



Transfer of Critical Thinking Skills from Mother Tongue to English Academic Writing: Exploring the Perspectives of Multilingual Students in Indonesia

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ABSTRACT

This qualitative study aims to explore the translangual transfer of critical thinking (CT) from the first language to English academic writing among 25 multilingual Indonesian students. Using in-depth interviews conducted over a one-semester observation timeline, the research examines concepts of cognitive scaffolding and rhetorical adaptation. Findings reveal that CT transfer is a non-mechanical process where L1 serves as a cognitive medium for negotiating meaning and restructuring arguments. While metalinguistic awareness facilitates this transfer, divergent rhetorical logic and language anxiety pose significant challenges. This study contributes the novelty of viewing CT transfer as an epistemological negotiation of cultural identity. These results imply that pedagogical support should prioritize culturally responsive writing to foster academic agency and cross-linguistic intellectual authenticity.

INTRODUCTION

Critical thinking is one of the key indicators of 21st-century academic literacy. Paul and Elder (2006) define it as a deliberate intellectual process of analyzing, evaluating, and synthesizing information rationally as the basis for decision-making. In the context of higher education, this ability is manifested through argumentative writing practices, logical issue analysis, and the construction of a convincing academic stance. However, critical thinking is not purely cognitive; it is also shaped by social and cultural contexts. Atkinson (1997) emphasizes that the forms and expressions of critical thinking vary across languages and cultures. In multilingual and multicultural contexts such as Indonesia, students generally develop this skill first through their mother tongue either Indonesian or regional languages before encountering the demands of academic writing in English.

The transition from the mother tongue to English presents both conceptual and rhetorical challenges. Students must adjust their culturally embedded modes of critical reasoning to align with the rhetorical conventions and academic logic of English, which are typically more explicit, linear, and argument-driven (Kaplan, 1966; Scollon & Scollon, 2001). According to the Common Underlying Proficiency theory (Cummins, 2000), cognitive skills can be transferred from L1 to L2 if supported by appropriate exposure and pedagogy. However, studies indicate that such transfer does not occur automatically, particularly when significant cultural and rhetorical differences exist between L1 and L2.

Recent literature highlights a research gap in this area. EFL studies have tended to focus on the development of critical thinking directly in English, often overlooking the foundational role of the first language (Stapleton, 2002). Yet, as argued by Canagarajah (2013), academic literacy practices in a second language are deeply influenced by literacy experiences in the first language and by the writer's ability to negotiate meaning across linguistic and cultural boundaries. Research in bilingual contexts (e.g., Mangka, 2009) underscores the importance of metacognitive strategies, whereas the Indonesian context demonstrates that cultural factors play an equally significant role alongside individual strategies in the process of transferring critical thinking skills.

LITERATURE REVIEW

This literature review discusses three main pillars that serve as the theoretical foundation of the study: (1) the concept of critical thinking skills within academic contexts, (2) the transfer of cognitive and critical thinking skills across languages, and (3) academic writing within multilingual and multicultural contexts.

Critical Thinking in Academic Contexts

Critical thinking is a higher-order cognitive skill that involves the ability to assess assumptions, draw inferences, and evaluate arguments. Paul and Elder (2006) define it as "the art of analyzing and evaluating thinking with a view to improving it." In academic writing, critical thinking is reflected in the ability to organize ideas systematically, articulate a rational stance, and support arguments with relevant evidence. However, the universal view of critical thinking has been challenged by Atkinson (1997), who emphasizes that this skill is socially situated

and influenced by cultural and linguistic values. This means that the critical thinking style of Indonesian students shaped by cultural norms of harmony and collectivism does not necessarily align with the critical thinking conventions of English academic traditions. Stapleton (2002) further argues that teaching critical thinking in a second language context risks becoming meaningless if students' linguistic and cultural backgrounds are disregarded.

Transfer of Thinking Skills across Languages

The Common Underlying Proficiency (CUP) theory proposed by Cummins (2000) explains that cognitive and literacy skills can be transferred from the first language (L1) to the second language (L2), provided that both are actively developed. This implies that students who possess a foundation of critical thinking in their mother tongue have the potential to apply it in English academic writing. However, this transfer process is not mechanical. Odlin (1989) indicates that transfer can be either positive (facilitative) or negative (interfering). In critical contexts, differences in rhetorical patterns and cultural expectations may pose significant challenges. Canagarajah (2013) expands this perspective through the concept of translanguing literacy, which emphasizes the importance of metalinguistic awareness and meaning negotiation. Thus, the transfer of critical thinking skills is not merely a linguistic phenomenon but also an epistemological and ideological process.

Academic Writing in Multilingual and Multicultural Contexts

Academic writing in English adheres to specific conventions, such as explicit argumentation, linear structure, and the requirement for rational evidence (Hyland, 2003). Kaplan (1966), through contrastive rhetoric, asserts that rhetorical patterns vary across cultures. For instance, Indonesian students' academic writing, which often tends to be indirect or circular, may be perceived as "illogical" within the Anglo-Saxon academic tradition. Previous studies have shown that students who successfully adapt to these conventions typically possess strong metacognitive strategies and rich literacy experiences in their first language (Leki, 1995). However, EFL studies remain limited in exploring how multilingual students actively negotiate these rhetorical differences. The Indonesian context adds further complexity, as students must not only adjust their linguistic expression but also navigate their cultural identity and local patterns of critical reasoning.

METHODOLOGY

This study employed a qualitative multi-case design (Creswell, 2018; Yin, 2018) to explore how critical thinking skills developed in the first language (L1) are transferred into academic writing in English (L2) among multilingual university students in Indonesia. The research was conducted across five universities offering Academic Writing courses. A total of 25 students from English education programs were purposively selected based on the following criteria: (1) having a non-English first language background, (2) currently taking or having completed an academic writing course in English, and (3) willingness to participate in the study. Data were collected through in-depth online interviews designed to elicit participants' experiences, strategies, and

perceptions in transferring critical thinking skills across languages. The data were analyzed using thematic analysis (Braun & Clarke, 2006), involving stages of transcription, coding, categorization, and theme identification. This methodological approach provided a comprehensive understanding of the dynamic processes underlying the transfer of critical thinking skills across languages within the context of English as a Foreign Language (EFL) academic writing in Indonesian higher education.

RESEARCH RESULT

In line with the study's objectives to explore the transfer of critical thinking skills from students' first language to English academic writing and to understand the challenges and strategies involved the findings are organized into four interrelated themes. These themes reflect students' lived experiences, linguistic adaptations, and the pedagogical implications of multilingual learning in the Indonesian higher education context.

1. Students' Experiences in Transferring Critical Thinking Skills from the First Language to English.
2. How do you understand and develop critical thinking skills in your first language? In what contexts are these skills most frequently practiced or refined?

Participants from the Tolitoli (P2) and Dampal (P4) ethnic groups explained that the habit of engaging in family and community discussions made them accustomed to weighing reasons and logic behind decisions. Meanwhile, participants from the Javanese (P6) and Mandar (P15) backgrounds reported that family deliberations taught them to consider diverse perspectives and offer suggestions in a thoughtful and logical manner. Similarly, participants from the Bugis (P8), Batak (P9), and Minahasa (P23) communities described how family discussions fostered their ability to express opinions, construct arguments, and evaluate multiple viewpoints before accepting an idea. Overall, the family context served as an early environment where most participants began to apply critical thinking both practically and emotionally.

Participants from the Buol (P1) and Dondo (P3) ethnic groups associated the development of critical thinking with traditional assemblies and cultural events, where they were trained to think collectively and reflectively. Similar patterns were found among participants from the Minangkabau (P7) and Toraja (P10) groups, who stated that customary discussions and cultural forums served as spaces for logical reasoning and social reflection, sharpening their ability to construct arguments and analyze complex situations. Likewise, participants from the Makassar (P14) and Rejang (P20) communities highlighted the interpretive depth involved in understanding cultural symbols, folklore, and proverbs practices that fostered their capacity for analytical and critical interpretation of implicit cultural meanings.

Participants from the Dondo (P3), Selayar (P16), and Minahasa (P23) backgrounds reported that religious gatherings, moral discussions, and study groups provided spaces for reflective thinking and the cultivation of

argumentation skills. Furthermore, participants from the Bone (P17) and Soppeng (P18) communities explained that religious values embedded in their traditions encouraged deep, evaluative, and ethically grounded reasoning.

1. In your academic writing practice, how would you describe the relationship between the way you construct arguments in your first language and in English?

Participants from the Buol (P1) and Tolitoli (P2) ethnic groups explained that they were accustomed to building arguments gradually and thoughtfully, taking into account norms of politeness and social harmony within their communities. This rhetorical style carried over into their English academic writing, though they recognized the need to construct arguments in a more direct and explicit manner to meet international academic conventions.

Meanwhile, participants from the Dondo (P3) and Dampal (P4) groups highlighted the importance of using narratives and analogies in developing arguments. In their first language, argumentation often unfolds through stories or examples closely tied to everyday experiences. When writing in English, they attempted to blend this narrative style with formal academic structures to produce writing that was both logical and contextually grounded.

Participants from the Lauje (P5) and Bugis (P7) communities stated that in their cultures, the strength of an argument is determined by logical reasoning and its relevance to local values. They were used to supporting opinions with lived experiences or collective community knowledge. When writing in English, they felt the need to adapt to a more data-, theory-, and text-based presentation of evidence while still maintaining a culturally grounded reasoning style.

From a slightly different perspective, participants from the Javanese (P6), Minangkabau (P10), and Sundanese (P13) groups indicated that they adapted more easily to academic argumentation patterns because the deductive reasoning structure common in their native languages closely resembles English academic logic. They typically present a main statement first, followed by supporting explanations or evidence an approach that facilitated smoother transfer of critical thinking and argumentation skills into English writing.

Participants from the Batak (P11) and Toraja (P16) ethnicities emphasized that the open debate and discussion practices prevalent in their cultural environments trained them to express opinions critically and assertively. This experience gave them an advantage when composing English argumentative texts, which require analytical reasoning, the ability to evaluate others' arguments, and clarity in expressing one's stance.

However, participants from the Mandar (P15), Sasak (P17), and Dayak (P18) communities reported challenges in adapting their native rhetorical styles often more narrative, contextual, and implicit into the explicit, formal, and evidence-based structure expected in English academic writing. Nonetheless, they perceived their narrative sensitivity and contextual awareness as strengths that enhanced the persuasiveness of their written arguments.

Participants from the Malay (P20) and Bugis (P21) groups expressed that their cultural background emphasizes delivering opinions with social harmony

and respect for others' viewpoints. This cultural orientation made them more cautious in writing argumentative essays in English, as they needed to learn how to express positions more assertively while maintaining politeness and respectfulness ingrained in their cultural values.

Meanwhile, participants from Papua (P22), Aceh (P23), and Bali (P24) noted that although their native languages may not possess explicit argumentative structures, they were accustomed to developing reasoning through community discussions, traditional storytelling, and social practices. These experiences provided them with a cognitive foundation for understanding logic, organizing ideas, and constructing arguments in English writing, even though additional practice was required to meet academic writing conventions.

2. Could you describe the cognitive processes involved when you transfer your critical ideas from your first language into academic writing in English?

Participants such as P2 (Tolitoli) and P5 (Lauje) emphasized the necessity of "mental re-imagining" or "mental translation" due to structural differences between their local languages and the more explicit, logical organization of English. Similarly, P3 (Dondo) and P4 (Dampal) highlighted the challenge of adapting from implicit, narrative-based reasoning to a more analytical and argumentative mode of expression. Conversely, participants from cultures characterized by direct communication, such as P11 (Dayak Kenyah), found it relatively easier to align their cognitive processes with English academic writing conventions compared to those from cultures that value indirectness and social harmony, such as P10 (Toraja) and P13 (Bali).

Moreover, participants from linguistic communities with strong oral traditions, including P9 (Batak) and P21 (Bima), reported a significant cognitive shift from emotional and oral expression toward the formal, objective demands of academic writing in English. Others, such as P23 (Minahasa) and P24 (Tolaki), described difficulties in transforming cyclical and elaborative thought patterns into the linear and coherent structures required in English academic discourse. Several participants also noted the pivotal role of Indonesian as a cognitive bridge in facilitating the transfer of ideas from their first language to English (e.g., P16 and P19), alongside the use of metacognitive strategies such as idea visualization, idiomatic filtering, and conceptual reframing to align with academic expectations.

3. To what extent do you feel that the patterns of critical thinking developed in your first language influence or shape the quality of argumentation in your academic writing in English?

Participants, such as P1 (Buol), P5 (Lauje), and P16 (Selayar), explained that they needed to think first in their first language, then translate their ideas into Indonesian, before finally composing them in English. This demonstrates that Indonesian often functions as a cognitive bridge in the process of transferring critical thinking skills into academic English writing.

Other participants, such as P3 (Dondo), P4 (Dampal), and P14 (Makassar), reported that they needed to adjust from an implicit or narrative mode of reasoning to a more explicit and argumentative form in line with the

conventions of academic English. This highlights the necessity of restructuring local logic to align with the more linear and systematic expectations of English academic discourse.

Some participants also noted that their first-language critical thinking patterns posed challenges when applied to English academic writing due to contrasting communication norms. For instance, P10 (Toraja), P13 (Bali), and P22 (Tidung) stated that their native languages tend to avoid direct confrontation or rely heavily on metaphorical expression, making it difficult to express arguments explicitly in English.

Conversely, participants such as P9 (Batak), P11 (Dayak Kenyah), and P17 (Bone) expressed that the direct and assertive communication styles in their first languages supported the logical demands of English academic writing. This suggests that a degree of congruence between local communicative norms and academic discourse structures can facilitate smoother transfer of critical thinking skills.

2. Supporting and Inhibiting Factors in the Transfer of Critical Thinking Skills.

1. What factors do you consider most contributive in facilitating the transfer of critical thinking skills from your first language into English, particularly within the context of academic writing?

Data from 25 participants representing diverse ethnolinguistic backgrounds revealed that the transfer of critical thinking skills from the first language (L1) to English is shaped by multiple interrelated factors, both individual and environmental. Overall, the factors most frequently mentioned by participants can be categorized into six major themes:

First, metalinguistic awareness. Most participants, such as P5 (Lauje), P12 (Sasak), and P22 (Tidung), emphasized the importance of understanding differences in linguistic structure, rhetorical style, and argumentation patterns between their L1 and English. This awareness enabled them to reformulate ideas into forms more aligned with English academic conventions.

Second, staged language transfer. Participants like P1 (Buol), P14 (Makassar), and P16 (Selayar) reported using a stepwise strategy: formulating ideas in their L1, translating them into Indonesian, and then into English. This strategy helped maintain conceptual integrity while adjusting to the logical and syntactic demands of English academic writing.

Third, instructional and learning environment support. Many participants, including P3 (Dondo), P4 (Dampal), and P6 (Javanese), highlighted the crucial role of instructors, peer discussions, and feedback in facilitating the articulation of arguments. Direct guidance and iterative writing exercises served as key mediators between critical ideas formulated in the L1 and their expression in English academic writing.

Fourth, exposure to academic texts and writing training. Participants such as P2 (Tolitoli), P7 (Minangkabau), and P17 (Bone) underscored the importance of reading and analyzing academic texts, understanding expository structures,

and using paragraph frameworks (e.g., topic sentence, evidence, elaboration) as effective means to develop coherent and logically organized arguments.

Fifth, visualization and planning strategies. Several participants, including P8 (Bugis), P19 (Wajo), and P23 (Minahasa), stated that creating outlines, mind maps, or visual representations of ideas was highly effective in transferring critical insights from oral or narrative forms into systematic academic writing.

Sixth, discussion and speaking activities. Participants such as P11 (Dayak Kenyah), P15 (Mandar), and P21 (Bima) reported that open class discussions, debates, and oral presentations greatly contributed to refining their critical thinking skills while simultaneously enhancing their preparedness to construct and articulate written arguments in English.

2. Have you experienced any challenges when attempting to apply your critical thinking patterns from your first language to writing in English? If so, what kinds of challenges did you encounter?

Factors Inhibiting the Transfer of Critical Thinking Skills

Participants from diverse ethnolinguistic backgrounds revealed that the majority of multilingual students encountered various obstacles when attempting to transfer their critical thinking skills from their first language (L1) to academic writing in English (L2). These barriers can be categorized into four major themes:

1. Structural Differences between Languages

Several participants noted that fundamental differences in sentence structure between their mother tongue and English posed significant challenges to organizing arguments logically. For instance, P1 (Buol) and P6 (Javanese) reported difficulties in structuring ideas because English syntax does not align with the way ideas are organized in their L1. This finding is consistent with Kaplan's (1966) notion that each culture possesses distinct rhetorical patterns, and transitioning to another rhetorical system requires time and deliberate training.

2. Lexical and Grammatical Limitations

Many participants expressed that limited vocabulary and grammatical mastery hindered their ability to articulate critical thinking effectively. P4 (Dampal), P5 (Lauje), P17 (Bone), and P23 (Minahasa) reported that such limitations often made them hesitant to express complex ideas. Meanwhile, P11 (Dayak Kenyah), P12 (Sasak), and P24 (Tolaki) emphasized that anxiety about making grammatical errors frequently disrupted their critical thinking flow, as their attention was diverted to language form rather than argument quality. This aligns with Krashen's (1982) concept of the affective filter, which can obstruct second language acquisition when learners experience anxiety or self-doubt.

3. Variations in Communicative Style and Logic

Several participants, such as P13 (Balinese), P14 (Makassarese), and P21 (Bimanese), indicated that the logic and rhetorical organization of their native

languages often differed from the expectations of English academic discourse. For example, P16 (Selayar) found it difficult to transition smoothly between ideas, while P19 (Wajo) struggled to craft effective paragraph openings in accordance with English academic conventions. These findings highlight that critical thinking developed in one linguistic and cultural framework cannot be directly transferred to another language without adaptation to its genre and linguistic norms.

4. Cultural and Affective Constraints

Some participants also experienced culturally rooted barriers. P3 (Dondo) and P20 (Rejang) reported challenges in expressing local cultural nuances or idiomatic expressions in English. P14 (Makassarese) further noted that certain cultural concepts lack direct equivalents in English, making them difficult to explain. Additionally, affective factors such as low self-confidence (P25/Nias) and unfamiliarity with academic writing conventions (P7/Minangkabau; P22/Tidung) further reinforced the difficulty in transferring critical thinking skills into English academic writing.

3. Strategies for Overcoming Linguistic and Rhetorical Challenges

1. When you encounter linguistic or rhetorical challenges in expressing critical ideas in English, what cognitive and linguistic strategies do you employ?

Based on the analysis of responses from 25 participants representing diverse ethnolinguistic backgrounds, it was found that multilingual students in Indonesia actively employ various strategies to overcome difficulties in expressing critical ideas in English. These strategies can be categorized into four major groups:

1. Metacognitive Strategies

Metacognitive strategies refer to the deliberate efforts made by students to plan, monitor, and evaluate their thinking and writing processes. Participants such as P2 (Tolitoli), P14 (Makassar), and P24 (Tolaki) reported using outlines, mind maps, and argumentative frameworks as planning tools before writing. Meanwhile, P12 (Sasak) and P17 (Bone) used strategies such as breaking down ideas into smaller conceptual units and verbally rereading their texts to monitor coherence and logical flow. These findings indicate that despite linguistic barriers, students maintained their critical thinking flow by strategically managing their text organization and reasoning process.

2. Linguistic Strategies

Many students relied on linguistic strategies to cope with limitations in vocabulary, grammar, and sentence construction. For instance, P1 (Buol), P8 (Bugis), and P15 (Mandar) intentionally used simpler vocabulary and sentence structures to ensure clarity of ideas. P3 (Dondo) and P13 (Bali) frequently used bilingual dictionaries and online academic sources to find equivalent terms or

academic phrases. Meanwhile, P7 (Minangkabau) and P23 (Minahasa) emphasized the importance of revision and editing, using both manual review and digital tools such as Grammarly to refine their writing. These practices demonstrate students' adaptive competence in bridging linguistic gaps while maintaining the precision of argumentation.

3. Social and Affective Strategies

This category involves social interaction and emotional regulation in the context of academic writing in a foreign language. P6 (Javanese) and P23 (Minahasa) engaged in peer or instructor discussions to clarify ideas and refine their argumentative structure. P25 (Nias) practiced affective strategies by developing a daily writing habit to build confidence and reduce writing anxiety. Such social and affective strategies play an important role in fostering collaborative learning and reducing psychological barriers that often inhibit reflective and critical writing.

4. Technology- and Reference-Based Strategies

Several participants utilized digital resources and model texts to enhance their academic writing performance. P4 (Dampal), P9 (Batak), and P19 (Wajo) reported that reading academic journals and articles helped them internalize academic writing conventions and rhetorical organization. P10 (Toraja) used academic templates and sentence structures as scaffolds for composing paragraphs. Additionally, P5 (Lauje) adopted a "thinking-in-English" approach as a form of intensive practice to minimize dependence on literal translation. These technology-driven and reference-based strategies not only improved linguistic accuracy but also supported cognitive engagement and genre awareness in academic writing.

2. Do you tend to translate concepts from your first language first, or do you construct arguments directly in English? Please explain your reasoning.

The interview results indicate that the majority of multilingual students tend to rely on their first language (L1) during the initial stage of forming critical ideas or concepts before expressing them in English (L2). Only a small number consistently attempt to construct arguments directly in L2. This strategic choice is influenced by cognitive and affective factors, as well as by the students' level of English proficiency.

1. Dominance of the First Language as a Medium for Processing Critical Concepts

Most participants, such as P1 (Buol), P2 (Tolitoli), P4 (Dampal), P6 (Javanese), and P14 (Makassarese), stated that they felt more comfortable exploring and developing critical ideas in their first language first. The primary reason is that thinking in the first language enables them to access memories

more quickly, explain concepts more deeply, and maintain the originality of ideas and clarity of logic before translating them into English.

2. Translation Strategy: Gradual Adaptation from L1 to L2

Some participants, such as P11 (Dayak Kenyah), P13 (Balinese), and P16 (Selayar), demonstrated a mixed strategy: they first outlined or formulated ideas in their first language, then wrote them in English. This approach represents a gradual adaptation process, indicating that critical thinking remains more natural in L1; however, they strive to align their reasoning and expression with the academic demands of English writing.

3. Thinking Directly in English: Developing Academic Language Automatization

A small number of participants, such as P3 (Dondo), P8 (Buginese), P10 (Torajan), and P18 (Soppeng), stated that they prefer or make an effort to construct arguments directly in English. Their primary motivation is to avoid the rigidity of literal translation and to become more familiar with the structures and academic writing styles commonly used in international contexts.

4. Affective Factors and Self-Belief

Several participants, such as P23 (Minahasa), P25 (Niasan), and P19 (Wajo), stated that low self-confidence in using English was the main reason they still heavily relied on their first language when engaging in critical thinking. This indicates that affective factors such as anxiety, lack of confidence, and negative self-perception regarding their L2 abilities can influence the cognitive strategies they employ.

3. How do you adjust your reasoning structure or writing style to align with the academic norms of the English language without compromising the originality of your ideas?

In general, multilingual students from various ethnic backgrounds employed diverse adaptation strategies in the process of writing academic texts in English.

First, several participants emphasized the importance of adjusting their reasoning structures to align with the conventions of English academic writing. For example, P2 (Tolitoli) and P24 (Tolaki) stated that they began by creating an outline or argument framework to make their writing more organized. Similarly, P22 (Tidung) explicitly used the TEEL formula (Topic, Explanation, Evidence, Link) to ensure that each argumentative paragraph adhered to academic norms without losing their personal line of reasoning.

Second, some participants focused more on lexical choice and language use. P3 (Dondo) and P20 (Rejang) adjusted terminology and vocabulary to fit academic style, while P8 (Buginese) preferred to use simpler diction to maintain clarity of meaning. This strategy reflects their effort to balance the formal demands of academic writing with their limited mastery of complex vocabulary.

Third, several participants prioritized preserving the originality of their ideas through a personal style. P5 (Lauje) highlighted the importance of thinking directly in English to achieve a more natural reasoning structure, whereas P16 (Selayar) maintained the authenticity of their voice by transcribing oral explanations into academic written form. In addition, P23 (Minahasan) benefited from peer feedback but emphasized that the logical flow of their arguments remained unchanged.

Fourth, some participants used external references as models. P4 (Dampal) and P9 (Batak) learned from academic text samples to adjust their writing style, while P13 (Balinese) modified phrases found through Google Scholar to fit their writing needs. P19 (Wajo) even actively compared their own writing with published journal articles to ensure alignment with academic norms.

Lastly, several participants underscored the importance of continuous revision and consistent practice. P7 (Minangkabau) and P15 (Mandar) revised their writing gradually to refine their academic style, whereas P25 (Niasan) emphasized the habit of daily writing as a means to internalize academic conventions while preserving the originality of ideas.

4. To what extent do you feel that the strategies you have developed reflect your linguistic and cultural identity?

The collected data reveal that students' academic writing strategies are not solely influenced by the normative demands of the English language, but are also closely connected to their linguistic identity (their first language and local patterns of thinking) and cultural identity (values, traditions, and learning habits inherited from their social environment).

1. Linguistic Identity through the First Language

Several participants explicitly emphasized the role of their first language in the thinking and writing process. P1 (Buol), P2 (Tolitoli), and P11 (Dayak Kenyah) indicated that generating ideas in their first language serves as a foundation before transferring them into English. This suggests that the local language functions as a conceptual medium that helps preserve clarity of meaning and originality of thought. P3 (Dondo) also reinforced this notion by using a bilingual dictionary as a bridge between the local and academic languages.

2. Cultural Identity through Oral, Visual, and Collective Traditions

Several writing strategies reflect strong cultural traditions rooted in orality and communal values. P16 (Selayar) and P17 (Bone) relied on oral strategies such as recording or reading aloud, demonstrating the continuity of oral traditions within academic writing. P6 (Javanese) and P23 (Minahasan) emphasized the importance of discussion and collaboration, aligning with the cultural value of collectivism. Additionally, P14 (Makassarese) employed mind mapping as a

form of visual representation, reflecting a visually organized learning style that also stems from local practices.

3. Cultural Values in Modes of Argumentation

Other participants connected their strategies to the distinctive logical and reasoning values of their respective cultures. For instance, P21 (Bima) associated the habit of using guiding questions with the local cultural tradition of inquiry. P19 (Wajo) emphasized a critical tradition by comparing their writing with scholarly journal articles. Meanwhile, P24 (Tolaki) demonstrated a systematic habit of structuring arguments, reflecting the organized patterns of thinking embedded in their cultural environment.

4. Personal and Cultural Identity in Language Style

Several responses revealed a strong connection between writing style and the cultural values embraced by the participants. P7 (Minangkabau) and P15 (Mandar) emphasized that writing freely or using simple sentences reflects the direct and practical communication traditions of their cultures. P9 (Batak) associated the assertive tone of their writing with the distinctive communicative character of their cultural background. Meanwhile, P25 (Niasan) highlighted the practice of daily writing discipline as part of a cultural value system that prioritizes consistency and hard work.

5. Perceptions of the Relevance and Appropriateness of Critical Thinking Norms in the English Language

1. How do you perceive the norms of critical thinking applied in English academic writing? Do you find these norms compatible with, or in contrast to, the cultural values and ways of thinking that you adhere to?

First, the majority of participants (e.g., P1, P2, P8, P12, P14, P15, P18, P21, P23, and P24) viewed the norms of critical thinking emphasizing logical structure, explicit argumentation, and analytical reasoning as relatively easy to adopt. This suggests a correspondence between academic critical thinking practices and everyday reasoning patterns already familiar within their cultural contexts, such as step-by-step reasoning (P1), the use of concrete examples (P4), or the habit of asking “why” and “how” questions (P21).

Second, a group of participants perceived that academic critical thinking norms do not entirely align with their local cultural values. Participants such as P6, P7, P16, and P20 highlighted a tension between collectivist values, oral traditions, or memorization-based learning habits and the demands of academic writing, which emphasize individual stance, explicit expression of ideas, and analytical argumentation. For instance, P6 explained that in Javanese culture, collectivism is prioritized over individual assertion, making the academic norm of taking a firm stance sometimes feel incongruent.

Third, several participants underscored the importance of hybridizing academic norms with local cultural values. Responses from P4, P10, P13, and P22

reflected efforts to preserve cultural authenticity within academic frameworks by incorporating community perspectives, local examples, or experience-based reasoning. This demonstrates an adaptation strategy that goes beyond mere imitation of Western norms, integrating local values into academic writing.

Fourth, some participants found academic critical thinking norms highly compatible with their cultural traditions, even reinforcing existing critical thinking identities. P9 (Batak) and P19 (Wajo) emphasized that their cultures already value assertiveness in expressing opinions and engaging in open argumentation, making English academic writing a natural extension of their cultural discourse practices.

2. Do you feel that you need to “compromise” your way of thinking when adapting to the expectations of critical thinking in English? If so, how do you respond to or manage this adjustment?

First, the majority of participants (e.g., P1, P2, P3, P11, P12, P20, and P22) indicated that compromise occurred primarily at the linguistic level. They began writing in their first language, created outlines or vocabulary lists, and used bilingual dictionaries before translating their work into English. This strategy suggests that the local language continues to function as a cognitive foundation, while English serves as the formal medium of expression.

Second, some participants felt that compromise took place in their writing style but not in the substance of their ideas. For instance, P4, P5, P8, P13, and P15 emphasized that although they adjusted to Western argumentative structures and academic conventions, their underlying logic remained rooted in local culture manifested through concrete examples, practical reasoning, or oral traditions.

Third, several participants believed that compromise was unnecessary because the norms of English academic writing aligned naturally with their cultural traditions. P9 (Batak), P19 (Wajo), and P24 (Tolaki) explained that their communities’ values of assertiveness, critical inquiry, and systematic reasoning made the process of adaptation feel more like a continuation of existing thought patterns than a form of compromise.

Fourth, some participants negotiated compromise through creative hybridization. P6 (Javanese), P7 (Minangkabau), P14 (Makassarese), P16 (Selayar), and P23 (Minahasan) sought to integrate collective, oral, or visual traditions into the demands of written academic discourse. Activities such as peer discussions, free writing, mind mapping, and transcribing oral explanations served as ways to preserve their local cognitive identity within academic texts.

3. In your opinion, is it important for higher education institutions to take into account students’ cultural and linguistic backgrounds in the teaching of critical thinking and academic writing? Why or why not?

First, most participants (e.g., P1, P2, P4, P8, P10, P12, P14, P15, P18, P21, P23, and P24) emphasized that recognizing students’ cultural backgrounds contributes to creating a more inclusive and meaningful learning environment. They argued that students are better able to comprehend and internalize the concept of critical thinking when the examples, contexts, or reasoning styles used

are relevant to their local experiences. P1 highlighted the importance of institutions valuing cultural diversity to prevent students from feeling alienated, while P14 underscored that cultural background can serve as an epistemic resource that enriches contextually grounded critical thinking skills.

Second, several participants (such as P6, P7, P16, and P20) expressed concerns about the potential risk of homogenization when cultural and linguistic dimensions are neglected. They contended that pedagogical approaches overly oriented toward Western norms may create cognitive and emotional dissonance, as students are compelled to adapt to reasoning and argumentation styles that emphasize individualism. For instance, P6 noted that disregarding the collective values embedded in local cultures may cause students to lose a sense of authenticity in their writing and self-expression.

Third, some participants (including P9, P13, P19, and P22) viewed the integration of cultural aspects not merely as a matter of inclusivity but also as a strategy to enrich academic perspectives. They argued that the cultural diversity of students can serve as a valuable source of critical insight that broadens intellectual horizons and deepens academic discourse within multicultural classrooms. For example, P19 emphasized that the confidence to express opinions grounded in specific cultural traditions can, in fact, strengthen the dynamics of critical dialogue in academic settings.

DISCUSSION

The findings of this study underscore that the critical thinking (CT) competencies of multilingual Indonesian students are not merely immediate academic acquisitions but are longitudinal constructs emerging from the internalization of socio-cultural and linguistic values. Within this framework, the mother tongue (L1) functions as a fundamental cognitive and metacognitive medium, providing the conceptual infrastructure for higher-order reasoning. This phenomenon aligns with Cummins' (2000) Common Underlying Proficiency (CUP) model, which posits that cognitive academic skills are transferable across languages through a shared underlying foundation. Consequently, the analytical rigor observed in students' English writing is deeply rooted in the conceptual competence originally nurtured in their first language.

Empirical evidence from this study suggests that early socialization within familial units, customary (*adat*) forums, and religious organizations serves as the primary locus for cultivating these skills. These culturally grounded discursive practices characterized by deliberation and collective decision-making provide natural scaffolds for the development of evaluative and reflective thinking. Viewed through the lens of Vygotsky's (1978) Sociocultural Theory, the mother tongue operates as a Zone of Proximal Development (ZPD), where local social interactions facilitate the transition toward complex reasoning in a foreign language.

Furthermore, the transfer of argumentative patterns is identified here as an inherently translingual process. This suggests that students do not merely translate ideas but undergo a "transformation of thought" across semiotic systems (Canagarajah, 2013; García & Wei, 2014). While students from deductive-

leaning cultures, such as the Javanese or Minangkabau, demonstrate greater alignment with the linear organization of English academic discourse, those from narrative-rich traditions (e.g., Bugis, Mandar, or Dayak) navigate a more complex negotiation between implicit cultural rhetoric and the explicit, evidence-based demands of Western academia. This "rhetorical negotiation" often involves the use of the national language, Indonesian, as a strategic cognitive bridge to reconcile divergent logical structures.

Despite the presence of various supporting factors such as metalinguistic awareness and explicit pedagogical guidance the transfer process is frequently impeded by "affective filters" and linguistic barriers. Limitations in academic lexicon and grammatical precision often constrain the depth of critical expression, while language anxiety can inhibit cognitive performance (Horwitz, 2001; Krashen, 1982). Nevertheless, the students in this study exhibited significant agency through adaptive metacognitive and social strategies. By employing structured frameworks like the TEEL (Topic, Explanation, Evidence, Link) formula, students achieve a state of "culturally responsive writing." In this state, they successfully conform to global academic conventions while preserving the authenticity of their local cognitive identities, ultimately enriching the academic discourse with diverse epistemological perspectives (Gay, 2018; Matsuda, 2014).

CONCLUSIONS AND RECOMMENDATIONS

This study highlights that transferring critical thinking (CT) skills from the mother tongue to English academic writing is a complex, non-automatic epistemological journey where students navigate tensions between local values, such as social harmony, and the assertive demands of Western academic discourse. While success is facilitated by early bilingualism and explicit pedagogical guidance, students must often overcome linguistic and cultural barriers by employing bicultural reasoning and metacognitive strategies to build a contextually grounded academic identity. To build on these findings, future research should adopt a longitudinal approach to track the evolution of these academic identities over time, utilize comparative analyses to identify the most effective early bilingual experiences for CT transfer, and further explore how diverse Indonesian ethnic groups reconcile specific values like *Mufakat* and *Sopan Santun* with the individualistic argumentation required in global academic contexts.

ADVANCED RESEARCH

Despite its insights, this study is limited by its reliance on self-reported data and its qualitative design, which precludes a quantitative ranking of factors influencing academic performance. Future research should employ longitudinal methods to track the evolution of academic identity and comparative analyses to identify the most effective early bilingual experiences for critical thinking transfer. Additionally, further study is needed on how diverse Indonesian ethnic groups reconcile local values like *Mufakat* and *Sopan Santun* with assertive Western-style argumentation.

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