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Oral Argumentation under Constraints: A Qualitative Study of Critical Thinking in Indonesian Higher Education

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Abstract
This study aims to explore the constraints that hinder the realization of critical thinking in students' oral argumentation in higher education contexts. The study employed an interpretive qualitative case study design. The participants were four purposively selected lecturers who teach speaking courses emphasizing argumentative discussion at Universitas Muhammadiyah Bone. They had at least one semester of experience facilitating academic speaking activities and were selected through maximum variation sampling to capture diverse instructional perspectives. Data were collected through classroom observations, audio recordings of academic speaking activities, and interviews with lecturers. Thematic analysis was conducted iteratively to identify recurring linguistic, affective, and pedagogical constraints. The findings indicate that students' oral argumentation is largely dominated by descriptive claims, with limited use of evidence, warrants, and rebuttals, revealing a gap between students' critical thinking potential and their oral performance. This gap is affected by related language issues, like having a small vocabulary and not speaking smoothly; emotional factors, such as anxiety and fear of being judged; and teaching conditions, like not having enough training in argumentation and support for academic reading and writing. The study concludes that critical thinking in oral argumentation should be understood as a context-dependent and discursive practice rather than merely an individual cognitive ability. So, the research highlights the importance of teaching methods that combine language skills, emotional support, and clear training in argumentation to help improve critical thinking through speaking in higher education.

Keywords:*Critical Thinking; Oral Argumentation; Learning Constraints; Higher Education*

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1. Introduction

Critical thinking has consistently been regarded as a fundamental competency in higher education, particularly given the complexities of information, academic expectations, and social dynamics of the 21st century (Facione, 2020). At the university level, students are required to comprehend knowledge, as well as to analyze, evaluate, and formulate logical, evidence-based arguments. Oral argumentation in an academic setting, including class discussions, presentations, seminars, and debates, serves as a primary venue for the cultivation of critical thinking (Kuhn, 2018;Mercer & Littleton, 2019). Nonetheless, numerous researches indicate that students' critical thinking skills are frequently insufficiently represented in academic speaking exercises. Students can construct relatively organized arguments in writing, although they lack the same depth of thinking in oral delivery. Oral argumentation is frequently marked by descriptive assertions, reiteration of the speaker's viewpoints, or assertions without substantiation and critical analysis (Rapanta et al., 2021),

This condition signifies that critical thinking in oral debate is not merely a function of individual cognitive capacity, but is also affected by numerous limits intrinsic to the speaking context. Time constraints, expectations for spontaneity, nervousness related to speaking, power relations within the classroom, and socio-cultural norms can hinder students from effectively communicating critical reasoning (Mercer & Littleton,2019; Noroozi et al., 2020; Zare & Othman, 2021). The inadequacy of critical thinking in oral contexts should not be perceived merely as a lack of competence, but as a multifaceted and contextual academic phenomenon. Consequently, a study is required that explicitly investigates the manifestation of critical thinking in students' oral arguments amidst the many constraints encountered in higher education.

Especially in the context of academic literacy, argumentative writing, and problem-based learning, research on critical thinking in higher education has developed significantly in recent years. Numerous research have been conducted with the purpose of determining the levels of critical thinking exhibited by students, the development of assessment tools, and the efficacy of instructional methods designed to enhance these abilities (Bezanilla et al., 2019; Facione, 2020); Davies & Barnett, 2022). On the other side, the study of argumentation has also seen important changes, particularly through the Toulmin framework, which places an emphasis on the components of claim, facts, warrant, backup, and refutation (van Eemeren et al., 2019). One of the most common applications of research that is based on argumentation theory is to evaluate the quality of arguments that are presented in academic writing and scientific conversations (Osborne et al., 2018).

Research reveals shortcomings in previous studies on critical thinking and argumentation, especially in oral forms, which have received less attention. Previous work often views critical thinking as an individual cognitive ability measured through

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tests, ignoring contextual factors like language and classroom interaction that impact oral performance. Additionally, a tendency to emphasize performativity aspects over reasoning quality has limited comprehensive understanding. This study addresses the gap by linking critical thinking and oral argumentation as practices shaped by various constraints, mapping challenges from individual to systemic levels. The contributions are theoretical - framing critical thinking as a contextual practice and practical, advocating for integrated language development and quality assessment in higher education speaking education.

The majority of studies that aim to establish a connection between critical thinking and argumentation continue to concentrate on written products, such as essays, research reports, or written examinations. There are still a relatively small number of studies that focus on oral argumentation as the primary focus of critical thinking. Rather than concentrating on the quality of the critical reasoning that lies behind the arguments, the research focus frequently turns to performativity features, such as fluency, pronunciation, or communication techniques, when oral situations are investigated.

Furthermore, current research frequently assumes that critical thinking can be directly transferred from the cognitive domain to the oral domain. This presumption disregards the fact that academic speaking practices are conducted under the influence of social interaction, structural constraints, and pressure. Studies that explicitly investigate the influence of cognitive, affective, sociocultural, and pedagogical constraints on the oral argumentation of students are still scarce.

Recent international studies show that the realization of critical thinking in oral contexts is greatly influenced by the dynamics of classroom dialog and the pedagogical strategies employed by lecturers. The dialogic approach asserts that the quality of critical thinking can be fostered through the dialogic movements of the lecturer and critical questions that encourage the elaboration of reasons and evidence (Cui & Teo, 2023). Furthermore, contemporary argumentation theory emphasizes that the strength of an argument lies not only in the claim but also in the dialogic process that tests the assumptions and relevance of the reasons (Nussbaum et al., 2023). This shows that previous studies still underemphasize the interactional and performative dimensions of oral argumentation.

Research on argument structure shows that elements such as warrants and rebuttals do not develop automatically without explicit scaffolding (Hu & Liu, 2025). On the other hand, research on willingness to communicate and second language anxiety shows that oral participation is dynamic and highly influenced by the social context and emotional conditions of students (Li et al., 2024). Thus, there remains a conceptual gap in explaining the relationship between students' cognitive potential and their oral argumentation performance in class.

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In addition to enriching the study of critical thinking and oral argumentation, this study also makes an important contribution to research discussing grammatical strategies in academic speaking learning. Previous studies tend to position grammatical strategies as a means to enhance speaking accuracy and fluency, separate from the development of higher-order thinking skills. This study complements that perspective by demonstrating that limitations in grammar and sentence structure affect the linguistic quality of speech and restrict students' ability to externalize critical reasoning coherently and argumentatively.

Therefore, despite the fact that the literature on critical thinking and argumentation is well-established, the comprehension of the interaction between the two in academic speaking practices in higher education remains incomplete. After conducting an analysis of recent literature, it is possible to identify numerous prominent research gaps. Initially, there is a disparity in concentration between the research on critical thinking, which is primarily cognitive, and the research on speaking, which is more performativity.

The interaction between oral argumentation and critical thinking has not been extensively investigated as a unified discursive practice. Secondly, an examination of constraints as a determining factor for the quality of critical thinking in oral argumentation is still being limited by existing research. Constraints are frequently regarded as peripheral variables, rather than as the primary mechanisms that influence students' critical thinking performance (Bao et al., 2021). Third, there is a scarcity of research that aims to elucidate the discrepancy between the potential for critical thinking among students and the actualization of their oral argumentation in the context of higher education. In reality, it is crucial to comprehend this discrepancy in order to prevent the oversimplification that poor oral argumentation is indicative of inadequate critical thinking abilities. Therefore, research is needed that positions oral argumentation as an academic practice under constraint and systematically examines how these various constraints shape critical thinking challenges in higher education. Because of this, more study is needed that looks at oral argumentation as an academic practice with limits and how these limits affect critical thinking challenges in higher education. Based on the problem background, state of the art, and research gap, this study comes up with solutions to the following questions; what are the constraints that limit the realization of critical thinking in students' oral argumentation in higher education?

2. Methods

2.1. Research Design

The research design chosen in this study is qualitative with an interpretative case study approach, justified by the nature of the phenomenon being investigated, namely the realization of critical thinking in oral argumentation practices in higher education. The qualitative approach was selected because critical thinking in oral argumentation is perceived as a contextual, situational discursive practice mediated by social interaction,

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thus it cannot be simplified to mere scores or quantifiable variables (Merriam & Tisdell, 2016; Braun & Clarke, 2021).

Critical thinking in the context of speaking cannot be reduced to quantitative scores or isolated variables, as it is a discursive practice influenced by social interactions, classroom dynamics, linguistic factors, and the affective conditions of students. Therefore, a qualitative approach was chosen to enable an in-depth exploration of the meanings, processes, and contexts that shape the emergence or absence of critical thinking in oral performance. The interpretative case study methodology facilitates the contextual and comprehensive examination of phenomena within a particular institutional framework.

To ensure credibility, the research employs source and method triangulation through observation, oral performance recordings, and interviews with lecturers. Confirmability is achieved via a reflective analysis process and an audit trail documenting coding steps. Dependability is reinforced through systematic analysis procedures, including checks on category consistency and data interpretation. Data saturation further enhances the trustworthiness of findings, which represent subjective perceptions supported by transparent and traceable empirical evidence.

2.2. Research Participants

The participants in this study were selected purposively, based on their appropriateness for the research objective, which aims to achieve a comprehensive understanding of the manifestation and limitations of critical thinking in the practice of oral argumentation within higher education. This methodology was selected because qualitative research seeks to investigate the significance, processes, and dynamics of phenomena through the pertinent and information-dense experiences of the participants (Merriam & Tisdell, 2016; Patton, 2019).

The research participants consisted of 4 lecturers who were actively involved in oral argumentation, as this context inherently demands oral argumentation practice and critical reasoning. Inclusion criteria include regular participation in academic speaking activities, willingness to be recorded, and a minimum of one semester of experience in a classroom setting that emphasizes argumentative discussion. The selection of participants consisting of only four lecturers in this study can be explained academically because the research uses a qualitative design with an interpretative case study approach. In qualitative research, the main goal is not to obtain a large number of respondents for statistical generalization but rather to gain a deep and contextual understanding of a phenomenon. Therefore, participants were purposively selected based on their alignment with the research objectives, specifically lecturers who are active in oral argumentation practices and have teaching experience in argument-based discussion classes.

To enrich the depth of analysis, this study also employs maximum variation sampling by selecting participants who demonstrate varying levels of engagement and quality of oral argumentation (high, medium, and low), thus enabling the exploration of diverse

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patterns of constraints influencing the articulation of critical thinking (Creswell & Poth, 2018; Tracy, 2020). Depending on data saturation, the number of participants was adjusted to ensure the depth and trustworthiness of research findings(Guest et al., 2018). This technique makes participant selection a technological and epistemological decision that enables critical thinking analysis as a contextual, academic, interaction-bound discursive process.

2.3. Data Collection Techniques

This study employs data collection procedures aimed at thoroughly capturing the expressions of critical thinking in students' oral argumentation practices, as well as the relevant contextual limitations. Primary data was gathered through recordings of class discussions, academic presentations, and question-and-answer sessions, which were subsequently transcribed verbatim and analyzed utilizing Toulmin's Argument Pattern framework to discern the structure and quality of oral argumentation as an expression of critical thinking in academic discourse (van Eemeren et al., 2019). This study employs interviews and classroom observations to elucidate the mechanisms of constraints that hinder the expression of critical thinking, enabling researchers to analyze the cognitive, affective, sociocultural, and pedagogical processes encountered by students during academic speaking practice (Lyle, 2018; Kumpulainen & Rajala, 2019). The data analysis was performed iteratively through thematic analysis, beginning with open coding, followed by category creation, and concluding with the establishment of analytical themes that elucidate the relationship between contextual restrictions. Furthermore, non-participant classroom observations and field notes were undertaken to record interaction dynamics, turn-taking patterns, lecturer reactions, and the social and pedagogical norms that shaped students' oral argumentation practices (Kumpulainen & Rajala, 2019; Tracy, 2020).

2.4. Procedure of data analysis

In this qualitative study, data analysis was conducted through an iterative and interpretive analytical cycle. The purpose of this cycle was to discover how critical thinking is shaped and constrained in students' oral statements in high school. The analysis began with data recognition and transcription. This allows researchers to engage directly with the linguistic and interactional aspects of students' oral arguments (Saldaña, 2021).

Next, the oral interaction data was divided into meaningful segments based on argumentative functions, such as claim initiation, justification, and responses to alternative viewpoints. This discourse-oriented approach aligns with discourse-oriented qualitative analysis approaches(Gee, 2018). All recordings of class discussions, presentations, and Q&A sessions were transcribed verbatim to preserve the integrity of the linguistic and interactional aspects of the data. The analysis begins with the familiarization stage, which involves thoroughly rereading the transcripts to identify

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general patterns in the students' argumentative performance. Next, data segmentation is performed based on argumentative functions, such as making claims, providing reasons, using evidence, responding to other viewpoints, and making clarifications.

Discourse analysis focusing on arguments allows for the identification of reasoning patterns, evidence support, and specific moments where claims can be justified (Hannken-Illjes, 2018). Thus, Interview and observational data were analyzed through a reflexive qualitative coding process, transitioning from first-cycle descriptive and process coding to second-cycle pattern coding to identify recurring constraints impacting students' argumentative performance (Miles et al., 2020).

3. Results and Discussions

This section described the various challenges revealed by the lecturers as a basis for identifying the need for more effective strategies, support, and learning approaches in developing students' critical thinking skills. The findings indicated that the challenges of critical thinking in higher education occurred through three items:

3.1. Difficulties

> [...yes, the biggest challenge is speaking in critical thinking, of course. They are actually already capable of critical thinking on average, it's just that they are not fully proficient in English. So we cannot say that they are thinking critically when speaking, when their critical thinking cannot be conveyed through speaking in English. So they still have some difficulties...]
>
> *(lecturer NRA)*

Based on the interview excerpt, NRA lecturers interpret that the biggest challenge in applying critical thinking in oral argumentation is not the students' critical thinking skills themselves, but rather their ability to express the results of their critical thinking in spoken English. NRA emphasized that most students are actually capable of analyzing and thinking critically, but when asked to convey these critical ideas in the form of speaking in English, they experience obstacles so that their critical thinking skills are not optimally displayed in class. This statement indicates a gap between cognitive competence (the ability to think critically) and linguistic competence (the ability to communicate critical thinking in English).

As a result, students who are actually critical thinkers may appear passive or less critical simply because of language limitations, such as a limited vocabulary, weak sentence structure, or lack of confidence when speaking. The concept of a limited vocabulary encompasses the linguistic challenges faced by students, hindering their ability to articulate ideas effectively and impacting their critical thinking capabilities. Weak sentence structure, also a linguistic issue, and results in the construction of unclear and illogical sentences, diminishing the perceived quality of their reasoning despite their actual cognitive abilities. Additionally, affective factors such as lack of confidence influence students' willingness to communicate, often causing anxiety and reluctance to participate, which further obstructs the expression of their critical thoughts.

In second language acquisition studies, this condition can be understood as the difference between everyday communication skills and academic skills; students may be

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able to reason and construct critical ideas, but do not yet have the academic language proficiency to convey their analysis with adequate structure, vocabulary, and accuracy (Cummins, 2000). This is also in line with the concept of communicative competence, whereby speaking performance is determined not only by ideas, but also by grammatical and discourse competence so that ideas are clearly and coherently reasoning into clear structured (Canale & Swain, 1980). Thus, the challenge emphasized by NRA illustrates that strengthening critical thinking in speaking requires adequate language learning support, so that students are not only able to think critically, but also able to transfer that critical, logical, and understandable English speech.

> [... The biggest challenge is motivation. Perhaps lecturers always encourage us to criticize, but some students always feel that they are afraid of making mistakes and being laughed at by their friends...]
>
> *(lecturer RTN)*

> [... they still process English by translating it into Indonesian first, then back into English. Even then, it is still being translated. When they are able to incorporate English into their minds, it will be easier for them to apply critical thinking in their learning ...]
>
> *(lecturer SYP)*

Based on the interview with RTN and SYP lecturers interpret "challenges" in applying critical thinking to speaking learning as obstacles that are not only academic in nature, but also psychological and linguistic. Lecturer RTN emphasized that the biggest challenge lies in student motivation and courage, because even though lecturers have guided students to criticize or express their opinions, some students are still afraid of making mistakes and being laughed at by their friends. The meaning of this statement shows that class culture and the emotional state of students greatly determine their involvement in the critical thinking process; anxious students tend to remain silent so that their critical thinking skills do not emerge in oral communication. This phenomenon is in line with the concept of foreign language anxiety, which explains that anxiety in language classes can inhibit speaking courage, reduce performance, and cause students to remain silent even though they have ideas (Horwitz et al., 1986).

Meanwhile, SYP lecturers explained the challenges from the language process perspective, namely that students still think in a translate pattern (from English to Indonesian, then back to English), which slows down the speaking process and hinders the smooth expression of ideas critically. This is consistent with language processing theory, which explains that limitations in working memory and a lack of automation will hinder fluency and the quality of idea organization (Berg & Levelt, 1990). In SYP's view, when students are able to "put English into their minds" meaning they are accustomed to processing ideas directly in English, they will find it easier to apply critical thinking because their cognitive energy is not spent on translation but can be focused on analysis

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and argumentation. Thus, the overall meaning of these two interviews confirms that the difficulty in applying critical thinking in speaking is not primarily because students are unable to think critically, but because of two main obstacles: affective barriers (fear of being wrong/ridiculed, which lowers motivation) and linguistic-cognitive barriers (dependence on translation) that prevent students from expressing critical reasoning fluently in English.

> [...I think the biggest challenge is their speaking skills or lack thereof. So their speaking skills are still lacking, so they can't be ignored or overlooked. I honestly believe that in teaching speaking, we must be able to see how well they speak because the success or failure of classroom learning is greatly influenced by their speaking skills. Because if they can't speak, there is nothing that can be evaluated and assessed in a classroom activity...]
>
> *(Lecture DRS)*

Based on the interview extract, lecturer DRS interpreted that the biggest challenge in critical thinking-based oral argumentation is the low speaking skills of students, making it difficult for them to actively speak and express their critical ideas. As one of the students said that "To *be honest, I understand the subject and have an opinion on it. "I try to speak, but I can't figure out how to say it in English. I need some time to think about what to say first. I stop talking sometimes because I'm afraid my speech is wrong."*

DRS emphasized that the success of learning in the classroom is greatly influenced by students' speaking abilities, because speaking activities are performative: if students are unable to speak, then lecturers do not have observable "performance data" to evaluate and assess. The meaning of this statement shows a direct relationship between speaking competence (linguistic/communicative competence) and the visibility of critical thinking skills in speaking classes; students may have ideas or analyses, but if their speaking skills are weak, then critical reasoning will not appear in the form of verbal communication. This condition is in line with the view of speaking assessment that emphasizes that speaking ability must be measured through actual performance, because speaking can only be assessed when learners actually produce utterances (Luoma, 2004).

Furthermore, in the context of second language learning, limited oral argumentation can reduce participation and make students appear passive, even though they actually understand the material; this is related to the idea that communication skills in L2 require mastery of linguistic aspects, fluency, and communication strategies so that students are able to participate (Ridge, 2008). Furthermore, low speaking skills can also hinder the development of higher-order thinking in oral form because students' cognitive resources are exhausted in thinking about language forms (vocabulary/structure) rather than constructing arguments. Berg & Levelt, (1990). Thus, the DRS findings confirm that improving speaking skills is an important prerequisite for students' critical thinking skills to emerge, be observed, and be fairly evaluated in speaking learning.

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Class observation data reveal that students encounter multiple challenges in developing critical thinking through academic speaking exercises. In class debates and presentations, the majority of students typically articulate their viewpoints descriptively and repetitively, demonstrating a weak capacity to construct arguments substantiated by logical reasoning and pertinent data. Students infrequently elucidate topics openly or draw a definitive link between the assertions and the rationale provided. Observations indicate that students are hesitant to challenge or engage with their peers' viewpoints, despite the availability of opportunities to pose critical inquiries or present alternate perspectives. This condition is exacerbated by students' inclination to seek validation from the lecturer prior to advancing their arguments, reflecting a power dynamic and reliance on academic authority in discourse practice.

Time constraints and the necessity for spontaneous responses frequently lead students to hastily abandon their arguments or to oversimplify inherently complicated concepts. Affective factors, including speaking anxiety, fear of linguistic blunders, and apprehension of negative evaluation, seem to affect students' engagement and depth of reasoning. The observation results suggest that challenges in critical thinking during speaking are not attributable to insufficient cognitive ability, but rather to a confluence of linguistic, affective, interactional, and pedagogical factors that hinder students' expression of critical reasoning in higher education.

3.2. Obstacles

Challenges refer to conditions needing additional effort, while obstacles are concrete barriers hindering critical thinking and oral communication, such as limitations in vocabulary, grammar, fluency, reliance on translation, fear of judgment, and insufficient resources. These obstacles can render students passive and unable to voice their ideas, obscuring their critical thinking abilities in the classroom. Understanding these obstacles allows for a more objective discourse in discussing interview results, highlighting the need for pedagogical solutions, psychological support, and effective learning strategies to mitigate them as revealed in interviews with the following lecturers;

> [... One of the most significant obstacles is the students' lack of prior knowledge on the topics discussed. When I raise current issues or specific cases, some students do not have enough information to analyze. As a result, they find it difficult to construct arguments or defend their opinions. Critical thinking requires background knowledge, and when students lack information, they will only give superficial answers or repeat what their friends have said. So, this obstacle is actually related to their academic readiness before entering the classroom. ...]
>
> *(lecturer SYP)*

Based on the interview excerpt, SYP lecturers interpreted that the main obstacle in applying critical thinking in speaking classes was students' lack of prior knowledge on the topics discussed. When students do not have enough information about current issues or specific cases, they find it difficult to engage in critical thinking processes that require analysis, evaluation of evidence, and the formulation of accountable arguments;

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as a result, their responses tend to be superficial, repetitive, or merely echo the opinions of their peers. This finding confirms that critical thinking does not stand alone but is highly dependent on an adequate knowledge base: the richer the students' background knowledge, the greater their chances of constructing strong arguments and defending them in oral discussions (Willingham, 2008).

In addition, limited prior knowledge can also increase the cognitive load when speaking in English while analyzing a topic, so that students' mental capacity is exhausted in "searching for content" and "constructing language" at the same time, which ultimately weakens the quality of reasoning and speaking performance (Sweller, 1988). Thus, SYP's statement shows that these obstacles are closely related to academic readiness before learning, for example, reading habits, access to information, and topic literacy, so that efforts to foster critical thinking in speaking need to be supported by pre-class activities such as providing reading materials, videos, or issue briefings so that students have the information they need to analyze and discuss more critically (Fisher, 2011).

> [... Obstacles faced by students include a lack of literacy and English vocabulary. Furthermore, there is also their self-confidence ...]
>
> *(lecture RTN)*

Based on the interview extract, RTN lecturers interpret that the main obstacle in applying critical thinking in speaking learning lies in three interrelated obstacles, namely lack of literacy, limited English vocabulary, and low student self-confidence. This statement implies that critical thinking skills in speaking cannot develop optimally if students do not have sufficient language and information to construct and convey arguments. Low literacy means that students lack references, data, or perspectives that can be analyzed, so that the ideas that emerge tend to be superficial and difficult to defend in discussion. Limited vocabulary then exacerbates this condition because students may understand ideas conceptually but are unable to express them accurately in English, causing them to become passive or choose to remain silent.

At the same time, low self-confidence becomes an affective barrier that makes students hesitate to express their opinions for fear of being wrong, being judged, or feeling that their language skills are not good enough. Thus, the findings of RTN confirm that critical thinking in speaking is not only a cognitive issue (the ability to analyze), but is also influenced by students' literacy readiness, linguistic skills, and psychological conditions. All three need to be addressed simultaneously so that students are able to convey critical reasoning clearly, based on evidence, and with confidence in classroom interactions.

> [...evaluate them performing the speaking process well if they are speaking. So I think their critical thinking ability is very positively correlated with their productivity in speaking. Why? We can only measure their critical thinking skills and involvement if they speak and present their arguments...]
>
> *(lecturer DRS)*

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> [...Of course, the first obstacle in this phenomenon is their lack of English language skills. What is the lack of vocabulary due to? This is primarily due to their limited vocabulary and insufficient practice in reading and listening...]
>
> *(lecturer DRS)*

Based on two interview excerpts, lecturer DRS interpreted that the main obstacle in developing critical thinking in speaking classes lies in the fact that critical thinking skills can only be observed and measured when students actually produce speech (talk) and convey arguments orally. DRS emphasized that critical thinking is "directly proportional" to speaking productivity: students may have critical thinking skills, but if they do not speak, lecturers cannot evaluate their reasoning process, the quality of their arguments, or the success of their learning. This view is in line with the concept of assessing speaking as a performative skill that must be assessed through actual performance, not just passive knowledge; speaking assessment requires evidence in the form of observable speech (Luoma, 2004; Brown, (2004). DRS also emphasizes that the root cause of students' lack of speaking productivity is limited English proficiency, particularly a lack of vocabulary, as well as minimal practice and reading.

This shows a strong relationship between language proficiency and the ability to express critical reasoning: a lack of vocabulary and exposure to input (reading) hinders fluency in oral production and depth of argument, because learners need linguistic resources to formulate ideas accurately and coherently (Nation, 2001). In addition, limited vocabulary can restrict students' ability to construct argumentative discourse and defend their opinions, because in academic communication, vocabulary serves as the main "tool" for expressing claims, reasons, evidence, and counterarguments (Schmitt, 2010). Thus, the findings of DRS confirm that improving critical thinking in speaking requires two simultaneous things: (1) increasing the courage and productivity of speaking so that the critical thinking process can be seen and evaluated, and (2) strengthening language skills (vocabulary, speaking practice, and reading literacy) so that students are able to express critical arguments more fluently, clearly, and based on evidence.

3.3. Problems

The section on 'problems' needs to be presented as an introduction before presenting the interview results because the focus is on describing the core issues that consistently arise in the critical thinking-based speaking learning process. While 'challenges' usually describe conditions that require more effort and "obstacles" emphasise barriers that hinder the process, 'problems' refer more to real issues that occur in the field for lecturers and in classroom situations which have a direct impact on the quality of learning and the achievement of objectives. These problems can include low participation in speaking, difficulty constructing evidence-based arguments, lack of literacy and vocabulary mastery, the habit of thinking through translation, fear of making mistakes, and limitations in learning strategies or time, which prevent critical thinking activities from running smoothly. Therefore, this section will serve as an important foundation before moving on to the interview excerpts, so that the analysis presented not only shows

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perceptions but also describes the reality of learning that requires appropriate pedagogical solutions, as shown in the following extract;

> [... The practical obstacle is that they only practice English on campus while they are studying...]
>
> *(lecturer RTN)*

> [... greatly affects them because when they cannot speak English, their thoughts and critical thinking ideas will not be conveyed. So, in presentations, around 60% ...]
>
> *(lecturer NRA).*

The interview with lecturer RTN and NRA interpreted that the main obstacle in applying critical thinking in speaking lies in the lack of English practice outside the campus environment and the direct influence of limited English skills on the ability to express critical ideas. Lecturer RTN emphasized that the practical obstacle for students is that they only use English while on campus, so opportunities to build speaking habits and fluency are very limited. This condition is in line with second language acquisition theory, which emphasizes that the development of speaking skills requires repeated exposure to and use of the language in real contexts; without adequate frequency of practice, language automation is difficult to achieve, so students remain hesitant and slow in producing utterances (Segalowitz, 2010; DeKeyser, 2020). In line with this, NRA lecturers emphasize that the inability to speak English greatly affects the critical thinking process in speaking because critical ideas will not be conveyed if students do not have the linguistic resources to express them; this shows the relationship between language proficiency and high-level thinking performance in oral communication.

From a language learning perspective, critical thinking skills can be "hidden" if students have not mastered the language to convey their analysis, so that cognitive abilities are not apparent in speaking performance (Cummins, 2000). Furthermore, when the burden of language production is high, students' cognitive capacity can be consumed by choosing vocabulary and constructing sentence structures, thereby reducing their attention to analysis, evaluation, and critical argumentation, a condition that is consistent with the limited cognitive resources framework in language processing (Garcia & Skehan, 1999). Thus, the findings of RTN and NRA emphasize that the development of critical thinking in speaking requires a broader and more sustained practice environment outside the classroom, as well as learning strategies that help students improve their fluency and language resources so that their critical ideas can be expressed clearly and effectively in English.

> [... The most common problem I see is students' inability to construct coherent arguments. They may have opinions, but they have difficulty connecting them to logical reasoning or relevant evidence. As a result, their arguments are disjointed or unconvincing. This is a problem because critical thinking requires the ability to reason coherently. So, weak reasoning structures are a major problem I encounter in CT-based speaking instruction...]
>
> *(lecturer SYP)*

In an interview conducted, lecturer SYP interpreted that the most dominant problem in critical thinking-based speaking learning is students' weakness in constructing

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arguments in a coherent and logical manner. Students often already have opinions, but find it difficult to connect these opinions with logical reasons and relevant evidence, resulting in arguments that are disjointed, unconvincing, and lack a clear line of reasoning. This finding emphasizes that critical thinking in speaking is not merely about 'having an opinion', but rather the ability to construct a logical reasoning structure from stating a claim, providing reasons, presenting evidence, to drawing conclusions in a consistent manner. The conditions described by SYP are in line with Toulmin's (2003) argumentation framework, which emphasizes that a strong argument must have elements such as a claim, data/grounds, and warrant so that the opinion can be justified.

When students are unable to connect claims with reasons and evidence, the quality of their arguments becomes weak and difficult to assess as a product of critical thinking. In addition, the ability to reason coherently is also related to critical thinking as reasoned judgment, which is the ability to make judgments based on reasons that can be tested and proven (Facione, 1990). Furthermore, the issue of 'incoherent arguments' identified by SYP lecturers can be understood as a limitation in reasoning and discourse organization in oral academic communication, where students need practice in structuring their ideas so that their arguments are clear and persuasive (Kuhn, 1991). Thus, the issues highlighted by SYP indicate that CT-based speaking learning requires special attention to training in argumentation structure, for example, through scaffolding, argument models, and exercises in presenting claims, evidence, and reasons, so that students are able to demonstrate critical thinking in their speaking performance.

> [... I see a fairly prominent problem in that students often fail to understand the core of the issue before responding. They listen to the question or issue, but only grasp a small portion of the information. As a result, their answers do not address the actual question. This happens because they lack preliminary analysis or clarifying questions...]
>
> *(lecturer DRS)*

Based on the interview extract, lecturer DRS interpreted that the prominent problem in critical thinking-based speaking learning is the failure of students to understand the core of the problem before responding, so that the answers given are often off target because they only capture some of the information from the questions or issues they hear. This finding indicates that the main obstacle is not merely the courage to speak, but rather the initial stage of critical thinking, namely problem clarification, the ability to identify what is actually being asked, what information is relevant, and what assumptions need to be clarified before constructing an argument. In critical thinking, the ability to clarify problems and ask clarifying questions is an important component to ensure that the reasoning process is accurate.

Ennis, (2011) places clarification (e.g., focusing questions, asking for explanations, and clarifying meaning) as a fundamental part of critical thinking skills. The conditions described by DRS are also in line with the critical thinking as disciplined inquiry approach, which emphasizes that a good response must begin with a proper understanding of the problem including testing the clarity of information and asking

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questions about anything that is unclear, so that the answer does not stray from the core issue (Paul & Elder, 2014) Furthermore, in the context of oral communication, failure to fully understand questions can occur due to limitations in information processing when listening (listening comprehension) and limitations in working memory, so that learners capture information partially and respond immediately without initial analysis. This can be explained by findings on the limitations of working memory capacity in understanding and processing complex information in real time (Baddeley, 2000). Thus, the meaning of the DRS statement emphasizes that CT-based oral argumentation needs to emphasize active listening and clarifying questions exercises. Based on these results, a taxonomy of the challenges with critical thinking in oral argumentation is shown in the following figure;

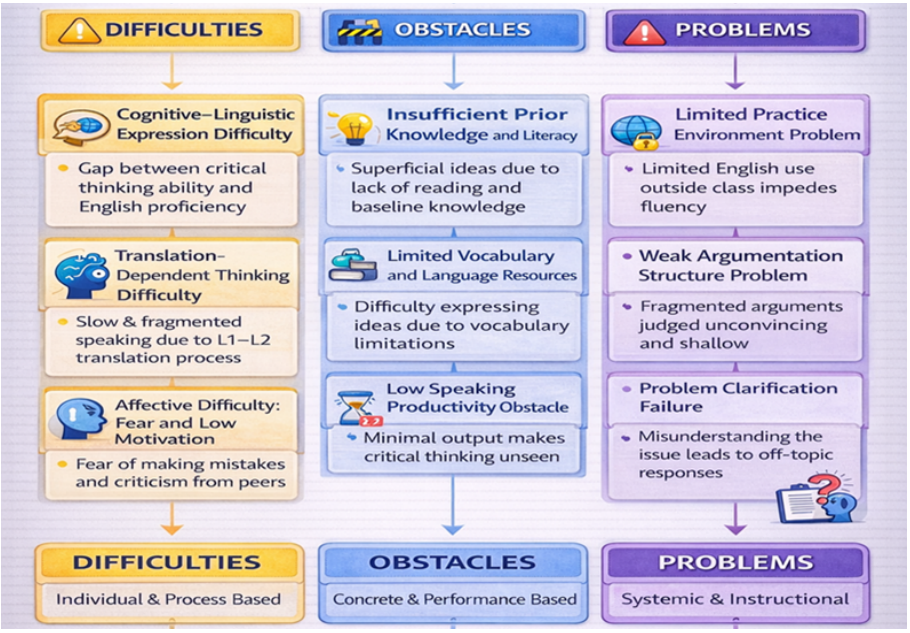

Figure 3.1. Taxonomy of the Challenges of Critical Thinking in Oral Argumentation

The taxonomic image represents an academic conceptual framework regarding the challenges faced by lecturers in implementing critical thinking-based speaking instruction. Overall, this image visualizes that challenges are not singular or isolated, but rather are hierarchically and layered, ranging from the individual to the systemic level. This taxonomy categorizes challenges into three main categories; difficulties, obstacles, and problems, reflecting differences in complexity levels, root causes, and their impact on the visibility and quality of students' critical thinking in the context of speaking instruction.

Regarding the difficulty levels, the images indicate individual and procedural challenges, particularly concerning the gap between students' critical thinking abilities and their ability to express them verbally in English. These difficulties include cognitive-

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linguistic constraints, dependence on the translation process from the first language to the second and affective barriers such as fear of making mistakes and low motivation. Academically, this level confirms that critical thinking is often already present cognitively, but cannot yet emerge verbally due to language limitations and the psychological condition of the students.

Next, at the level of obstacles, the image depicts concrete and performative barriers, which are factors that directly hinder the emergence of critical thinking in speaking performance. These barriers include a lack of prior knowledge and topic literacy, limited vocabulary and language resources, and low student speaking productivity. At this stage, critical thinking is not only difficult to express but also blocked from being observed and assessed, as students lack sufficient content, language, or verbal output as performative evidence of their thinking process.

In terms of problems, the image illustrates systemic and pedagogical challenges that directly impact the quality and sustainability of learning. These problems include a limited environment for practicing English outside the classroom, weak argumentation structures among students, and a failure to understand the core issue before responding. Conceptually, this level indicates that even though individual difficulties and concrete obstacles have been identified, without systemic support, such as sustained practice opportunities, argumentation scaffolding, and problem clarification training, critical thinking in speaking will remain partially and suboptimally developed.

From the perspective of constructive alignment, the gap between students' potential for critical thinking and their oral argumentation performance indicates a misalignment between learning objectives, classroom activities, and assessment forms. Although critical thinking is often stated as a key learning outcome in speaking courses, learning activities and assessments still tend to focus on performativity aspects such as fluency and speaking courage, so students are not explicitly directed or assessed based on the quality of their reasoning and argument structure (Biggs & Tang, 2011). As a result, students do not receive clear pedagogical signals that the ability to develop evidence-based claims, warrants, and rebuttals is an integral part of academic speaking success.

The first finding directly addresses the research question regarding the constraints that limit the realization of critical thinking in oral argumentation, particularly in the aspect of the gap between cognitive competence and linguistic competence. NRA stated that students *"actually already capable of critical thinking… but their critical thinking cannot be conveyed through speaking in English."*

This quote reinforces the interpretation that the main issue does not lie in the absence of critical thinking ability but rather in the limitations of externalizing that thinking process into academic discourse in English. Thus, the realization of critical thinking becomes dependent on the availability of linguistic resources such as vocabulary, sentence structure, and fluency.

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The second finding shows that affective and participatory factors also limit the visibility of critical thinking in the oral context. RTN explains that students *"are afraid of making mistakes and being laughed at by their friends*," which indicates that anxiety and fear of social evaluation hinder their courage to speak. Furthermore, SYP noted that students continue to interpret English by first translating it into Indonesian and then back into English. This data reinforces the interpretation that the cognitive load from the translation process and simultaneous emotional pressure reduces students' capacity to spontaneously develop reasoning, evidence, and argumentative elaboration.

The third finding relates to low speaking productivity as a performative barrier. DRS assert that "*we can only measure their critical thinking skills… if they speak and present their arguments*." This statement clarifies that in the context of speaking-based classes, critical thinking can only be observed through verbal performance. Therefore, limited vocabulary and lack of reading and speaking practice affect fluency and reduce opportunities for lecturers to assess the quality of students' reasoning.

The fourth finding reinforces the structural dimension of the argumentation problem. SYP states that students *"…have difficulty connecting [opinions] to logical reasoning or relevant evidence,"* which indicates a weakness in building a coherent claim-reason-evidence structure. Meanwhile, DRS observes that students often *"fail to understand the core of the issue before responding,"* indicating a weakness in the problem clarification stage before constructing an argument. Both of these quotes directly connect the findings with the research question: the constraints on the realization of critical thinking are not only linguistic and affective but also related to reasoning structure and the ability to understand the core of the issue.

Overall, the findings can be grouped into three connected areas: (1) challenges individuals face (language and emotions), (2) issues with performance (low productivity and literacy), and (3) problems with teaching and structure (weaknesses in argument structure and understanding the issue). This thematic structure reinforces the interpretation that critical thinking in oral argumentation is a discursive practice influenced by the interaction between cognitive capacity, language resources, emotional conditions, and learning design. Thus, the answers to the research questions become more comprehensive and based on consistent empirical data.

Furthermore, the findings regarding students' dependence on the translation process, limited vocabulary, and speaking anxiety can be explained through the Cognitive Load Theory, which states that human working memory capacity is limited. When students have to simultaneously process a second language, formulate sentence structures, and manage anxiety, intrinsic and extraneous cognitive load increases, leaving little cognitive resources for analysis, evaluation, and critical reasoning (Sweller, 1988; Baddeley, 2000).

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3.2. Discussion

Based on the interview results with lecturers, the challenges section emphasizes that the obstacles to implementing critical thinking in speaking are not simply "an inability to think" but rather a series of conditions that hinder the observable emergence of critical thinking in oral performance. This result presents a challenge as a class reality that needs to be exposed before the interview results, as it provides context for why critical thinking achievement is not always apparent even though students are "cognitively" capable of reasoning. These challenges include internal factors (language, literacy, and affective) and pedagogical-situational factors (limited practice, heterogeneity of abilities, time constraints, and activity designs that demand equal argumentation). With this framework, the discussion becomes more comprehensive: the research not only reports positive perceptions but also maps the dynamics that hinder the ecosystem of speaking-based critical thinking in the classroom.

The first important finding is the existence of a gap between cognitive competence (critical reasoning) and linguistic competence (English oral production). NRA interviews emphasised that many students are actually capable of critical thinking, but "not fully English", so their critical ideas are not conveyed in clear academic speech. This means that critical thinking can be "hidden" because students do not yet have the linguistic resources (vocabulary, sentence structure, fluency, and discourse competence) to transfer reasoning into coherent spoken arguments. From an academic perspective, this aligns with the view that speaking performance is the result of the interaction between knowledge/ideas and the ability to express them; language limitations can reduce the apparent quality of reasoning. This discussion is also relevant to additional literature on cognitive load in L2 production (Garcia & Skehan, 1999) and the output hypothesis (Swain, 2005), which emphasizes the need for language production to mature form and meaning in academic communication.

Second, DRS show that critical thinking in speaking is performative: lecturers can only assess the quality of analysis, reasoning, and arguments when students are actually speaking. Therefore, low speaking productivity, triggered by a limited vocabulary, lack of practice, and weak reading habits, directly reduces the visibility of critical thinking. This means the pedagogical issues are twofold: (1) creating conditions that encourage students to speak (courage, opportunity, and participation structure), and (2) strengthening linguistic and literacy foundations so that arguments can be constructed accurately and based on evidence. Additional literature that can strengthen this discussion includes Willingness to Communicate (Macintyre et al., 1998), which explains why students are "able" but choose to remain silent, as well as input-interaction (Long), which emphasizes the importance of exposure and interaction in improving both fluency and complexity of speech.

Third, the affective aspect emerges as a highly significant obstacle, particularly motivation, anxiety, and fear of making mistakes/being laughed at (RTN). In the context

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of a discussion-based classroom, negative emotions can hinder linguistic risk-taking and reduce participation, thereby preventing the development of critical thinking processes through dialogue. Additionally, the documents also show the habit of "thinking through translation" (SYP), which slows down speech production and burdens students' attention; when cognitive energy is drained by translating and constructing language forms, there is less room for analysis, evaluation, and elaboration of arguments. Academically, these findings can be supported by language anxiety theory (Horwitz, MacIntyre & Gardner) and L2 motivation (McDonough, 2003), which explain how affective factors regulate speaking courage and persistence in constructing mature arguments.

Fourth, at the level of problems (field issues that directly impact the quality of learning), the lecturer highlighted the limitations of the practice environment: students tend to use English only on campus, resulting in very limited opportunities to build speaking habits and automaticity. This lack of practice has implications for the smoothness and speed of response, which ultimately hinders the spontaneous emergence of critical argumentation in debates/presentations. These findings indicate the need for strategies that expand the ecology of language use (e.g., speaking clubs, community-based tasks, out-of-class speaking projects, and digital speaking practice) to make practice repetitive and meaningful. Relevant additional literature to enrich the discussion includes deliberate practice in skill learning (Ericsson, 2012), and the task-based language teaching approach (Ellis, 2017), which emphasizes the frequency of practice and task design to promote reasoning complexity.

Fifth, the most prominent academic problem is the failure to construct coherent and evidence-based arguments (SYP). Students can have opinions, but they struggle to connect them with logical reasoning and relevant data, making their arguments disjointed and unpersuasive. This shows that CT in speaking is not about "having an opinion," but rather the ability to build reasoning structure (claim–reason–evidence–conclusion) and manage the organization of spoken discourse. Therefore, the implication is the need for argumentation scaffolding: argument models, claim-evidence-reasoning exercises, and rubrics that assess coherence and the quality of evidence. Additional literature that supports this includes, for example, Kuhn, (2022) on the development of argumentation, as well as the genre-based pedagogy approach Hyland, (2007) for explicitly constructing academic discourse structures.

Sixth, DRS adds a frequently overlooked but fundamental problem: problem clarification—students fail to grasp the core issue before responding because they only grasp partial information and do not ask clarifying questions. Conceptually, this means the weakness occurs in the early stages of critical thinking: identifying the focus of the question, determining relevant information, and testing the clarity of meaning before formulating an answer. In academic speaking practice, this skill is closely related to active listening, real-time information processing, and working memory capacity; without

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clarification, responses can easily stray from the core issue and the quality of reasoning becomes low. This discussion can be enriched by academic literature on listening and speaking and metacognitive listening strategies Vanderplank, (2012), which emphasize planning–monitoring–evaluation when understanding an issue before responding.

Based on the discussion, it can be concluded that the challenges in implementing critical thinking in speaking courses are not caused by a lack of critical thinking skills in students, but rather by limitations in externalizing that thinking process into English speaking performance. Research findings consistently indicate a gap between students' cognitive potential and the linguistic, affective, and pedagogical abilities that support the oral expression of critical thinking. In other words, critical thinking is often present internally, but it doesn't always manifest performativity in the context of speaking.

Conceptually, these challenges form a layered continuum, ranging from difficulties at the individual and procession level (e.g., vocabulary limitations, translation dependence, speaking anxiety), progressing to concrete and performative obstacles (such as low speaking productivity and lack of topic literacy), and culminating in systemic and pedagogical problems (limited practice environment, weak argumentation structure, and failure to clarify issues). These three layers of challenges interact and reinforce each other, thus hindering visibility and the quality of critical thinking in speaking learning.

The important conclusion from this discussion is that critical thinking-based speaking cannot be developed through a purely linguistic approach. Strengthening grammar or fluency without affective support, academic literacy, and argumentative scaffolding is not sufficient to elicit critical reasoning orally. Conversely, critical thinking in speaking demands a holistic learning ecosystem that includes strengthening language resources, creating an emotionally safe classroom climate, providing continuous input and practice, and designing tasks and assessments that evaluate the quality of reasoning, not just fluency.

Thus, this research confirms that the success of developing critical thinking in a speaking course lies in the ability of lecturers and institutions to bridge the gap between thinking and speaking. The development of critical thinking in oral argumentation requires a balance between institutional support and learner agency. Institutional support includes a curriculum that encourages evidence-based argumentation, a safe emotional space, plenty of chances to practice, and tests that focus on the quality of reasoning. But if students don't take charge of their own learning, question their assumptions, and think critically, this kind of help may not be enough. Thus, the success of developing critical thinking relies on both institutional strategies and active student participation.

This research clearly demonstrates the connection between empirical facts and theoretical assumptions commonly accepted in critical thinking literature. In general, there is an assumption that the low quality of oral arguments reflects the weak critical thinking skills of students. However, the data from this research actually shows that

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many students are "actually already capable of critical thinking" but are unable to express it verbally in English. This fact challenges the reductionist assumption that equates speaking performance with cognitive capacity. Thus, the findings of this research strengthen the argument that critical thinking in the context of oral argumentation is a language-mediated practice, not merely an indicator of individual analytical intelligence.

When compared to earlier studies, these results match what research says about cognitive load and second language production, which indicates that language difficulties can take away mental resources from understanding to focusing on language forms. Additionally, the results about relying on translation and feeling anxious while speaking support existing studies on foreign language anxiety and the willingness to communicate, which show that how much students participate in speaking is heavily affected by their emotions and the classroom environment. However, this research expands on those studies by showing that linguistic and affective barriers affect speaking fluency and limit the visibility of argument structures such as warrants and rebuttals in academic practice. In other words, this research more explicitly connects argumentation theory and second language acquisition theory in the context of higher education.

Overall, this research emphasizes that critical thinking in oral argumentation should be understood as the result of a complex interaction between cognitive competence, linguistic capacity, affective conditions, argumentation structure, and institutional support. By clarifying the relationship between empirical facts and theoretical assumptions and linking them to previous literature, this research explains the existing constraints and offers a more comprehensive policy direction and pedagogical reformulation for higher education.

4. Conclusion

This study indicates that students' challenges with critical thinking in higher education are not due to a lack of critical thinking ability but rather their difficulty in expressing this reasoning verbally. The research reveals a gap between students' cognitive capabilities and their critical thinking skills, as many students can analyze and evaluate concepts internally but struggle to apply these skills in spoken academic interactions due to various contextual, affective, linguistic, and pedagogical factors.

This study identified that linguistic limitations, including reliance on translation, limited vocabulary, and low fluency, hinder students' ability to develop critical arguments in English. Affective factors such as anxiety and lack of self-confidence further restrict participation in discussions. Systemic and pedagogical issues, including insufficient speaking practice and a discouraging classroom culture, also contribute to these challenges, affecting both cognitive and discursive aspects of critical thinking.

The data indicate that difficulties in critical thinking-based oral argumentation function along a stratified continuum. Students encounter challenges in articulating ideas due to linguistic and emotional barriers; obstacles impede the manifestation of critical thinking, stemming from low verbal productivity, inadequate background

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knowledge, and insufficient resources; and systemic issues such as poor argumentation, unclear problem definitions, and limited practice opportunities compromise the quality and sustainability of critical thinking development. These levels interact constantly, mutually reinforcing each other and influencing the overall quality of students' oral arguments.

This research concludes that oral argumentation teaches critical thinking cannot be conducted solely with a linguistic or skills-based approach. Conversely, critical thinking in oral argumentatio should be understood as a context-bound academic practice that requires an integrated learning environment. Simultaneously, this ecosystem must support affective readiness, enhance academic literacy, improve students' language resources, and provide clear support for argument construction and problem clarification. Ultimately, this research considers speaking not just a communication skill; it is an intellectual and epistemic practice. In higher education, speaking ability and oral argumentation serves as a visible platform for evidence-based assessment, reasoning, and academic responsibility.

This research asserts that the main issue in oral argumentation is not the lack of critical thinking skills among students, but rather their difficulty in expressing those thoughts verbally in English. Vocabulary limitations, sentence structure, speaking anxiety, lack of literacy, and weak argument structure all contribute to the gap between cognitive potential and speaking performance. Thus, critical thinking in speaking should be understood as a practice influenced by language, emotions, and the learning context, not just by an individual's mental ability.

The broader impact of these findings is the need for changes in teaching and assessment in higher education. Speaking classes should not only assess fluency but also evaluate the quality of reasoning, evidence, and coherence of arguments. However, this study has limitations because it was conducted in a single institutional context with a limited number of participants and therefore is not intended for broad generalization. Further research is recommended to involve more contexts, use a mixed-methods approach, and longitudinally test the effectiveness of strategies such as argumentation scaffolding and academic literacy reinforcement.

Conflicts of Interest

The authors declare no conflict of interest

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