

Insights on Integrating Critical Thinking with EFL Instructions in Indonesian Higher Education

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ARTICLE INFO	ABSTRACT
<p>Keywords: critical thinking, EFL instructions, higher education, qualitative research</p> <p>DOI: http://dx.doi.org/10.21093/ijeltal.v10i2.2044</p> <p>How to cite: Ilyas, H.P. & Istaryatiningtias, I. (2025). Insights on Integrating Critical Thinking with EFL Instructions in Indonesian Higher Education. <i>Indonesian Journal of English Language Teaching and Applied Linguistics</i>, 10(2), 269-286</p>	<p><i>This research sought to address three key questions: how EFL instructors in higher education integrated critical thinking (CT) skills into their teaching practices, what challenges they encountered during the integration process, and how EFL students perceived and experienced the impact of this integration. Five instructors from four universities and 49 students participated in this research, with the following methods being employed: interviews with the instructors and open-response questionnaires and focus group discussions with students. A qualitative research approach was adopted using a descriptive design to explore the integration of CT within EFL instruction. The instructors were selected purposively based on their experience teaching EFL courses at the tertiary level and their willingness to participate. Students were chosen through convenience sampling from two intact classes in the third and fifth semesters. The data collection instruments included semi-structured interviews for instructors, open-ended written questionnaires for students, and one focus group discussion. Instrument validation involved expert judgment and pilot testing with non-participant instructors and students. Thematic analysis following Braun and Clarke's (2006) six-phase framework was applied, with inter-coder reliability established at 87% to ensure analytical consistency. The findings indicated that EFL instructors could integrate CT in almost all EFL courses (reading, listening, speaking, writing, grammar, and vocabulary), with the CT themes emerging being analyzing, evaluating, giving arguments, guessing, inferring, reasoning, and summarizing. The study contributes to EFL pedagogy by documenting practical instructional strategies for CT integration and offering a context-sensitive framework for developing CT across language skill areas. It also offers theoretical insights into how sociocultural and constructivist principles manifest in EFL classrooms. These findings can inform curriculum reform, teacher training, and future research in CT-oriented language education.</i></p>

1. Introduction

The role of critical thinking (CT) in higher education is both urgent and pivotal (e.g., An Le & Hockey, 2022; Davies & Barnett, 2015; Ennis, 2018; Paul & Elder, 2019). Several elements of CT, including analysis, evaluation, criticism, interpretation, and reasoning, assist students in internalizing ideas, comprehending concepts, formulating arguments, solving problems, and identifying solutions or alternatives (Ilyas, 2023). This will undoubtedly facilitate their success in academic life and later in professional life, where problems will be more prevalent. In higher education, the presence of CT is essential (Bean & Melzer, 2021), and it must be incorporated into every course taught. This is because, firstly, the character of studying in higher education involves complex ideas, theories, concepts, and principles. Secondly, students have fully developed cognitive abilities to receive abstract ideas and concepts.

English as a Foreign Language (EFL) is one of the major disciplines within higher education. It also requires CT. This major, which is popular in non-English-speaking countries and usually under the faculty of education, teaches its students language skills and theories in language teaching & learning, linguistics, and literature. CT is indeed important in this regard, given that there are some controversies involving researchers and writers in this field. Furthermore, as with theories in social sciences, one concept is named differently by different authors. Besides this, there is a plethora of perspectives on the subject, which can be bewildering for students. In such a context, CT can function as a tool for students in higher education (Ilyas, 2023), enabling them to gain a more detailed understanding of the intricacies of the academic world and beyond (Kerruish, 2023). The role of instructors in higher education is of great importance in facilitating students' CT (Lin, Lin, & Zhu, 2018; Singh & Lu, 2020). Students of EFL majors who are placed in non-Western countries are often somewhat unfamiliar with skeptical stances and CT. This is why they must be facilitated to develop a critical stance (Ilyas, 2023).

Recent research in EFL higher education contexts has increasingly highlighted various pedagogical interventions to enhance students' CT. For instance, Lu and Xie (2019) demonstrated that integrating a CT-oriented instructional pattern into an argumentative writing course significantly improved students' writing performance and reasoning skills. Similarly, Zhang (2018) showed that an SFL-informed writing curriculum enhanced EFL students' awareness of linguistic choices and their evaluative capacities in text construction. Inquiry-based models (Wale & Bishaw, 2020) and guided discovery approaches (Yaiche, 2021) have also shown notable effects on reasoning and inference, particularly in reading and writing-focused courses. In Indonesia, research by Tusino et al. (2020) confirmed the benefits of hybrid task-based instruction on students' critical writing performance, and Sari and Prasetyo (2021) found that project-based learning encouraged critical engagement and increased student motivation in reading courses. However, these studies predominantly examine interventions using experimental or quasi-experimental designs and tend to focus on student outcomes without exploring the instructors' actual practices or the process of integrating CT across diverse EFL course types.

Despite these promising studies, there remains a paucity of research in the Indonesian EFL context that qualitatively explores how instructors conceptualize, plan, and implement critical thinking in language instruction. Furthermore, very few studies investigate the perceptions of students regarding this integration across multiple language domains (reading, writing, speaking, grammar, and vocabulary). As Zhang, Yuan, and He (2020)

emphasized, EFL instructors often acknowledge the importance of CT yet lack practical pedagogical models and confidence to integrate it effectively. This highlights an urgent need to investigate CT integration not only from a theoretical or outcome-based perspective but also through pedagogical implementation lenses.

Accordingly, this present study aims to address these limitations by adopting a qualitative approach to explore how CT is implemented across varied EFL courses and how both instructors and students experience this integration. The study contributes by offering a pedagogical dimension, namely, a descriptive account of CT instructional practices in Indonesian higher education. It also aims to inform the development of a context-sensitive framework that can support CT integration across EFL skill areas. Thus, the study fills a significant empirical gap and advances discourse in EFL pedagogy.

There is very little information, particularly in the Indonesian context, on how instructors integrate CT into their teaching practices, on the challenges they encounter, and on how EFL students in higher education perceive the impact of EFL instruction on their CT skills. There is a need for research investigating these aspects, and therefore, this research poses three research questions:

- (1) How do EFL instructors in Indonesian higher education integrate CT skills into their teaching practices?
- (2) What challenges do EFL instructors face when incorporating CT into their curriculum?
- (3) How do students perceive the impact of EFL instruction on their CT skills?

By posing these questions, the findings of this research are expected to reveal information on integrating CT with EFL, thereby providing insights to EFL practitioners in higher education. In addition, the findings of the research can contribute to the academic debate and discussion about the topic of the infusion of CT and EFL.

2. Literature Review

2.1 Theoretical Foundations of CT and EFL Pedagogy

The capacity to think critically is of paramount importance in higher education, including in the context of EFL learning. It enables students to discern, analyze, and reason logically, thereby facilitating the acquisition of knowledge and the formulation of well-founded opinions. CT in EFL draws upon insights from diverse academic disciplines, including philosophy, psychology, and education. John Dewey, a prominent figure in the field of education, defines CT as a process of careful and deliberate thinking that involves analyzing, interpreting, synthesizing, and evaluating information to reach reasoned conclusions (Boydston, 2008; Dewey, 2001; Siegel, 1988). In the context of EFL, CT skills are essential for students to engage with texts critically, communicate ideas effectively, and analyze discourse in their field.

One theory that served as the foundation for integrating CT with EFL is the theory of cognitive development by Piaget. According to this theory, students develop their cognitive abilities by actively interacting with their environment and surroundings, a process known as assimilation and accommodation (Babakr, Mohamedamin, & Kakamad, 2019; Haber, 2020; Padmanabha, 2018). In the field of EFL, instructors can facilitate students' cognitive development by assigning tasks that are both meaningful and relevant, yet challenging.

These tasks should prompt students to analyze, question, and reflect on language literature, thereby enhancing their understanding of linguistic structure and discourse patterns.

Another foundational theory is Vygotsky's sociocultural theory, which asserts that students learn and develop their cognition through social interaction and collaboration with others (Barrs, 2021; Eun, 2019; Nardo, 2021; Newman, 2018). This naturally requires language as a medium for communication. In EFL classrooms, instructors can facilitate students' learning and cognitive development through meaningful collaborative activities such as dialogues, group discussions, projects, or peer feedback. Such activities should be conducted as authentically as possible to facilitate language acquisition and CT, for instance, through debate on current trending topics.

Constructivist theory provides a further theoretical basis for integrating CT with EFL. The theory strongly asserts the importance of teaching materials, stating that students construct their knowledge through active engagement with the materials (Chuang, 2021; Clark, 2018; Pande & Bharathi, 2020; Xu, 2019). This implies that EFL students build knowledge through English language materials. The theory also asserts that every learner builds mental representations of ideas and concepts in their mind based on the knowledge and experiences they have. Consequently, EFL instructors may facilitate students' CT abilities by furnishing challenging English language materials and assigning the students to investigate, examine, analyze, evaluate, and synthesize the materials. This process not only enhances the comprehension of materials and CT but also encourages independent learning.

In conclusion, the aforementioned theories, derived from diverse disciplines, if applied in the EFL contexts, can promote students' cognitive development, social interaction, and constructivist learning. EFL instructors should consider integrating these perspectives into their instructions. The integration can facilitate students to think freely and critically, learn independently, and communicate effectively. Furthermore, it can facilitate the development of confidence, autonomy, and problem-solving skills, which are essential for success in academic, professional, and personal contexts within a complex and multicultural world.

2.2 Literature on the Use of CT in EFL Higher Education Contexts

In the past eight years, a considerable number of studies have been conducted on the use of CT in EFL higher education contexts in non-Western countries. These countries have not traditionally considered CT to be an innate and major part of their educational cultures. The research objectives of these studies have varied. The countries, among others, Algeria (e.g., Yaiche, 2021), China (e.g., Lu & Xie, 2019; Zhang, 2018; Zhang, Yuan, & He, 2020), Ethiopia (Wale & Bishaw, 2020), and Iran (e.g., Afshar & Movassagh, 2017; Amirian, Ghaniabadi, Heydarnejad, & Abbasi, 2023; Ebadi & Rahimi, 2018; Ghanizadeh, 2017) have all contributed to this field. Japan is another country where research has been conducted, with examples including Akatsuka (2020) and Kusumoto (2018). Libya is another country where research has been conducted, with examples including Saleh (2018). In addition, similar studies have been conducted in Pakistan (e.g., Din, 2020; Khan, 2017), Palestine (e.g., Itmeizeh & Hassan, 2020), Saudi Arabia (e.g., Sharadgah, Sa'di, & Ahmad, 2020), and Turkey (e.g., Cosgun & Atay, 2021).

As previously mentioned in the studies on CT and EFL in higher education, the objectives are diverse. For example, some studies examine the relationship between CT and writing skills, and vice versa (Ebadi & Rahimi, 2018; Lu & Xie, 2019; Sharadgah, Sa'di, & Ahmad, 2020;

Zhang, 2018). Some studies seek to enhance EFL students' CT abilities through a variety of methodologies (Kusumoto, 2018; Wale & Bishaw, 2020; Yaiche, 2021). Other studies aim to explore instructors' perceptions and challenges in implementing CT in EFL contexts of higher education (Saleh, 2018) and EFL students' perceptions, experiences, and challenges (Zhang, Yuan, & He, 2020), including CT integration with certain approaches to promote students' CT skills (Akatsuka, 2020; Cosgun & Atay, 2021). Other studies have been conducted to evaluate the CT skills of EFL higher education students (Din, 2020) and investigate the relationship between CT and other students' learning achievement (Amirian, Ghaniabadi, Heydarnejad, & Abbasi, 2023; Afshar & Movassagh, 2017; Ghanizadeh, 2017). Lastly, Itemizeh and Hassan (2020) conducted a study to examine the integration of CT into a novel EFL curriculum.

A review of the literature on the relationship between CT and writing skills reveals a positive correlation. Studies by Ebadi and Rahimi (2018), Lu and Xie (2019), Sharadgah, Sa'di, and Ahmad (2020), and Zhang (2018) demonstrate that CT is a significant predictor of writing skills. The EFL students' cognitive skills and writing abilities demonstrate improvement. Ebadi and Rahimi (2018) demonstrated that a WebQuest-based classroom was an effective tool for developing CT and writing skills, as evidenced by post-test results and students' perceptions. A study by Lu and Xie (2019) that adopted the ICTRWT (International Critical Thinking Reading and Writing Test) framework indicated that the treatment group exhibited improvements in critical thinking and writing skills. Similarly, Zhang (2018) employed the SFL (Systemic Functional Linguistics) approach and demonstrated that EFL writers demonstrated enhanced CT abilities. The combination of CT and argumentative writing is also an effective approach for enhancing both skills, as demonstrated by Sharadgah, Sa'di, and Ahmad (2020).

Over the past four years, numerous recent research studies focusing on the integration of CT and EFL/ESL in the context of higher education have been carried out in Malaysia (Beh & Ganapathy, 2021) and Indonesia, two nations characterized by comparable language, culture, and heritage. Within Malaysia, a study by Beh and Ganapathy (2021) involved 60 undergraduate students to improve their academic writing and CT skills through the utilization of TSF (Frangenheim's Thinking Skills Framework). The findings of the study revealed a positive impact on students' development in CT and academic writing, thus recommending the framework as a valuable instrument for teaching CT.

Recent studies from Indonesian researchers have also examined the relationship between CT and EFL in higher education (Sari & Prasetyo, 2021; Tusino, Faridi, Saleh, & Fitriati, 2020; Yulian, 2021). Sari and Prasetyo (2021) investigated the impact of PjBl (Project-Based Learning) on EFL undergraduate students' CT. The majority of students demonstrated increased motivation, and the majority expressed a very positive impact on their CT. Research by Tusino et al. (2020) found that TBLT (Task-Based Language Teaching) combined with CT enhanced EFL undergraduate students' writing performance. They suggested the integration of CT in foreign language teaching. Yulian (2021) sought to enhance students' CT in reading by implementing the flipped classroom teaching model. The results demonstrated that the model significantly enhanced students' CT in reading.

The studies on CT and EFL in higher education presented above, originating from Indonesia and other countries, demonstrate that students in non-Western countries can be taught CT skills that can contribute to their academic success. The studies also demonstrate the potential for integrating CT with EFL contexts, with successful outcomes. However, further research is required to extend beyond the utilization of specific teaching approaches. This

research should investigate how instructors implement the integration, the challenges they encounter, and how students perceive the impact of the integration on their CT skills, which are still very few, especially in EFL Indonesian higher education contexts. This is the rationale behind the present research, which aims to address a gap in the existing literature.

3. Research Methodology

3.1 Research Design

In light of the research questions that were posed, this research adopted a qualitative approach. This was done for several reasons, including the fact that this approach is beneficial in exploring participants' opinions, perceptions, feelings, emotions, and thoughts (Creswell, 2012; Stake, 2010; Yin, 2010). Given that this research was interested in tapping into these aspects, the qualitative approach was deemed to be the most suitable for the research objectives, which have exploratory characteristics. Consequently, the selected methodology was expected to yield a comprehensive understanding of the condition.

3.2 Setting and Participants

The participants in this research were EFL instructors and students in higher education. There were five instructors, each from a different institution: three universities in Jakarta and one university in Serang, Banten. Therefore, the two participants were from the same institution. Three of the participants were female, and their teaching experiences in the English teaching department ranged from five to more than eight years, with a minimum level of educational background being a Master's degree. At the outset of the research, it was anticipated that there would be a greater number of participants than the eventual total of five. However, only five individuals consented to take part, stipulating that their personal details, including the institution they represented, should be kept anonymous to safeguard their privacy.

The student participants were selected from two EFL classrooms, one in the third semester and the other in the fifth semester. The number of students in the third semester was 23, while in the fifth semester, there were 26. The participants were all from the same university and were taught by two different instructors. They were selected because the two instructors granted researchers access to their classrooms, while the other instructors were somewhat reluctant to allow researchers access. In addition, distance and time were other factors, especially in an EFL classroom at a university in Serang. Therefore, the researchers determined that two EFL classrooms with a total of 49 students would be sufficient to answer the third research question.

3.3 Instruments

Qualitative data collection methods were employed, including interviews, open-response questionnaires, and focus group discussions (FGD). The interview was conducted with EFL instructors, and it was conducted in person in a relaxed, conversational manner. One interview session was conducted via Zoom meeting due to the distance and available time. In all interview processes, instructors were queried on two research questions: how they integrated CT skills into their teaching practices and what challenges they faced when incorporating CT into their curriculum. To ensure clarity and avoid misunderstanding, repetition and confirmation were sometimes employed during the interview activity.

Prior to data collection, the interview questions were piloted with two EFL instructors who were not part of the main study. Feedback from this pilot testing informed the revision of

question wording and sequencing to enhance clarity and relevance. Similarly, the open-response questionnaire was subjected to expert validation involving two qualitative research experts and one applied linguist to ensure its content appropriateness and alignment with the research objectives.

An open-response questionnaire was distributed to students enrolled in the third semester of the EFL program. The rationale behind this data collection method was its practicality. In accordance with the instructions provided by the instructor, the reading course included CT activities. Additionally, the instructor informed the researchers that the students were already aware of the importance of CT when reading. During the data collection process, the students were first provided with an explanation of what an open-response questionnaire was. They were then instructed to write freely on a blank piece of paper, including their thoughts, feelings, and opinions on the CT activities they had experienced during the course. The students were asked to write in Indonesian to ensure they could express their perceptions of the impact of instructions on their CT skills without any linguistic constraints.

To ensure linguistic and conceptual clarity, the questionnaire was also reviewed by a bilingual expert to verify the equivalence of meaning between the original items and their translations. Adjustments were made to preserve the original intent while maintaining cultural and academic appropriateness.

A further qualitative method employed was FGD. This was conducted once with students in their fifth semester, who were concurrently enrolled in an essay writing course. As with the instructor of the third semester, the instructor of this course also incorporated CT activities, particularly when teaching the argumentative essay. The rationale behind conducting an FGD was twofold: firstly, there was sufficient time to complete the activity, and secondly, the researchers aimed to diversify their research methods to anticipate potential issues by adopting a single approach and triangulating the data. Additionally, one of the advantages of FGD is that participants can provide each other with insights and information that may not have been captured through other methods (Akyıldız & Ahmed, 2021). In conducting the FGD, the authors attempted to facilitate a sense of calm and relaxation among the students in the presence of unfamiliar individuals. Initially, the activity was somewhat awkward, but as it progressed, communication became more natural and productive, aligning with expectations. Despite the availability of extensive notes, the entire activity was recorded for subsequent data analysis.

To enhance the trustworthiness of data interpretation and minimize subjective bias, inter-coder reliability was established during the thematic analysis process. Two independent coders analyzed a subset of the data and achieved an agreement rate of 87%. Discrepancies were resolved through iterative discussion until consensus was reached. This process ensured consistency and credibility in coding and thematic development.

3.4 Data Analysis Procedures

Thematic analysis was employed in this study. This qualitative research method enables researchers to uncover, scrutinize, and explain emerging themes or patterns within the dataset (Braun & Clarke, 2022). The primary aim of thematic analysis is to comprehend the concepts that arise from the data and eventually result in a comprehensive report. The initial step in the data analysis process involved adhering to the core principles of thematic analysis. Subsequently, following the collection and transcription of the dataset, the researchers

meticulously examined the data, investigating deeply into its contents to gain a profound understanding. It was during this phase that potential themes started to surface.

To ensure methodological rigor, the thematic analysis followed Braun and Clarke's (2022) six-phase framework. The first phase involved familiarization with the data, whereby the researchers repeatedly read the transcripts and field notes to immerse themselves in the content. The second phase entailed generating initial codes manually and inductively, marking significant features across the dataset relevant to the research questions. In the third phase, these codes were collated and sorted into potential themes based on conceptual similarity. The fourth phase involved reviewing and refining themes by checking their coherence in relation to the coded extracts and the entire dataset. During the fifth phase, the themes were clearly defined and named, ensuring each theme captured the essence of participants' perspectives. Finally, in the sixth phase, a detailed report was produced, integrating analytic narratives and illustrative quotes to ensure transparency and credibility in theme representation.

Moving forward, the coding phase ensued, during which the researchers systematically assigned codes to information, features, and patterns that were connected to the research inquiries. These codes were further scrutinized and categorized based on their similarities, ultimately leading to the formation of overarching themes. Finally, a comprehensive review and refinement of the themes was conducted to ensure a robust and coherent interpretation of the data. The systematic application of thematic analysis in this research underscored its efficacy in unearthing the underlying themes and patterns inherent in the dataset, thereby enriching the overall interpretation and understanding of the research phenomena.

4. Results and Discussion

4.1. Integration Practices of CT in EFL Instruction

The study, based on interviews, identified several themes pertaining to CT practices integrated into EFL instructions. All instructions categorized as CT were found to belong to the themes of analyzing, evaluating, giving arguments, guessing, inferring, reasoning, and summarizing, which are all considered important elements of CT by CT practitioners and authors (e.g., Davies & Barnett, 2015; Ennis, 2018; Paul & Elder, 2019). Presented below are examples showcasing how CT practices were incorporated into EFL instructions.

Table 1: Integration Practices of CT in EFL Instructions

EFL Skills	Examples of EFL Instructions	CT Activities
Reading	Identifying the principal ideas.	Analyzing
	Identifying supporting sentences.	Analyzing
	Finding irrelevant information.	Evaluating
Writing	Identifying the interconnections between the characters in a narrative.	Analyzing & Evaluating
	Developing the primary argument, along with sentences that support it.	Giving Argument
	Writing a summary of a text.	Summarizing
	Writing the introductory and concluding paragraphs of the body text.	Analyzing & Giving Argument
Speaking	Presenting compelling arguments in support of the central thesis.	Giving Argument & Reasoning
Vocabulary	Inferring meaning from context.	Guessing & Inferring
Grammar	Determining the correct parts of speech in the texts.	Analyzing
	Identifying the different types of sentences in the texts.	Analyzing
	Transforming sentences into several different typas.	Analyzing

Instructor 1, who was teaching reading to EFL students, conceded that several activities were conducive to CT. The researchers concurred with this assessment following an examination of the instructions. As illustrated in Table 1, for instance, the directive "Identifying the interconnections between the characters in a narrative" could foster students' CT. Through this instruction, students read the narrative meticulously to comprehend it, subsequently identifying the characters, including their actions and roles in the story. Students were required to analyze the narratives and evaluate the interconnections between them. This required a CT process, as the activity necessitated deep thinking. The task was not straightforward, particularly when the narratives were challenging, such as reading authentic short stories by renowned authors.

The integration of CT with writing, particularly argumentative essays, is evident in the work of Instructor 2. One example of this integration was the EFL instruction, "Developing the primary argument, along with sentences that support it," which was categorized under the CT theme of "giving argument." The development of a primary argument is relatively straightforward for students who have an opinion about a topic. However, the construction of supporting sentences that were both convincing and genuinely supportive of the primary argument was a more challenging task. A further challenge for students was to integrate the supporting sentences into the broader context of the essay. This required them to develop sentences that were coherent with the overall structure of the essay and that served to reinforce the argument. The development of a strong argument involved students in the practice of logical thinking, which in turn promoted CT. Instructor 2 remarked, "I always tell my students that their essays need a brain, not just a body. They can write paragraphs, but if the logic and argument aren't there, it's just empty text."

Similar to essay writing, which typically has a central idea or thesis statement, speaking also has a central thesis or proposition to argue or defend. This can be integrated with CT as well, as reported by Instructor 3, who taught a public speaking course. One way she inserted CT into speaking instructions was by having students make strong arguments to support the central thesis, as stated in Table 1. In one of the sessions in the public speaking course, the instructor asked students to present a debatable topic. Examples of such topics included "School uniforms should be omitted" and "Writing a research paper should be omitted as a requirement to get an undergraduate degree in all Indonesian universities." By presenting these topics, the instructor hoped to encourage students to reason, opine, and argue, thereby improving their CT. As Instructor 3 put it, "When they defend a position in front of the class, it's no longer about speaking fluently, but about making sense. That's where CT shows up." Some authors of CT literature also include reasoning as a component of CT (e.g., Paul, Niewoehner, & Elder, 2019; Watson, Arp, & King, 2024).

EFL instructions that can be integrated with CT are related to vocabulary skills. As reported by Instructor 4, one of his instructions was to infer the meaning of words from contexts. This instruction encouraged students to engage in intelligent guessing and inferring, as they were not simply required to guess and infer. When students wished to infer the meaning of a word, they were obliged to read the sentence in which the word was contained. This entailed reading the sentences preceding and following the word to gain a contextual understanding. Subsequently, students sought to identify the association of the word in the sentence context, before finally inferring or guessing its meaning. Instructor 4 explained, "I tell my students that words don't live alone. They have families, neighbors, and friends. To

understand one word, you need to understand its context. That's how critical readers behave." This activity involved a deep thinking process, which has the potential to promote students' CT.

The final integration between CT and EFL pedagogy is through grammar instructions. The last participant, who taught a grammar course during the semester, demonstrated the integration of CT with grammar instructions by, among other methods, asking students to identify different types of sentences in texts and transform sentences into several different types. He argued that identifying different types of texts was the initial step for students in CT. He stated, "This is an indispensable preliminary step in CT, establishing the groundwork for more intricate and demanding CT activities." A more intricate and challenging CT activity was transforming a specific type of sentence into several distinct types, such as transforming a complex sentence into a simple and compound sentence. Instructor 5 shared, "Grammar may seem mechanical, but when I ask students to convert sentences into different forms, they begin to see how choices in form reflect choices in meaning. That's where analysis comes in." Apart from enhancing students' comprehension of sentence types, this activity could foster their CT abilities, as it involved an analytical thinking process. Consequently, the researchers classified it under the theme of analysis.

The present findings resonate with the literature that emphasizes the value of explicit CT-oriented instruction in EFL contexts. Similar to Lu and Xie (2019), who found that structured CT frameworks enhanced argumentative writing performance, this study confirms that integrating CT elements such as analyzing, evaluating, and reasoning into reading, writing, and speaking instructions can foster students' critical engagement with texts. Likewise, the findings parallel those of Zhang (2018), who observed students' shift from structural accuracy toward meaning construction through CT-infused writing tasks grounded in systemic functional linguistics. This study also aligns with Cosgun and Atay's (2021) advocacy for problem-based learning, where CT and creativity were simultaneously enhanced through instructional innovation.

These findings substantiate Vygotsky's sociocultural theory, where learning occurs through mediated collaboration and dialogue, especially evident in CT tasks that required argumentation and group presentation. Moreover, the results reinforce constructivist assumptions (Clark, 2018; Xu, 2019), as students were encouraged to construct meaning through contextual analysis and synthesis. By documenting how CT can be meaningfully embedded across various EFL components, including grammar and vocabulary, this study adds to the theoretical understanding of CT as a multi-skill, discipline-transcending construct.

Theoretically, this study expands current pedagogical models by demonstrating that CT can be scaffolded even in mechanical language components through analytical tasks. Practically, it offers an integrative instructional map for EFL practitioners in Indonesian universities, addressing gaps in CT application as reported in regional studies such as Tusino et al. (2020) and Sari and Prasetyo (2021). The emphasis on micro-skills (inferring vocabulary, transforming grammar structures) alongside macro-competencies (argumentative reasoning) bridges a divide often left unexplored in CT integration research.

4.2. Challenges Faced by Instructors

Integrating CT into EFL instructions is not as straightforward as it may seem. This was the consensus among EFL instructors. They highlighted that, in addition to the lack of a unified

definition of CT, which made it difficult to grasp, CT was also a subjective concept. This research identified three primary challenges faced by EFL instructors.

Firstly, EFL instructors expressed uncertainty regarding the efficacy of their CT instruction. Consequently, they were uncertain as to whether their instructional methods could enhance students' CT abilities. However, they attempted to incorporate activities that they believed would foster CT skills, given their awareness that higher education necessitated the development of higher-order thinking abilities. Instructor 1, who taught reading, was also aware of the fast flow of information bombarding people. Consequently, students had to be equipped with CT skills to avoid becoming victims of textual propaganda and to make them realize that there were many perspectives of seeing something. Despite the uncertainty, they would continue to insert CT skills into their teaching instructions. Instructor 1 said, "Sometimes I wonder if what I'm doing is enough. Are they really becoming critical thinkers? But I can't ignore it. CT is what education is about."

The second challenge revolved around the constrained opportunity to deliver instructions encompassing CT, bearing in mind that EFL educators were required to address a vast amount of educational content within a limited timeframe and assign tasks to their students. All instructors acknowledged this obstacle, consequently opting for meeting sessions where the themes were predetermined with CT elements, as articulated by Instructor 3, who mentioned meticulously selecting materials to incorporate CT activities from the provided one-semester curriculum. Instructor 3 added, "The syllabus is packed. I can't redesign the whole course. So, I focus on inserting CT where it fits best with topics that naturally provoke questioning and discussion." Oftentimes, the curriculum for classes was supplied by the English education department and encompassed numerous subjects to be addressed, albeit with the possibility of making modifications in certain educational institutions. The fact that instructors identified the scarcity of time available to integrate CT into subject courses as one of the difficulties was brought to light by Snyder and Snyder (2008).

Finally, all instructors acknowledged that the majority of EFL students encountered difficulties when undertaking tasks integrated with CT, particularly when confronted with challenging texts or topics. A clear illustration of this was provided by Instructor 2, who taught a writing course. She selected texts that were difficult to read without introductory and concluding paragraphs and required students to write the introduction and conclusion to complete the essay text. She stated, "It took students a very long time to write them. Only a few students could finish writing in a specified time." This does not indicate that the CT ability of Indonesian higher education students is deficient; rather, it is more indicative of their English proficiency level, which is not commensurate with the texts. As Instructor 2 noted, "When I gave them a complex editorial to analyze, most of them just stared at it. Not because they were lazy, but because both the English and the reasoning were tough. It's a double burden." However, there are two factors to be considered when integrating CT and EFL faced by students. Primarily, they must grapple with English texts, and secondarily, they encounter difficulties with CT itself.

The challenges reported by instructors mirror several findings in existing literature. Zhang, Yuan, and He (2020) similarly highlighted instructors' uncertainty and lack of professional knowledge about CT, leading to uneven or hesitant implementation. This study supports their conclusion and extends it by adding the insight that curriculum constraints and language proficiency mismatches also complicate the CT integration process. Instructor concerns over

insufficient time reflect Wale and Bishaw's (2020) study, where EFL teachers struggled to balance content delivery and inquiry-based learning methods.

This dilemma is particularly relevant to Vygotsky's zone of proximal development (ZPD), where instructor scaffolding is necessary but hindered by limited resources and training. Constructivist perspectives further explain how deep learning requires guided engagement, which becomes difficult when instructors face institutional limitations. The psychological resistance of instructors to unfamiliar instructional practices, as seen in Akatsuka (2020), further corroborates the current findings.

The novelty of this study lies in its identification of a structural barrier within Indonesian higher education that impedes the effective integration of CT into EFL instruction. Specifically, the research reveals how pedagogical and curricular inflexibility constrains instructors' ability to implement CT-based practices despite their awareness and willingness to do so. This structural insight adds a novel contribution to the CT literature by foregrounding the systemic and institutional limitations that obstruct pedagogical innovation, a factor that remains underexplored in Indonesian contexts. By highlighting the disconnect between instructor intent and institutional support, this study reinforces the necessity for targeted professional development and curricular reforms, thereby addressing a critical gap in existing research on CT integration in EFL education.

Despite these contributions, this study has limitations. The findings concerning structural barriers and pedagogical constraints are drawn from a relatively small and geographically limited sample of five instructors from four institutions, which may restrict the generalizability of the results. Additionally, as the data relies heavily on self-reported perspectives from instructors, there is a possibility of subjective bias or selective recall influencing the responses. Future research could build on these insights by employing a multi-site, mixed-methods approach involving classroom observations and institutional policy analysis to more comprehensively examine the systemic factors affecting CT integration. Such efforts would further validate and expand upon the novelty identified in this study.

4.3. Student Perceptions and Experiences

The findings of this research, based on open-response questionnaires and FGD, indicate that EFL students benefited from the integration of CT and course instructions. One student wrote, "At first, I thought CT was only for philosophy class. But when I had to judge whether a paragraph supported the main idea, I realized it's something I must use all the time." In the context of reading, some students observed that texts, when read with close attention and a critical lens, may contain information that was not directly relevant to the main premise of the text. This observation was based on the instruction to identify irrelevant information from the texts. Conversely, some students noted that when they engaged in a process of CT and deep reading, they were able to distinguish the main premise of the text, along with the supporting evidence. Others indicated that CT instruction prompted them to recognize the necessity of verifying the content of a text.

In the writing classroom, students also benefited from this integration. The majority of them indicated that CT enabled them to analyze their own writing. For instance, they could identify an unclear thesis statement in an argumentative essay, supporting sentences that did not substantiate the thesis statement, and a lack of evidence or proof to support compelling arguments. Another student explained, "In my first draft, I thought my thesis was clear. But

then I reread it and realized I had no evidence. CT made me reread and rewrite.” Additionally, many of them also stated that CT could assist in coherently organizing sentences and avoid reiterating ideas. Consequently, CT facilitated the writing process and fostered the development of a more reflective approach to writing. They anticipated that this skill would prove beneficial in the completion of their final project later, which was a requirement for graduation from the university.

In addition to the advantages of integration, students also identified challenges. The majority of them indicated that CT was not effortless. They attributed this to two main obstacles. First, the CT process itself was perceived as difficult. This was attributed to their limited knowledge. A student shared during the FGD, “It’s hard because sometimes I don’t know what to say. I have ideas, but turning them into logical English sentences takes time and effort.” Another added, “Sometimes I doubt myself. Am I thinking critically or just writing nonsense? But when my teacher said, ‘Just trust your process,’ I felt more confident.” For instance, when they were required to compose the supporting sentences for the main premise, they had to engage in prolonged periods of silent reflection. Even when they had identified the sentences, they were uncertain as to whether their work was accurate. Fortunately, their instructor was consistently supportive and encouraged them to believe in themselves. The second challenge was related to language. They had to translate their thoughts into English, which was a foreign language with different grammar rules, vocabulary, and sentence structures. The students’ experiences aligned with the challenges faced by EFL instructors as previously mentioned.

Students’ reflections in this study offer confirmatory and complementary evidence to several empirical investigations. Yulian (2021) showed that students in flipped classrooms reported improved CT in reading, a finding reflected here as students recognized the need to verify and evaluate textual claims. Similarly, Din (2020) reported a disjunction between students’ attitudes and abilities, also evident here, where students struggled with writing reflective content despite their enthusiasm. In alignment with Sharadgah, Sa’di, and Ahmad (2020), who found that explicit teaching of CT through writing improved students’ evaluative and inferential skills, the present study found that students became more conscious of logic, coherence, and evidence in their writing tasks.

The findings also draw parallels with Yaiche (2021) and Wale & Bishaw (2020), where inquiry and discovery-based learning facilitated deeper reasoning and problem-solving. Additionally, students’ recognition of language barriers and hesitation in expressing abstract ideas in English confirms Akatsuka’s (2020) findings regarding low-proficiency learners’ resistance to higher-order thinking. These experiences underscore the constructivist and sociocultural theories underpinning this study, specifically, that students internalize CT through interaction, reflection, and guided practice.

The novelty of this study also lies in its theoretical contribution, which demonstrates that the development of CT in EFL contexts is not solely a cognitive process but is also inherently linguistic and affective. This multidimensional perspective is often overlooked in traditional, linear CT frameworks that treat thinking skills as isolated from language proficiency and emotional engagement. By highlighting students’ struggles not only with understanding but also with articulating critical thought in a foreign language, the study offers a novel lens through which to view CT instruction. Practically, this research provides a reflective template for instructors to anticipate and address students’ dual challenges in comprehension and

expression. It introduces the concept of dual-scaffolded instruction as an innovative pedagogical approach, one that simultaneously supports the development of CT skills and linguistic proficiency in EFL learning environments.

Nonetheless, this study is not without limitations. The relatively small and geographically limited sample, comprising five instructors from four institutions and 49 students from only two classrooms, may constrain the generalizability of the findings. Future research with a broader participant pool and enhanced methodological triangulation is recommended to build upon these findings. Despite these limitations, the study offers meaningful contributions to EFL and CT pedagogy. Theoretically, it underscores the adaptability of CT principles within language education by linking CT elements, such as analyzing, evaluating, and reasoning, with distinct language skills. Practically, the study provides a pedagogical reference for instructors seeking to integrate CT into EFL instruction, particularly in non-Western, higher education contexts where such integration remains underexplored. These insights are expected to inform curriculum development, instructional strategies, and teacher training programs aimed at fostering students' higher-order thinking skills through language learning.

5. Conclusion

This research sought to address three key questions: (a) the manner in which EFL instructors integrated CT skills into their teaching practices, (b) the challenges they faced when incorporating CT into teaching activities, and (c) the perceived impact of CT on EFL students' CT skills. The response to the initial inquiry indicated that CT could be integrated into all language skills (reading, listening, speaking, and writing) and language components (vocabulary and grammar). The CT elements included analyzing, evaluating, giving arguments, guessing, inferring, reasoning, and summarizing. The three challenges identified in response to the second question were: EFL instructors expressed uncertainty regarding the efficacy of their CT instruction, constrained opportunity to implement more integration due to limited time and plenty of teaching materials to be covered, and encountered difficulties in doing the integrated tasks with their students. Regarding student perceptions and experiences, the research found that students benefited from the course in terms of becoming aware of the texts they were reading and the pieces of writing they were composing. However, they also expressed difficulty in thinking critically, apart from turning the results of thinking processes into a foreign language.

The findings of this research could contribute to the existing literature on the integration of CT and EFL instruction in higher education, providing insights into the processes involved in such integration. Another insight is the necessity for EFL instructors who wish to integrate CT into their teaching to be aware that, despite the positive impact of such integration, EFL students still encounter difficulties when attempting to complete integrated tasks. This aspect requires further attention. Moreover, further research in Indonesia on a similar topic is needed in different settings with diverse participants to gain a more comprehensive understanding of the conditions and challenges faced by EFL instructors in integrating CT and instruction within the context of higher education.

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