. The primary objective of this paradigm is to cultivate students' capacity for critical thinking. The action research study data was obtained through the researcher's field notes, students' writing assignments, and student interviews. These data sources were then subjected to analysis after each cycle. The results of this study indicate that the iterative implementation of Socratic questioning had a beneficial impact on students' responses and writing assignments. Students' academic achievement was influenced by factors such as their level of language proficiency, limited reading skills, and test-related anxiety. In order to ensure the successful implementation of Socratic inquiry in

educational settings, it was imperative to acknowledge and resolve the following concerns (Sahamid, 2016)

Unsia Fika Umami Abidah published the fourth previous study in 2022, located in Universitas Negeri Surabaya. This study investigated the "what and how" of effective literacy instruction. People who wish to improve their reading comprehension could use this method not only for academic purposes but also in their everyday lives. This technique is commonly known as the Socratic method. This investigation employed a qualitative descriptive research design. The researcher provided an example of a Socratic method pattern, and four out of five concur that the method has encouraged critical thinking among university students. (Fika & Abidah, 2022)

In addition, its method assists students in critically reading and analyzing when they believe critical reading is essential. The Socratic method answered their query and assisted them in analyzing additional information as they continued their search. It also demonstrates that university students need to learn more about methods to help them read critically, as many students are still unfamiliar with the Socratic method.

The fifth previous study was conducted by Vina Roudotun Nissah in 2020, located in East Java, Indonesia. This study demonstrates how Socratic inquiry can be used to promote students' critical thinking as they read explanation texts. The investigation centered on eleventh-grade pupils in Jawa Timur. The researcher observes and documents the application of Socratic inquiry techniques to characterize how these techniques are utilized to cultivate critical thinking in students. Based on the stated theory, the outcome demonstrated that the instructor effectively implemented the Socratic questioning technique. The interview results demonstrated that the student's behavior had improved after Socratic questioning was implemented. Moreover, the students' task demonstrated their ability to attain the maximum taxonomy bloom level. (Nissah, 2020)

## CHAPTER III

### RESEARCH METHODOLOGY

This chapter discusses the research methodology, including research design, research site and participants, research instrument, teaching intervention, data collection, data analysis, and research procedure.

#### 3.1 Research Design

As indicated in Chapter 1, the primary objective of this study is to examine the efficacy of the Socratic questioning technique in fostering the development of critical thinking skills among students in an English as a Foreign Language (EFL) speaking class. Therefore, this study utilized a quantitative approach in the form of an experimental design. (Ary et al., 2018) stated that experimental research entails the examination of the impact resulting from the deliberate manipulation of one variable on another. The manipulated variable is the experimental treatment or the independent variable. The study employed a quasi-experimental research design to assess the effectiveness of Socratic questioning in fostering the development of critical thinking skills among students. This research fulfilled the quasi-experimental research requirement with an experimental and controlled class as the research subject. A non-equivalent controlled class design was chosen with pre-test and post-test treatment. This design was adopted when the characteristics of the students in both classrooms were comparable. According to Campbell & Riecken (1968), the non-equivalent group design with pre-test and post-test can be described in the following manner:

Group	Pre-test	Treatment	Post-test
Experimental	O <sub>1</sub>	X	O <sub>2</sub>
Controlled	O <sub>3</sub>	-	O <sub>4</sub>

In this design, O<sub>1</sub> and O<sub>3</sub> represented the pre-tests of the experimental and control groups, X represented the actual treatment, and O<sub>2</sub> and O<sub>4</sub>

represented the post-tests. Consequently, both the experimental and control groups completed the pre-and post-tests. However, only the experimental class was subject to the treatment. In the experimental class, the researcher taught speaking using Socratic seminars to increase students' critical thinking. In contrast, the researcher taught speaking in the control class without using Socratic seminars but with a project-based learning approach.

## **3.2 Research Site and Participants**

### **3.2.1 Research Site**

This study was conducted in the English education program at one of the institutes in Garut, Indonesia. The reason for choosing this site was because the suitable prerequisite was available in this education program. There were EFL-speaking classrooms, and the students were at the university level and more capable of high-order thinking, directly proportional to better critical thinking skills than lower-level students. In this research, the researcher acted as a participant-observer who also served as the teacher performing the teaching program and employing the Socratic questioning method in the speaking class.

### **3.2.2 Research Participants**

The research participant in this study was two classes of second-year students at one of the Educational Institute in Garut, Indonesia, which consisted of 30 students per classroom, 60 participants in total. The purposive sampling technique was used to choose a specific purpose based on the researcher's principle of their judgment (Cohen et al., 2007). They were various levels of language proficiency in those classrooms. In the experimental class, Critical thinking must be applied and improved in the English classroom because metacognitive intelligence, which consists of 4C (Critical Thinking and Problem Solving, Creativity and Innovation, Collaboration, and Communication), was one of the 2013 curriculum objectives in Indonesia. Metacognitive regulates the six cognitive aspects outlined by Benjamin Bloom in his taxonomy: memory, comprehension, application, analysis and synthesis, and evaluation (Anderson & Krathwohl, 2000). Critical thinking was also

essential for developing creative English teacher candidates. Students must think critically to devise a creative remedy to a problem.

Furthermore, the newly generated ideas must be relevant to the current mission. The application of critical thinking was imperative in assessing novel concepts, selecting optimal options, and adapting said concepts as circumstances dictate (Rahmawati, 2022).

### **3.3 Research Instrument**

In acquiring the data, the researcher employed tests based on the standard procedure and used a systematic method. The following is the instrument of the data collection:

#### **3.3.1 Test**

The test was one of the tools utilized in the quantitative research methodology. According to (Brown, 2004), an assessment evaluates an individual's aptitude, understanding, or execution within a specific field. The data collection instrument employed in this study consisted of a series of speaking tests designed to assess students' proficiency in critical thinking abilities. The researcher employed a research design that incorporated pre-test and post-test measures. According to Gass et al. (2005), a pre-test was administered to the participants to establish comparability among the groups before their treatment.

Additionally, a post-test was conducted to assess the impact of the treatment. A pre-test was administered to assess the students' existing critical thinking skills before their exposure to the Socratic questioning method. Subsequently, the administration of the post-test aimed to assess the student's critical thinking skills through the treatment of the Socratic questioning technique.

In the control class, the researcher did not give the Socratic questioning method as a treatment. The controlled class was only treated by employing

project-based learning to find out the difference in the score between the experimental and controlled one.

### **3.4 Teaching Intervention**

This study's teaching procedure was conducted in several stages and steps in five weeks span. The pre-test was conducted in the first meeting to measure students' critical thinking skills prior to receiving the treatment. The pre-test was in the form of a Focus Group Discussion (FGD), consisting of four to five students in each group, as does the post-test of this research. Focus group discussion was chosen because it is suitable and can provide the points required for the assessing process by the Facione Holistic Scoring rubric. The duration of the FGD was for 45 minutes.

The researcher performed the pre-test and post-test with three topics provided to the classes. Three topics were provided to give diversity in the classroom and to avoid monotonous discussions about one topic. Each group randomly chose one topic discreetly, and all the topics were distributed in the same number equally. The topics provided are "Artificial Intelligence," "Freedom of Speech in Indonesia," and "Social Media." Meanwhile, starting in the second meeting, the classes underwent treatment. There are four treatments for each class. The treatment for the experiment class was in the form of Socratic seminars, and the treatment for the controlled class was in the form of Project-Based Learning (PBL).

The Socratic Seminar was chosen since it can accurately depict the teaching of the Socratic Questioning method. Socratic seminar is a type of assessment also known as Socratic Circles. This method is, in one way, a dialogue or discussion between students about the concept at hand. The Socratic seminar type employed in this research was based on the classroom size. Therefore, it was in the form of two groups divided equally into inner small and outer large circles. The two groups took turns discussing as the inner circle discussed the topic first while the outer circle listened, observed, and noted the discussion happening inside the inner circle.

The first and second treatments were conducted in the second week, the first treatment for the experiment class was to introduce the concept and principles of the Socratic questioning method, and the second treatment was to introduce the concept of critical thinking and how to improve it. The third and fourth treatments were conducted in the third week; the third treatment was to make the students apply the six types of Socratic questions and the examples they asked in the Socratic Seminar in the following week. The fourth and last treatment was to conduct the Socratic Seminar to ensure further and implement the previous treatment's knowledge.

Meanwhile, the first treatment for the controlled class was to introduce the concept and principles of debating as the main project, the second treatment was to practice the debating procedure, the third treatment was to simulate the real-time debate, and the last treatment was to conduct quick brainstorming under the time-limited rule.

### **3.5 Data Collection Procedure**

The tests were employed to gather data in order to formulate a response to the research inquiry. Both classrooms were administered a pre-test and post-test before and after the treatment was administered to the students. The experimental group exclusively received the treatment after administering the pre-test to the students. Subsequently, the student's scores were computed before and after the examination employing the Statistical Package for the Social Sciences (SPSS). Furthermore, the author conducted an analysis and explained the outcomes of the calculation. The pre-test and post-test scores of the students were subsequently computed utilizing the Statistical Package for the Social Sciences (SPSS). The present study employed the Holistic Critical Thinking Scoring Rubric to evaluate the progression of critical thinking abilities.

### **3.6 Data Analysis**

This research used the t-test formula through IBM SPSS (Special Package of the Social Sciences) version 26 software to analyze data. The

normality and homogeneity tests should be calculated before the t-test is applied. Before calculating the t-test, some of the requirements should be fulfilled as below:

### **3.6.1 Normality Test**

Before executing the t-test, it was crucial to ascertain whether the data had a normal distribution. Before advancing to the next phase, researchers conducted normality tests. Kolmogorov Smirnov with  $\alpha = 0.05$  was used to analyze the normality test in this study. Kolmogorov Smirnov is utilized if the sample size exceeds thirty. If the result of the normality test is  $< \alpha = 0.05$ , then the data are not normally distributed. Moreover, if the result of the data is greater than or equal to or  $> \alpha = 0.05$ , the data are normally distributed. This study's analysis of normality was conducted with IBM SPSS Statistics 26.

### **3.6.2 Homogeneity Test**

As a normality test, the assumption of equal variances is essential. Tests are conducted to determine whether or not data variances are equal or homogeneous. This study uses the Levene Statistic test with a significance level  $\alpha = 0.05$  to obtain these results. Similar to the normality test, the data are not homogeneous if the homogeneity test results are less than or equal to or  $< \alpha = 0.05$ . Moreover, if the result is greater than or equal to or  $> \alpha = 0.05$ , the data are homogeneous. This research's homogeneity was examined using IBM SPSS Statistics 26.

### **3.6.3 T-Test (Paired T-Test & Independent T-Test)**

A t-test was used to analyze the data using statistical calculations. T-test was used to determine the significance of post-test results and the mean score gain for the experimental and control groups. The mean scores of the experimental and control groups were compared using an Independent T-test. Additionally, the Paired T-test was used to compare the same group's pre-test and post-test mean scores to determine whether there was a significant improvement. The researcher also used SPSS 26 to compare the experimental

and controlled classes' scores in this research. Moreover, the test proved whether the Socratic questioning method effectively enhances critical thinking in speaking class.

#### **3.6.4 Effect Size**

Following the t-test, the effect size was calculated to determine the magnitude of the treatment effect or the significance level. As the t-test provides the statistical result of significance, the effect size generates statistical data and determines whether the effect size is robust or weak. In this study, the following formulation of Cohen's d-effect magnitude is adopted:

Cohen's d effect size criteria are used as the bases to determine the level of significance. The effect size criteria of Cohen's d are:

0-0.20 = weak effect

0.21-0.50= modest effect

0.51-1.00= moderate effect

> 1.00 = strong effect

#### **3.6.5 Statistical Hypothesis**

The researcher would form zero hypotheses and an alternative hypothesis:

1. (Null Hypothesis)  $H_0: \rho\text{-value} > \text{sig } \alpha = 0,05$ . It means that  $H_a$  is rejected and  $H_0$  is accepted, or the Socratic questioning method does not significantly affect critical thinking in speaking class.
2. (Alternatives Hypothesis)  $H_a: \rho\text{-value} < \text{sig } \alpha = 0,05$ . It means that  $H_a$  is accepted and  $H_0$  is rejected, or the Socratic questioning method significantly affects critical thinking in speaking class.

#### **3.7 Research Procedure**

Several stages of procedures were conducted in this study which were described in detail as follows:

1. The researcher prepared research procedures on March 10, 2023.
2. The researcher formulated the research problems on March 15, 2023.
3. The researcher analyzed the related literature review on March 23, 2023.

4. The researcher determined the research method and research design of this study. This study adopted a quantitative in the form of an experimental design on April 27, 2023.
5. The researcher determined the setting and participants of this research. This research was conducted in the English education program at one of the institutes in Garut, Indonesia. Two EFL speaking classes were chosen as the participants, and the researcher arranged an agreement with the lecturer of the classes and permitted to conduct the study in the class on 18 May 2023.
6. The researcher prepared all of the instruments for the research and decided on the test. The test adopted focus group discussion (FGD) in discussing and presenting the participants' arguments and ideas toward the distributed topic to see their critical thinking skills. Furthermore, the researcher prepared the assessment rubric for assessing pre-test and post-test. The Holistic critical thinking scoring rubric was created by Peter Facione (2014) for assessing critical thinking skills development on May 19, 2023.
7. The research and the data collection stages were carried out from May 30 to July 4, 2023.
8. The researcher collected all of the data, analyzed it, and compared it with theory to study the effectiveness of the Socratic questioning method in developing students' critical thinking skills, which finished on 10 July 2023.
9. The researcher presented the final result of this research on 29 July 2023.

## **CHAPTER IV**

### **RESEARCH FINDINGS**

#### **4.1 Research Findings**

This study was conducted in a five-week span to answer the research question. After the series of tests and treatments were utilized, this study obtained real-time data as the findings of this study. The following are the details of the findings:

##### **4.1.1 Data Description**

An investigation was conducted at an Educational Institution in Garut to address the research inquiry. The purpose was to demonstrate how Socratic questioning can effectively develop students' critical thinking skills in EFL Speaking class. The study collected data through pre-test and post-tests focused on critical thinking. These tests were administered at the research period's beginning and end to the experimental and controlled classes. A critical thinking rubric assessed students' grasp of critical thinking. The following is a further description of the data:

##### **4.1.1.1 The Scoring on the Pre-Test and Post-Test**

The pre-test and post-test of this research were in the form of a Focus Group Discussion (FGD) consisting of four to five students in each group. Focus group discussion was chosen because it is suitable and can provide the points required for the assessing process by the Facione Holistic Scoring rubric. The duration of the FGD was for 45 minutes. The participants were also given an arguments table as the worksheet to present their thoughts, ideas, and arguments in written form. The following figures are the scoring rubric and the arguments table:

Figure 4.1 The Facione Holistic Critical Thinking Scoring Rubric

<b>Holistic Critical Thinking Scoring Rubric</b> Facione and Facione	
<b>4</b>	<p>Consistently does all or almost all of the following:</p> <ul style="list-style-type: none"> <li>Accurately interprets evidence, statements, graphics, questions, etc.</li> <li>Identifies the salient arguments (reasons and claims) pro and con.</li> <li>Thoughtfully analyzes and evaluates major alternative points of view.</li> <li>Draws warranted, judicious, non-fallacious conclusions.</li> <li>Justifies key results and procedures, explains assumptions and reasons.</li> <li>Fair-mindedly follows where evidence and reasons lead.</li> </ul>
<b>3</b>	<p>Does most or many of the following:</p> <ul style="list-style-type: none"> <li>Accurately interprets evidence, statements, graphics, questions, etc.</li> <li>Identifies relevant arguments (reasons and claims) pro and con.</li> <li>Offers analyses and evaluations of obvious alternative points of view.</li> <li>Draws warranted, non-fallacious conclusions.</li> <li>Justifies some results or procedures, explains reasons.</li> <li>Fair-mindedly follows where evidence and reasons lead.</li> </ul>
<b>2</b>	<p>Does most or many of the following:</p> <ul style="list-style-type: none"> <li>Misinterprets evidence, statements, graphics, questions, etc.</li> <li>Fails to identify strong, relevant counter-arguments.</li> <li>Ignores or superficially evaluates obvious alternative points of view.</li> <li>Draws unwarranted or fallacious conclusions.</li> <li>Justifies few results or procedures, seldom explains reasons.</li> <li>Regardless of the evidence or reasons, maintains or defends views based on self-interest or preconceptions.</li> </ul>
<b>1</b>	<p>Consistently does all or almost all of the following:</p> <ul style="list-style-type: none"> <li>Offers biased interpretations of evidence, statements, graphics, questions, information, or the points of view of others.</li> <li>Fails to identify or hastily dismisses strong, relevant counter-arguments.</li> <li>Ignores or superficially evaluates obvious alternative points of view.</li> <li>Argues using fallacious or irrelevant reasons, and unwarranted claims.</li> <li>Does not justify results or procedures, nor explain reasons.</li> <li>Regardless of the evidence or reasons, maintains or defends views based on self-interest or preconceptions.</li> <li>Exhibits close-mindedness or hostility to reason.</li> </ul>
(c) 1994, Peter A. Facione, Noreen C. Facione, and The California Academic Press. (See cover page for conditional permission to duplicate.)	

(P. Facione, 1989) Facione, P. (1989). Critical Thinking: A Statement of Expert Consensus for Purposes of Educational Assessment and Instruction. *Research Findings and Recommendations*, 315.

**Figure 4.2 The Arguments Table**  
**Students' Worksheet**  
**Pre-Test & Post-Test**  
**ARGUMENTS TABLE**

Name : \_\_\_\_\_  
Class : \_\_\_\_\_

No	ARGUMENTS
1	

The researcher performed the pre-test and post-test with three topics provided to the classes. Three topics were provided to give diversity in the classroom and to avoid monotonous discussions about one topic. Each group of the FGD randomly chose one topic discreetly, and all the topics were distributed in the same number equally. The topics are “Artificial Intelligence – Is AI Friend or Foe?” “Freedom of Speech in Indonesia – Does Rubber law limit freedom of speech in Indonesia?” and “Social Media – Does social media bring good or bad influence?” During the discussion, each group was sequentially observed and examined to analyze and review their argument-building process and procedures in group discussion. These aspects were used to ensure further the student's level of critical thinking which will be calculated alongside their arguments table.

Several aspects of critical thinking, as presented in Holistic Critical Thinking by P. Facione, were divided into six primary components of argument-building. The components were; First, stating the interpretation of evidence, statements, graphics, questions, information, or the points of view of others. Second, the iteration of solid and relevant counter-arguments. Third, stating the obvious alternative points of view. Fourth, formulating accurate claims/conclusions. Five, following the procedure and reasoning in the correct way. Moreover, six stated the arguments logically supported by evidence and reasons.

#### 4.1.1.2 The Students' Score of Pre-Test

The following table shows the result of the student's scores on the pre-tests:

SCORE	EXPERIMENTAL CLASS		CONTROLLED CLASS	
	Freq	(%)	Freq	(%)
*<2.00	18	60%	15	50%
2.00 - 3.00	11	37%	15	50%
3.00 - 4.00	1	3%	0	0%
MEAN	1.90		1.92	

<b>MIN. SCORE</b>	1.00	1.17
<b>MAX. SCORE</b>	3.00	2.67

Based on the provided table, data for both the experimental class and the controlled class were analyzed. In the pre-test results for the experimental class, 18 out of 30 sampled students (60% of the sample) scored below the minimum passing threshold, with the lowest score being 1.00. In the middle range, 11 out of 30 sampled students (37% of the sample) scored between 2.00 – 3.00. Only 1 out of 30 sampled students (3% of the sample) achieved scores ranging from 3.00 – 4.00, with the highest score being 3.00.

For the controlled class, 15 out of 30 sampled students were categorized as low achievers as their scores fell below the school's minimum passing standard, with the lowest score recorded at 1.17. Additionally, 15 out of 30 sampled students (around 50% of the sample) obtained scores ranging from 2.00 - 3.00 in the pre-test session. None of the students in the controlled class could score within the range of 3.00 - 4.00 during the pre-test, with the highest score reaching 2.67.

Furthermore, the table also indicated that the mean score in the pre-test for the experimental class was 1.90, while the controlled class had a mean score of 1.92. Both classes did not meet the minimum passing standard in the pre-test; however, the controlled class had a higher mean score than the experimental class. These data suggest that the pre-test results from both the experimental and controlled classes are normally distributed and exhibit homogeneity.

#### 4.1.1.3 The Students' Score of Post-Test

The following table shows the result of the student's scores on the post-tests:

**Table 4.2 The Score of the Post-Test**

<b>SCORE</b>	<b>EXPERIMENTAL CLASS</b>		<b>CONTROLLED CLASS</b>	
	<b>Freq</b>	<b>(%)</b>	<b>Freq</b>	<b>(%)</b>
<b>*&lt;2.00</b>	7	23%	12	40%

<b>2.00 - 3.00</b>	14	47%	15	50%
<b>3.00 - 4.00</b>	9	30%	3	10%
<b>MEAN</b>	2.47		2.09	
<b>MIN. SCORE</b>	1.50		1.00	
<b>MAX. SCORE</b>	3.67		3.33	

In the experimental class, it is evident that 7 out of 30 sampled students (23%) achieved a low score in the post-test, with the lowest score recorded at 1.50. Additionally, 14 out of 30 students (47%) obtained a middle score, and 9 out of 30 students (30% of the sample) achieved a high score, with the highest score reaching 3.67.

On the other hand, in the controlled class, 12 out of 30 students (40%) received the lowest score, with a minimum score of 1.00. Furthermore, 15 out of 30 students (50% of the sample) attained a middle score, while only 3 out of 30 students achieved a high score, with the highest score being 3.33.

Moreover, based on the table above, it is evident that the mean score for the experimental class was 2.47, while the controlled class had a mean score of 2.09. This result indicates a significant improvement in the mean score from the pre-test to the post-test, particularly for the experimental class. The mean and student scores can also be calculated in the appendix sections.

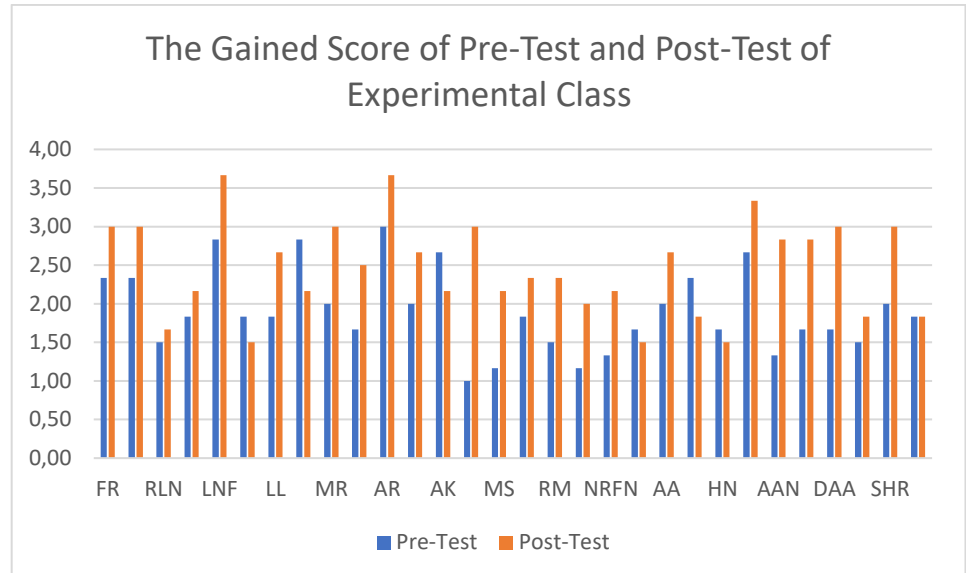
#### 4.1.1.4 The Gained Score of Pre-Test and Post Test

The obtained scores were analyzed by calculating the difference between the post-test and pre-test scores for the experimental and controlled classes. The data regarding the difference in scores for the pre-test and post-test in the experimental class are provided below:

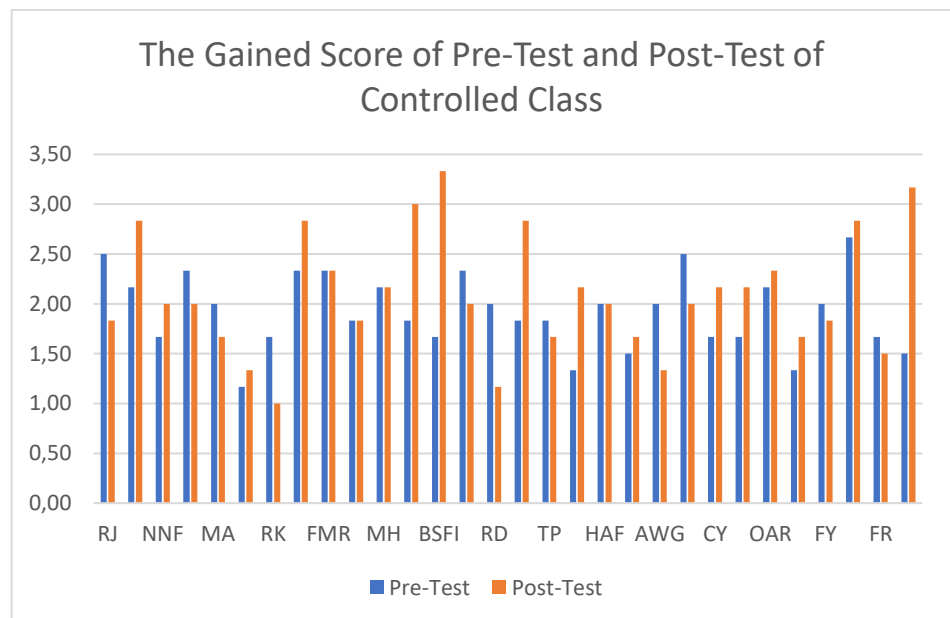
**Table 4.3 The Gained Score of Pre-Test and Post-Test**

<b>GAINED SCORE OF EXPERIMENTAL CLASS</b>					<b>GAINED SCORE OF CONTROLLED CLASS</b>			
<b>NO</b>	<b>Name</b>	<b>Pre-Test</b>	<b>Post-Test</b>	<b>Gained Score</b>	<b>Name</b>	<b>Pre-Test</b>	<b>Post-Test</b>	<b>Gained Score</b>
<b>1</b>	FR	2.33	3.00	0.67	RJ	2.50	1.83	-0.67

2	JH	2.33	3.00	0.67	SAO	2.17	2.83	0.67
3	RLN	1.50	1.67	0.17	NNF	1.67	2.00	0.33
4	RFM	1.83	2.17	0.33	DTS	2.33	2.00	-0.33
5	LNF	2.83	3.67	0.83	MA	2.00	1.67	-0.33
6	NPILS	1.83	1.50	-0.33	MS	1.17	1.33	0.17
7	LL	1.83	2.67	0.83	RK	1.67	1.00	-0.67
8	NKA	2.83	2.17	-0.67	SSH	2.33	2.83	0.50
9	MR	2.00	3.00	1.00	FMR	2.33	2.33	0.00
10	SSA	1.67	2.50	0.83	RN	1.83	1.83	0.00
11	AR	3.00	3.67	0.67	MH	2.17	2.17	0.00
12	RDH	2.00	2.67	0.67	HNS	1.83	3.00	1.17
13	AK	2.67	2.17	-0.50	BSFI	1.67	3.33	1.67
14	TR	1.00	3.00	2.00	XDA	2.33	2.00	-0.33
15	MS	1.17	2.17	1.00	RD	2.00	1.17	-0.83
16	SM	1.83	2.33	0.50	RP	1.83	2.83	1.00
17	RM	1.50	2.33	0.83	TP	1.83	1.67	-0.17
18	FZ	1.17	2.00	0.83	WIH	1.33	2.17	0.83
19	NRFN	1.33	2.17	0.83	HAF	2.00	2.00	0.00
20	NSY	1.67	1.50	-0.17	ERV	1.50	1.67	0.17
21	AA	2.00	2.67	0.67	AWG	2.00	1.33	-0.67
22	SR	2.33	1.83	-0.50	AZ	2.50	2.00	-0.50
23	HN	1.67	1.50	-0.17	CY	1.67	2.17	0.50
24	AAL	2.67	3.33	0.67	DAD	1.67	2.17	0.50
25	AAN	1.33	2.83	1.50	OAR	2.17	2.33	0.17
26	AP	1.67	2.83	1.17	DIM	1.33	1.67	0.33
30	DAA	1.67	3.00	1.33	FY	2.00	1.83	-0.17
28	P	1.50	1.83	0.33	IZS	2.67	2.83	0.17
29	SHR	2.00	3.00	1.00	FR	1.67	1.50	-0.17
30	VAS	1.83	1.83	0.00	SMR	1.50	3.17	1.67
<b>POINTS</b>		<b>1.90</b>	<b>2.47</b>	<b>0.57</b>	<b>Points</b>	<b>1.92</b>	<b>2.09</b>	<b>0.17</b>



**Figure 4.3 The Gained Score of Pre-Test and Post-Test of Experimental Class**



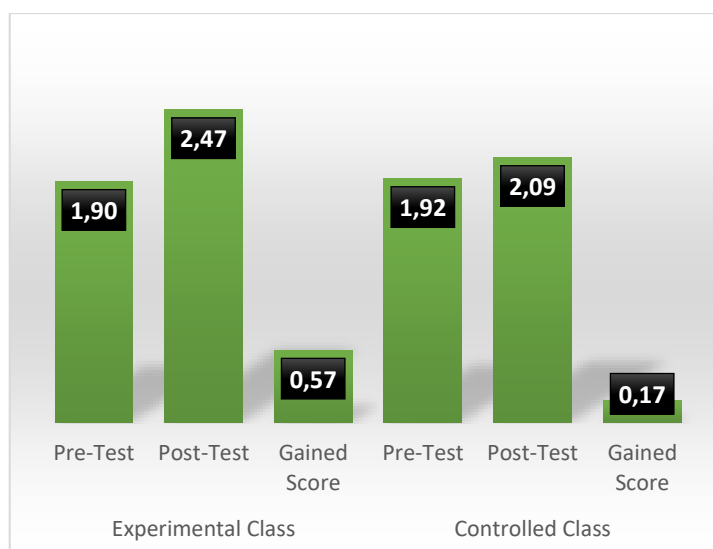
**Figure 4.4 The Gained Score of Pre-Test and Post-Test of Controlled Class**

According to the provided table and chart, the majority of students in the experimental class demonstrated improvement in their post-test

scores. However, four students experienced a decline in their scores. Additionally, the average gain score for the experimental class was 0.57, while for the controlled class, it was 0.17. Although the post-test results for the controlled class showed some improvement, it was not as significant as the post-test results for the experimental class. These differences can be attributed to the distinct treatments implemented in each classroom.

#### 4.1.1.5 The Overview of Pre-Test and Post-Test Gained Scores

Following the presentation of the data results, this section provides an overview of the scores between the experimental and controlled classes. A comparison was made to observe the progress in achievement from both classes. The figures below illustrate this comparison:



**Figure 4.5 Overview of Both Classes Scores Comparison**

Figure 4.5 shows that the pre-test mean score in the experimental class was 1.90, slightly lower than the controlled class, with a score of 1.92. The difference between the two is merely 0.02 points, indicating that both classes were at a similar level regarding critical thinking.

Following the treatment, there was a change in the scores after the researcher implemented the treatment and taught critical thinking using the holistic critical thinking rubric in both classes. The post-test mean score of the experimental class significantly improved, particularly after implementing several treatments using Socratic questioning as the teaching

intervention. The chart clearly shows that the experimental class achieved higher mean scores in the post-test compared to the controlled class.

Furthermore, the mean scores of the post-tests in the experimental class increased from 1.90 in the pre-test to 2.47, indicating a difference of 0.57 points. In contrast, the post-test results in the controlled class showed a slight improvement but not as significant as the experimental class, with scores increasing from 1.92 to 2.09. Based on this data, it can be concluded that the intervention of Socratic questioning in teaching critical thinking is effective, particularly in speaking.

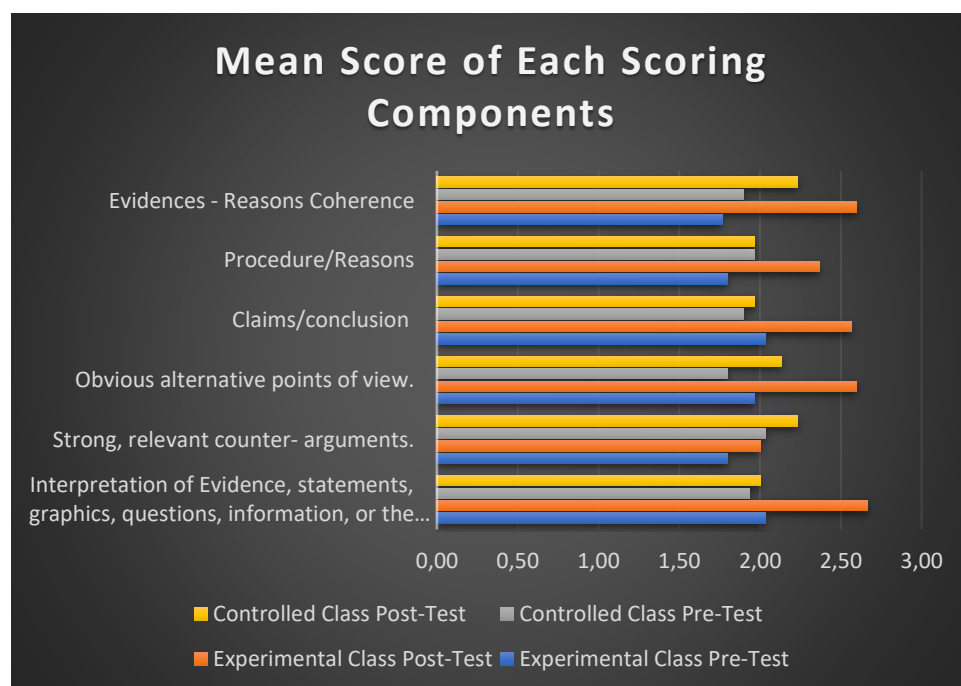
Additionally, the figure illustrates the gained score for each class, with the experimental class showing a gained score of 0.57 compared to the controlled class, with a gained score of 0.17. This result demonstrates that the experimental class significantly improved significantly more than the controlled class.

#### **4.1.1.6 The Mean Score of Experimental & Controlled Class of Pre-Test & Post-Test Score**

**Table 4.4 The Mean Score of Experimental & Controlled Class of Pre-Test & Post-Test Score**

<b>Mean Score of Experimental &amp; Controlled Class of Pre-Test &amp; Post-Test Score</b>								
<b>No</b>	<b>Parameter Scoring Components</b>	<b>Experimental Class</b>			<b>Controlled Class</b>			<b>Max Score</b>
		<b>Pre-Test</b>	<b>Post-Test</b>	<b>Gap</b>	<b>Pre-Test</b>	<b>Post-Test</b>	<b>Gap</b>	
<b>1</b>	<b>Interpretation of Evidence, statements, graphics, questions, information, or the points of view of others.</b>	2.03	2.67	0.63	1.93	2.00	0.07	4

2	<b>Strong, relevant counter-arguments.</b>	1.80	2.00	0.20	2.03	2.23	0.20
3	<b>Obvious alternative points of view.</b>	1.97	2.60	0.63	1.80	2.13	0.33
4	<b>Claims/conclusion</b>	2.03	2.57	0.53	1.90	1.97	0.07
5	<b>Procedure/Reasons</b>	1.80	2.37	0.57	1.97	1.97	0.00
6	<b>Evidences - Reasons Coherence</b>	1.77	2.60	0.83	1.90	2.23	0.33
<b>Average</b>		1.90	2.47	0.57	1.92	2.09	0.17



**Figure 4.6 Mean Score of Each Scoring Component**

The table and chart above demonstrate that each component significantly improved in the experimental class. This improvement is evident by the notable difference between the post-test and pre-test scores in the experimental class, particularly when compared to the controlled class.

Furthermore, when considering the improvement in the mean scores of the students, the experimental class exhibited progress in five components: Interpretation of Evidence, Obvious alternative points of view, Claims/conclusion, Procedure/Reasons, and Evidences - Reasons Coherence. Additionally, there was a slight increase in the Strong, relevant counter-arguments component. In contrast, the controlled class showed improvement in five components, while only one component, procedure/reasons, remained stagnant. Thus, it can be concluded that the experimental class achieved higher scores than the controlled class.

#### 4.1.2 Data Analysis

This section aimed to statistically present the pre-test and post-test results analysis by utilizing the t-test. Prior to conducting the analysis, it was necessary to perform both the normality and homogeneity tests. The normality test was employed to determine whether the collected data exhibited a normal distribution. Similarly, the homogeneity test was employed to assess whether the variances of the research samples were uniform. Subsequently, t-test calculations and Cohen's d effect size measurements were conducted to gauge the effectiveness of implementing Socratic questioning as a teaching method for Critical Thinking. All data analysis and calculations were performed using the IBS SPSS Statistics 26 software and Microsoft Excel 2019.

##### 4.1.2.1 Normality Test

**Table 4.5 Normality Test Result of Pre-Test and Post-Test  
in Experimental Class and Controlled Class**

		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Students' Test Score	PreTest Experiment	.158	30	.055	.949	30	.160
	PostTest Experiment	.118	30	.200*	.954	30	.210
	PreTest Control	.114	30	.200*	.974	30	.665

PostTest Control	.146	30	.103	.959	30	.291
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\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

As displayed in Table 4.5, the Kolmogorov-Smirnov test for normality was employed due to the sample size (N) being the same and more than 30. The results indicated that the normality significance values for the pre-test in the experimental class were 0.055 and 0.200 in the controlled class. These findings demonstrated that both pre-test datasets follow a normal distribution, as their significance values are above  $\alpha = 0.05$  ( $0.055 > 0.05$ ;  $0.200 > 0.05$ ).

In contrast, the significance values for the post-test in the experimental class were 0.200, and in the controlled class, they were 0.103. These results indicated that both datasets from the post-test are also normally distributed, as their Kolmogorov-Smirnov significances surpass the  $\alpha = 0.05$  threshold ( $0.200 > 0.05$ ;  $0.103 > 0.05$ ).

#### 4.1.2.2 Homogeneity Test

**Table 4.6 Homogeneity Test of Pre-Test from Both Classes**  
**Test of Homogeneity of Variance**

		Levene Statistic	df1	df2	Sig.
Results of Pre-Test	Based on Mean	2.181	1	58	.145
	Based on Median	1.455	1	58	.233
	Based on Median and with adjusted df	1.455	1	47.803	.234
	Based on trimmed mean	2.058	1	58	.157

After conducting a normality test, the researchers employed the Levene Statistic to determine the significance of homogeneity. The results showed that the significance of the pre-test in both the experimental and controlled classes, as measured by the mean, was 0.145, surpassing the significance level  $\alpha = 0.05$  ( $0.145 > 0.05$ ). This indicates that the pre-test data from both classes exhibit homogeneous variance.

**Table 4.7 Homogeneity Test of Post-Test from Both Classes**  
**Test of Homogeneity of Variance**

		Levene Statistic	df1	df2	Sig.
Students' Score	Based on Mean	.395	1	58	.532
	Based on Median	.531	1	58	.469
	Based on Median and with adjusted df	.531	1	56.015	.469
	Based on trimmed mean	.409	1	58	.525

According to Table 4.7, the statistical analysis of the post-test outcomes in the experimental and controlled groups indicated a significance level of 0.532 ( $0.532 > 0.05$ ). The post-test data from both groups exhibited values higher than the significance level  $\alpha = 0.05$ , which aligns with the findings of the pre-test data. In conclusion, based on the analyzed data, it can be inferred that the post-test results from both classes are similar.

#### **4.1.2.3 The Hypothesis Test**

T-tests were conducted to assess the effectiveness of incorporating Socratic questioning in teaching Critical Thinking. Both paired t-tests and independent t-tests were utilized to investigate the research hypothesis and answer the research question concerning the efficacy of using Socratic questioning as a method of instruction for Critical Thinking at an educational institution. Furthermore, the calculation of effect size using Cohen's d effect size test was employed to measure the extent of effectiveness of the implemented method. The chosen significance level for analysis was alpha ( $\alpha$ ) = 0.05 or 5%. The summarized results of the hypothesis tests are presented below:

#### 4.1.2.3.1 Paired T-Test

**Table 4.8 Paired-T-Test of Experimental Class**

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
Pair					Lower	Upper			
1	Pre Test -	-	.62084	.11335	-.79916	-.33551	-	29	.000
	Post Test	.56733					5.005		

The paired sample t-test performed on the experimental class resulted in a significance value of 0.000, which is below the selected  $\alpha$  value of 0.05. This implies that the implementation of Socratic questioning in teaching Critical Thinking significantly enhances students' Critical Thinking abilities. As the alpha value is below 0.05, the null hypothesis ( $H_0$ ) is rejected, and the alternative hypothesis ( $H_a$ ) is accepted. The paired t-test examined the difference between the scores obtained before and after the treatment.

**Table 4.9 Paired-T-Test of Controlled Class**

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
Pair					Lower	Upper			
1	Pre Test -	-	.64328	.11745	-.40654	.07387	-	29	.167
	Post Test	.16633					1.416		

In contrast, the paired sample t-test performed on the controlled class produced a similar result to the experimental class, albeit with minor distinctions. The resulting significance value for the 2-tailed test was 0.167,

higher than the selected  $\alpha$  value of 0.05. This indicated that the implementation of Socratic questioning in teaching Critical Thinking does not significantly improve students' Critical Thinking abilities. Since the alpha value is above 0.05, the null hypothesis ( $H_0$ ) is accepted, and the alternative hypothesis ( $H_a$ ) is rejected.

#### 4.1.2.3.2 Independent T-Test

**Table 4.10 Group Statistics of Post-Test from Both Classes**

<b>Group Statistics</b>					
	Learning	N	Mean	Std. Deviation	Std. Error Mean
	Methods				
Students' Score	Socratic Questioning	30	2.4670	.61830	.11288
	Conventional	30	2.0887	.59741	.10907

Table 4.10 illustrates the average scores for the experimental class, which utilized the Socratic questioning method, and the controlled class, which employed the traditional approach. The experimental class achieved a mean score of 2.47, while the controlled class obtained a mean score of 2.09. Furthermore, Table 4.11 presents the findings of the independent t-test, showing a t-value of 2.410 and a significance level (sig) of 0.019 for the two-tailed test.

Upon acquiring the mean scores, t-value, and sig (two-tailed), the researcher proceeded to compare the t-value with the critical t-value (t-table) to determine the significance of the impact of Socratic questioning on students' Critical Thinking in the speaking class. The t-table value for 58 degrees of freedom (df) was 2.0017. The comparison revealed that the t-value (2.410) exceeded the t-table value, and the sig (two-tailed) or  $p$ -value of the post-test was lower than  $\alpha = 0.05$ , precisely  $0.019 < 0.05$ .

Based on the calculations mentioned above, it can be concluded that the alternative hypothesis ( $H_a$ ) is accepted, while the null hypothesis ( $H_0$ ) is rejected. In conclusion, implementing Socratic questioning has proven to

be an effective approach for enhancing students' Critical Thinking in speaking class.

#### 4.1.2.4 Effect Size

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Students' Score	Equal variances assumed	.395	.532	2.410	58	.019	.37833	.15697	.06412	.69254
	Equal variances not assumed			2.410	57.932	.019	.37833	.15697	.06412	.69255

Once the effectiveness of the treatment has been determined, the subsequent objective is to assess the magnitude of the effectiveness of Socratic questioning on students' Critical Thinking in the speaking class. The Cohen's d effect size test was employed to calculate the effect size. The criteria associated with Cohen's d effect size were used to interpret the result. The outcome of the effect size analysis is presented in Table 4.11, as outlined below:

$$d = (M_1 - M_2) / s_{pooled}$$

$$s_{pooled} = \sqrt{[(s_1^2 + s_2^2) / 2]}$$

$$d = \frac{M_E - M_C}{\text{Sample } SD \text{ pooled}} \times \left( \frac{N-3}{N-2.25} \right) \times \sqrt{\frac{N-2}{N}}$$

correction factor for small samples <50

Table 4.12 Table of Effect Size

<b>STATISTIC OF POST-TEST</b>	<b>EXPERIMENTAL CLASS</b>	<b>CONTROL CLASS</b>
<b>MEAN</b>	2.47	2.09
<b>STD. DEVIATION</b>	0.62	0.60
<b>N (SAMPLE SIZE)</b>	30	30
<b>EFFECT SIZE</b>	0.59	

According to the effect size analysis, the result obtained is classified as medium or moderate, as it measures 0.59, which exceeds the threshold of 0.5. This indicates a significant level of effectiveness, as it falls within the medium effect size category.

#### **4.2 Discussion**

Socratic questioning intervention generally improved students' critical thinking in speaking class. It can be seen from the mean of post-test score that the experimental class score is higher than the controlled class, which is 2.47 for the experimental class and 2.09 for the controlled class. It means that there is a 0.57 points difference between those classes. Moreover, almost all of the six component scores increased in the experiment class than controlled class. Thus, it supports that Socratic questioning intervention can significantly increase students' critical thinking skills.

From the explanation above, this research is in line with the previous studies, which stated that the Socratic questioning method proved that the Socratic method develops critical thinking skills in English Language Learners and provides a handbook as the result of the Socratic method (Jensen, 2015). And with the previous study conducted by Vina Roudotun Nissah demonstrates how Socratic inquiry can promote students' critical thinking as they read explanation texts. The research results demonstrated that the student's behavior improved after implementing Socratic questioning. Moreover, the students' task demonstrated their ability to attain the maximum taxonomy bloom level (Nissah, 2020).

Furthermore, Socratic Questioning helped them to read and analyze critically when they thought it was essential to read with critical analysis. The Socratic method answered their inquiry and helped them analyze further information as they kept studying it. It also shows that university students must read more about methods and techniques to help them read critically because most students still do not know the Socratic Questioning method (Fika & Abidah, 2022).

In addition to that, based on the observation in the classroom, the students had changed into positive behavior in the experimental class rather than the controlled one. It was also in line with the previous study that stated the students had changed into positive behavior after implementing the Socratic questioning technique (Nissah, 2020). Then, the result stated that students critical thinking improved a lot in the experimental class, which has been intervened by Socratic questioning, especially in the first component, which is the Interpretation of evidence, statements, graphics, questions, and information which is related with the previous study (Sahamid, 2016).

Based on the observation during the treatment of the Socratic questioning method, the experimental class students were enthusiastic and excited about following the learning process. In the first treatment, the majority of students were relatively unfamiliar and did not know the term and concepts of the Socratic questioning method. Nevertheless, as the treatment advanced to the second meeting, the students started to grasp the concept and principles of the Socratic questioning method. They were relatively fast in applying the types and principles of Socratic questioning to their critical thinking, as this was seen from their significant improvement in thinking critically when the Socratic Seminar was conducted. They were even enthusiastic about conducting a more extended Socratic seminar, and most students became more confident in expressing their thoughts and ideas.

R. Paul & Elder (2008) stated that Socratic questioning is one of the most effective methods to promote critical thinking through dialogue from questioning between students and the teacher. Based on the score of post-tests of the experimental class, it can be determined that the statement was valid since the score of the students treated using the Socratic questioning method was higher than the conventional one. Finally, the Socratic questioning method is effective and significantly impacts the development of students' critical thinking skills.

#### **4.2.1 Concluding Remarks**

Based on the discussion above, it is concluded that the application of Socratic questioning improved and aided the development of the student's critical thinking skills. The result above also had the same result as the previous study, which stated that each component influenced the score of the whole test.

Moreover, this study has the same result as the previous study, which stated that after the employment of the treatment of the Socratic questioning method, students were better at accurately writing and interpreting evidence, statements, graphics, or questions alongside their arguments goal/title correctly (Jensen, 2015). In addition, most of the students could identify and evaluate the pros and cons of one issue. Furthermore, students could thoughtfully analyze and evaluate the major alternative points of view and draw warranted conclusions with their coherence after implementing Socratic questioning.

Regarding argument-building procedures, some students went through several issues in stating their assumptions' key results and reasoning procedures. Some students were still struggling to translate the main idea of their thought from Bahasa into English. Nevertheless, based on the score, the students were still categorized as good to the average level. In addition, most of the EFL students had difficulty stating the basic concept of their arguments and explaining their claims or assumption alongside the evidence correctly before the treatment. Albeit, students were able to use them correctly after the treatment.

Based on the post-test score of the experimental class, it can be concluded that the claims were valid since the score of the students treated by the Socratic questioning method was higher than the controlled or conventional teaching class.

## CHAPTER V

### CONCLUSION AND SUGGESTION

#### 5.1 Conclusion

This study used a quasi-experimental design to get the empirical evidence on the effectiveness of the Socratic questioning method in developing students' critical thinking in ELF speaking class at one of the institutes in Garut, Indonesia. The data were analyzed using SPSS and Microsoft Excel to obtain the descriptive statistics and hypothesis test of the result and prove the theories of the previous studies mentioned in the previous chapter.

The findings confirm that the implementation of Socratic questioning had a moderate or medium effect on improving the students' critical thinking skills. The data from the experimental class revealed that the mean score of the post-test was higher than the pre-test score, such as 2.47 in the experimental and 2.09 in the controlled class. In addition to that, based on the independent t-test, the t-table showed 2.0017 with 58 as the degree of freedom (df). The comparison with the t-table is t-value  $2.410 > t\text{-table } 2.0017$ , and the sig (2-tailed) or  $p$ -value of the post-test is lower than  $\alpha = 0,05$ ;  $0.019 < 0,05$ . From the calculation above, it can be concluded that the alternative hypothesis, which is  $H_a$ , is accepted, and  $H_o$  is rejected. The effect size also supported the findings that Socratic questioning is effective, with an effect size of 0.59, which is a moderate or medium effect size. It concluded that the Socratic questioning significantly affected the student's critical thinking skills development in speaking class.

Moreover, the result of the Discussion section showed that the Socratic questioning method is effective in aiding and improving students' critical thinking skills, and this is in line and related with the theory from R. Paul & Elder, which stated that the implementation of Socratic questioning is one of the most effective methods to promote critical thinking through dialogue from questioning between students and the teacher. It can be

concluded that using the Socratic questioning method improves students' critical thinking skills in several areas, which are interpretation, analysis, evaluation, inference, explication, and self-regulation (self-evaluation).

## **5.2 Suggestion**

This research revealed that using the Socratic questioning Method in developing students' critical thinking skills at the university level is effective. Therefore, the researcher provides suggestions for future researchers. The suggestions are:

### **5.2.1 For Teachers**

To the teachers who will use the Socratic questioning method in the classroom for any education level, it is vital to be prepared and well-equipped to comprehend the Socratic questioning method since it is pretty complex and requires a high degree of critical thinking to be employed. Additionally, the teacher needs to guide and facilitate the proper time and teaching material for the teaching and learning activity in the classroom. Lastly, in conducting the Socratic seminar, students must be given well-enough comprehension of the types of Socratic questioning to be utilized and adequately understand the topic. Students must be previously knowledgeable about the subject matter to be discussed in the seminar. Thus, it will significantly help them discuss and create brilliant ideas to improve their critical thinking skills.

### **5.2.2 For Researchers**

For the researchers who would like to conduct similar research, it is recommended to analyze and describe better the areas and aspects of critical thinking to be improved as the result of implementing the Socratic questioning method. Moreover, it is highly suggested to analyze the supporting factor of improving critical thinking, whether internally or externally. Lastly, to better maximize the effect of implementing the Socratic questioning method in teaching, it is suggested to conduct the teaching in long-term treatment and various learning activities.

### **5.2.3 For Educational Institution**

Socratic questioning has proven to be a promising and effective teaching method for improving and developing students' critical thinking skills. It is highly suggested for many educational institutions, especially for the English Education program where this study was conducted, since the Socratic questioning method was relatively easy to be implemented in the classroom, even for beginner educators. Moreover, the students were relatively quick to grasp the idea and concept of Socratic questioning. It can be perceived that the students were also very enthusiastic and interested in this teaching method since it gave them so many opportunities to voice out their thoughts and arguments. Thus, educational institutions should start planning to implement and conduct educator training using the Socratic Questioning method.

### **5.2.4 For Government**

To help in achieving the national goal of education and to help in creating a better and critical thinker generation for the future, the government, as the initiator of the educational system, suggested preparing and allocating funding for the education sector in researching, developing, and providing educational institution as well as the educator with the suitable teaching environment that will help in the implementation of the Socratic questioning method. Moreover, the teaching method was proven to be practical and easy to use for many educators.

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# APPENDICES

## APPENDIX 1. RESEARCH INSTRUMENT

### APPENDIX 1.1 Students Worksheets

Students' Worksheet

Pre-Test & Post-Test

## ARGUMENTS TABLE

Name : \_\_\_\_\_

Class : \_\_\_\_\_

No	ARGUMENTS
1	

**APPENDIX 1.2 Students' Score of Pre-Test and Post-Test**

**a. Students' Pre-Test Score of Experimental Class**

<b>No</b>	<b>Name</b>	<b>Interpretation of Evidence, statements, graphics, questions, information, or the points of view of others.</b>	<b>Strong, relevant counter-arguments</b>	<b>Obvious alternative points of view.</b>	<b>Claims/conclusion</b>	<b>Procedure/Reasons</b>	<b>Evidences - Reasons Coherence</b>	<b>Total Score</b>
1	FR	2	2	2	2	3	3	2.33
2	JH	2	2	2	3	3	2	2.33
3	RLN	2	1	2	2	1	1	1.50
4	RFM	1	2	2	2	2	2	1.83
5	LNF	3	2	3	3	3	3	2.83
6	NPILS	2	2	1	2	2	2	1.83
7	LL	2	2	2	2	1	2	1.83
8	NKA	3	2	3	3	3	3	2.83
9	MR	2	2	2	2	2	2	2.00
10	SSA	3	1	2	1	1	2	1.67
11	AR	3	3	3	3	3	3	3.00
12	RDH	2	2	2	2	2	2	2.00
13	AK	3	2	2	3	3	3	2.67

14	TR	1	1	1	1	1	1	1.00
15	MS	1	1	2	1	1	1	1.17
16	SM	1	2	3	2	2	1	1.83
17	RM	2	1	2	2	1	1	1.50
18	FZ	1	1	1	2	1	1	1.17
19	NRFN	2	2	1	1	1	1	1.33
20	NSY	2	2	2	2	1	1	1.67
21	AA	2	2	2	2	2	2	2.00
22	SR	3	2	2	2	3	2	2.33
23	HN	2	2	2	2	1	1	1.67
24	AAL	3	2	2	3	3	3	2.67
25	AAN	2	2	1	1	1	1	1.33
26	AP	2	2	2	2	1	1	1.67
27	DAA	2	2	2	2	1	1	1.67
28	P	1	2	2	2	1	1	1.50
29	SHR	2	2	2	2	2	2	2.00
30	VAS	2	1	2	2	2	2	1.83
Points		2.03	1.80	1.97	2.03	1.80	1.77	1.90
Max Points		4						

**b. Students' Post-Test Score of Experimental Class**

No	Name	Interpretation of Evidence, statements, graphics, questions, information, or the points of view of others.	Strong, relevant counter-arguments	Obvious alternative points of view.	Claims/conclusion	Procedure/Reasons	Evidences - Reasons Coherence	Total Score
1	FR	3	2	3	4	3	3	3.00
2	JH	3	2	3	4	3	3	3.00
3	RLN	2	1	2	2	1	2	1.67
4	RFM	2	3	3	1	2	2	2.17
5	LNF	3	4	4	4	3	4	3.67
6	NPILS	2	1	2	2	1	1	1.50
7	LL	3	2	2	3	3	3	2.67
8	NKA	2	2	2	2	3	2	2.17
9	MR	3	2	3	4	3	3	3.00
10	SSA	3	2	2	3	2	3	2.50
11	AR	4	3	4	3	4	4	3.67
12	RDH	3	2	2	3	3	3	2.67
13	AK	3	1	2	2	2	3	2.17
14	TR	4	2	3	2	3	4	3.00

15	MS	2	2	3	2	2	2	2.17
16	SM	2	2	3	2	2	3	2.33
17	RM	3	2	2	3	2	2	2.33
18	FZ	2	2	2	2	2	2	2.00
19	NRFN	2	2	2	2	2	3	2.17
20	NSY	2	1	2	2	1	1	1.50
21	AA	2	3	3	3	3	2	2.67
22	SR	2	1	2	2	2	2	1.83
23	HN	2	1	2	2	1	1	1.50
24	AAL	3	4	3	4	2	4	3.33
25	AAN	3	2	3	3	3	3	2.83
26	AP	4	2	2	3	3	3	2.83
27	DAA	3	3	4	2	3	3	3.00
28	P	3	1	2	1	2	2	1.83
29	SHR	3	2	4	3	3	3	3.00
30	VAS	2	1	2	2	2	2	1.83
Points		2.67	2.00	2.60	2.57	2.37	2.60	2.47
Max Points		4						

## c. Students' Pre-Test Score of Controlled Class

No	Name	Interpretation of Evidence, statements, graphics, questions, information, or the points of view of others.	Strong, relevant counter-arguments	Obvious alternative points of view.	Claims/conclusion	Procedure/Reasons	Evidences - Reasons Coherence	Total Score
1	RJ	2	3	1	3	3	3	2.50
2	SAO	1	3	3	3	2	1	2.17
3	NNF	1	2	1	1	3	2	1.67
4	DTS	2	2	2	3	3	2	2.33
5	MA	1	3	1	3	3	1	2.00
6	MS	1	1	1	2	1	1	1.17
7	RK	1	1	1	2	3	2	1.67
8	SSH	2	1	2	3	3	3	2.33
9	FMR	3	2	3	3	1	2	2.33
10	RN	3	3	1	1	1	2	1.83
11	MH	3	3	3	1	2	1	2.17
12	HNS	3	2	1	2	1	2	1.83
13	BSFI	2	1	3	1	1	2	1.67
14	XDA	1	2	3	3	2	3	2.33

15	RD	3	3	2	2	1	1	2.00
16	RP	2	1	3	2	2	1	1.83
17	TP	1	3	2	2	1	2	1.83
18	WIH	1	3	1	1	1	1	1.33
19	HAF	2	1	1	2	3	3	2.00
20	ERV	3	1	1	1	1	2	1.50
21	AWG	3	3	1	1	3	1	2.00
22	AZ	3	3	1	2	3	3	2.50
23	CY	3	2	1	1	2	1	1.67
24	DAD	1	1	2	1	2	3	1.67
25	OAR	1	2	3	3	1	3	2.17
26	DIM	1	1	1	2	1	2	1.33
27	FY	3	1	3	1	3	1	2.00
28	IZS	3	3	3	2	3	2	2.67
29	FR	1	2	2	1	1	3	1.67
30	SMR	1	2	1	2	2	1	1.50
Points		1.93	2.03	1.80	1.90	1.97	1.90	1.92
Max Points		4						



15	RD	1	1	2	1	1	1	1.17
16	RP	4	3	3	3	2	2	2.83
17	TP	1	2	2	2	2	1	1.67
18	WIH	2	2	2	2	2	3	2.17
19	HAF	2	2	2	2	2	2	2.00
20	ERV	3	2	1	1	1	2	1.67
21	AWG	2	1	1	1	1	2	1.33
22	AZ	2	2	2	2	2	2	2.00
23	CY	3	2	2	2	2	2	2.17
24	DAD	2	3	2	2	2	2	2.17
25	OAR	2	3	2	3	2	2	2.33
26	DIM	1	2	2	1	2	2	1.67
27	FY	2	2	2	1	1	3	1.83
28	IZS	2	3	3	3	3	3	2.83
29	FR	1	2	2	1	1	2	1.50
30	SMR	3	3	3	3	3	4	3.17
Points		2.00	2.23	2.13	1.97	1.97	2.23	2.09
Max Points		4						

**APPENDIX 2. LESSON PLAN**  
**RENCANA PELAKSANAAN PEMBELAJARAN**  
**(RPP)**

Unit Education : College Education – Institut Pendidikan Indonesia  
Subject : Speaking for Academic Purposes  
Class/Semester : 2ABC/Genap  
Topic : Socratic Questioning Method, How to critically think better.  
Skill : Speaking  
Time Allocation : 3 SKS (3 x 50 minutes)

**A. Kompetensi Inti**

- KI-1: Menghayati dan mengamalkan ajaran agama yang dianutnya.
- KI-2: Menghayati dan mengamalkan perilaku jujur, disiplin, santun, peduli (gotong royong, kerjasama, toleran, damai), bertanggung jawab, responsif, dan pro-aktif dalam berinteraksi secara efektif sesuai dengan perkembangan anak di lingkungan, keluarga, sekolah, masyarakat dan lingkungan alam sekitar, bangsa, negara, kawasan regional, dan kawasan internasional”.
- KI 3: Memahami, menerapkan, dan menganalisis pengetahuan faktual, konseptual, prosedural, dan metakognitif berdasarkan rasa

- ingin tahunya tentang ilmu pengetahuan, teknologi, seni, budaya, dan humaniora dengan wawasan kemanusiaan, kebangsaan, kenegaraan, dan peradaban terkait penyebab fenomena dan kejadian, serta menerapkan pengetahuan prosedural pada bidang kajian yang spesifik sesuai dengan bakat dan minatnya untuk memecahkan masalah
- KI 4: Mengolah, menalar, dan menyaji dalam ranah konkret dan ranah abstrak terkait dengan pengembangan dari yang dipelajarinya di sekolah secara mandiri, bertindak secara efektif dan kreatif, serta mampu menggunakan metode sesuai kaidah keilmuan

#### A. Kompetensi Dasar dan Tujuan Pembelajaran

Kompetensi Dasar	Tujuan Pembelajaran
3.1 Menganalisis fungsi sosial, struktur teks, dan unsur kebahasaan pada ungkapan ajakan melakukan suatu tindakan, serta responsnya, sesuai dengan konteks penggunaannya.	Setelah diberikan penjelasan: <ul style="list-style-type: none"> <li>• Siswa mampu menjelaskan pengertian, jenis-jenis dan tahapan dalam Socratic Questioning Method and How to critically think better.</li> <li>• Siswa mampu menganalisis perbedaan Socratic Questioning Method dengan metode lain.</li> <li>• Siswa mampu mempresentasikan kesimpulan berdasarkan hasil temuan penggaliannya dari beberapa sumber belajar terkait isu topik pembelajaran melalui cara Socratic questioning.</li> <li>• Siswa mampu menyampaikan hasil belajar atau hasil temuan tentang isu topik pembelajaran yang sedang dibahas dengan dibantu Socratic questioning di depan kelas secara tepat dan sistematis.</li> </ul>
4.1 Menyusun teks lisan dan tulis untuk mengucap dan merespons ajakan melakukan suatu tindakan, dengan memperhatikan fungsi sosial, struktur teks, dan unsur kebahasaan, yang benar dan sesuai konteks.	

#### B. Sumber Belajar

- Internet/Video
- Kamus Bahasa Inggris
- Pengalaman peserta didik dan guru

#### C. Materi Pembelajaran

##### Socratic Questioning Method

Socratic questioning is a method of teaching in which the teacher asks questions and students answer. The teacher does not give answers but encourages discussion among the class members, often asking follow-up questions to encourage further explanation or clarification.

Socrates developed the Socratic Method as an educational tool for his pupils in Athens. He used it to question them about their beliefs and practices, and he also encouraged them to ask him questions. His method was based on the idea that knowledge can be gained only through dialogue between people with different opinions. This approach contrasts with traditional Greek education, where the teacher gives information and expects students to memorize it without critical thinking.

### ➤ **Socratic Questioning and Critical Thinking**

Critical thinking involves thinking critically about ideas, concepts, arguments, and issues. It means thinking independently, analyzing ideas logically, and evaluating claims objectively. Students are expected to develop these skills when they use Socratic questioning. They learn how to challenge their own beliefs and those of others, and they gain experience in evaluating evidence, reasoning from facts, and supporting their conclusions with reasons.

### ➤ **Socratic Questioning and Process Improvement**

Socratic questioning can help improve a process because it helps improvement facilitators become more effective communicators and enables team members to develop critical thinking skills. The facilitator can guide discussions by asking open-ended questions such as "What do you think?" or "Why did you choose that option?"

### ➤ **Socratic Questions**

There are six different types of questions that Socrates asked his students.

1. Clarifying Concepts: What is your understanding?
2. Probing Assumptions: How do you know?
3. Probing Rationale, Reasons & Evidence: Why do you believe what you do?
4. Questioning Viewpoints & Perspectives: What other possibilities exist?
5. Probing Implications & Consequences: What will happen if we do not change?
6. Questioning the Question: Is there another way to look at this problem?

### ➤ **An Example:**

A team of coworkers is trying to decide on a new company policy, and one member suggests that implementing a strict attendance policy will increase productivity. Another team member argues that a strict attendance policy could have negative consequences, such as causing employees to feel micromanaged and demotivated. Using Socratic questioning, the first member might ask the following questions to probe the assumptions and consequences of the second member's argument:

- Can they provide examples of companies with strict attendance policies and low productivity?

- Do they think there may be other ways to increase productivity, such as improving the work environment or providing additional resources, that do not involve implementing a strict attendance policy?
- How might implementing a strict attendance policy impact employee morale and retention?

➤ **Socratic Seminar**

Socratic seminars are a type of assessment also known as Socratic Circles. This method is, in one way, a dialogue or discussion between students about the concept at hand (Kenney, 2013). Depending on the class size, this can be done with two groups of students. Using two groups, a small circle of students would group inside a larger circle of students, representing the second group. The teacher would pose the initial topic and questions, and each circle of students would discuss the topic. As each group takes a turn discussing, students focus on their ideas and then respond to the talking points of the other group.

Students must be previously knowledgeable about the content discussed in the Socratic Circles. The teacher then presents the first question. Students in the smaller group discuss the questions and form new questions. Then the larger group discusses the topic and questions from the smaller group and creates questions for the smaller group to answer. This process is repeated, creating a dialogue between the two groups. After presenting the opening question, the teacher acts as the facilitator of the Seminar (Kenney, 2013).

➤ **The procedures of the Socratic Seminar are as follows:**

1. The teacher explains the process of the Socratic seminar and sets the parameter by reviewing norms in the Socratic seminar.
2. The norms in the Socratic seminar are:
  - Respect everyone's thoughts
  - It is not necessarily necessary to raise your hand to speak, but it can be done by signaling through eye contact and using the talking chips to deliver arguments and ideas.
  - There is no fixed turn in delivering the argument or ideas.
  - The inner circle should focus on discussing; the outer circle should remain silent and practice active listening.
- The students are given a text about the debatable topic for the seminar, and the student will have 5 minutes to read the text. Then the teacher will ask a series of starting questions that probes the students' thoughts and initiate the seminar. In addition to the text, a video concerning the topic is also shown for the post-test. The starting questions are:
  - What stands out about the topic?
3. The class is split into two groups; the inner and outer circles. The splitting of the groups is done through the students choosing odd and even numbers, the inner circle will be the odd number, and the outer circle will be the opposite.
4. The students are given 5 minutes to prepare their thoughts on the topic and get ready to start the seminar.
5. All students will be given five talking chips and two pieces of paper. The first piece of paper will be for the arguments table (appendix D). The second piece of paper will be for critique and a note-taking table (appendix E).

- 6 The inner circle group discusses firsts and takes notes second, and the outer circle takes notes first and discusses second.
- 7 Each group gets four rounds to discuss and take notes:
  - First round – 10 minutes (5 chips)
  - Second round – 7 minutes (3 chips)
  - Third round – 5 minutes (2 chips)
  - Final round – 3 minutes (1 chip)
- 8 After the final round, the inner and outer circles switch positions, reversing the roles.

**Notable points in the Socratic seminar:**

- Assess by the content of what is being discussed, explain answers, and respond to each other's.
- Make sure the groups stay on topic.
- Outer needs to make sure to take notes, so they can respond to the inner circle's ideas when it is their turn

➤ **Let us practice the Socratic seminar.**

Topic: “Teacher Marketplace – Is it good or bad?”

Teacher Marketplace Discussion Text

The Indonesian government has faced a shortage of qualified teachers for many years. This shortage is particularly acute in rural areas, where there are often not enough teachers to meet the needs of students. To address this issue, the government has proposed a new initiative called the "Teachers Marketplace."

However, many still debate whether Teachers Marketplace has more advantages or disadvantages. Some of those who see the benefits of Teachers Marketplace will say that the Teachers Marketplace has a system that would allow schools to recruit teachers from a pool of qualified candidates directly. This concept would give schools more flexibility in hiring teachers and help ensure that qualified teachers are placed in the schools where they are most needed.

The Teachers Marketplace would be a digital platform allowing schools to search for teachers by subject area, experience, and other criteria. Schools could post job openings and receive applications from qualified candidates. The platform would also provide schools with information about teachers, such as their qualifications, teaching experience, and references.

The Teachers Marketplace is a promising initiative that could help to address the shortage of qualified teachers in Indonesia. By giving schools more flexibility in hiring teachers, the Teachers Marketplace could help to ensure that all students have access to high-quality education.

However, some people have expressed concerns about the Teachers Marketplace. They worry that the platform could lead to a two-tier education system, with the best teachers hired by the most affluent schools. They also worry that the platform could lead to teachers being exploited by schools willing to pay less for their services.

The Teachers Marketplace is a new initiative, and it is essential to consider the potential benefits and risks before implementation. The government should address the concerns raised and implement safeguards to protect teachers from exploitation. If these steps are taken, the Teachers Marketplace could be a valuable tool for improving the quality of education in Indonesia.

➤ **How to Critically think better with Socratic Questioning**

In any case, when an issue persists or is apparent, implement these Socratic Questioning to help in critical thinking toward the issue:

**The types of Socratic questions and examples based on R.W. Paul's six types of Socratic questions ("The six types of Socratic questions") (R. Paul & Elder, 2008):**

1. Questions for clarification:	<ul style="list-style-type: none"> <li>• Why do you say that?</li> <li>• What do you mean by...?</li> <li>• How does this relate to our discussion?</li> <li>• What do you think is the main issue?</li> <li>• Could you expand upon that point further?</li> </ul>
2. Questions that probe assumptions:	<ul style="list-style-type: none"> <li>• Why would someone make this assumption?</li> <li>• What could we assume instead?</li> <li>• How can you verify or disapprove of that assumption?</li> </ul>
3. Questions that probe reasons and evidence:	<ul style="list-style-type: none"> <li>• What would be an example?</li> <li>• What do you think causes this to happen...?</li> <li>• Why...?</li> <li>• What other information do we need?</li> <li>• By what reasoning did you come to that conclusion?</li> <li>• Is there reason to doubt that evidence?</li> </ul>
4. Questions about viewpoints and perspectives:	<ul style="list-style-type: none"> <li>• What would be an alternative?</li> <li>• What is another way to look at it?</li> <li>• How would other groups of people respond, and why?</li> <li>• What might someone who believed...think?</li> <li>• Would you explain why it is necessary or beneficial, and who benefits?</li> <li>• Why is it the best?</li> </ul>

	<ul style="list-style-type: none"> <li>• What are the strengths and weaknesses of...?</li> <li>• How are...and ...similar?</li> <li>• What is a counterargument for...?</li> </ul>
5. Questions that probe implications and consequences:	<ul style="list-style-type: none"> <li>• What generalizations can you make?</li> <li>• What are the consequences of that assumption?</li> <li>• What are you implying?</li> <li>• How does...affect...?</li> <li>• How does...tie in with what we learned before?</li> </ul>
6. Questions about the question:	<ul style="list-style-type: none"> <li>• Why is this question important?</li> <li>• What was the point of this question?</li> <li>• Why do you think I asked this question?</li> <li>• What does...mean?</li> <li>• How does...apply to everyday life?</li> </ul>

#### D. Metode Pembelajaran

- 1.Socratic Questioning Method
- 2.PBL (Project Based Learning)
- 3.Pembelajaran kooperatif
- 4.Diskusi
- 5.Ceramah
- 6.Resitasi

#### E. Media/alat, Bahan dan Sumber Belajar

- Media** : *Worksheet* atau lembar kerja (siswa), Lembar penilaian
- Alat/Bahan** : Spidol, papan tulis, kertas/buku, Smartphone/HP, Laptop, dan Projector
- Sumber Belajar:** Internet/modul khusus

#### F. Langkah-Langkah Pembelajaran

Kegiatan Pendahuluan (15 Menit)
Melakukan pembukaan dengan salam pembuka dan berdoa untuk memulai pembelajaran, memeriksa kehadiran peserta didik sebagai sikap disiplin
Mengaitkan materi/tema/kegiatan pembelajaran yang akan dilakukan dengan pengalaman peserta didik dengan materi/tema/kegiatan sebelumnya serta mengajukan pertanyaan untuk mengingat dan menghubungkan dengan materi selanjutnya.
Menyampaikan motivasi tentang apa yang dapat diperoleh (tujuan & manfaat) dengan

mempelajari materi : <i>Socratic Questioning Method and Principles</i> .	
<b>Peserta didik akan diberikan suatu isu dan diharuskan untuk memberikan tanggapan dan ide mereka terhadap isu tersebut secara spontan untuk melihat kemampuan critical thinking mereka.</b>	
Menjelaskan hal-hal yang akan dipelajari, kompetensi yang akan dicapai, serta metode belajar yang akan ditempuh.	
<b>Kegiatan Inti ( 120 Menit )</b>	
<b>Kegiatan Literasi</b>	Peserta didik diberi motivasi dan panduan untuk melihat, mengamati, membaca dan mengungkapkan kembali. Mereka diberi tayangan berupa video mengenai Socratic Questioning method serta isu yang dapat dianalisis dengan metode tersebut dan bahan bacaan terkait materi <i>Socratic Questioning method and Principles</i> .
<b>Critical Thinking</b>	Guru memberikan kesempatan untuk mengidentifikasi sebanyak mungkin hal yang belum dipahami, dimulai dari pertanyaan faktual sampai ke pertanyaan yang bersifat hipotetik. Pertanyaan ini harus tetap berkaitan dengan materi <i>Socratic Questioning method and Principles</i> .
<b>Collaboration</b>	Peserta didik dibentuk dalam dua kelompok untuk mempraktekkan <i>Socratic Seminar</i> (Inner circle and outer circle) untuk mendiskusikan, mengumpulkan informasi, mempresentasikan ulang, dan saling bertukar informasi mengenai isu <i>“Global Warming - Is Human responsible for global warming?”</i>
<b>Communication</b>	Peserta didik mempresentasikan hasil diskusi kelompok atau individu secara klasikal, mengemukakan pendapat atas presentasi yang dilakukan kemudian ditanggapi kembali oleh kelompok atau individu yang mempresentasikan.
<b>Creativity</b>	Guru dan peserta didik membuat kesimpulan tentang hal-hal yang telah dipelajari terkait materi <i>Socratic Questioning method and Principles</i> . Peserta didik kemudian diberi kesempatan untuk menanyakan kembali hal-hal yang belum dipahami. Guru memberi apresiasi atau tanggapan terhadap pertanyaan yang muncul serta terhadap tanggapan dari siswa lainnya terkait pengertian, fungsi, manfaat dari <i>Socratic Questioning method and Principles</i> .
<b>Kegiatan Penutup (15 Menit)</b>	
<b>Peserta didik diharap untuk mempresentasikan hasil dari diskusi Socratic Seminar mengenai isu terkait untuk melihat pemahaman siswa setelah dilakukan pembelajaran menggunakan <i>Socratic Questioning Method</i>.</b>	
Peserta didik membuat rangkuman/simpulan pelajaran tentang point-point penting yang muncul dalam kegiatan pembelajaran yang baru dilakukan.	
Guru membuat rangkuman/simpulan pelajaran tentang point-point penting yang muncul dalam kegiatan pembelajaran yang baru dilakukan.	

## B. Penilaian Hasil Pembelajaran

For the Treatment class:


### Socratic Seminar Participants Scoring Rubric

4	3	2	1
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<ul style="list-style-type: none"> <li>-Offers enough solid analysis, without prompting, to move the conversation forward.</li> <li>-Demonstrates deep knowledge of the text and the question.</li> <li>-Comes to the seminar prepared with notes and a marked or annotated text.</li> <li>-Shows active listening.</li> <li>-Offers clarification and/or follow-up that extend the conversation.</li> <li>-Makes comments that refer to specific parts of the text.</li> </ul>	<ul style="list-style-type: none"> <li>-Offers solid analysis without prompting.</li> <li>-Demonstrates a good knowledge of the text and the question.</li> <li>-Comes to the seminar prepared with notes and a marked or annotated text.</li> <li>-Shows active listening and offers clarification and/or follow-up.</li> <li>-Relies on the text to drive his or her comments.</li> </ul>	<ul style="list-style-type: none"> <li>-Offers some analysis but needs prompting from the seminar leader.</li> <li>-Demonstrates general knowledge of the text and question.</li> <li>-Less prepared, with few notes and no marked or annotated text.</li> <li>-Actively listens but does not offer clarification and/or follow-up to others' comments.</li> <li>- Relies more upon his or her opinion and less on the text to drive his or her comments.</li> </ul>	<ul style="list-style-type: none"> <li>-Offers little commentary.</li> <li>-Comes to the seminar ill-prepared with little understanding of the text and question.</li> <li>-Does not listen to others and offers no commentary to further the discussion.</li> </ul>
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**APPENDIX 3. DOCUMENTATION**

**APPENDIX 3.1 Thesis Guidance Card**


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 Program : S1


Pembimbing :  
 Pembimbing I : YUSTIKA NUR FAJRIAH, M.Pd.  
 Pembimbing II : ANNE RATNA SUMINAR, M.Pd.  
 Jabatan/Gol. :

Judul Skripsi:  
 THE EFFECTIVENESS OF SOCRATIC QUESTIONING METHOD IN DEVELOPING STUDENTS' CRITICAL THINKING IN EFL SPEAKING CLASS

Tanggal	Pokok Permasalahan	Paraf Pembimbing	
		I	II
13/02	Research Proposal Review	✓	
18/02	Research Proposal Review		✓
28/02	Title Review		✓
03/03	Title Review	✓	
07/03	Chapter 1		✓
24/03	Chapter 1		✓
14/04	Chapter 2	✓	
18/04	Chapter 2	✓	
27/04	Chapter 3 Research Design	✓	
28/04	Chapter 3 Research Design		✓
30/04	Chapter I, II, III	✓	✓
17/05	Chapter 3 Research Instrument	✓	
31/05	Teaching Intervention	✓	
05/06	Teaching Program	✓	✓

Garut, 12 Juli 2023  
Ketua Program Studi

ANNE RATNA SUMINAR M.Pd.


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 Pembimbing II : ANNE RATNA SUMINAR, M.Pd.  
 Jabatan/Gol. :

Judul Skripsi:  
 THE EFFECTIVENESS OF SOCRATIC QUESTIONING METHOD IN DEVELOPING STUDENTS' CRITICAL THINKING IN EFL SPEAKING CLASS

Tanggal	Pokok Permasalahan	Paraf Pembimbing	
		I	II
08/07	Research Procedure	✓	
13/07	Chapter 4 Research findings	✓	✓
18/07	All Chapters	✓	✓
24/07	All Chapters	✓	
25/07	All Chapters		✓

Garut, 12 Juli 2023  
Ketua Program Studi

ANNE RATNA SUMINAR M.Pd.

## APPENDIX 3.2 Research Approval



YAYASAN GRIYA WINAYA GARUT  
**INSTITUT PENDIDIKAN INDONESIA**  
 FAKULTAS PENDIDIKAN ILMU SOSIAL, BAHASA DAN SASTRA  
 Jalan Terusan Pahlawan No. 32 Sukagalih - Tarogong Kidul, Garut  
 Telp. (0262) 233556 Fax. (0262) 540469 Kode Pos : 44151  
 email : [fpisbs@institutpendidikan.ac.id](mailto:fpisbs@institutpendidikan.ac.id) web : [www.institutpendidikan.ac.id](http://www.institutpendidikan.ac.id)

Nomor : /IPI.D1/AKM/ /2022  
 Lampiran : -  
 Perihal : Permohonan Izin Penelitian

Yth. Bapak/Ibu Pimpinan  
 Institut Pendidikan Indonesia  
 di Tempat

Disampaikan dengan hormat, bahwa mahasiswa kami:

Nama : Aldy Hakim Herlambang  
 Nomor Induk Mahasiswa : 19221001  
 Program Studi : Pendidikan Bahasa Inggris/ S-1  
 Tingkat/ Semester : IV/ VIII  
 Alamat : Jl.Cibuyutan Kp.Babakan Wetan Ds.Sukakarya  
 RT.03 RW.03, 44191, Kec.Banyuresmi  
 Kab.Garut Jawa Barat.

bermaksud memohon izin melakukan pengambilan data melalui wawancara dan observasi di tempat Bapak/ Ibu memimpin untuk keperluan penelitian dalam rangka penulisan Tugas Kuliah.

Kami berharap Bapak/ Ibu berkenan untuk memberikan izin bagi mahasiswa tersebut. Demikian surat ini dibuat, atas perhatian dan kerjasama Bapak/ Ibu kami ucapkan terima kasih.

Garut, 29 Mei 2023  
 Dekan,

Dr. Lina Siti Nurwahidah, M.Pd.  
 NIP 196805271993032001



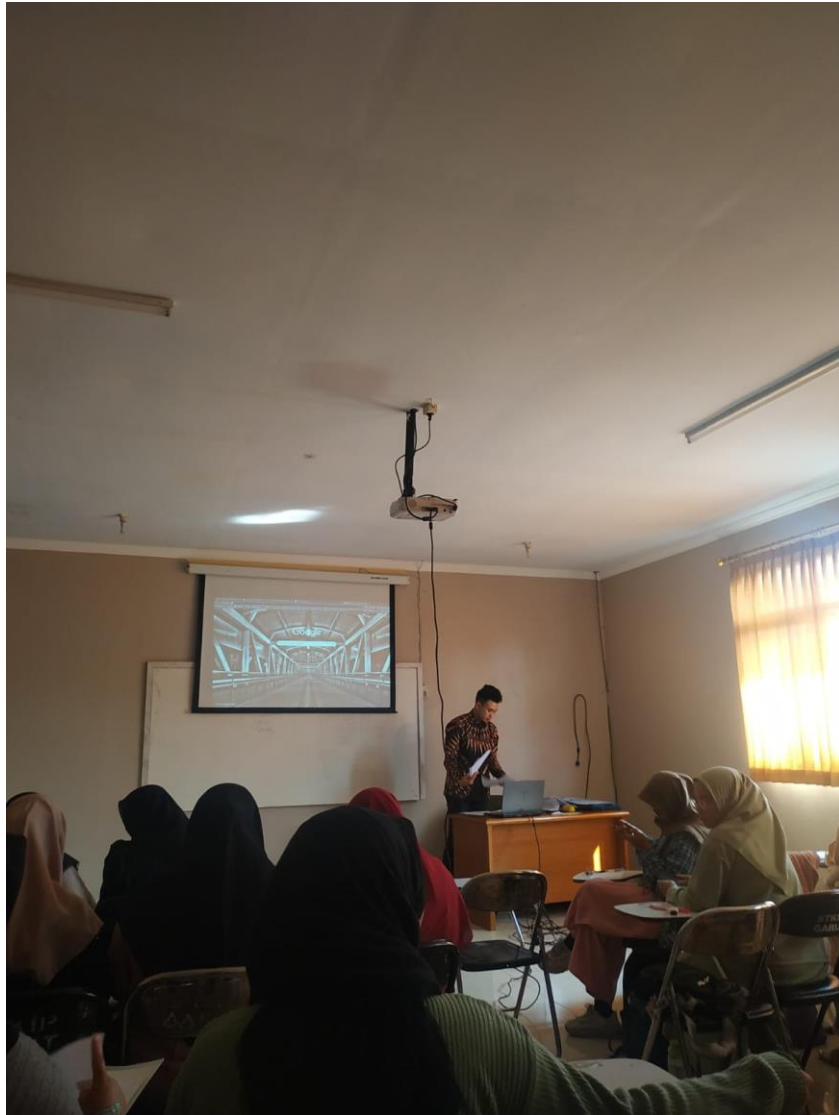
### APPENDIX 3.3 Field Documentation

#### Pre-Test, Learning Treatment, Post-Test



## Socratic Questioning Treatment





### Socratic Seminar



### Class Attendance



## Students' Worksheet

### Appendix D – Arguments table

#### ARGUMENTS TABLE

Name : Muna' Ainul Mardiyah  
 Class : 2C

No	ARGUMENTS
1	Freedom of speech can be to express themselves, so that they are more courageous in expressing their own opinion.
2	In Indonesia, the right to express opinions is respected in the Constitution of the Republic of Indonesia, but freedom of opinion in Indonesia has not been fully heard by everyone.
3	There is freedom of speech and expression but in our country not everyone is equal to be heard there is still a lack of justice for freedom of speech because of differences of opinion with state officials.
4	I think the people really want to create a society, nation, and state to guarantee freedom of expression and freedom of speech, so that views on freedom of speech can be equal.
5	
6	Group Argument : Freedom of speech is one of the effort to fulfil human rights, people are required to be good at expressing their intentions properly.
7	But in Indonesia it has not been able to properly implement freedom of speech, because the Indonesian government still look at social status.
8	Freedom of speech is indeed limited to maintain order in Indonesia, but why does the government only listen to the opinions of important people?
9	

## Appendix B – Arguments table

## ARGUMENTS TABLE

2.6

Name : APRILIA PUTRI

Class : 2-A

AI

No	ARGUMENTS
1	<p>In my opinion, AI will bring harm for humanity, especially in the field of work. The reason is because AI can think and act like a human as explained by the following experts:</p> <ul style="list-style-type: none"> <li>- Thinking humanly "The exciting new effort to make computers think .. machines with minds, in the full and liberal sense." (Haugeland, 1985 cited in Russell &amp; Norvig, 2010)</li> <li>- AI can thinking Rationally "The study of mental faculties through the use of computational models" (Charniak and Mc Dermote, 1985 cited in Russell &amp; Norvig, 2010). "The study of the computations that make it possible to perceive, reason, and act" (Winston, 1992 cited in Russell &amp; Norvig, 2010).</li> <li>- AI can Acting Humanly "The art of creating machines that perform functions that require intelligence when performed by people" (Kurzweil, 1990 cited in Russell &amp; Norvig 2010).</li> <li>- AI can Acting Rationally "Computational Intelligence is the study of the design of intelligent agents" (Poole et al., 1998 cited in Russell &amp; Norvig, 2010).</li> </ul> <p>Because of some of the AI capabilities above, I feel that AI can threaten humans from any field, but what I will discuss here is from the field of work. I think AI will replace humans in many jobs, because companies may be more interested in using AI that is tireless<sup>and</sup> can work totally than humans. Finally, there will be more unemployment in this world which will certainly affect the world economy.</p> <p>But AI also has many advantages such as a lot of work it will be more effective if you use AI.</p>

## Appendix B – Arguments table

## ARGUMENTS TABLE

B.5

Name : Luthfi Nadia fazaClass : 2A

Topic : Artificial Intelligence

No	ARGUMENTS
1	<p>My opinion regarding Artificial Intelligence is more or less the same as the argument that I had explain in previous meeting. Despite the abundance of information regarding the positive development of AI, I am still believe that AI can provide quite a lot of negative influences on human, as long as these people or human cannot regulate or control the development itself.</p> <p>The big reason why this opinion occurs is because supported by several real incidents that have often even occurred due to AI itself. The Problem that often occurs is the security of people's personal data which is easily spread to the public domain, inaccurate or discriminatory algorithms, loss of jobs.</p> <p>Indeed that several other opinions have emerged such as the emergence of AI which can actually help humans themselves. Based on this, they argue that the positive side of AI will greatly benefit human.</p> <p>The positive impacts include the jobs that can be completed quickly and efficiently, AI can provide more accurate information, increase productivity, and make human work easier.</p> <p>Something that we all should realize is that we currently live in an era of globalization with technology as the face of that era itself. It's unethical when other country are competing to develop their AI, but we are competing to restrain this development and participate in becoming an underdevelopment country. We must understand technology and support the development of AI itself. Therefore, the main solution for AI development is SDM (human itself). As what I have explain before that AI will have a bad impact on humans because until now we have not had any preparations, so that in the future we will not be disturbed by AI itself. McCarthy (2007) explain that AI is a step to create computers, robots, or programs that work intelligency, like human. This is made a big possibility for humans to be taken by AI's program (human position). Based on this explanation, this goes back to the negative impact I mentioned earlier about losing a job and many other.</p>

## Appendix B – Arguments table


## ARGUMENTS TABLE

2.16

Name : Risal MaulanaClass : 2A

No	ARGUMENTS
1	<p>Rubber laws is the designation of a law, article that is considered to have no clear benchmarks scale. In Indonesia the articles that apply and are considered rubber laws are as follows: blasphemy, defamation, traffic law and ITE law. Meanwhile, the draft laws that are considered rubber laws include articles prohibiting the president, witchcraft articles, Peppu and Music RUU.</p> <p>some people who pros to this topic stated that the law which is considered as rubber laws are good because people will not descriptive to convey their opinion brutality.</p> <p>In my opinion as a cons side, I agree that rubber laws is limiting our freedom of speech because there are so many evidence that <del>proof</del> prove that the rubber laws are limiting our freedom of speech such as:</p> <ol style="list-style-type: none"> <li>1. When Bima criticized the governor of Lampung through his presentation. He was threatened and wanted by some unknown people. Not only that, his family is also got some terrors.</li> <li>2. The case of an ex teacher / <del>former</del> former teacher from Mataram, named Baiq Nurul, is one of the most complicated issue that has occurred because of the ITE Law. Baiq Nurul is considered to have violated article 27 for selling immoral content. In fact, Baiq made the defense for self defense purposes. She is known to be one of the victims of sexual violence perpetrated by his superiors. However, she was actually entangled in this rubber laws.</li> <li>3. According to katadata.co.id. There is almost 400 peoples have been charged with the ITE law in the last 5 years.</li> </ol> <p>So, the conclusion that <del>we can take</del> we can take from that all evidence is Indonesia rubber law is limited our freedom of speech.</p>

## APPENDIX 3.4 Decree


**YAYASAN GRIYA WINAYA**  
**INSTITUT PENDIDIKAN INDONESIA (IPI GARUT)**  
 Jl. Terusan Pahlawan No. 32 Tlp. (0262) 233556 Tarogong Kidul 44151 Garut  
 Fax (0262) 540469 Website <http://www.institutpendidikan.ac.id> Email [info@institutpendidikan.ac.id](mailto:info@institutpendidikan.ac.id)

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**SURAT KEPUTUSAN**  
**INSTITUT PENDIDIKAN INDONESIA IPI**  
**Nomor : 138/IPI.D1/KM/II/2023**

tentang  
 Pengangkatan Dosen Pembimbing Skripsi  
 pada Program Studi Pendidikan Bahasa Inggris IPI  
 2022-2023

Dekan Fakultas Pendidikan Ilmu Sosial, Bahasa dan Sastra Institut Pendidikan Indonesia:

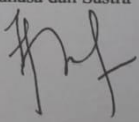
Menimbang : a. bahwa dalam upaya meningkatkan kualitas hasil karya ilmiah mahasiswa ditetapkan dosen pembimbing I dan Pembimbing II.  
 b. bahwa dosen yang namanya tercantum dalam Surat Keputusan ini memiliki wewenang dalam membimbing skripsi mahasiswa.

Mengingat : a. Undang-Undang Nomor 12 Tahun 2012 tentang Sistem Pendidikan Tinggi;  
 b. Permen Dikbud No. 49 Tahun 2014 tentang Standar Nasional Pendidikan Tinggi;  
 c. PP Nomor 19 tahun 2005 tentang Standarisasi Nasional Pendidikan;  
 d. Pedoman Akademik Institut Pendidikan Indonesia Tahun Akademik 2022-2023

Memperhatikan : a. Hasil seminar proposal Pendidikan Bahasa Inggris  
 b. Surat Penunjukkan Dosen Pembimbing Skripsi.

**MEMUTUSKAN**

Menetapkan : 1. YUSTIKA NUR FAJRIAH, M.Pd selaku pembimbing I dan ANNE RATNA SUMINAR, M.Pd selaku pembimbing II untuk membimbing mahasiswa bernama ALDY HAKIM HERLABANG - 19221001 dengan Judul :  
**THE EFFECTIVENESS OF SOCRATIC QUESTIONING METHOD IN DEVELOPING STUDENTS' CRITICAL THINKING IN EFL SPEAKING CLASS**  
 2. Pada Dosen Pembimbing akan diberikan honorarium sesuai dengan ketentuan yang berlaku di Institut Pendidikan Indonesia dan surat keputusan ini berlaku satu tahun sejak tanggal ditetapkan.  
 3. Keputusan ini berlaku sejak tanggal ditetapkan dengan ketentuan apabila terdapat kekeliruan dalam penetapan ini akan diperbaiki sebagaimana mestinya.

Ditetapkan di : Garut  
 Tanggal : 13 Februari 2023  
 Dekan Fakultas Pendidikan Ilmu Sosial,  
 Bahasa dan Sastra  
  
 Dr. LINA SITI NURWAHIDAH, M.Pd.

Tembusan Yth:

1. Yth. Ketua Yayasan Griya Winaya (sebagai laporan)
2. Yth. Ketua Program Studi S1
3. Wakabid Akademik
4. Wakabid Keuangan

### APPENDIX 3.5 Facione Holistic Critical Thinking Scoring Rubric

<b>Holistic Critical Thinking Scoring Rubric</b>	
Facione and Facione	
<b>4</b>	<p>Consistently does all or almost all of the following:</p> <ul style="list-style-type: none"> <li>Accurately interprets evidence, statements, graphics, questions, etc.</li> <li>Identifies the salient arguments (reasons and claims) pro and con.</li> <li>Thoughtfully analyzes and evaluates major alternative points of view.</li> <li>Draws warranted, judicious, non-fallacious conclusions.</li> <li>Justifies key results and procedures, explains assumptions and reasons.</li> <li>Fair-mindedly follows where evidence and reasons lead.</li> </ul>
<b>3</b>	<p>Does most or many of the following:</p> <ul style="list-style-type: none"> <li>Accurately interprets evidence, statements, graphics, questions, etc.</li> <li>Identifies relevant arguments (reasons and claims) pro and con.</li> <li>Offers analyses and evaluations of obvious alternative points of view.</li> <li>Draws warranted, non-fallacious conclusions.</li> <li>Justifies some results or procedures, explains reasons.</li> <li>Fair-mindedly follows where evidence and reasons lead.</li> </ul>
<b>2</b>	<p>Does most or many of the following:</p> <ul style="list-style-type: none"> <li>Misinterprets evidence, statements, graphics, questions, etc.</li> <li>Fails to identify strong, relevant counter-arguments.</li> <li>Ignores or superficially evaluates obvious alternative points of view.</li> <li>Draws unwarranted or fallacious conclusions.</li> <li>Justifies few results or procedures, seldom explains reasons.</li> <li>Regardless of the evidence or reasons, maintains or defends views based on self-interest or preconceptions.</li> </ul>
<b>1</b>	<p>Consistently does all or almost all of the following:</p> <ul style="list-style-type: none"> <li>Offers biased interpretations of evidence, statements, graphics, questions, information, or the points of view of others.</li> <li>Fails to identify or hastily dismisses strong, relevant counter-arguments.</li> <li>Ignores or superficially evaluates obvious alternative points of view.</li> <li>Argues using fallacious or irrelevant reasons, and unwarranted claims.</li> <li>Does not justify results or procedures, nor explain reasons.</li> <li>Regardless of the evidence or reasons, maintains or defends views based on self-interest or preconceptions.</li> <li>Exhibits close-mindedness or hostility to reason.</li> </ul>
(c) 1994, Peter A. Facione, Noreen C. Facione, and The California Academic Press. (See cover page for conditional permission to duplicate.)	

(P. Facione, 1989) Facione, P. (1989). Critical Thinking: A Statement of Expert Consensus for Purposes of Educational Assessment and Instruction. *Research Findings and Recommendations*, 315.

## APPENDIX 3.6 Researcher's Curriculum Vitae



### Contact

**Phone**  
089510326727

**Email**  
aldyhakimh@gmail.com

**Address**  
Jl.Cibuyutan, Banyuresmi,  
Garut, West Java

### Educational Background

2019 - 2023  
**Institut Pendidikan Indonesia (IPI) Garut**  
English Education Program - Education Degree

2016 - 2018  
**SMAN 6 Garut**  
Language Major

### Hard Skill

- English Language - Aktif
- Microsoft Offices
- Content-creating and storytelling
- Social Media Marketing

### Soft Skill

- Teamwork adept
- Communicative
- Adaptive
- Disciplined

### Bahasa

- English - Active
- Indonesian - Active
- Japanese - Passive

# Aldy Hakim Herlambang

## Curriculum vitae

I am an English enthusiast and educator. I am highly motivated in teaching and honing my skill in English Education. I am sufficiently experienced in teaching English. I am also a sport enthusiast and experienced in teaching Physical Education. I am capable of working under pressure and adaptable in most situation and team-oriented project/profession.

## Job Experience

- 2022-2023  
Pelangi Elementary Garut I Garut, West Java  
**School coordinator, English and Physical Education Teacher**  
School coordinator - Coordinating and field-managing the school. Teaching English and Physical Education at the Elementary level.
- 2021-2022  
PPI 76 Garut I Garut, West Java  
**English Club Teacher**  
Teaching and supervising the English club at Senior High school level.
- 2021 - 2022  
Mts. Ma-Arif Banyuresmi I Garut, West Java  
**English Teacher**  
Teaching English at Junior High School level.
- 2020 - 2021  
Bisya Course I Garut, West Java  
**English Course Teacher**  
Teaching English course at Elementary level.
- 2019 - 2020  
Vendor BCA PT. DIKA I Garut, West Java  
**Marketing SPB**  
Marketing BCA product and account creation

## Organizational Experience

- 2021 - 2022  
**Chairman of HIMADIKSARIS (Himpunan Mahasiswa Pendidikan Bahasa Inggris)**
- 2020 - 2021  
**Chief Division of Basketball in IMAPORA (Ikatan Mahasiswa Pecinta Olahraga)**
- 2021 - 2022  
**Chairman of the Student body in SMPN 3 Banyuresmi**

## Achievements

- 2022  
Mahasiswa Berprestasi Institut Pendidikan Indonesia 2022
- 2022  
The Best Delegate Award - Global Speech and Expression Room Model OIC (Organization of Islamic Cooperation) Held by BEM NAWASENA UNIKOM
- 2021  
2x Silver Medal of English National Science Competition held by POSI
- 2020  
First Best Speaker of NUDC Internal Selection