International Journal of Multicultural and Multireligious Understanding

http://ijmmu.com
editor@ijmmu.com
ISSN 2364-5369
Volume 12, Issue 7
July, 2025
Pages: 86-98

Enhancing Critical Thinking Skills Through Instructional Strategies: A Systematic Review

Nauka Nayana Prasadini; Joko Priyana

Department of English Language Education, Yogyakarta State University, Indonesia

http://dx.doi.org/10.18415/ijmmu.v12i7.6819

Abstract

The integration of critical thinking skills in instructional strategies often presents numerous challenges. Nevertheless, instructional methods are among the most effective ways to teach students how to think critically. However, due to limited literature on the subject, this topic has not been explored extensively. This research paper takes a closer look at prior studies on the integration of instructional methods that improve students' critical thinking skills. It also examines the potential outcomes of the analysed instructional methods and their future applications. This is a systematic literature review-based research, adopting the PICO framework to analyse relevant studies from 2013 to 2023. The results indicate that questioning, Socratic questioning, debate, and collaborative learning have all been utilized to improve students' critical thinking skills. Nonetheless, students encounter difficulties following the lesson due to their lack of language proficiency and instruction that is based on lower-order thinking skills. It is therefore crucial to consider students' backgrounds and learning preferences when exploring and implementing appropriate critical thinking-based instructional methods. The recommendations are not exclusive to themselves, but rather, can be applicable to each other.

Keywords: *Critical Thinking Skills; Instructional Strategies*

Introduction

The development of critical thinking skills has become a key pedagogical priority in education. It is a set of skills integrated into the learning process, enabling students to critically evaluate information, solve complex problems, and make informed decisions (McPeck, 1981; Paul, 1991). These skills are also considered to be at the highest levels in the Bloom Taxonomy, an information processing taxonomy to standardize students' level of thinking (Anderson et al., 2001). The cultivation of critical thinking skills develops students into self-reliant and creative learners, adept in independently developing their ideas. These skills extend beyond the classroom, providing graduates with skills that benefit their professional tenures and well-being as citizens (Lizaragga et. al in Lin, 2018; Uribe-Enciso et al., 2017).

From a language learning perspective in the classroom, critical thinking skills connect students' association between language skills, background knowledge, and personal experiences (Saleh, 2019). Often, the skills urge them to be critical in lessons, pushing them to participate further in the written or oral form. Consequentially, it helps students to develop their language skills, added with critical

perspectives on culture and values (Tian & Low in Yuan et al., 2022). This signifies critical thinking skills' importance in English Language Teaching (ELT). Nevertheless, it's crucial to acknowledge that critical thinking aspects still require explicit instructions and experience to fully enhance students' thinking skills (An Le & Hockey, 2022; Yuan et al., 2021). This is why many explicit strategies are developed and employed in the context of ELT.

While numerous strategies, including learning activities (Kusumoto, 2018), assessments (Putra & Abdullah, 2019; Sarwanto et al., 2020; Widana, 2017), and learning materials (Bouzid, 2016; Erningtyas, 2020; Ilyas, 2015; Nainggolan & Wirza, 2021), have been investigated in promoting critical thinking skills, instructional strategies stand out as particularly promising. Instructional strategies are the techniques to deliver learning materials, mainly emphasizing oral language skills in their instructions (Moore, 2015; Schouten & Bardell, 2021). The strategies include direct and indirect methods, where teachers are not only directing the learning process but also facilitating and supporting students' engagement in the classroom. These strategies are designed to involve students in active and collaborative learning experiences, actively encouraging them to exchange ideas and viewpoints with peers. Educators who use these strategies hope that they will enhance students' comprehension and equip them with persuasive communication skills. Selecting the appropriate instructional strategies may also motivate students to proactively nurture their critical thinking skills (Lin, 2018; Zhao et al., 2016).

Yet, the integration of critical thinking skills in instructional strategies presents numerous challenges. A major challenge comes from the conventional approaches, which heavily rely on lectures and rote memorization— making teachers dominate the learning process. These approaches tend to produce passive, teacher-dependent learners (Bernard et al., 2020; Kaur et al., 2020). This issue challenges the notion of critical thinking that is supposed to involve active engagement and the ability to apply knowledge to real-world contexts. Additionally, teachers have a limited understanding of critical thinking. Not only they are unable to fully grasp the concept, but it also hinders them from modifying their teaching approach based on the existing materials (Defianty & Wilson, 2022; Solihati & Hikmat, 2018). While the materials may contain critical thinking skills elements, teachers lack the expertise to effectively adapt them in their pedagogical approach. This incongruity between the resources and instructional implementation poses a multifaceted challenge in fostering students' critical thinking skills.

With regard to the challenges in applying critical thinking-based instructional strategies, the issues have received significant scholarly attention. Numerous studies have investigated factors contributing to the limited application of critical thinking skills in instructions.

Teachers' reluctance and negative perceptions of such an approach are one of the principal factors of this issue. Researchers note that teachers see the approach as somewhat of a burden for the teachers and students. Bernard et al. (2020) point out that teachers only apply a critical-thinking-based approach in their instructions because it was a "compulsory programme" by the government. Still, students are unable to properly follow the lesson under the strategies as they do not possess adequate language skills. This finding is supported by other studies that note the low efficacies of critical thinking-based instructional strategies, leading students to be disruptive in the classroom (Singh et al., 2020; Syafryadin et al., 2021).

Unlike the studies above, Defianty and Wilson (2022, pp. 132–133) argue that the lack of critical thinking-based instructional strategies is due to teachers' low understanding of its pedagogical application. Many of them give vague elaboration on critical thinking instructions that they have applied in the classroom, such as only stating *discussion* or *asking for an opinion* as two of the examples. This finding is concerning, as many instructional strategies with critical thinking aspects can be explored more by the teachers. This becomes an alarming situation of how low the teachers' understanding is regarding critical thinking skills. Another noteworthy factor that would contribute to this issue is the encouragement of critical thinking skills may prompt students to question authority figures. This also includes teachers who may question the lessons that they received in the classroom. This idea met with resistance in Asian educational contexts (Ilyas, 2015; Heyman in Lin, 2018).

Most of the existing research has not explored several aspects of critical thinking-based instructional strategies. The research primarily presents the perspectives of both teachers and students regarding instructions, accompanied by statistical data on students' improvement before and after receiving instruction. Yet, they fail to state the broader implications of such practices. Additionally, these studies rarely offer explicit examples of statements, instructions, or activities that signify critical thinking skills within instructional strategies. The previous studies have not focused on the application of such strategies and their implications for students' performance and learning environment. Andreucci-Annunziata et al. (2023) also underline that it is necessary to identify more empirical studies regarding the conceptualization of critical thinking skills in instructional strategies. Addressing these gaps is crucial in advancing our comprehension of instructional strategies and empowering educators to implement them effectively.

This paper reviews the past studies on instructional strategies to enhance students' critical thinking skills. It also set out to investigate the possible outcomes using the examined instructional strategies, along with suggestions for improvements on the future applications of the strategies. The findings will offer important insights into the best instructional strategies that would not only captivate students' interests but also sharpen their critical thinking skills.

Methods

Research Design

This study is a systemic literature review-based research, in which the main goal is to gather empirical evidences that offer answers to the research questions (Snyder, 2019). This research also adopted the PICO framework, as suggested by several researchers (Higgins & Thomas, 2004; Bedenlier et al. Zawacki-Richter, 2020). It requires the gathered data to effectively address the study's populations ('students'), intervention ('instructional strategies'), comparators ('various critical thinking-based instructional strategies'), and outcomes ('enhanced critical thinking skills').

Research Site and Source of Data

The sources for the relevant studies were from multiple academic databases, including Google Scholar, CrossRev, ERIC, and Springer database, published from 2013 to 2023. The targeted data sources of data selection were books, academic papers, conference proceedings, and articles that are relevant to critical thinking-based instructional strategy. The collected data should also discuss the types of instructional strategies, and their implications for students' critical thinking performance, alongside teachers' and students' perceptions of the strategies. Several search strings were used to collect the data, including combinations of 'instructional strategies,' 'critical thinking skills,' and 'critical thinking-based instruction.' The combinations of these search strings resulted in 154 works, ranging from books to journal articles. After the elimination process based on the works' relevance with the topics, the total number of works to be used for this study is 56 works.

Data Collection and Analysis

The data collection was conducted with a thorough reading of the collected work. This stage is supported by writing an annotated bibliography on the methods, findings, and arguments on the critical thinking-based instructional strategies and their impact on students' critical thinking skills development.

To analyse the data, the researcher synthesised and compared similar arguments regarding the issue. These syntheses and comparisons are presented in the next section's elaborations in several sub-categories. First, it uncovers a brief introduction to critical thinking skills. It follows with a discussion on instructional strategies and how they would enhance critical thinking skills. Next, the study presents each of the instructional strategies, how they can be incorporated with critical thinking skills, impacts, and criticisms of the strategy. Finally, this research proposes recommendations for using instructional strategies to develop critical thinking skills.

Results and Discussion

The findings below are the instructional strategies that teachers or lecturers often apply to enhance students' critical thinking skills. A summary of instructional strategies found in past studies and their educational level is listed below.

Table 1. Instructional strategies to foster critical thinking skills

Type of instructional strategies	Course Level	Applied studies
Questioning	University	Feng (2013)
	High school	Kholisoh et al. (2021), Mahmud & Muliati (2016), Mustika et al. (2020)
	Elementary school	Rashid & Qaisar (2016)
Socratic questioning	Pre-service University	Al-Darwish (2012), Kusmaryani (2021), Suhardiana (2019)
	High school	Sahamid (2016)
	Elementary school	Chew et al. (2019)
Debate	University	Li et al. (2021), Zare & Othman (2017)
	High school	Alasmari & Ahmed (2013), Iman (2017)
Collaborative learning	University	Alahdal (2019), Warsah et al. (2021)
	Vocational school	Devi (2015)

From the table, four strategies are often applied across educational levels to improve students' critical thinking skills: 1.) questioning, 2.) Socratic questioning, 3.) debate, and 4.) collaborative learning. The extent of each strategy's application and impacts on critical thinking skills will be discussed in the next subsection. This section will also be followed by a discussion of the challenges and recommendations for future practice.

Questioning

Questioning is teacher utterances that are commonly used as a technique for activating student participation within an initiation-response-feedback pattern (Ur, 2012). It is often elicited in the classroom, with the hope that it will recall students' prior knowledge to answer a question or a problem. Ur (2012, pp. 229–230) categorized question types based on their credibility, expected answer length, expected number of answers, and level of thinking required of students. What will be focused on here is the questions according to the level of thinking. Ur divided the questions in this type into 'lower-order' and 'higher-order' questions.

Higher-order questions are particularly valuable in language-learning procedures as they challenge students and make the learning process more interesting and enriching (Ur, 2012). Rashid and Qaisar (2016) suggest that using questioning as an intervention might have a positive impact on student learning. By connecting previous knowledge and creating networks of concepts, critical thinking encourages students to develop a deeper understanding of the material. Kholisoh et al. (2021) strongly confirm this, emphatically highlighting that critical questioning not only improves critical thinking but also undeniably fosters a highly conducive learning environment for EFL students, undeniably improving their speaking abilities.

Unfortunately, the incorporation of questioning remains relatively low. Studies have shown a considerable disparity between the number of lower-order and higher-order questions asked by teachers. For instance, Mahmud & Muliati's (2016) research found that teachers tend to ask more lower-order questions (97.65%) than higher-order ones (2.35%), indicating that students are not adequately challenged

to think at higher levels. This is partly because students often lack the foundational information and skills necessary to engage in higher-order thinking. While Mustika et al.'s (2020) research found a lesser gap between the use of high-order (37%) and low-order (67%) questions in class, there is a need to understand what causes this phenomenon.

Various studies have identified language barriers and different thinking levels as two significant challenges that hinder teachers from applying critical questioning techniques. Due to students lack of vocabulary, teachers may sometimes find themselves posing what might be considered 'easier' questions, which could potentially lead students to answer less critically, relying more on rote memory (Mustika et al., 2020; Rashid & Qaisar, 2016). Students' poor performance in intellectual standards also may impact their understanding of critical questions. This results in students exhibiting severely weak performance in making coherent responses to critical questions (Kholisoh et al., 2021; Rashid & Qaisar, 2016).

Socratic Questioning

Socratic questioning is an approach rooted in systematic discipline and depth, usually focused on a fundamental concept, principle, theory, or problem (Alsaleh, 2020; Chew et al., 2019). This questioning approach is different from ordinary questioning, as it values students' answers and encourages them to express their way of thinking. As Paul and Elder (2006, p. 91) point out, the approach recognizes any thought and assertion as a connecting point to further thoughts. The primary goal of Socratic questioning is to foster students' thinking and reasoning skills, enabling them to engage in mental exercises with no resistance from teachers or lecturers (Suhardiana, 2019). By probing individuals' thinking processes through a series of questions, this approach seeks to understand the deepest foundations of their statements or beliefs.

Several studies have explored different approaches to incorporating Socratic questioning into teaching. One approach involves giving hints to students based on the oral questioning strategies during the exercises, while the control group does not receive any hints (Fahim, 2012; Suhardiana, 2019). From the same research, Suhardiana (2019) also suggests another approach involving a questions-and-answers session with feedback and remarks from the teacher, which leads students to think for themselves and appreciate their reasoning.

It is important to note, however, that the provoking efforts and questioning methods used in the Socratic method should not be interpreted or used as a means to endorse a teacher-centred classroom. Rather, this approach should be used to encourage and raise the voices of students in the classroom (Al-Darwish, 2012). In addition, several studies have explored the practice of dividing students into two groups—outer and inner circles—to engage in Socratic dialogue. In this method, the students in the inner circle have the first chance to bring up a topic of debate about Socratic questions, while the students in the outer circle observe. The teacher then gives the students in the outer circle a chance to give their thoughts on the inner circle conversation before continuing the unfinished debate. Finally, students reflect on their performance and the topic after the discussion using Socratic questions (Kusmaryani, 2021)

Results from these studies show that by applying the Socratic questioning method, students gain improvement in their critical thinking skills (Chew et al., 2019; Kusmaryani, 2021; Sahamid, 2016). The strategy allows students to think about the exercises from a different angle and address them after in-depth reasoning and analysis. As a result, students were able to provide reasoned responses in their writing tasks, indicating a development in critical thinking across all levels of proficiency. Similarly, Kusmaryani (2021) also states that the use of questioning encourages students to share their perspectives, without worrying about the accuracy of their answers. The same study also notes that the use of Socratic questions motivates students to improve their argumentative skills in speaking and writing, in which students do further research to find arguments in favour of their views. Therefore, they will feel certain about the thinking process that they have done earlier. Meanwhile, in terms of writing skills, Socratic questioning helped students perceive different thinking perspectives in written form. This led to improved writing assignment responses from the students since they were applying additional thinking processes (Sahamid, 2016).

While the use of Socratic questioning is generally associated with positive effects on students' critical thinking and language macro-skills, it is important to acknowledge certain potential shortcomings. Chew et al. (2019) noted that one of the limitations of Socratic questioning is the lack of opportunity for students to reflect on their answers. Since the questioning method focuses on understanding each student's deep thinking on certain problems, it may be difficult to compare each answer with their peers' various, different perspectives. Additionally, most research added that students may have difficulties engaging in Socratic-based questions due to their limited language ability (Al-Darwish, 2012; Sahamid, 2016; Suhardiana, 2019). According to Suhardiana's (2019) observation, students seem to struggle in comprehending Socratic questions as per teachers' instructions during reading comprehension sessions, resulting in a potential hindrance to their full understanding of the assigned text. A similar trend is also identified by Al-Darwish (2012), where students face challenges in providing answers as they believe teachers already have predetermined correct responses. These answers are often provided during most of the questioning sessions in teachers' instructions. It makes sense if they are used to this view which leads them to be uncertain about the thinking process that they have been through. All of the shortcomings stated above eventually leads to students' rising anxiety level when facing Socratic questioning. Sahamid (2016) stated that in students' journals, students wrote that Socratic questioning may create an atmosphere of stress and tension for some students. This is due to students' inability to fully respond to the Socratic questions and their fears of being punished for giving wrong answers— despite that is not the goal of Socratic questioning instructions.

Debate

Debating is a formal method of interactive and representative argument aimed at persuading judges and the public (Alasmari & Ahmed, 2013; Iman, 2017). It involves the use of different logic construction strategies, as well as distribution to entice the target audience to end a controversial issue. The main goal of this debate is not to judge whether a team's opinion is right or wrong, but rather to try to convince the jury which side has a stronger case on the discussed issue (Alasmari & Ahmed, 2013). Debate preparation fosters skills such as articulating an argument in its key terms, gathering, and using data and evidence, and categorizing and communicating information in an accessible manner. understand, evaluate, and refute opposing arguments. These skills are also part of promoting active learning, which requires students to actively participate and interact with teacher guidance (Bonwell & Eison, 1991).

Previous studies reveal debate is a useful instructional method for developing and maintaining critical thinking skills, verbal communication, and confidence (Alasmari & Ahmed, 2013; Iman, 2017; Q. Li et al., 2020; Zare & Othman, 2017). Through debate preparation, students are encouraged to consider different perspectives and have open-mindedness to reasonable criticisms. This conclusion is strongly supported by previous statistics, conclusively demonstrating that the debate instruction process significantly increases the number of critical activities done in a group discussion (Iman, 2017; Q. Li et al., 2020; Zare & Othman, 2017). For instance, students become comfortable and driven in looking for data and evidence to support their opinions, learn that issues are not merely two sides, and are open to reasonable criticisms of their opinions. While it might be considered an intimidating practice by most students, research strongly indicates that students become not just excited but passionate about these logical thinking-driven instructions since they actively seek to 'test' and assert their views in the debate (Q. Li et al., 2020).

Regardless of the positive outcomes arising from this instructional approach, the debate also has its own challenges. To begin with, students may be reluctant to share their opinions and ideas without analysing and criticizing their sources. This is stemmed from their lack of analytical and logical skills, especially if the class often employs teacher-centred approaches (Iman, 2017). However, Li et al. (2020) suggest that the lack of analytical and logical skills in students' arguments may also come from their low language proficiency level. This is shown by how students often use unprofessional language that makes their arguments flawed. Students' inability to process arguments properly and growing frustration over giving their opinions often lead the debate into a heated and emotion-driven one. Another challenge is

that students are often uncomfortable with the nature of tension in debate instructions. Zare & Othman (2017) underline that some students may experience distress and anxiety with the competitive nature of the debates. They also may experience these feelings due to the underwhelming abilities that they have to give their opinions. However, some students mostly feel happy and engaged with the exercises given under this instruction (Goodwin in Zare & Othman, 2017).

Collaborative Learning

Collaborative learning (CL) is a learning strategy that involves two or more participants collaborating in the learning process, interacting and negotiating to solve problems in the learning process, using their cognitive and metacognitive skills in the process of interacting, and taking responsibility for their learning (Warsah et al., 2021). This instructional approach is different from cooperative learning, despite having a similar approach to group learning activities. Cooperative learning is more structured and prescriptive for both teachers and students in terms of classroom techniques and how to work together in groups. It relies on the socially structured exchange of information between learners in a group. On the other hand, collaborative learning involves learners engaging with more capable others such as teachers, advanced learners, or peers who provide guidance and assistance during the learning (Brown, 2001). Learners are also actively involved in the classroom process and develop social skills while discussing ideas and developing concepts (Alahdal et al., 2019)

Warsah et al. (2021) note that for teachers to successfully implement collaborative learning (CL) in the classroom, they must have five skills: design, control, promote, reinforce, and reflect on learner interactions. The role of the teacher is not only to create an enabling environment for learning, but also to monitor and facilitate student interaction, promote cooperation, and reflect on the effectiveness of learning activities. In addition, learners are encouraged to collaborate, participate in cognitive learning activities, and perform metacognitive learning activities. This agrees with Devi's (2015) study, which found that during CL activities, students engage in a range of activities, including identifying and analysing ideas from other group members, deciding on important information for their groups, making group decisions, synthesizing information, and changing perspectives to arrive at decisions. These activities require critical thinking skills and reflect the collaborative nature of CL, where learners work together towards a common goal.

Several studies have highlighted the positive outcomes of CL instruction. Alahdal et al.'s (2019) study found that using CL instruction significantly increased the amount of language production of learners. This is due to the fact that students get equal participation opportunities in the classroom, regardless of the mistakes that they might make. This learning nature of the instruction promotes a more inclusive classroom environment, where even less proficient learners feel confident to participate in class discussions. CL was also found to highly improve critical thinking skills, in which students who engaged in CL were better able to evaluate, analyse, and synthesize ideas communally, leading to better retention of critical thinking skills (Alahdal et al., 2019; Devi, 2015; Warsah et al., 2021). The critical discussion that students have with each other leads them to have a mature discussion on specific issues. They are not only basing their arguments on emotional consideration but also existing studies related to the issues. Warsah et al. (2021) specify this finding by stating that learners perceived CL instructions as a contributing factor in promoting the development of their cognitive abilities and maturity throughout the learning process.

One of the main challenges faced by students in collaborative learning lessons is the lack of time, which was reported by 69% of the students in one research (Devi, 2015). The research states that students are often facing time constraints in completing the discussion under this instruction. This not only makes students have incomplete discussions to solve an issue but also causes distress in not having the same perspectives by the end of the discussion. In addition, the students' proficiency in English was identified as a huge challenge as well. The same research notes that four interviewees from vocational schools admitted that limited vocabulary, grammar, and pronunciation were obstacles to their participation. This factor also hinders their understanding of the issue or inputs given by the teacher as a part of instruction.

This factor also contributes to students' inability to make a critical contribution to the group work. Some students reported not knowing what to do in their groups, while others contributed very little to the group work. However, this issue could be attributed to unclear instructions from the teacher (Jacobs in Devi, 2015).

Challenges and Recommendations for the Practice

While the strategies are impactful on students' critical thinking skills, some strategies may be considered to be ineffective due to several factors. The mentioned studies in the previous section suggest that the root of students' obstacles in understanding critical thinking skills' instructions is low language proficiency in the classroom. These studies claim that despite the participants coming from secondary school or higher education backgrounds, they do not possess adequate language skills that help them understand the instructions given by the teacher. In particular, they do not understand critical thinking-based instructions that require them to logically analyse and compare the given inputs and instructions in English. This issue makes them give incomplete or no responses to teachers or give pre-determined answers that are unrelated to the given questions in the instructions.

Students' low proficiency eventually leads to bigger problems that hinder the application of critical thinking-based instructions. To start, teachers require a longer time to deliver the instructions due to students' lack of understanding of the instructions (Devi, 2015; Singh et al., 2020; Zare & Othman, 2017). This problem is argued to fuel students' anxiety and frustration over their lack of understanding of teachers' "complicated" instructions. Another problem is it takes time for students' critical thinking skills to be developed from these instructions. Past studies suggest that multiple learning cycles (in 6-12 weeks) are required to see the progression of students' critical thinking skills under the given instructions (Yang & Gamble, 2013; Zare & Othman, 2017). All of these challenges lead teachers to be reluctant to use critical thinking-based instructions in the classroom. They believe that using critical thinking-based instructions requires more effort, and yet it makes the learning process much more complicated (Al-Darwish, 2012; Bernard et al., 2020; Sahamid, 2016). One research discovered a somewhat surprising result, as students' test performances are declining under these instructions since they do not understand the lesson's delivery (Singh et al., 2020). This suggests that teachers care more about students' scores or testing performances rather than their language abilities and critical thinking skills development.

In spite of the discouraging problems, it is still possible to integrate the reality of CT into the EFL without reducing test scores or improving English proficiency scores. Yang and Gamble (2013) speculate the pre-conditions for its application's success; one of them is ensuring essential CT skills in instructional designs that align with students' capabilities. Therefore, there are several recommendations for choosing suitable instructional strategies to enhance the critical thinking skills of the students.

One recommendation is to carefully select the most suitable instructional strategies for the students. As presented in previous sections, each instructional strategy has its strengths and weaknesses. For instance, questioning and Socratic questioning are the go-to instructions that could increase students' critical thinking skills due to their spontaneous nature. This makes students supposedly not worry about the accuracy of their answers. The problem is students often do not acquire the language skills that they need to deliver their opinions properly. Teachers also often believe that these questioning instructions only rely on "difficult questions," but not on the questions that challenge students' prior knowledge and personal opinions. Meanwhile, debate and collaborative learning are suitable to enhance students' awareness of different perspectives in a social group. However, some students may be too emotionally involved under these instructions. Reviewing these points, it is suggested that teachers should consider the instructional strategies from many perspectives, including students' abilities, time allowance, and targeted goals in both the learning process and critical thinking skills development.

Another recommendation is to consider students' backgrounds. Previous studies note the different language proficiency levels that students acquire make it difficult to choose one specific instructional method. For example, if a questioning method is being applied in a university class, it may be too simple for students who have higher language proficiency. On the other hand, if other approaches such as debate

are being applied in the classroom, it may create hostility for students who lack language proficiency. Though it is a tricky situation, this issue is inseparable from the fact that years of instructions induced with lower-order thinking skills may be attributed to the problem. Therefore, teachers should consider the cultural, linguistic, and proficiency backgrounds of students when implementing speaking-based instructional strategies. This is to ensure that all students have an equal opportunity to develop their critical thinking skills.

It is also important to take into consideration students' preferences when choosing instructional strategies. Some students may prefer debate due to its competitiveness and the open nature of their discussions. Others may prefer Socratic questioning since there is no right or wrong answer to it; rather, students are challenging their prior beliefs, views, or knowledge. If teachers provide a variety of instructional strategies that cater to students' preferences and learning styles, it may enhance both their learning engagement and critical thinking.

A final recommendation is collaboration among teachers. Sharing the best practices and effective strategies may help teachers learn how specific instructional thinking skills impact their studies. This eventually also adds to their professional development opportunities that are necessary to be incorporated into their teaching methods. The collaboration cannot only be through workshops and online sources but also through academic and conference publications. Sharing results of critical thinking skills development through instructions may not only promote its application in the classroom but also benefit the students they teach.

Conclusion

This study explores instructional strategies to enhance students' critical thinking skills. So far, there are four instructional strategies identified for this purpose: questioning, Socratic questioning, debate, and collaborative learning. These instructional strategies have their own strengths; questioning and Socratic questioning challenge students' prior knowledge, views, and beliefs from the questions given in the instructions. Meanwhile, debate and collaborative learning help students to respect different perspectives and have open-mindedness to reasonable criticisms in a group.

However, studies reveal that students generally face difficulties in understanding lessons under these instructions. They lack the proficiency needed to understand both instructions and lessons. This also adds to the fact that students' progress culminated from years of learning under lower-order-thinking-based instruction. Moreover, students need time to develop their critical thinking skills under the instructions. These problems underline teachers' reluctance to apply these approaches. Overall, these findings strengthen the idea of how crucial it is to implement instructional strategies that would enhance students' critical thinking skills. Several recommendations given in this paper are to select the most suitable instructional strategies, consider students' backgrounds and learning preferences, and collaborate with fellow teachers in exploring new instructional strategies to enhance critical thinking skills. These recommendations can go hand-in-hand with each other and should be treated carefully.

As this study is based on a systematic literature review, it is worth noting that these recommendations' hypotheses could be further tested in different research contexts. Discussions on critical thinking and its supporting instructions will continue to evolve. There are still many questions that require further investigation. For instance, do these specific recommendations work when applied to different education stages? Are there any complications resulting from these recommendations' implementation? Thus, further exploration in this research area is highly recommended.

References

Al-Darwish, S. (2012). The Role of Teacher Questions and the Socratic Method in EFL Classrooms in Kuwait. *World Journal of Education*, *2*(4), 76–84. https://doi.org/10.5430/wje.v2n4p76.

Alahdal, A., Ahmed, A., & Hassan, M. (2019). Effectiveness of Collaborative Learning as a Strategy in the Teaching of EFL. *Opción*, *35*(20), 1026–1043.

Alasmari, A., & Ahmed, S. S. (2013). Using Debate in EFL Classes. *English Language Teaching*, *6*(1), 147–152. https://doi.org/10.5539/elt.v6n1p147.

Alsaleh, N. J. (2020). Teaching Critical Thinking Skills: Literature Review. *TOJET: The Turkish Online Journal of Educational Technology*, *19*(1), 21–39. https://eric.ed.gov/?id=EJ1239945.

An Le, D. T. B., & Hockey, J. (2022). Critical thinking in the higher education classroom: knowledge, power, control and identities. *British Journal of Sociology of Education*, *43*(1), 140–158. https://doi.org/10.1080/01425692.2021.2003182.

Anderson, L. W., W, K. P., Airasian, D. R., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R., Raths, J., & Wittrock, M. C. (2001). *Taxonomy for Learning, Teaching, and Assessing*. Longman.

Andreucci-Annunziata, P., Riedemann, A., Cortés, S., Mellado, A., del Río, M. T., & Vega-Muñoz, A. (2023). Conceptualizations and instructional strategies on critical thinking in higher education: A systematic review of systematic reviews. *Frontiers in Education*, *8*. https://doi.org/10.3389/feduc.2023.1141686.

Bernard, C., Djami, N., & Kuswandono, P. (2020). Teachers' strategies to implement higher-order thinking skills in English instruction. *Metathesis: Journal of English Language, Literature, and Teaching*, *4*(1), 25–40. https://doi.org/10.31002/metathesis.v4i1.2048.

Bonwell, C. C., & Eison, J. A. (1991). *Active learning: Creating excitement in the classroom*.

Bouzid, H. A. (2016). Boosting 21st century skills through Moroccan ELT textbooks. *Journal of English Language Teaching and Linguistics*, *1*(2), 97–108. https://doi.org/10.21462/jeltl.v1i2.24.

Brown, H. D. (2001). Teaching by Principles: An Interactive Approach to Language Pedagogy. In S. Frazier (Ed.), *TESOL Quarterly* (Vol. 35, Issue 2). https://doi.org/10.2307/3587655.

Chew, S. W., Lin, I., & Chen, N. (2019). Using Socratic Questioning Strategy to Enhance Critical Thinking Skill of Elementary School Students. *2019 IEEE 19th International Conference on Advanced Learning Technologies (ICALT)*, *2161-377X*, 290–294. https://doi.org/10.1109/ICALT.2019.00088.

Defianty, M., & Wilson, K. (2022). Critical thinking in ELT: Indonesian teachers' understanding and practice ten years down the track. *IJEE (Indonesian Journal of English Education)*, *9*(1), 120–139. https://doi.org/10.15408/ijee.v9i1.26673.

Devi, A. P. (2015). *Using Cooperative Learning in Teaching Critical Thinking in Reading*. *4*(1), 1–14.

Erningtyas, A. (2020). *The Incorporation of Twenty-first Century Skills Into English Language Learning Activities: A Textbook Analysis*. Yogyakarta State University.

Fahim, M. (2012). Fostering Critical Thinking through Socrates' Questioning in Iranian Language Institutes. *Journal of Language Teaching and Research*, *3*(6), 1122–1127. https://doi.org/10.4304/jltr.3.6.1122-1127.

Feng, Z. (2013). Using Teacher Questions to Enhance EFL Students' Critical Thinking Ability. *Journal of Curriculum and Teaching*, *2*(2), 147–153. https://doi.org/10.5430/jct.v2n2p147.

Higgins, J. P. T., & Thomas, J. (2004). *Cochrane Handbook for Systematic Reviews of Interventions* (J. Chancler, M. Cumpston, T. Li, M. J. Page, & V. A. Welch (eds.); Issue 1). Wiley Blackwell.

Ilyas, H. P. (2015). *Critical Thinking: Its Representation In Indonesian ELT Textbooks And Education*. University of York.

Iman, J. N. (2017). Debate Instruction in EFL Classroom: Impacts on the Critical Thinking and Speaking Skill. *International Journal of Instruction*, *10*(4), 87–108.

Kaur, C., Singh, S., & Marappan, P. (2020). A review of research on the importance of higher order thinking skills in teaching English language. *Journal of Critical Reviews*, *7*(8), 740–747. https://doi.org/10.31838/jcr.07.08.161.

Kholisoh, M. N., Anggani, D., & Bharati, L. (2021). Teachers' questioning strategies and students' perceptions toward critical questions in EFL classroom interaction. *Journal of English Language Teaching*, *6*(1), 136–145.

Kusmaryani, W. (2021). The Effect of Socratics Questioning Method in Improving Students ' Speaking Skill and Critical Thinking in English as a Foreign Language Learning. *Advances in Social Science, Education and Humanities Research*, *619*(Iciep 2020), 289–295.

Kusumoto, Y. (2018). Enhancing critical thinking through active learning. *Language Learning in Higher Education*, *8*(1), 45–63. https://doi.org/10.1515/cercles-2018-0003.

Li, C., Zhang, L. J., & Jiang, G. (2021). Conceptualisation and measurement of foreign language learning burnout among Chinese EFL students. *Journal of Multilingual and Multicultural Development*, *0*(0), 1–15. https://doi.org/10.1080/01434632.2021.1931246.

Li, Q., Li, Y., & Shen, Y. (2020). Impacts of debate instruction on students' critical thinking skills in College EFL Classes: an empirical investigation. *Journal of Physics: Conference Series*, *1629*, 0–9. https://doi.org/10.1088/1742-6596/1629/1/012104.

Lin, Y. (2018). *Developing Critical Thinking in EFL Classes*. Springer. https://doi.org/10.1007/978-981-10-7784-5.

Mahmud, M., & Muliati, A. (2016). Teacher's questioning and students' critical thinking in EFL classroom interaction. *ELT Worldwide*, *3*(2).

McPeck, J. E. (1981). *Critical Thinking and Education.* Routledge.

Moore, K. D. (2015). *Effective instructional strategies: From theory to practice* (4th ed.). SAGE Publication.

Mustika, N., Nurkamto, J., & Suparno, S. (2020). Influence of questioning techniques in EFL classes on developing students' critical thinking skills. *International Online Journal of Education and Teaching (IOJET)*, *7*(1), 278–287.

Nainggolan, B. R., & Wirza, Y. (2021). Evaluation of an English Textbook: Does 'English in Mind' promote critical thinking skills? *Advances in Social Science, Education and Humanities Research*, *546*(Conaplin 2020), 51–59.

Paul, R. (1991). Critical Thinking: What Every Person Needs To Survive in a Changing World. In *NASSP Bulletin* (Vol. 75, Issue 533, pp. 120–122). https://doi.org/10.1177/019263659107553325.

Paul, R., & Elder, L. (2006). *Critical Thinking: Learn The Tools The Best Thinkers Use*. Pearson Prentice Hall.

Putra, T. K., & Abdullah, D. F. (2019). Higher-Order Thinking Skill (HOTS) questions in English National Examination in Indonesia. *Jurnal Bahasa Lingua Scientia*, *11*(1), 178–185. https://doi.org/10.21274/ls.2019.11.1.145-160.

Rashid, S., & Qaisar, S. (2016). Developing Critical Thinking through Questioning Strategy among Fourth Grade Students. *Bulletin of Education and Research*, *38*(2), 153–168.

Sahamid, H. (2016). Developing critical thinking through Socratic Questioning: An Action Research Study. *International Journal of Education & Literacy Studies*, *4*(3). https://doi.org/10.7575/aiac.ijels.v.4n.3p.62.

Saleh, S. E. (2019). Critical Thinking as a 21st Century Skill: Conceptions, Implementation and Challanges in the EFL Classroom. *European Journal of Foreign Language Teaching*, *0*(0), 1–16. https://doi.org/10.5281/zenodo.2542838

Sarwanto, Fajari, L. E. W., & Chumdari. (2020). Open-ended questions to assess critical-thinking skills in Indonesian elementary school. *International Journal of Instruction*, *14*(1), 615–630. https://doi.org/10.29333/IJI.2021.14137A.

Schouten, M. A., & Bardell, T. (2021). *Building Oral Language Skills through Classroom Instruction: Six High-Yield Strategies to Borrow from the Clinic*. LD School. https://www.ldatschool.ca/building-oral-language-skills/.

Singh, S., Singh, T., Singh, M., & Kaur, C. (2020). *Teaching Strategies to Develop Higher Order Thinking Skills in English Literature*. *11*(8), 211–231.

Snyder, H. (2019). Literature review as a research methodology : An overview and guidelines. *Journal of Business Research*, *104*(March), 333–339. https://doi.org/http://dx.doi.org/10.1136/bmjebm-2020-111651.

Solihati, N., & Hikmat, A. (2018). Critical thinking tasks manifested in Indonesian language textbooks for senior secondary students. *SAGE Open*, *8*(3). https://doi.org/10.1177/2158244018802164.

Suhardiana, I. P. A. (2019). Socratic questioning to promote EFL students' critical thinking in a language learning. *Yavana Bhāshā: Journal of English Language Education*, *2*(1), 83–102.

Syafryadin, Harahap, A., Haryani, & Astrid, A. (2021). Boosting classroom interaction based on Higher Order Thinking Skills (HOTS) in English learning for beginners. *International Journal of Language Education*, *5*(1), 477–489.

Ur, P. (2012). *A Course in English Language Teaching* (2nd ed.). Cambridge University Press.

Uribe-Enciso, O. L., Uribe-Enciso, D. S., & Vargas-Daza, M. D. P. (2017). Critical Thinking and its Importance in Education: Some Reflections. *Rastros Rostros*, *19*(34), 78–88. https://doi.org/10.16925/ra.v19i34.2144.

Warsah, I., Morganna, R., Uyun, M., Afandi, M., Islam, U., Sultan, N., & Kasim, S. (2021). The Impact of Collaborative Learning on Learners' Critical Thinking Skills. *International Journal of Instruction*, *14*(2), 443–460.

Widana, I. W. (2017). Higher Order Thinking Skills Assessment (HOTS). *JISAE (Journal of Indonesian Student Assesment and Evaluation)*, *3*(1), 32–44.

Yang, Y. C., & Gamble, J. (2013). Effective and practical critical thinking-enhanced EFL instruction. *ELT Journal*, *67*(October), 398–412. https://doi.org/10.1093/elt/cct038.

Yuan, R., Liao, W., Wang, Z., Kong, J., & Zhang, Y. (2022). How do English-as-a-foreign-language (EFL) teachers perceive and engage with critical thinking: A systematic review from 2010 to 2020. *Thinking Skills and Creativity*, *43*, 101002. https://doi.org/10.1016/j.tsc.2022.101002.

Yuan, R., Yang, M., & Lee, I. (2021). Preparing pre-service language teachers to teach critical thinking: Can overseas field school experience make a difference? *Thinking Skills and Creativity*, *40*, 100832. https://doi.org/10.1016/j.tsc.2021.100832.

Zare, P., & Othman, M. (2017). Students' Perceptions toward Using Classroom Debate to Develop Critical Thinking and Oral Communication Ability. *Asian Social Science*, *11*(9), 158–170. https://doi.org/10.5539/ass.v11n9p158.

Zawacki-Richter, O. (2020). *Systematic Reviews in Educational Research: Methodology, Perspectives, and Application*. Springer.

Zhao, C., Pandian, A., Kaur, M., & Singh, M. (2016). Instructional Strategies for Developing Critical Thinking in EFL Classrooms. *English Language Teaching, 9*(10), 14–21. https://doi.org/10.5539/elt.v9n10p14.

Copyrights