

Beyond similarities and differences: Unveiling critical thinking in EFL students' comparison-contrast essays

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Abstract

Critical thinking is widely recognized as a key objective in English as a Foreign Language (EFL) writing instruction. However, few studies have explored how it is demonstrated in specific academic genres. This study examined how EFL university students expressed critical thinking through the writing of comparison-contrast essays. Guided by Paul and Elder's (2020) critical thinking framework, the study addressed the question: How do EFL students demonstrate critical thinking in the process of composing comparison-contrast essays? The research took place in an essay writing course at a university in Jakarta, Indonesia, involving 20 fifth-semester English education majors aged 21–23. Data included students' essays and their written reflections on the writing process. The data were analyzed using qualitative content analysis, applying the elements and intellectual standards of critical thinking to identify patterns of reasoning. The findings showed that students demonstrated critical thinking through analytical categorization, evaluative judgments, integration of perspectives, and logical organization. Reflections revealed deliberate thinking strategies that supported the writing process. The study concludes that comparison-contrast writing, when paired with structured instruction and reflective practice, provides a productive platform for developing critical thinking. These insights contribute to genre-based writing pedagogy and support the integration of critical thinking as a central goal in EFL education.

Keywords: *Academic writing; comparison-contrast essay, critical thinking, EFL students, qualitative research*

INTRODUCTION

Academic writing plays a vital role not only in language development but also in shaping students' intellectual growth in the context of EFL education ([Molinari, 2024](#); [Vasilopoulos & Bangou, 2025](#); [Wang et al., 2025](#)). Among various forms of academic writing, the comparison and contrast essay presents an effective structure through which students can develop reasoning, highlight relationships between concepts, and express evaluative judgments ([Deane & Philippakos, 2024](#); [Valerdi, 2023](#)). This genre requires more than identifying similarities or differences because it requires students to examine ideas, prioritize criteria, and draw conclusions based on evidence. As such, it holds strong potential to foster critical engagement with content and sharpen students' ability to think clearly and logically. Unlike writing tasks that mainly ask students to state opinions or summarize information, comparison and contrast essays require students to make relational judgments, select relevant criteria, weigh alternatives, and justify conclusions. These demands make the genre a meaningful site for observing how critical thinking (CT) is actually constructed in student writing.

Despite the inclusion of critical thinking (CT) in many EFL curricula, student writing often reflects a limited engagement with this objective. Many essays tend to describe rather than analyze, summarize instead of evaluate, and list rather than explain. While researchers have addressed the importance of CT in general (e.g., [Dessie & Guadu, 2025](#); [Song et al., 2025](#); [Yang et al., 2025](#)), there is a noticeable lack of inquiry into how it is reflected in specific academic writing tasks. Few studies have explored how CT emerges in actual student texts, particularly within the structure of a comparison and contrast essay. This gap is even more evident in non-English-dominant educational settings, where writing instruction may be shaped by local cultural and academic expectations. Previous studies have often examined CT through broad writing performance, argumentative essays, instructional interventions, or students' perceptions. However, little attention has been given to the textual traces of CT in comparison and contrast essays, even though this genre is widely taught in EFL writing classrooms. As a result, the field still lacks clear empirical evidence on how students use comparison, categorization, justification, and perspective taking as visible forms of critical thinking in their written work.

This study addresses the gap by examining how CT is demonstrated in comparison-and-contrast essays by EFL university students. The research is guided by the question: *How do EFL students demonstrate critical thinking in the process of composing comparison and contrast essays?* The objective is to identify the specific ways in which CT appears in students' written texts and written reflections, with particular attention to how the comparison and contrast structure supports analytical categorization, evaluative judgment, integration of multiple perspectives, and logical organization.

The novelty of this study lies in three main aspects. First, it shifts the focus from general claims about CT in EFL writing to a close analysis of one specific academic genre, namely the comparison and contrast essay. Second, it examines students' actual essays together with their written reflections, allowing the study to connect visible textual features with the thinking processes reported by the writers. Third, it applies [Paul and Elder's](#) CT framework to show how elements of thought and intellectual standards appear in student writing within an Indonesian EFL university context. Through this focus, the study offers a more precise account of how CT is not only expected in the curriculum but also expressed, organized, and justified in students' academic texts.

The contribution of this study is both theoretical and pedagogical. Theoretically, it extends current discussions of CT in EFL writing by demonstrating how a specific rhetorical structure can shape the expression of higher-order thinking. Pedagogically, it provides writing teachers with concrete indicators of CT in comparison and contrast essays, such as meaningful categorization, reasoned evaluation, fair consideration of different viewpoints, and coherent movement from comparison to implication. These insights can help EFL teachers design writing instruction and assessment practices that treat comparison-and-

contrast writing not as a simple descriptive task but as a productive space for developing critical academic reasoning.

Theoretical Models of Critical Thinking in Writing

A number of well-established frameworks have been proposed to define and assess CT, especially within academic contexts such as writing. One of the most widely recognized is [Facione's \(1990\)](#) model, developed through expert consensus in the Delphi Report. [Facione \(1990\)](#) defined CT as a purposeful, self-regulatory judgment that involves six core cognitive skills: interpretation, analysis, evaluation, inference, explanation, and self-regulation. In writing tasks, these skills are essential. For instance, interpretation involves making sense of texts or ideas, whereas evaluation requires the writer to assess the credibility of sources or the strength of arguments. When applied to writing, this model encourages students to think carefully about their position, the purpose of their comparison, and the reasoning behind their conclusions. Together, these components help writers go beyond surface-level analysis and produce more thoughtful, balanced essays. For this study, [Paul and Elder's framework \(2020\)](#) was selected as the main analytical lens because it provides not only a list of thinking skills but also a set of visible reasoning standards that can be traced in written texts. This is important for analyzing comparison and contrast essays, since students must make their purpose clear, select relevant points of comparison, examine information from more than one position, identify assumptions, and draw logical implications from the similarities and differences they discuss. In this sense, the framework offers a closer fit with the rhetorical and cognitive demands of comparison and contrast writing.

A third framework that supports the integration of CT in writing is Bloom's revised taxonomy ([Anderson & Krathwohl, 2001](#)). This taxonomy classifies cognitive tasks in six categories, from lower-order to higher-order thinking: remembering, understanding, applying, analyzing, evaluating, and creating. In writing a comparison and contrast essay, students typically draw upon the higher levels of this taxonomy. They analyze similarities and differences between concepts or texts, evaluate their significance, and create original interpretations based on this analysis. Thus, the taxonomy provides a clear structure for understanding the cognitive demands of comparison-contrast writing and supports educators in designing tasks that challenge students to engage in thoughtful, meaningful reflection.

Although these three models are relevant to writing research, they serve different purposes in this study. [Facione's model \(1990\)](#) is valuable for identifying broad cognitive skills such as analysis, evaluation, and inference, while Bloom's revised taxonomy helps explain the level of thinking required in academic tasks. However, both models are less specific in showing how reasoning appears inside the structure of a student's essay. [Paul and Elder's model \(2020\)](#) was therefore preferred because it links the components of reasoning with standards for judging the quality of that reasoning. This makes it especially suitable for examining how students construct comparison, justify evaluation, consider different viewpoints, and organize claims coherently in written form. Thus, [Facione](#) and Bloom are used as supporting conceptual references, while [Paul and Elder's framework \(2020\)](#) functions as the primary analytical model for the study.

This choice is also relevant to the genre focus of the research. A comparison and contrast essay is not merely a task of listing similarities and differences. It requires the writer to decide what is worth comparing, explain why the comparison matters, interpret the relationship between the compared subjects, and present a reasoned conclusion. These processes correspond closely to [Paul and Elder's \(2020\)](#) elements of thought, particularly purpose, information, interpretation, assumptions, implications, and point of view. They also correspond to the intellectual standards of clarity, relevance, logic, breadth, and fairness. For this reason, [Paul and Elder's framework \(2020\)](#) allows the analysis to move beyond general statements about CT and toward a more precise examination of how CT is expressed within a particular academic genre.

Studies on CT in EFL Writing

In recent years, the emphasis on CT in EFL writing has gained momentum, reflecting a shift from focusing solely on linguistic accuracy to fostering higher-order thinking in academic communication. Numerous studies have examined various pedagogical interventions, writing tasks, and technological integrations to support the development of CT in EFL writing classrooms. These studies, although diverse in context and method, share a common aim: to enhance learners' ability to analyze, reason, and construct arguments effectively through writing. This section reviews and compares relevant studies, highlighting their contributions, methodological strengths and limitations, and identifying the key gaps this present research aims to address. However, because this study focuses on comparison and contrast essays, the review does not treat CT as a general writing outcome only. Instead, it pays particular attention to how previous studies have examined the relationship between writing genre, rhetorical structure, and students' reasoning. This focus is necessary because different essay genres invite different patterns of thinking. Argumentative writing often requires taking a position and defending it, problem-solving writing requires identifying causes and proposing responses, while comparison and contrast writing requires categorizing criteria, weighing similarities and differences, and making judgments based on relational analysis.

Several studies have focused on identifying how CT emerges in the writing of EFL students and the obstacles that learners face in demonstrating it. [Ilyas and Arifin \(2025\)](#) explored students' argumentative essays and found that while learners could present coherent arguments and use evidence, they struggled to organize complex ideas and synthesize information effectively. [Jumariati et al. \(2024\)](#) echoed similar findings, noting that although students were strong in identifying problems and proposing solutions, they were less confident in constructing arguments and supporting them with evidence. [Gunawan et al. \(2025\)](#) highlighted barriers such as limited academic vocabulary and lack of critical reading exposure, emphasizing the importance of instructional support and structured feedback. These descriptive and document-based studies revealed recurring challenges in embedding CT in writing but offered limited insight into how genre choice or specific rhetorical structures influence such outcomes. Their findings are useful because they show that CT can be observed in students' written products, yet most of them focus on argumentative or general academic writing. As a result, they do not fully explain how students demonstrate CT when the task requires them to compare two subjects, establish shared criteria, and evaluate the meaning of similarities and differences. This limitation is important because comparison and contrast essays demand a form of reasoning that is relational rather than merely persuasive.

In contrast, several experimental and quasi-experimental studies have evaluated the effectiveness of instructional approaches designed to enhance CT. [Krisbiantoro \(2025\)](#) demonstrated the impact of the process-product approach in improving both CT and report writing performance among Indonesian EFL students. [Al Herz \(2025\)](#) and [Insuwan and Thongrin \(2025\)](#) similarly reported gains in students' CT abilities when writing tasks incorporated culturally relevant content and genre-based instruction. [Xu et al. \(2025\)](#) highlighted how the continuation task significantly boosted Chinese students' dispositions and performance in CT. These intervention-based studies provide compelling evidence for the role of task design and scaffolding in fostering analytical reasoning. However, many of these studies measure improvement through scores, tasks, or general performance indicators, without closely examining how CT is constructed inside the students' actual writing. They also tend to treat genre as a teaching approach rather than as a structure that shapes reasoning. The present study responds to this limitation by examining how the comparison and contrast essay itself guides students to categorize ideas, compare alternatives, justify preferences, and move from observation to implication.

The increasing use of generative AI tools in writing instruction has also prompted investigations into their effects on CT. [Arif and Naeem \(2025\)](#) and [Shen and Teng \(2024\)](#)

reported that AI-supported writing, when paired with reflective learning strategies, improved argument structure and reasoning clarity. However, [Liu et al. \(2025\)](#) and [Tai et al. \(2025\)](#) warned against over-reliance on Artificial Intelligence (AI), which could diminish learners' autonomy and suppress deeper analysis. [Zhang et al. \(2025\)](#) addressed this concern by introducing reflection journals that enhanced students' critical evaluation of AI-generated outputs. These studies underscore the importance of teacher mediation and student reflection in AI-integrated writing environments. However, they mainly focus on performance outcomes rather than analyzing written texts to determine how CT is expressed. Although these studies are relevant to current writing pedagogy, their concern is mainly the role of digital tools in supporting or limiting CT. They provide limited insight into how students reason within a non-digital classroom task, where the structure of the essay itself becomes the main support for thinking. The present study, therefore, offers a different contribution by showing how CT can be traced in students' own written comparisons and reflections without relying on AI tools as the central learning condition.

A separate group of studies investigated the role of critical pedagogy and multimodal strategies in enhancing CT through writing. [Lee and Lee \(2025\)](#) used Disney animations to facilitate critical literacy practices among Korean middle school students, while [Alenazi \(2025\)](#) explored how picture-based writing supported interpretation and reasoning skills. [Mehta and Al Mahrooqi \(2024\)](#) advocated the empowerment of students through independent research projects, arguing that inclusive and context-relevant tasks foster more authentic engagement. Similarly, [Mujiono et al. \(2024\)](#) integrated project-based learning and design thinking to advance critical writing. While these studies offer innovative insights into student-centered instruction, most of them are exploratory and focus more on students' perceptions or outcomes than on the actual cognitive processes embedded in their written texts. They also show that CT can be encouraged through rich materials, social themes, and creative classroom practices. Nevertheless, the genre dimension remains underdeveloped. The question of how a conventional academic essay genre, such as comparison and contrast writing, can function as a site for CT has not been sufficiently examined. This is significant because EFL writing classrooms often teach comparison and contrast essays as basic academic writing tasks, yet their potential for developing analytical and evaluative reasoning is rarely discussed in depth.

Additional contributions come from corpus-based and review studies that explore CT from a discourse or assessment perspective. [Yilmaz and İlerten \(2024\)](#) analyzed shifts in metadiscourse' marker use, revealing how learners transitioned from personal opinion to evidence-based argumentation. [Plakans and Lee \(2025\)](#) reviewed trends in second language writing assessment and emphasized the importance of recognizing CT as a core component of writing competence, beyond surface-level linguistic features. These works add theoretical depth to the conversation but do not provide genre-specific findings or close analyses of student compositions, which limits their direct application to genre-sensitive writing instruction. Their contribution is important because they show that CT can be examined through discourse features and assessment principles. However, they do not show how students use a particular rhetorical pattern to build critical reasoning across an essay. In comparison and contrast writing, CT may appear through the selection of criteria, the balance between similarities and differences, the explanation of significance, and the movement from comparison to conclusion. These textual features require close qualitative analysis, which remains limited in the current literature.

Across these studies, CT is widely acknowledged as essential to EFL writing, and various interventions have proven effective in enhancing it. However, a notable gap persists in research that directly analyzes how CT is expressed within a specific academic writing genre. Most studies either use argumentative writing as a general category or do not distinguish between different rhetorical structures. None of the reviewed works focus explicitly on the comparison-contrast essay as a site of CT development. This present study addresses that gap by closely examining how EFL university students demonstrate CT

within the structure of comparison-contrast essays. By analysing student texts through a genre-sensitive and cognitively informed lens, the study offers new insights into the intersection of genre, writing pedagogy, and higher-order thinking, contributing to both theoretical understanding and classroom practice.

The present study positions [Paul and Elder's framework \(2020\)](#) as the most appropriate model for addressing this gap. The comparison and contrast essay requires students to clarify their purpose, select relevant information, interpret relationships, recognize assumptions, consider more than one point of view, and draw logical implications. These actions correspond directly to the elements of thought identified by [Paul and Elder \(2020\)](#). At the same time, students' writing can be evaluated through intellectual standards such as clarity, relevance, logic, breadth, depth, and fairness. This makes the framework more suitable than [Facione's model \(1990\)](#) and Bloom's taxonomy for the present analysis. [Facione's model \(1990\)](#) identifies important CT skills, and Bloom's taxonomy explains levels of cognition. Still, [Paul and Elder's framework \(2020\)](#) allows the researcher to examine both the structure and the quality of reasoning within actual student essays. Therefore, the study contributes to the field by offering a genre-focused account of CT in EFL writing and by demonstrating how comparison and contrast essays can reveal students' analytical, evaluative, and reflective thinking in observable textual forms.

RESEARCH METHOD

Research Design

This study employed a qualitative content analysis within an interpretivist paradigm to explore how CT is demonstrated in EFL students' comparison and contrast essays. This approach was selected to enable a close examination of students' written texts and uncover patterns of reasoning, evaluation, and interpretation embedded within their writing. Rather than relying on numerical scoring or surface-level features, qualitative analysis enables researchers to identify how students express critical thought through rhetorical choices, logical connections, and evaluative language ([Carradini et al., 2025](#)). The interpretivist stance positions meaning as socially constructed, making it suitable for understanding how learners engage with comparison and contrast as a form of academic argument. By focusing on the meanings students construct and the decisions they make in shaping their texts, this design provides a deeper understanding of the cognitive and communicative demands involved in producing critical writing in a foreign language context.

Qualitative content analysis was considered appropriate because the study did not aim to measure statistical improvement in students' CT. Instead, it sought to explain how CT was demonstrated in twenty student essays and written reflections. The research question required an interpretive reading of students' texts, including how they selected points of comparison, justified claims, considered alternative views, and organized reasoning. Therefore, the analysis focused on the meaning and quality of students' written responses rather than on frequency counts or test scores.

The study used a combined deductive and inductive coding procedure. Deductive coding was guided by [Paul and Elder's \(2020\)](#) CT framework, particularly the elements of thought and the intellectual standards. These categories provided the initial lens for identifying evidence of purpose, information, interpretation, assumptions, implications, point of view, clarity, relevance, logic, breadth, and fairness in the essays and reflections. Inductive coding was then used to identify recurring patterns that emerged from the data but were not fully captured by the initial framework. This combination allowed the analysis to remain theoretically grounded while also being responsive to the students' actual writing.

The derivation of themes followed several stages. First, all essays and reflections were read repeatedly to gain a complete understanding of the data. Second, meaningful units were identified, including sentences, clauses, or paragraphs that showed reasoning, judgment, comparison, explanation, or reflection. Third, these units were coded using the initial categories drawn from [Paul and Elder's framework \(2020\)](#). Fourth, related codes were

compared across essays and reflections to identify repeated patterns. Fifth, similar codes were grouped into broader categories. Finally, these categories were refined into four major themes that represented the strongest and most repeated forms of CT in the data: analytical thinking through comparison and categorization, evaluative judgments and justifications, integration of multiple perspectives, and logical organization and coherence of reasoning.

Context and Participants

This study was conducted as part of an essay writing course offered to fifth-semester students majoring in English education at a university in Jakarta. The course is part of a structured writing sequence within the English education program, following paragraph writing and foundational essay writing courses as prerequisites. One of the key components of the course was the teaching of comparison and contrast essays, which served as the focal genre for this research. The comparison-contrast task was selected due to its potential to prompt analytical thinking, perspective weighing, and structured argumentation, which are qualities that are closely associated with CT. Instructional sessions focused not only on structural organization but also on developing coherence, logical reasoning, and effective argument support, providing a strong pedagogical foundation for the investigation.

A total of 20 students participated in this study, comprising 18 females and 2 males, aged between 21 and 23 years old. All participants had completed the prerequisite writing courses and were familiar with academic writing conventions. They were selected through purposive sampling, as they were enrolled in the course during the semester in which the study was conducted. Ethical procedures were strictly followed: the research goals and data collection process were clearly explained, and students voluntarily gave their consent after understanding the purpose of the study. To ensure confidentiality, participants' identities were kept anonymous, and pseudonyms in the form of codes (P1 to P20) were used throughout the data analysis and reporting stages. This approach respected the integrity of the participants and upheld research ethics while allowing for detailed textual examination of their work.

The sample size was appropriate for qualitative content analysis because the purpose was not to generalize statistically but to examine the depth and variety of CT expressions within a bounded classroom context. The twenty essays and twenty written reflections provided sufficient textual data to identify repeated patterns across participants while still allowing close and careful analysis of each student's writing.

Data Sources

This study drew upon two sources of data to explore how CT is demonstrated in comparison and contrast essays written by EFL students. The primary data consisted of student essays written during an in-class writing task. Before this, students had received a focused instructional session lasting 3.5 hours, during which they were introduced to the structure, language features, and logical organization of comparison and contrast essays. The session also included a complete model essay and guided practice exercises to help students understand how to organize comparisons, present clear arguments, and support their points with relevant examples. In the following meeting, students wrote their own comparison and contrast essays on the given topics. The writing prompt asked students to compare and contrast online learning and face-to-face learning. This topic was selected because it was familiar to the students and allowed them to draw on their learning experiences while also requiring them to compare two learning modes through relevant criteria, such as flexibility, communication, motivation, discipline, and learning effectiveness. These essays served as the core material for examining how CT appeared in their writing choices, use of evidence, and overall structure.

To complement the textual analysis, the students were also asked to write reflections about their writing experience immediately after completing the essay. These reflections were written in Indonesian to allow students to express their thoughts freely without language barriers. They were encouraged to describe anything that came to mind during the writing process, such as how they generated ideas, connected points, managed structure,

dealt with challenges, and evaluated their own reasoning. This reflective writing provided deeper insights into the students' cognitive and affective engagement with the task and allowed the researcher to connect observable features in the essays with the writers' intentions, thought processes, and difficulties. Together, the essays and reflections formed a rich dataset that supported both surface-level textual analysis and a deeper understanding of how students approached CT during the act of writing.

The use of essays and reflections also strengthened the analysis through data triangulation. The essays showed how CT appeared in the final written product, while the reflections revealed how students explained their thinking, planning, and decision-making during composition. By comparing these two sources, the researcher could examine whether the reasoning observed in the essays was supported by the students' own accounts of their writing process.

Analytical Framework

This study employed [Paul and Elder's \(2020\)](#) critical thinking framework as the foundation for analyzing student essays and written reflections. The framework offers a comprehensive model built around two interrelated components: the elements of thought and the intellectual standards. The elements include purpose, question, information, interpretation, concepts, assumptions, implications, and point of view. These elements guide the structure of reasoning within a written text. The intellectual standards, such as clarity, accuracy, relevance, logic, depth, breadth, and significance, are used to evaluate the quality of that reasoning. This dual approach allowed for a systematic assessment of how students organized their ideas, made judgments, and supported their comparisons with meaningful insights.

The analysis was conducted through manual coding in several stages. First, the essays were read closely to identify meaningful units that indicated CT. These units included statements of comparison, explanations of similarity and difference, evaluative claims, reasons, examples, conclusions, and transitions that showed logical connections. Second, the meaningful units were coded deductively using [Paul and Elder's](#) elements of thought and intellectual standards. For example, a sentence that stated the reason for comparing two learning modes was coded as purpose, while a paragraph that considered both online and face-to-face learning from different student needs was coded as point of view and breadth. A statement that explained the consequence of a difference between the two learning modes was coded as an implication. Third, inductive coding was applied to identify repeated patterns that appeared across the essays and reflections. Through this process, the codes were gradually grouped into broader categories.

For example, when students clearly stated their purpose, framed a guiding question, or identified assumptions in their comparisons, these instances were marked accordingly. Likewise, textual features reflecting logical development, balanced perspectives, and meaningful conclusions were noted as evidence of critical engagement. After coding the essays, the written reflections were examined to understand the students' decision-making during the writing process. These reflections offered valuable support for interpreting how students arrived at their reasoning and helped confirm or clarify what was expressed in the essays.

The four themes were generated through a process of code comparison and category refinement. Codes related to the selection of comparison points, grouping of ideas, and use of criteria were combined into the theme of analytical thinking through comparison and categorization. Codes related to preference, judgment, explanation, and reason-giving were grouped into evaluative judgments and justifications. Codes showing awareness of different learning needs, balanced views, and conditional reasoning were grouped into integration of multiple perspectives. Codes related to paragraph unity, transitions, order of ideas, and movement from observation to implication were grouped into logical organization and coherence of reasoning. These four themes were retained because they appeared repeatedly

across the essays and were supported by evidence from students' reflections.

To ensure consistency and depth in the analysis, the researcher followed a systematic content analysis procedure that included repeated reading, coding, code comparison, category development, theme refinement, and verification across the two data sources. Segments of text were grouped into themes corresponding to [Paul and Elder's \(2020\)](#) framework, allowing the researcher to trace the presence and quality of CT features within and across cases. This approach enabled the study to go beyond merely identifying whether CT occurred, instead examining how it took shape in response to the specific demands of the comparison-contrast genre. The combination of this structured framework with open, grounded reading of the texts supported a balanced and rigorous interpretation of students' CT in academic writing.

Trustworthiness was addressed through credibility, dependability, confirmability, and transferability. Credibility was strengthened by using two data sources, namely essays and written reflections, so that the interpretation of CT in the essays could be compared with students' own explanations of their writing process. Dependability was supported by maintaining a clear coding procedure and an audit trail that recorded coding decisions, category formation, and theme refinement. Confirmability was enhanced through reflective memo writing during analysis to reduce the influence of personal assumptions and to keep the interpretation grounded in the data. Transferability was supported by providing detailed information about the research context, participants, writing task, data sources, and analytical procedures, allowing readers to judge the relevance of the findings to other EFL writing contexts.

To further strengthen the reliability of interpretation, selected coded excerpts were reviewed after the initial coding process to check whether the codes consistently reflected [Paul and Elder's framework \(2020\)](#) and the students' written meanings. Any overlapping or unclear codes were reconsidered and placed under the most appropriate category. This process helped ensure that the four final themes were not imposed randomly but were developed through repeated engagement with the data and careful comparison across participants.

FINDINGS AND DISCUSSION

Findings

Based on [Paul and Elder's \(2020\)](#) framework, four key themes emerged: analytical thinking through comparison and categorization, evaluative judgments and justifications, integration of multiple perspectives, and logical organization and coherence of reasoning. These findings are drawn from students' essays and reflections, providing a view of both the written products and the thinking processes behind them.

Analytical Thinking through Comparison and Categorization

Students demonstrated CT by identifying key aspects of the topics and organizing their comparisons into focused categories. Instead of listing random features, they grouped ideas around meaningful criteria such as time flexibility, communication, learning motivation, and effectiveness. This shows the ability to analyze the subject and structure it intentionally. For example, P3 wrote, *"Online learning offers flexibility in terms of time and place, whereas face-to-face learning provides fixed schedules and physical presence." These differences affect students' discipline and learning habits.* The student moved beyond surface comparisons by connecting each feature to a broader implication.

The reflections further support the notion that this comparison was based on planning and not incidental. P14 shared, *"I began by dividing the two learning types into aspects like time, communication, and motivation, so I could think clearly about what to compare."* This reveals an analytical process in which students first identified categories and then structured their comparisons based on those distinctions. The clarity and consistency in these categories reflect a level of reasoning consistent with the intellectual elements of thought.

In addition to topic-based categorization, some students demonstrated the ability to compare abstract dimensions, such as motivation, learning independence, and psychological

comfort, which reflected deeper cognitive engagement with the subject. For example, P8 noted, *"In online learning, students have to motivate themselves without much supervision, but in face-to-face classes, teachers constantly remind and guide them."* This shows how the student moved from concrete aspects, such as time and place, to psychological and behavioral considerations. The reflections reinforced that these deeper comparisons emerged from intentional thought. P11 explained, *"I didn't only think about the physical setting." I tried to include emotional and psychological factors that influence learning because those are important too."* These examples demonstrate that analytical thinking is not limited to surface-level traits but extended to internal and abstract elements that affect learning. Such comparisons indicate an increasing awareness of complexity, supporting [Paul and Elder's \(2020\)](#) emphasis on examining assumptions and implications within clear categories of thought.

Evaluative judgments and justifications

CT was also visible in how students expressed clear evaluations and supported their positions with logical reasoning. Many students did not treat the compared subjects as neutral but instead chose one over the other, offering justifications tied to specific values, such as learning effectiveness or personal engagement. For instance, P7 wrote, *"Although both have strengths, face-to-face learning is more effective because it encourages discipline and deeper engagement through real-time interaction."* The statement not only shows a preference but is also grounded in reasoning and relevant criteria."

In their reflections, the students explained how they arrived at these decisions. P12 remarked, *"I thought about my own experiences and asked myself which one gave better results. I chose face-to-face teaching because I learned more when the teacher was in front of me."* This illustrates how students reflected on both personal and academic experiences to form their conclusions. Such judgments were made through deliberate comparison and thoughtful evaluation, aligning with the intellectual standard of significance and depth.

Integration of multiple perspectives

Another indicator of CT in the essays was the integration of alternative views. Several students demonstrated the ability to consider both the strengths and limitations of each learning mode, acknowledging that the effectiveness of either one might vary depending on individual needs or contexts. For example, P9 wrote, *"Face-to-face learning gives better interaction, but online learning helps students with part-time jobs." "Both have benefits depending on the student's situation."* This recognition of multiple factors suggests that students were not merely arguing for one side but attempting to consider the topic in a more balanced way."

Reflections confirmed that this perspective-taking was intentional. P5 stated, *"I wanted to ensure I didn't ignore the good aspects of online learning, even though I like face-to-face better. I tried to be fair in my comparison."* This demonstrates students' willingness to step outside their personal preferences and consider broader contexts. The ability to account for different viewpoints and adjust claims accordingly demonstrates the use of CT standards, such as fairness, relevance, and breadth.

Moreover, some students explored conditional reasoning to justify their balanced perspectives, signaling a more advanced form of critical engagement. Rather than treating both learning modes as universally equal, they framed their comparisons around situational effectiveness. According to P13, *"If students need flexibility because of distance or family responsibilities, online learning is more practical. However, if they struggle with focus, face-to-face is the better option."* This type of conditional statement reveals an understanding that effectiveness is not absolute but shaped by individual circumstances. In the reflection, P2 elaborated, *"I realized I couldn't say one method is always better." It depends on what the students need at the time, so I tried to explain that clearly in my writing."* These responses highlight the students' ability to integrate context into their reasoning, demonstrating an awareness of complexity and a commitment to fairness. These are two qualities that align closely with [Paul and Elder's \(2020\)](#) intellectual standards and support the development of well-rounded CT in academic writing.

Logical Organization and reasoning coherence

Finally, the students demonstrated CT through their essays' logical flow and coherence. Most essays followed a clear organizational pattern, with each paragraph focusing on a single comparison point, supported by transitions and logical progression. These features reflect clarity of thought and purposeful structuring. P16 wrote, *"In terms of communication, face-to-face allows direct feedback." In contrast, online learning uses written chats, which can be delayed. This difference affects how quickly students get help and clarification.*" The paragraph is structured to move from observation to implication, demonstrating logical development."

Students were also aware of the importance of clarity in presenting their ideas. P1 noted in her reflection, *"I tried to make each paragraph compare one point only, so the reader doesn't get confused." I used transition words to show when I was changing ideas.*" This statement reveals deliberate attention to coherence, showing that students made conscious choices to present their arguments in a way that reflected structured reasoning. Such an organization reflects the intellectual standards of logic and clarity, supporting the conclusion that students engaged critically with the writing process.

Discussion

This study examined how EFL students demonstrated CT in comparison-and-contrast essays by analyzing both their written products and their reflections on the writing process. The findings show four forms of CT: analytical thinking through comparison and categorization, evaluative judgments and justifications, integration of multiple perspectives, and logical organization and coherence of reasoning. These findings are not general claims about writing improvement, but are grounded in specific textual actions found in the students' essays. Students demonstrated analysis when they selected criteria such as flexibility, communication, motivation, discipline, and learning effectiveness. They demonstrated evaluation when they judged which learning mode worked better and supported this judgment with reasons. They demonstrated breadth and fairness when they acknowledged that online and face-to-face learning may serve different student needs. They demonstrated logic when they arranged ideas in clear paragraphs and moved from comparison to implication. Thus, the findings indicate that CT in comparison-and-contrast writing emerged through observable rhetorical choices rather than through abstract thinking alone.

These results support previous studies that view writing as a space for developing CT, but they also extend them by showing how CT is shaped by a particular essay genre. [Ilyas and Arifin \(2025\)](#), for example, found that students could show CT in argumentative writing but often had difficulty organizing complex ideas and combining information. The present study adds that comparison and contrast writing can reduce this difficulty because it gives students a clearer structure for reasoning. The students did not have to build an argument from an open topic; instead, they worked through defined points of comparison and used those points to make judgments. This finding also complements [Krisbiantoro \(2025\)](#), [Al Herz \(2025\)](#), and [Insuwan and Thongrin \(2025\)](#), who emphasized the value of instructional support in CT-oriented writing. However, while those studies mainly showed that teaching approaches can improve CT, the present study shows where CT becomes visible in the text itself. It can be seen in how students classify ideas, explain the meaning of similarities and differences, justify preferences, and connect each comparison point to a conclusion. In this way, the study makes the analysis more text-centered and genre-focused.

The reflections strengthen this interpretation because they show that students were aware of the reasoning choices behind their essays. For example, some students explained that they first divided the topic into aspects before writing, while others stated that they considered both positive and negative sides before forming a conclusion. These reflective accounts confirm that the four themes were not only surface features of the final texts, but also part of the students' composing process. This finding is consistent with [Zhang et al. \(2025\)](#), who emphasized the value of reflection in writing development, and with [Shen and Teng \(2024\)](#), who linked writing support with clearer reasoning. The difference is that the

present study does not place digital tools at the center of the analysis. Instead, it shows that reflection itself, when paired with a comparison and contrast task, can help students examine their criteria, check their reasoning, and explain why their judgments are reasonable.

The findings also provide a clearer response to studies that reported students' weak reasoning in academic writing. [Jumariati et al. \(2024\)](#), for instance, found that students often struggled to support claims with convincing evidence. In the present study, students were able to justify claims more clearly when the task required them to compare two familiar learning modes. Their justifications were not always highly complex, but they usually connected a judgment to a criterion. For example, when students preferred face-to-face learning, they often linked this preference to direct feedback, discipline, interaction, or concentration. When they valued online learning, they linked it to flexibility, distance, or personal responsibility. This shows that comparison and contrast writing can help students move from preference to reasoned evaluation. The genre appears to guide students toward a more explicit link between claim, criterion, and explanation.

The findings extend [Paul and Elder's \(2020\)](#) framework by showing how its elements of thought and intellectual standards operate within the specific structure of comparison and contrast writing. In this genre, purpose appeared when students explained why the two learning modes were being compared. Information appeared when they selected relevant experiences or examples to support their points. Interpretation appeared when they explained what a similarity or difference meant for learning. The point of view appeared when they considered the needs of students in different situations. Implication appeared when they linked a feature, such as delayed feedback or flexible scheduling, to its possible effect on learning. The intellectual standards were also visible in genre-specific ways. Clarity appeared in focused comparison points. Relevance appeared in the selection of meaningful criteria. Logic appeared in the movement from comparison to explanation. Breadth appeared in the inclusion of both advantages and limitations. Fairness appeared when students avoided presenting one learning mode as always superior. Therefore, the study does not merely apply [Paul and Elder's framework](#); it shows how the framework can be translated into concrete indicators for analyzing EFL comparison and contrast essays.

This genre-based interpretation also clarifies why comparison and contrast essays should not be treated as merely descriptive writing tasks. The data show that students did more than list similarities and differences. They selected categories, judged the value of each category, considered different learning conditions, and arranged their reasoning in a sequence that led to a conclusion. These actions connect the genre directly to analytical reasoning, evaluative judgment, and perspective taking. This contribution differs from studies that focus mainly on AI-supported writing, visual prompts, or broad genre instruction ([Alenazi, 2025](#); [Arif & Naeem, 2025](#); [Liu et al., 2025](#); [Tai et al., 2025](#); [Insuwan & Thongrin, 2025](#)). The present study shows that the rhetorical structure of the essay itself can function as a thinking scaffold in an EFL classroom.

The findings have concrete implications for assessment in EFL writing classrooms. Teachers can assess CT in comparison and contrast essays by looking beyond grammar, vocabulary, and essay format. First, categorization can be assessed by examining whether students choose clear and meaningful points of comparison. Second, justification can be assessed by examining whether students support their judgments with reasons, examples, or learning experiences. Third, balanced viewpoints can be assessed by examining whether students recognize both strengths and limitations rather than presenting a one-sided claim. Fourth, logical transitions can be assessed by examining whether students use clear connections between comparison points and explanations. Fifth, evidence-based conclusions can be assessed by examining whether the final judgment follows from the comparison developed in the body paragraphs. These indicators can help teachers design rubrics that place CT at the center of writing assessment, not as an additional element but as part of the quality of academic writing itself.

This study suggests that teachers should model comparison and contrast writing as

a reasoning process. Students need support in choosing criteria, explaining why each criterion matters, weighing both sides fairly, and linking their conclusion to the evidence presented. Reflection tasks can also be used after writing to help students explain how they selected categories, formed judgments, and checked the logic of their essays. This is especially useful in EFL contexts because students may be able to explain their thinking more fully in their first language before refining it in English. In this way, comparison and contrast writing can become a practical classroom path for teaching CT through visible writing actions: categorizing, judging, balancing, connecting, and concluding.

Table 1

Infographic of CT indicators in EFL comparison and contrast essays

Finding theme	What the data showed	Link to Paul and Elder's framework	Assessment indicator
Analytical thinking through comparison and categorization	Students selected criteria such as flexibility, communication, motivation, discipline, and learning effectiveness.	Purpose, information, relevance, clarity	Clear and meaningful comparison categories
Evaluative judgments and justifications	Students made preferences and supported them with reasons drawn from learning experiences.	Interpretation, implication, significance, logic	Judgments supported by reasons, examples, or experience
Integration of multiple perspectives	Students considered different student needs and learning conditions before concluding.	Point of view, breadth, fairness	Balanced discussion of strengths and limitations
Logical organization and coherence of reasoning	Students arranged each paragraph around one comparison point and connected ideas through transitions.	Logic, clarity, relevance	Clear movement from comparison to explanation and conclusion

CONCLUSIONS

This study revealed that EFL students demonstrated CT in their comparison-contrast essays through analytical categorization, reasoned judgment, balanced perspective-taking, and coherent organization, supported by reflective insights into their writing process. The findings extend [Paul and Elder's \(2020\)](#) CT framework by showing how its core elements take shape within a specific academic genre, while also aligning with [Facione's \(1990\)](#) model and Bloom's taxonomy's cognitive dimensions. Empirically, this research offers new insight into the thinking abilities of Indonesian university students, a group often overlooked in genre-based writing research, especially in non-Anglophone contexts. Practically, the study shows that comparison-contrast writing, when paired with structured instruction and reflective tasks, can become a powerful tool for fostering higher-order thinking in EFL classrooms. Although the study focused on a small, context-specific group, limiting the generalizability of the findings, it provides a valuable foundation for further research across diverse institutions, genres, and learner levels. Future studies might explore the longitudinal development of CT in writing or examine how collaborative writing tasks shape reasoning. At its core, this research underscores the idea that students learn to think critically not only

by writing more but also by using purpose, structure, and reflection. As educators, we must design writing experiences that help students sharpen their reasoning and express their voices with clarity and confidence. Writing critically requires thinking freely and responsibly in a world that urgently needs both.

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