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EXTRANJEROS**

Título

The usage of debate as a pedagogical strategy for the development of critical thinking

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Idioma Inglés**

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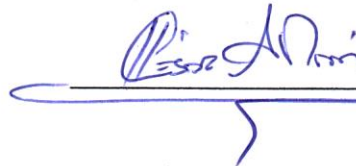
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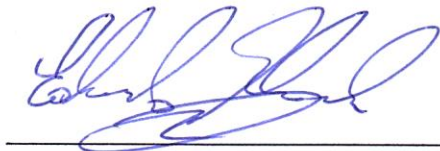
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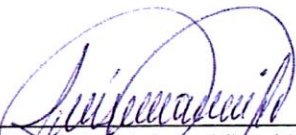




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DEDICATORY

I dedicate this work to my parents, Luis Chicaiza and Marilyn Rengifo, for the values and example they instilled in me throughout my life. To my mother, who is no longer with us, but whose influence remains with me.

To my sisters Verónica, Lorena, and Tatiana, for their constant support at every stage of this process.

To my brothers-in-law, especially Edwin, for their help and support when I needed it most.

To my partner, Allison, for accompanying and supporting me during these decisive years.

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Jonathan Chicaiza

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RESUMEN

El debate se presenta como una estrategia metodológica que puede influir en el desarrollo del pensamiento crítico en los estudiantes, ya que promueve la construcción y evaluación de argumentos dentro de un proceso interactivo. Por esta razón, el propósito de esta investigación fue analizar cómo el uso del debate contribuye al desarrollo del pensamiento crítico en los estudiantes de primer semestre de la carrera de Pedagogía de los Idiomas Nacionales y Extranjeros de la Universidad Nacional de Chimborazo, en el periodo académico 2025-2S. La dinámica propia del debate, que exige participación activa, intercambio de ideas y formulación de argumentos, lo convierte en una herramienta que favorece prácticas discursivas necesarias para fortalecer habilidades cognitivas vinculadas al pensamiento crítico. Metodológicamente, este estudio adoptó un enfoque mixto y se desarrolló bajo la modalidad de campo como investigación aplicada. La población estuvo conformada por estudiantes de primer semestre de la mencionada carrera. Para la recolección de datos se emplearon, una evaluación diagnóstica, un diario de campo y un examen final, instrumentos a través de los cuales se obtuvieron datos cuantitativos y cualitativos sobre el proceso de intervención. Los resultados mostraron que, después de las sesiones de debate, los estudiantes evidenciaron mejoras en evaluación, análisis, síntesis, argumentación y validez, cambios que se reflejaron tanto en las pruebas aplicadas como en las observaciones realizadas durante las sesiones. Asimismo, se observó un progreso en la participación, la organización de los turnos, el trabajo colaborativo y la claridad para expresar y justificar ideas. Estos hallazgos indican que el debate contribuyó al fortalecimiento del pensamiento crítico y al desarrollo de habilidades comunicativas necesarias en la formación académica.

Palabras claves: Debate, Pensamiento crítico, Participación, Habilidades cognitivas.

ABSTRACT

Debate is presented as a methodological strategy that can influence the development of critical thinking in students, as it promotes the construction and evaluation of arguments within an interactive process. For this reason, the purpose of this research was to analyze how the use of debate contributes to the development of critical thinking in first-semester students of the National and Foreign Language major at the Universidad Nacional de Chimborazo, during the 2025-2S academic term. The inherent dynamics of debate, which demand active participation, the exchange of ideas, and the formulation of arguments, make it a tool that fosters discursive practices necessary to strengthen cognitive skills related to critical thinking. Methodologically, this study adopted a mixed-methods approach and was conducted as applied field research. The population consisted of first-semester students of the aforementioned major. Data collection involved a diagnostic assessment, field diary, and a final exam, instruments through which quantitative and qualitative data on the intervention process were obtained. The results showed that, after the debate sessions, students demonstrated improvements in evaluation, analysis, synthesis, argumentation, and validity, changes reflected both in the administered tests and in the observations made during the sessions. Likewise, progress was observed in participation, turn-taking, collaborative work, and clarity in expressing and justifying ideas. These findings indicate that the debate contributed to strengthening critical thinking and developing communication skills necessary for academic training.

Keywords: Debate, Critical thinking, Participation, Cognitive skills.

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CHAPTER I

1. REFERENTIAL FRAMEWORK

1.1. INTRODUCTION

Academic and professional achievement requires students to develop critical thinking abilities which form the foundation of their educational success. Students need to develop critical thinking abilities to handle modern society's complex information because this skill enables them to analyze and evaluate and combine different pieces of information. The first semester of National and Foreign Language major at Universidad Nacional de Chimborazo shows that first-semester students lack essential skills for critical thinking. Students face difficulties when they try to participate in discussions because they lack the ability to create solid arguments and express their thoughts effectively during group discussions. Future educators will achieve their professional goals through critical thinking and effective communication because these abilities form the foundation of their professional duties.

The current lack of debate as a methodological strategy further complicates the situation. Debate, a tool with proven scientific validity for developing critical thinking and effective communication, has long been recognized for its capacity to foster analytical attitudes and reflections. In contemporary research like Ghafar's (2024), debate has demonstrated its ability to improve critical thinking and promote students' understanding of different viewpoints.

This research focuses on implementing debate as a methodological strategy to address the identified deficiencies. By including debate sessions, this study aims to analyze the extent to which it facilitates the development of critical thinking in first-semester students of the National Language and Foreign Language major at the Universidad Nacional de Chimborazo. The research is framed within constructivist, socio-cognitive, and dialogic approaches that promote active and reflective learning processes, characteristic of contemporary schools.

This study adopts a mixed methods approach to provide a comprehensive understanding of the phenomenon. Data collection will involve pre-tests and outcome tests to assess the evolution of students' critical thinking skills, along with surveys and observation guides to gather qualitative insights. The findings are expected to demonstrate the

effectiveness of debate as a pedagogical tool, offering valuable contributions to the academic curriculum and supporting the professional growth of students.

1.2. PROBLEM STATEMENT

In the first semester of the National and Foreign Language major at the Universidad Nacional de Chimborazo, it has been observed that students exhibit a marked deficiency in meaningful interaction with one another. This lack of interaction hinders students' development of the essential interpersonal skills necessary for effective communication, thereby resulting in their encountering difficulties in building collaborative relationships and actively participating in academic or professional conversations.

Moreover, students frequently rely on superficial research in formulating their arguments, often accepting the information provided by their instructors without engaging in independent verification or further research. This passive learning style hinders their ability to critically evaluate ideas, question assumptions, and develop robust critical thinking skills.

Furthermore, many students lack confidence in their public speaking abilities, often experiencing feelings of shyness and discomfort, which negatively contribute to their ability to communicate clearly in front of an audience. This is particularly problematic because, as future educators, they will require robust public speaking skills to lead classrooms effectively and confidently.

The existing curriculum, which does not incorporate debate as a teaching method, is a contributing factor to these challenges. Debate has been empirically validated as an effective tool for fostering critical thinking, enhancing communication skills, and exposing students to diverse perspectives. The absence of debate from the curriculum deprives students of a crucial opportunity to develop these essential skills.

This study aims to examine how the incorporation of debate as a teaching strategy can assist first-semester students in this program in enhancing their critical thinking abilities. It intends to address the issues and provide evidence of how debate could be a valuable addition to the academic curriculum.

1.3. PROBLEM FORMULATION

What is the contribution of debate as a methodological strategy in the development of critical thinking in first semester students of National and Foreign Languages major at the Universidad Nacional de Chimborazo in the 2025-2s academic period?

1.4. JUSTIFICATION

This research will focus on analyzing how the use of debate can contribute to the development of critical thinking in first-semester students of the National and Foreign Language major at the National University of Chimborazo. This study arises because it has been identified that many students have difficulties interacting meaningfully, evaluating information in depth, formulating solid arguments, and expressing themselves confidently in public. These limitations affect their training as future teachers, who need to master these skills in order to perform adequately in educational settings. Debate, recognized in literature as an effective tool for strengthening reasoning, analysis, and communication, is proposed as a strategy that could help overcome these difficulties and promote more reflective and participatory learning.

Besides, this study would also show the changes taking place in the students when debate is made as part of their academic activities. The students will see improvement in their ability to analyze ideas, justify a position and do so with mutual respect and valid counterclaims. The findings may lead to indicating the inclusion of debate during the first semester, contributing to the strengthening of the educational quality of the degree program. In the same vein, this paper aims to contribute useful knowledge to the teaching and academic community, demonstrating how a simple and easily accessible strategy can generate a positive impact on professional training and the development of skills that are essential for academic and social life.

1.5. OBJECTIVES: GENERAL AND SPECIFICS

1.5.1. GENERAL OBJECTIVE

- To analyze how debate contributes to the development of critical thinking in first semester students of the National and Foreign Language major at the Universidad Nacional de Chimborazo in the 2025-2s academic period.

1.5.2. SPECIFIC OBJECTIVES

- To diagnose the critical thinking skills of the study population.
- To apply debate sessions to favor the development of critical thinking in the study population.
- To evaluate the contribution of the intervention strategy based on the evolution of critical thinking of the study subjects.

CHAPTER II

2. THEORETICAL FRAMEWORK

2.1. INVESTIGATIVE BACKGROUND

Li, Li, and Shen's (2020) research, titled "Impacts of Debate Instruction on Students' Critical Thinking Skills in College EFL Classes: An Empirical Investigation," sought to analyze the impact of debate on the development of critical thinking in college EFL students. Utilizing experimental design grounded in the Paul-Elder model, the researchers compared a control group with a group that participated in structured discussions. The findings indicated substantial enhancements in the capacity to evaluate information, formulate cogent arguments, and synthesize ideas, thereby substantiating the efficacy of debate as a pedagogical strategy for cultivating critical thinking in higher education.

A study by El Majidi, de Graaff, and Janssen (2021), entitled "Debate as a Pedagogical Tool for Developing Speaking Skills in Second Language Education," explored the role of debate in the development of speaking skills in high school students learning English as a second language. Utilizing a quasi-experimental design, the study assessed aspects such as fluency, accuracy, and cohesion in oral production. The findings indicated that students who participated in debates achieved clearer and more structured expression compared to those who received traditional instruction, thereby underscoring the value of debate in second language acquisition.

In a 2024 study, Dewangga et al. (2024) investigated critical thinking skills in debate classes through the use of the case method, combining debate with the case method to enhance critical thinking in college students. By incorporating real-world situations into the debates, they promoted deeper analysis and better-grounded arguments. The outcomes of their study demonstrated enhancements in the identification of assumptions, the evaluation of evidence, and the construction of arguments. This finding underscores the efficacy of integrating diverse pedagogical strategies to fortify critical learning.

In the domain of health education, Nurakhir, Palupi, Langeveld, and Nurmalia's (2020) study, titled "Students' Views of Classroom Debates as a Strategy to Enhance Critical Thinking and Oral Communication Skills," examined nursing students' perceptions regarding the utilization of debate in the classroom setting. Through a series of interviews, the study identified several benefits, including the strengthening of argumentation, decision-making skills, and effective communication. However, the study also highlighted several

challenges in the implementation of this strategy. The findings suggest that integrating debate into professional education can contribute to the development of essential competencies for nursing practice.

In a related study, Tran and Tran (2022) evaluated the impact of debating activities on critical thinking skills among high school students in Vietnam. Their mixed methodology, which included pre- and post-intervention tests as well as classroom observations, revealed a notable enhancement in the participants' analysis, argumentation, and synthesis abilities. Additionally, most students expressed a favorable attitude towards the utilization of debate as a pedagogical tool, though certain challenges related to time management and performance evaluation were identified.

2.2. THEORETICAL FRAMEWORK

2.2.1. Methodological Approaches

Constructivist Approach

The constructivist approach is based on the idea that students actively build their own knowledge through experience and interaction with the environment. Piaget (1954) argues that “learning is an active process in which students build new knowledge based on their prior experiences” (p. 13). According to recent analyses, constructivist learning remains central to modern pedagogy, emphasizing student-centered meaning-making and active engagement (Zajda, 2023).

The selection of the constructivist approach is justified by its relevance to the research, which aims to analyze the development of critical thinking through debate. Constructivism, by emphasizing the active construction of knowledge by students, aligns with the interactive and reflective nature of debate. In this sense, debate is not only presented as a technique for expressing ideas but as a space where students can reconstruct and expand their understanding through interaction with their peers and the analysis of different perspectives. This theory is fundamental to support the research, as debate, as a pedagogical strategy, precisely seeks for students to build their own critical understanding through active participation, reflection, and the confrontation of ideas, in accordance with Piaget's postulates.

Sociocognitive Approach

According to Schunk and Usher (2019), the social-cognitive framework emphasises that learning takes place in social contexts where individuals observe, imitate, and self-regulate their cognitive and behavioral engagement, highlighting that modeling and social interaction are foundational to cognitive development.

This sociocognitive approach is relevant because it directly relates to the nature of debate as a social activity. Debate involves interaction between participants, and this approach highlights how learning happens through these social exchanges. This point about learning through observation, imitation, and modeling is relevant because students in a debate setting learn from each other's arguments and behaviors.

Critical Approach

Critical pedagogy seeks to empower students to question and challenge power and oppression structures in society. Freire (1970) asserts that “education should be an act of liberation, in which students become active subjects in the creation of knowledge and the transformation of their reality” (p. 58). This critical approach has been included because it connects to the study's focus on debate as a tool for developing critical thinking. Debate can serve as a platform for students to question established ideas and social structures. Freire's quote emphasizes education as liberation, which aligns with using debate to help students actively engage with and challenge information.

Dialogic Approach

Recent systematic reviews show that dialogic pedagogy where classroom discourse shifts from monologic to dialogic forms promotes interactive talk, mutual reasoning, and critical thinking among students (Laird-Gentle, Larkin, Kanasa & Grootenboer, 2023).

This focus on the dialogic approach arises from the very nature of debate, which is, at its core, an exercise in structured conversation. The selection highlights the importance of dialogue in the learning process, making emphasis on the exchange of ideas and critical discussion resonates with the research's objective of using debate to cultivate critical thinking. In essence, by including this approach, the research directly acknowledges that meaningful interaction and discussion are not merely tools but fundamental mechanisms through which critical thinking is developed and refined.

2.2.2. Theories Supporting Study Variables

Critical Thinking Theory

Recent research shows that critical thinking in higher education is conceptualized as a higher-order cognitive process that combines skills and dispositions aimed at evaluating, analyzing, and reflecting upon what to believe or do (Andreucci-Annunziata et al., 2023).

Including this theory is essential because it provides a clear definition of the main concept being studied: critical thinking. By using this definition, the research establishes what critical thinking involves the ability to evaluate and analyze information in a logical and reflective way. This helps set guidelines for how critical thinking will be measured and examined when using debate as a teaching strategy. In other words, it explains which specific skills and processes the debate activities aim to develop in the students.

Communicative Action Theory

Habermas's (1984) theory of communicative action focuses on rational communication and mutual understanding as the basis for social interaction. Habermas argues that “communicative action seeks understanding and coordination of actions through dialogue and rational argumentation” (p. 99).

The choice of Habermas's theory is critical here, as debate inherently hinges on communication to achieve understanding. By emphasizing rational communication and mutual understanding, this theory provides a lens through which the interactions within a debate can be analyzed. It suggests that debate is not just about arguing but about seeking a shared understanding through reasoned discourse. This rationale is essential for supporting the research since it clarifies why the communication aspect of debate is considered crucial for the development of critical thinking, aligning with Habermas's view that dialogue and rational argumentation lead to coordinated action and mutual understanding.

Cognitive Dissonance Theory

Cognitive dissonance arises when individuals recognize conflicts between their beliefs and actions, motivating efforts to reduce the discord through changing cognitions, behaviors, or rationalizations (Nikula, Fusek & van Gaalen, 2023).

This theory provides a framework for analyzing how the process of debating, which might involve advocating for a position contrary to one's personal beliefs, can lead to an internal struggle to reconcile these discrepancies, potentially resulting in altered beliefs and attitudes. It clarifies why exploring the psychological aspect of internal consistency, under this framework, is considered crucial for understanding the depth of debate as a pedagogical

tool, aligning with the aim to determine how these changes in cognition and behavior are developed.

Problem-Based Learning (PBL)

Recent evidence suggests that problem-based learning models explicitly adapted to emphasize critical thinking lead to significantly higher outcomes in student development of analytical skills and problem-solving competence (Yu & Mohamed Zin, 2023). It provides a valuable lens through which we can understand how debate activities may encourage similar skill development. By engaging students in complex, real-world scenarios within a debate context, we can potentially observe the same processes of problem identification and analysis that PBL aims to cultivate. This theoretical consideration directly supports the research, as it aligns with the goal of determining whether debate serves as an effective methodology for enhancing critical thinking and problem-solving abilities.

Collaborative Learning

Contemporary research highlights that collaborative learning, especially when supported by structured interaction and mutual accountability, significantly enhances students' critical thinking and interpersonal skills within small-group tasks (Ferreira & Zabolotna, 2024). This methodology is essential for fostering collaboration and communication. This provides insight into how debate activities may encourage similar skill development. By examining the extent to which students share ideas, work together to formulate arguments, and solve problems as a unit, this theory helps illuminate how debates may serve as a practical method for enhancing both collaborative abilities and critical thought processes, clarifying why teamwork is an essential part of debate, therefore, supporting communication.

Active Learning

The concept of active learning has evolved to encompass student-centred strategies that require learners to engage in meaningful tasks, such as problem-solving, discussion, and reflection rather than passively receiving information (Doolittle, Wojdak & Walters, 2023). By investigating how engaging in activities like thinking, discussing, researching, and creating within the debate setting influences information retention and understanding, this methodology helps clarify the role of student involvement in developing critical and reflective skills. This theoretical consideration directly supports the research, as it aims to

understand the effectiveness of practical engagement as a means of fostering critical thinking, as active participation and reflection are major factors in how students learn best during activities like the debate.

2.2.3. Curriculum

Integration of Debate in the School Curriculum

Embedding debate as an interdisciplinary pedagogical strategy within the school curriculum has been shown to enhance students' critical reasoning and communicative proficiency by engaging them in structured argumentation and collaborative inquiry (Reis & colleagues, 2025). This viewpoint offers a direct link between pedagogical strategy and comprehensive student growth, suggesting that debate is not an ancillary activity but an integral component for holistic education. This theoretical grounding directly supports the research by emphasizing that curriculum design is a key element when examining the practical implementation and effectiveness of debate as a method to cultivate essential skills.

Curriculum Planning and Design

Curriculum planning and design must not only articulate clear objectives, but also ensure coherent alignment between learning outcomes, instructional activities, and assessment tasks to support sustained student development (Prøitz, 2023). This perspective is particularly relevant to this study, as it highlights the need for deliberate design when introducing pedagogical strategies like debate. Simply adding debate sessions without considering their alignment with learning objectives and overall curriculum goals would diminish their effectiveness. This assertion thus supports the research by underscoring the necessity of systematic planning and ongoing evaluation to maximize the benefits of debate for students' development of critical thinking skills.

2.2.4. Origin of Debate as a Methodological Strategy

History and evolution of the debate

Debate as an educational strategy has a long history, going back to Ancient Greece, where it was used to teach speaking skills and argumentation. This shows that using debate in education is not a new idea, but one with deep historical roots. Its long tradition explains

why debate is seen as an effective method for developing critical thinking and why it continues to be relevant and valuable in modern educational contexts.

Over time, educational debate has continued to evolve, incorporating structured formats and contemporary pedagogical approaches aimed at strengthening students' analytical reasoning, argumentation, and communicative competence (Dewangga, Rosadi, Muna & Indriani, 2024).

2.2.5. Types, structure and norms about debate

Different debate formats (e.g., parliamentary, Lincoln-Douglas, Karl Popper) are distinguished by distinct structural rules and pedagogical aims, which influence the development of students' argumentation and analytic proficiency (Debate Project Consortium, 2024). The variety of formats enriches educational experience and enables discussion of diverse topics and issues.

Oxford-style Debate

In the Oxford-style debate format, two opposing sides engage in structured argumentation and rebuttal under formal rules, which encourages students to rigorously examine necessity, beneficiality, and practicability of a motion (Aarhus University Teaching Cases, 2024).

The Oxford-style debate format involves two opposing sides, Affirmative and Negative, who engage in structured constructive speeches, interpellation, and rebuttals; evaluation typically weighs evidence (25 %), delivery (30 %), interpellation (30 %), and rebuttal (15 %), with the Affirmative required to prove the case rather than merely rely on the Negative's lack of response (Oxford Debate Guidelines, 2025).

The rules demand rigorous interaction. During interpellation, questions should primarily focus on arguments developed in the opponent's speech, and participants must avoid irrelevant or biased remarks. Similarly, consulting teammates is prohibited once questioning begins. In rebuttals, clarity is emphasized: the speaker should point out logical fallacies or counter incorrect claims, without introducing new arguments only extending those already presented.

The debate is divided into three thematic phases: necessity, beneficiality, and practicability, each featuring 5–7 minutes constructive speeches followed by 2-minute interpellations. Subsequently, the audience engages in a 15-minute discussion, and team captains summarize their positions in 3-minute rebuttals. Finally, the audience votes based on argumentative strength, determining whether the motion is carried or defeated.

British Parliamentary Debate Model

The British parliamentary debate (BP) is a structured academic format that replicates the deliberative dynamics of the UK Parliament. Its primary objective is to develop argumentative competencies through improvisation and the logical construction of reasoning under time pressure (Bonet et al., 2019, p. 13). This model originated in the British political context, where discussions focused on legislative and social issues, but it has been adapted to educational settings to enhance skills such as critical thinking and effective communication (Sánchez, 2017, p. 15). Currently, its application extends to international competitions like the World Universities Debating Championship in Spanish (CMUDE), where participants are evaluated on their ability to defend or refute motions using solid arguments, prioritizing logical quality over technical evidence (Bonet et al., 2019, p. 17).

Among the distinctive features of this model are improvisation, hierarchical roles, and strategic persuasion. Debaters receive the motion for the topic to be discussed with only fifteen minutes of preparation, requiring general knowledge of the subject and the ability to articulate arguments without prior research (Bonet et al., 2019, p. 28). Teams are divided into Government, tasked with defending the motion, and Opposition, responsible for refuting it, each with specific roles such as the Prime Minister, who defines the debate's parameters, and the Leader of the Opposition, who challenges the motion's foundations (Table 1, p. 22). Persuasion is achieved through techniques like *punctual rebuttal*, which simplifies complex arguments, and the principle of recency, which emphasizes the last point presented to influence the audience (Bonet et al., 2019, p. 19).

The rules governing this format are rigorous. The use of electronic devices or external evidence is prohibited, privileging participants' cultural background and prior knowledge (Bonet et al., 2019, p. 25). Each speech lasts seven minutes, with points of information brief fifteen-second questions allowed only between the first and sixth minutes (p. 51). Adjudication, conducted by a panel of judges, employs the *Warsaw Scale* to evaluate criteria

such as clarity, relevance, and originality, assigning scores ranging from 50 to 99 points (Table 2, p. 29). Failure to fulfill roles, such as introducing new arguments during the final phase of the debate, results in penalties that affect the team's ranking (Bonet et al., 2019, p. 25).

Structurally, the debate is organized into three stages: preparation, intervention, and adjudication. During preparation, teams analyze the motion classified as political, evaluative, or factual, and design strategies based on their general understanding of the topic (Bonet et al., 2019, p. 26). The intervention follows a predetermined order, beginning with the Prime Minister, continuing with the Leader of the Opposition, and alternating until concluding with the Opposition Whip, who synthesizes key points (p. 22). Finally, judges deliberate by comparing argumentative quality, awarding positions and individual scores based on criteria such as logical coherence and the social impact of speeches (Melero, 2019, p. 35). This structure not only fosters discursive discipline but also strengthens synthesis and critical evaluation skills, essential elements for the comprehensive development of argumentative competencies in academic contexts (Guzmán-Cedillo & Flores-Macías, 2020, p. 9).

Lincoln-Douglas Debate

The Lincoln-Douglas debate format is characterized by a one-on-one structure focused on philosophical and value-based resolutions; individual participants must construct a value-criterion framework and defend it under strict time constraints while demonstrating rhetorical precision and analytic depth (StudyUnicorn, 2025).

A central feature of LD debate is the requirement that the judge choose between two opposing positions: the affirmative, which supports the resolution, and the negative, which challenges it. The format does not allow the judge to remain neutral; they must determine which side offers stronger reasoning and more persuasive use of evidence. Resolutions change every two months and usually address controversial political or social issues. They are released in advance so that debaters have enough time to conduct thorough research before the competition.

Tournaments typically begin with preliminary rounds and continue into elimination rounds. In the preliminary stage, competitors alternate between defending the affirmative and the negative side. Their advancement depends both on the number of debates they win

and, on the speaker, points they receive, which reflect qualities such as clarity, persuasive skill, and the ability to respond effectively to opposing arguments. Judges pay attention not only to the strength of the analysis but also to how clearly and accessibly debaters communicate complex ideas. Once the elimination phase begins, debates are evaluated by a panel of three judges, and competitors face single elimination matches until one finalist wins the event.

The formal structure of an LD debate follows a strict sequence:

1. **Affirmative Constructive (AC):** 6 minutes to present arguments in favor of the resolution.
2. **Cross-Examination of the Affirmative:** 3 minutes of questioning by the negative.
3. **Negative Constructive (NC):** 7 minutes to refute the affirmative and present counterarguments.
4. **Cross-Examination of the Negative:** 3 minutes of questioning by the affirmative.
5. **First Affirmative Rebuttal (1AR):** 4 minutes to respond to the NC.
6. **Negative Rebuttal (NR):** 6 minutes to counter-refute.
7. **Second Affirmative Rebuttal (2AR):** 3 minutes to conclude the debate.

Each debater has a total of four minutes of preparation time that can be used throughout the round to organize their responses and plan their strategic approach. One of the essential technical practices in this format is flowing, a structured method of note-taking that arranges arguments in vertical columns and often uses different colors to distinguish each side. This technique helps keep track of every line of argument and makes it easier to ensure that all points are addressed during rebuttals. It also requires careful and attentive listening, since overlooking an opponent's claim can result in losing a round due to failing to respond to key arguments.

The Karl Popper Debate

In the Karl Popper debate format, two teams (Affirmative and Negative) of three to five members (three active participants) engage in structured speeches, cross-examination, and timed rebuttal phases; teams commit to principles of fair play, respectful conduct, and rigorous argumentation (Czech Debate Association, 2018).

The norms are governed by the KPDP Code of Ethics and the *Adjudicator's Handbook*. “The aim of the Debate League is to facilitate in an attractive way the development of skills, abilities, and knowledge of the participants. Competitive debating is intended to educate while teaching sportsmanship and social etiquette as well.” (Czech Debate Association, 2018, p. 1)

According to the official rules of the Karl Popper Debate Programme, each team must consist of at least three members (with three participating in each round), and adhere to ethical standards emphasizing fair play, respectful comportment, and accurate information. The format features ten components (six speeches, four cross-examinations) and assigns specific roles for example the first Affirmative speaker (A1) defines the motion to promote structured argumentation and critical teamwork (Czech Debate Association, 2018).

Debate Structure

The sequence follows a predefined order:

- **A1 (6 minutes):** Defines the resolution and presents key arguments.
- **N3 cross-questions A1 (3 minutes).**
- **N1 (6 minutes):** Rebuts the affirmative or introduces a negative criterion.
- **A3 cross-questions N1 (3 minutes).**
- **A2 (6 minutes):** Reinforces A1's arguments and counters the negative.
- **N1 cross-questions A2 (3 minutes).**
- **N2 (6 minutes):** Dismantles A2's rebuttal and deepens their line.
- **A1 cross-questions N2 (3 minutes).**
- **A3 (5 minutes):** Synthesizes key clash points from the affirmative perspective.
- **N3 (5 minutes):** Concludes the debate from the negative viewpoint.

Evaluation is usually based on three areas: the clarity and strength of the arguments, the quality of delivery, and the effectiveness of strategic choices such as structure and time use. In debates centered on proposals or values, one of the most serious strategic mistakes is failing to present the criterion, which serves as the standard for weighing both sides.

2.2.6. Benefits of Debate

Development of Communication Skills

Debates structured within the classroom environment provide students with repeated opportunities to articulate ideas, listen and respond to peers, and refine verbal and written communication skills through structured argumentation (Debate as an Educational Methodology, 2024). This assertion offers a crucial link between the activity of debating and the improvement of communication skills, which are essential for academic and professional success. By focusing on how students learn to express themselves more clearly, logically, and persuasively through debate, we can better assess the practical benefits of this pedagogical strategy. This theoretical consideration supports the broader goal of the research by providing a direct focus on the observable enhancements in students' communicative abilities.

Promotion of Critical Thinking

Engaging students in structured debate activities fosters critical thinking by requiring them to question assumptions, evaluate competing evidence, and construct coherent and well-grounded arguments within a dialogic framework (Andreucci-Annunziata et al., 2023). This perspective directly addresses the research's fundamental objective of fostering critical thinking skills among students. The rigorous nature of debate, requiring students to analyze, evaluate, and synthesize information, makes it an ideal method for developing these crucial cognitive abilities, therefore supporting the aims to understand how these skills are achieved when debate is incorporated as a methodological strategy.

Improvement in Argumentation Skills

Classroom debate activity supports students in developing their argumentation capacity by engaging them in constructing, presenting, and responding to claims and counterclaims, thereby advancing their logical structuring and persuasive expression of ideas (Chen, Wang, Zhai & Li, 2022). This insight underscores the practical benefits of debate in improving students' capacity for structured, logical discourse, an ability that is not only valuable within academic settings but extends to various aspects of daily and professional life, therefore supporting the aims to determine how argumentation skills are developed and improved when debate is employed as the main methodology.

2.2.7. Methodologies for Applying Debate

Methodology for Applying Debate as a Pedagogical Technique

The application of debate as a technique to foster critical thinking requires a structured approach divided into three interconnected phases: preparation, execution, and reflective evaluation. According to Jimenez et al. (2024), the design must begin with selecting topics (motions) that are "controversial, curriculum-relevant, and aligned with students' cognitive levels" (p. 385). For example, in nursing education, motions such as "Patient privacy should take precedence over collective safety in cases of contagious diseases" allow exploration of complex ethical dilemmas (Nurakhir et al., 2020). Role assignment is equally critical: dividing students into *pro* and *con* teams, with 2-3 members each, ensures that each participant assumes specific responsibilities, such as first speaker, rebuttal speaker, or conclusion presenter (Jimenez et al., 2024).

During the preparation phase, students must conduct guided research, consulting "academic articles, books, and reliable digital resources" to build evidence-based arguments (Nurakhir et al., 2020, p. 135). This process, which Jimenez et al. (2024) note requires 1 to 2 weeks, is complemented by workshops on argumentative techniques. These workshops teach the use of *Points of Information (POI)* 30-second interventions to challenge opposing arguments and how to structure speeches with introductions, logical development, and conclusions (Nurakhir et al., 2020). Preparation not only strengthens disciplinary knowledge but also develops the ability to "anticipate counterarguments and adjust strategies in real time" (Jimenez et al., 2024, p. 390).

Debate execution follows a strict temporal structure. The *pro* team's first speaker has 7 minutes to present key arguments, followed by a 5-minute rebuttal from the *con* team. POI rounds are interspersed between speeches, allowing up to 3 critical questions per team (Nurakhir et al., 2020). The instructor acts as a moderator, ensuring respect for speaking turns and argument relevance. Jimenez et al. (2024) emphasize the use of real-time rubrics to assess "analytical depth" and "rhetorical clarity," criteria aligned with skills such as analysis, comparison, and evaluation (Cui & Zhao, 2024).

Post-debate evaluation integrates qualitative and quantitative instruments. Cui and Zhao (2024) propose a coding scheme with five categories: analysis, comparison, evaluation, inference, and synthesis, each classified into low, medium, and high levels. For

example, high-level analysis involves "breaking down information into organic elements and establishing clear relationships among them" (Cui & Zhao, 2024, p. 5). Additionally, self-assessment and peer assessment are recommended, where students reflect on their "use of evidence" and "respect for divergent perspectives" (Jimenez et al., 2024, p. 391).

Curricular integration is a determining factor for success. Debates should link to previously covered thematic units, ensuring students have "minimum conceptual mastery" to engage critically (Cui & Zhao, 2024, p. 13). In time-constrained contexts, Nurakhir et al. (2020) suggest shortening the preparation phase to 48 hours, provided key resources are accessible. Finally, teacher training is essential: instructors must master moderation techniques and qualitative rubrics to avoid evaluation biases (Jimenez et al., 2024).

Among the identified challenges are the "lack of familiarity with formal debate rules" and "stage anxiety among novice students" (Nurakhir et al., 2020, p. 138). To mitigate these, starting with small-group debates and conducting demonstration sessions with recorded examples are recommended. Jimenez et al. (2024) also propose assigning progressively complex roles, allowing students to build confidence before addressing larger audiences.

2.2.8. Characteristics of Critical Thinking

Analysis and Evaluation of Arguments

Contemporary studies define critical thinking as a higher-order process involving the analysis, evaluation, and synthesis of information and arguments, whereby thinkers discern assumptions, judge evidence, and construct reasoned judgments (Andreucci-Annunziata et al., 2023). These skills are fundamental to the practice of debate, where students must critically evaluate presented arguments and construct logical and coherent responses. The ability to analyze and evaluate arguments strengthens the development of robust critical thinking, enhancing students' academic performance.

Logical Thinking and Reasoning

Logical thinking and reasoning involve the disciplined use of deductive, inductive and analogical processes to structure information, evaluate claims, and draw justified conclusions (Fehér, Jaruska, Szarka & Tóthová Tarová, 2023). This capability is crucial in debates, where students must structure their arguments logically and persuasively. This highlights the fundamental cognitive processes that debate aims to cultivate, namely the

ability to structure arguments in a logical and persuasive manner. The practice of forming coherent lines of reasoning, based on clear premises and valid deductions, directly supports the research goal of measuring how debate enhances critical thinking skills, particularly those pertaining to the systematic organization and evaluation of information, and therefore supports the core aim of understanding how these skills are developed with the use of debate as a strategy.

Open-Mindedness and Questioning

Open-mindedness in educational contexts is described as a willingness to consider new ideas, evaluate one's own beliefs and assumptions, and engage in reflective inquiry, which are key dispositions supporting critical thinking (Siegel, 2017). This attitude is crucial in debates, where students must consider different perspectives and adjust their arguments in response to new evidence. This statement reinforces that intellectual flexibility and the courage to challenge one's own viewpoints are integral components of critical thought. Within the debate context, students are consistently required to engage with diverse perspectives and adapt their arguments in response to emerging evidence.

2.2.9. Relationship Between Debate and Critical Thinking

How Debate Promotes Critical Thinking

Debate promotes critical thinking by requiring students to analyze, evaluate, and construct arguments rigorously and logically. Snider and Schnurer (2002) highlight that "debate develops critical thinking by compelling participants to evaluate evidence, consider different perspectives, and defend their positions coherently" (p. 105). This assertion elucidates how the very nature of debate necessitates a high degree of critical engagement; students are not merely asked to memorize or recite information, but to actively dissect, critique, and synthesize it into a reasoned stance. Consequently, this perspective supports the research goal of demonstrating debate's potential to cultivate sophisticated critical thinking skills.

2.2.10. Activities to Apply Both Variables

Debate Workshops

Debate workshops create structured opportunities for students to practise constructing claims, challenging opposing viewpoints, and engaging in reflective argument evaluation skills directly connected to the development of critical thinking and academic communication (Cinkara & Karaman, 2023). These workshops are essential for developing the skills necessary to participate in both formal and informal debates. This suggests that providing dedicated workshops can offer a tangible and focused opportunity for students to develop the skills necessary for effective debating, and subsequently, the critical thinking abilities these skills promote. This strategy supports the aims of the study by offering a direct means to observe and analyze how the structured practice of debate contributes to the development of those cognitive competencies, offering practical experience in developing these abilities.

Research and Presentation Projects

Research and project-based assignments have been shown to strengthen critical thinking by engaging students in investigating complex questions, analysing evidence, and presenting well-reasoned conclusions (Almulla, 2020). This methodology is highly relevant for the development of critical and communicative skills. This viewpoint indicates that the processes developed through debate, such as the rigorous investigation of topics and the logical articulation of arguments, are transferable to independent research tasks. Therefore, the inclusion of research projects supports the study by providing a direct pathway to evaluate whether debate effectively enhances students' ability to engage in deep analytical inquiry and present information in a structured and persuasive way, reinforcing those abilities developed during the debate activities in the curriculum.

2.2.11. Necessary Resources for Applying Methodology

Assessment and Feedback

Effective assessment and feedback practices are integral to supporting students' development of critical thinking and debate skills by providing targeted information about performance and guiding next-step actions (Haughney, Wakeman & Hart, 2020). These strategies are fundamental for ensuring continuous and meaningful learning. Assessment is not merely for evaluation but is a crucial component for learning, as it offers students the necessary feedback to identify areas of strength and areas needing improvement. This theoretical element directly supports the study's goal of fostering critical thinking through

debate, as it underscores the importance of a continuous cycle of practice, feedback, and revision, thus enhancing the learning curve for students.

Instructional Materials

Thoughtfully designed instructional materials, including debate guides, structured worksheets, and peer-review templates provide essential scaffolding for students to engage meaningfully in debate and critical thinking tasks (Chen, Wang, Zhai & Li, 2022). These resources are essential for preparing and practicing debate skills.

Online Platforms and Digital Tools

Digital debate platforms and interactive online tools expand opportunities for students to engage in structured argumentation and critical thinking outside the traditional classroom, facilitating asynchronous discussions, peer-feedback, and persuasive reasoning in virtual environments (González-Mohino, Rodríguez-Doménech, Callejas-Albiñana & Castillo-Canalejo, 2023). These tools are particularly useful in the context of distance education.

2.2.12. Roles of Both Teacher and Student

Teacher's Role as Facilitator and Guide

The teacher's role as a facilitator is essential for supporting students' development of debate and critical thinking skills; teachers guide collaborative inquiry, scaffold reasoning processes, and help learners regulate their motivation and engagement throughout argumentative activities (Järvenoja et al., 2020). This role involves creating a safe and motivating learning environment. The implementation of debate as a methodology, where the educator's role goes beyond traditional lecturing and instead becomes one of active mentorship. Teachers are not simply delivering content but are actively guiding students through the processes of analyzing arguments, formulating responses, and engaging in constructive dialogue, thereby providing a safe and motivating learning environment.

Students' Role as Active and Critical Participants

Students must take an active and critical role in their learning by engaging meaningfully in debates and critical thinking activities. Johnson and Johnson (1994) argue that "students who actively participate in debate and critical thinking develop a deeper

understanding and stronger skills” (p. 67). This role is fundamental for the success of debate and critical thinking methodologies. By actively participating in the processes of formulating arguments, listening critically to opposing viewpoints, and responding thoughtfully, students not only enhance their communication skills but also deepen their comprehension of the subject matter. This emphasis on active involvement aligns with the study’s goal to assess how debate promotes critical thinking through practical experience and participation.

Affirmative Role Student:

This axis records the performance of students assigned to defend the affirmative stance in debates. It analyzes their ability to structure coherent arguments, use academic evidence (e.g., citations from Ghafar, 2024 or Li et al., 2020), and respond to counterarguments. In the thesis, this data will evaluate how preparing and delivering affirmative speeches contributes to developing skills such as synthesis and persuasion, which are linked to critical thinking.

Negative Role Student:

Focuses on students tasked with refuting the affirmative stance. It documents their ability to identify weaknesses in opposing arguments, employ verifiable sources (e.g., Dewangga et al., 2024), and propose logical alternatives. This record will measure critical analysis skills and adaptability, key aspects of the research hypothesis.

CHAPTER III

3. METHODOLOGICAL FRAMEWORK

3.1. RESEARCH APPROACH

The approach of this research adhered to the mixed method, integrating both qualitative and quantitative methods to achieve a comprehensive understanding of the contribution of debate in the development of students' critical thinking. This approach allowed the analysis of the data from multiple perspectives, offering a holistic and robust view of the phenomenon under study. This method was chosen because of the need to capture both quantifiable improvements in critical thinking, and the qualitative nuances present in interactions during debate sessions, which was critical given the deficiency identified in first semester students.

3.2. RESEARCH MODALITY

The research was carried out through the field modality, which implied the collection of data directly in the environment where the study phenomenon occurred. This modality enabled observation and analysis in the natural environment of the participants, facilitating direct interaction and monitoring classroom dynamics. The choice of field research responded to the need to obtain a real and contextualized perspective on how debate, as a pedagogical strategy, influenced behavior and the development of critical thinking in the educational context.

3.3. LEVEL OR TYPE OF RESEARCH

This was applied research, aimed at solving practical problems through the application of theories and knowledge. This type of research was aligned with the objective of implementing a discussion strategy to enhance critical thinking, seeking results that could be replicated in similar educational contexts. Applied research was chosen to directly address the shortcomings in students' critical skills, providing practical solutions adjusted to the reality of the academic environment.

3.4. STUDY POPULATION

The study population consisted of first semester students in the National and Foreign Language major at the Universidad Nacional de Chimborazo, located in Riobamba, Ecuador. This population was determined based on the empirical experience accumulated as a student at the aforementioned university. This experience suggested that students at this level would

benefit from a pedagogical intervention centered on debate, as this methodological strategy promoted the development of critical thinking, an essential skill for their academic and professional training.

3.5. TECHNIQUES AND INSTRUMENTS FOR COLLECTING DATA

Questionnaire

The questionnaire was fundamental to measure critical thinking skills before and after the intervention. This technique allowed obtaining direct and structured information from the students, facilitating the comparison of their levels at different times. This technique was selected for its ability to generate quantitative data that provided objective evidence on the effectiveness of the debate as a pedagogical strategy.

Pre-test and Post-test

To address specific objectives one and three, pre-tests and post-tests were applied. These were specific techniques that allowed the evaluation of changes in critical thinking skills. These instruments were essential for this research as they provided comparative data before and after the intervention. In the context of this research, this technique allowed for a clear identification of the contribution of debate on the development of critical thinking.

The diagnostic test was administered at the beginning of the intervention period to establish a baseline of the students' critical thinking skills. This instrument was structured into sections that evaluated different dimensions of critical thinking, including Evaluation, Analysis, Synthesis, Argumentation, and Validity. The test consisted exclusively of open-ended questions contextualized in everyday situations from the Ecuadorian context, allowing students to demonstrate their reasoning through authentic and relevant scenarios.

At the end of the intervention period, the outcome test was administered. It maintained a structure similar to the diagnostic test to ensure comparability of results. It included the same dimensions and types of questions, enabling an accurate assessment of changes in students' critical thinking skills. Moreover, the parallel design of both tests guaranteed the validity and reliability of the measurements.

Observation

Observation was used to collect data on student interactions and behaviors during the discussion sessions. This technique was key to analyze in detail the participation and

development of critical skills in real time. Observation was chosen for its ability to capture qualitative and contextual nuances of the debate process.

Field Diary

The field diary was employed to record the researcher's observations and reflections during the discussion sessions. This instrument provided a detailed narrative of the events and behaviors observed, allowing for an in-depth interpretation of classroom dynamics. Its use enriched the analysis by documenting both objective and subjective aspects of the critical thinking development process.

The field journal allowed observations from the debate sessions, focusing on aspects related to students' participation, interaction, and development of critical thinking. The thematic axes included elements such as role performance (affirmative and negative), turn-taking, group dynamics, emotional reactions, and observable effects on analysis, evaluation, and synthesis during the debates.

3.6. DATA ANALYSIS TECHNIQUES AND INSTRUMENTS

Qualitative Analysis

Qualitative data analysis involved a series of procedures that began with the organization and preparation of information, such as the classification of field notes. The researcher then conducted a thorough reading of the entire corpus to gain a general idea of the content and reflect on its overall meaning.

From this, the researcher developed broader categories or themes that represented the main findings of the study. These themes could be linked together through narratives, theoretical models, or general descriptions, depending on the methodological approach used, such as grounded theory, case study, or phenomenology.

Thematic Analysis

Reflective thematic analysis (RTA), developed by Braun and Clarke, was presented as a qualitative method that emphasized the researcher's reflexivity and the subjective construction of meaning. As described above, the process began with a thorough familiarization with the data and continued with the identification of patterns and meanings that emerged organically. These were progressively integrated into categories that were

reviewed and refined recursively until an interpretive narrative was constructed that could contextualize and explain the phenomena studied, going beyond simple description.

Qualitative Comparative Analysis

Qualitative comparative analysis focused on identifying similarities and differences across cases, themes, or categories, which helped build stronger and more reliable interpretations of the data. This type of analysis could be structured using matrices that combined quantitative variables with qualitative themes, allowing for a systematic examination of how different data sets related to one another.

In studies that used mixed methods approaches, researchers not only compared numerical and narrative results but also integrated them directly to assess their coherence or reveal new insights. This process provided greater validation by bringing together multiple types of data and perspectives.

CHAPTER IV.

4. RESULTS AND DISCUSSION

4.1. Field journal progress matrix and thematic analysis.

Table 1

Progression matrix for debate applications.

Central Theme	Progression Category	Evidence of Initial State	Evidence of Final State
Consolidation of communicative confidence and active participation in debates	Progression of confidence and oral participation	Some classmates wanted to express their opinions, but it was clear that they were nervous, which prevented them from speaking with confidence... not everyone felt comfortable participating.”	few students who rarely spoke gave short but clear opinions today.”
Transition from chaotic interaction to regulated collaborative dynamics	Regulation of turn taking and strengthening of teamwork	Turns were not always respected, as on several occasions more than one student from the same group spoke at the same time... at times it became a little disorderly because everyone wanted to participate.”	Turns were respected very well. Students waited patiently and responded directly to previous arguments... There was strong collaboration. Students reminded each other of useful phrases.”

<p>Progressive development of critical thinking and the use of argumentative resources in English</p>	<p>Deepening of critical analysis and use of evidence</p>	<p>Some of my classmates had well structured arguments and knew what they were talking about. Others just threw out random ideas without much substance or basis, and some clearly did not understand the topic very well or perhaps had not done enough research.”</p>	<p>Students linked eating habits with emotional, physical, and economic consequences, a strong sign of deeper thinking.”and “Students discussed convenience versus cost, nutrition versus taste, and emotional aspects of eating out.”</p>
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Source: Data obtained from field diaries.

Author: The researcher

4.1.1. Growth of communicative confidence and active participation

At the beginning of the intervention, the data showed that many students hesitated to speak. Several attempted to participate but expressed visible nervousness, which limited their clarity and confidence. It was noted that “some classmates wanted to express their opinions, but it was clear that they were nervous... not everyone felt comfortable participating.” Participation was uneven, and fear of making mistakes restricted students’ willingness to speak in English.

As the intervention progressed, gradual improvement was observed. Students began to appear more relaxed and increasingly willing to share their ideas. Many of them relied less on written notes and began speaking in a more spontaneous and natural way. Some students who had previously remained silent contributed for the first time, showing a growing sense of comfort during the debates. These changes indicate that repeated practice and familiar, relatable topics played an important role in developing confidence.

Toward the end of the process, the change in participation became more evident. It was recorded that “a few students who rarely spoke gave short but clear opinions.” It was also observed that the overall level of confidence during the interaction had increased considerably, as reflected in the comment “I felt very satisfied with how confidently the group interacted.” This progression shows a clear movement from hesitation to more active, secure, and consistent participation.

4.1.2. Transition from disorganized interaction to structured teamwork

At the beginning, interaction among students was energetic but lacked structure. Several spoke simultaneously or interrupted one another, producing moments of disorder. It was recorded that “turns were not always respected... it became a little disorderly because everyone wanted to participate.” This situation reflected a group still unfamiliar with regulating participation collaboratively.

Over time, clearer patterns of organization began to emerge. Interruptions decreased and students listened more attentively to one another. Turn taking became more controlled, allowing discussions to flow more naturally. Students gradually demonstrated stronger teamwork by respecting speaking time and supporting one another during the

activity. This mutual assistance helped stabilize the group dynamic and facilitated more constructive exchanges.

Toward the end of the intervention, interaction became significantly more disciplined and cooperative. It was noted that “turns were respected very well” and that students “waited patiently and responded directly to previous arguments.” Collaboration was especially evident when students reminded their peers of useful expressions or vocabulary. This steady evolution confirms a transition from unregulated participation to a well-structured and collaborative environment.

4.1.3. Strengthening of critical thinking and argumentative skills in English

At the beginning, the data showed substantial variation in the quality of students’ arguments. Some presented clear ideas, while others contributed comments that lacked depth or factual support. It was noted that “others just threw out random ideas without much substance or basis... some clearly did not understand the topic very well.” This situation indicated an early stage of limited analytical development and insufficient preparation.

As the process continued, students began demonstrating clearer reasoning and stronger argumentative structure. More evidence-based arguments appeared, and students increasingly connected ideas through cause-and-effect relationships. They also offered more coherent conclusions and incorporated more precise vocabulary and real-life examples to support their claims. These developments reveal a growing ability to analyze, justify, and evaluate ideas from different perspectives.

By the final stages, students demonstrated deeper and more multidimensional reasoning. It was recorded that “students linked eating habits with emotional, physical, and economic consequences” and that they discussed numerous contrasting aspects such as “convenience versus cost, nutrition versus taste, and emotional aspects of eating out.” These comments illustrate a shift from simple reactions to more sophisticated reasoning that integrates multiple dimensions of a topic.

4.2. Comparison table between the diagnostic test and outcome test and qualitative comparative analysis

Table 2

Results of diagnostic tests, improvement with the intervention of debate, and outcome test results.

Criteria evaluated	Diagnostic test	Application of debate sessions	Outcome test
Evaluation	3.0	+0.7	3.7
Analysis	2.0	+1.6	3.6
Synthesis	2.0	+2.0	4
Argumentation	2.0	+2.2	4.2
Validity	2.7	+1.1	3.8
Overall Average	11.88 / 25	+7.6 improvement range	19.3 / 25

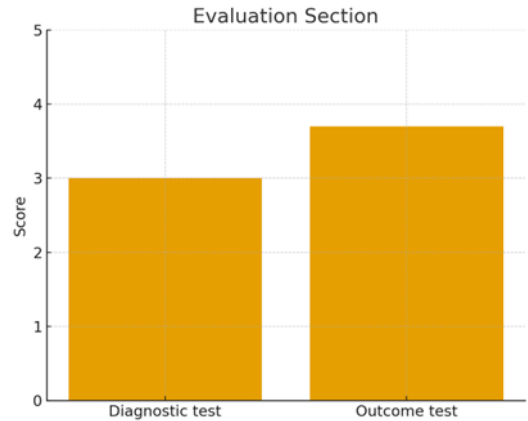
Source: Data obtained from the diagnostic test, the application of the debate, and outcome test.

Author: The researcher

The following graphs show the evaluated sections separately and their progression before and after the application of the debate.

Figure 1

Diagnostic and outcome scores for the Evaluation section.



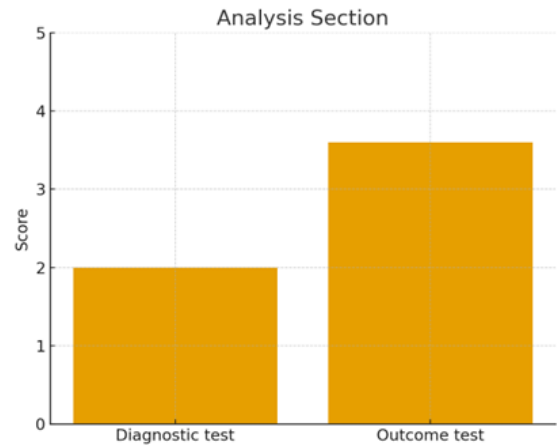
Source: Data obtained from Table 2.

Author: The researcher

The Evaluation section increased from 3.0 in the diagnostic test to 3.7 in the outcome test. This represents a 23.3% improvement, suggesting that students handled information more carefully and considered relevant aspects of the tasks with greater consistency after the debate sessions.

Figure 2

Diagnostic and outcome scores for the Analysis section.



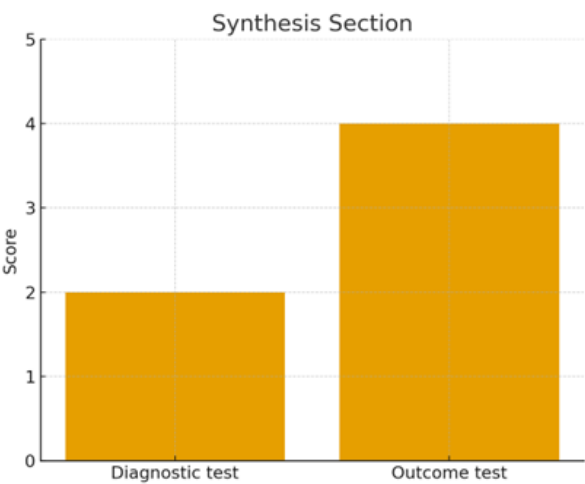
Source: Data obtained from Table 2.

Author: The researcher

The Analysis section increased from 2.0 to 3.6, showing a 50% improvement. This indicates that learners demonstrated clearer distinctions between ideas, identified relationships more effectively, and organized information with greater structure following the intervention.

Figure 3

Diagnostic and outcome scores for the Synthesis section.



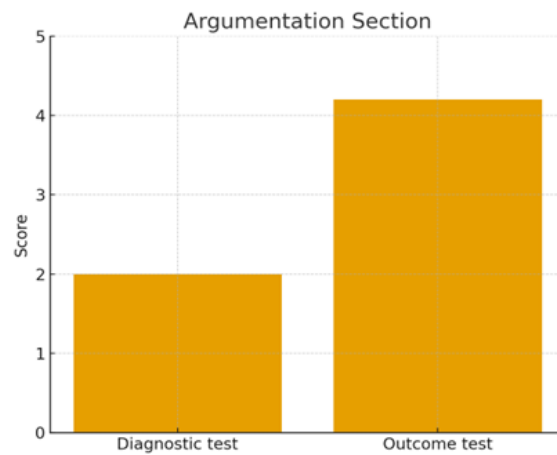
Source: Data obtained from Table 2.

Author: The researcher

The Synthesis section rose from 2.0 to 4.0, which reflects a 100% improvement. This suggests that students were able to combine information more effectively and propose more complete responses after engaging in the debate activities.

Figure 4

Diagnostic and outcome scores for the Argumentation section.



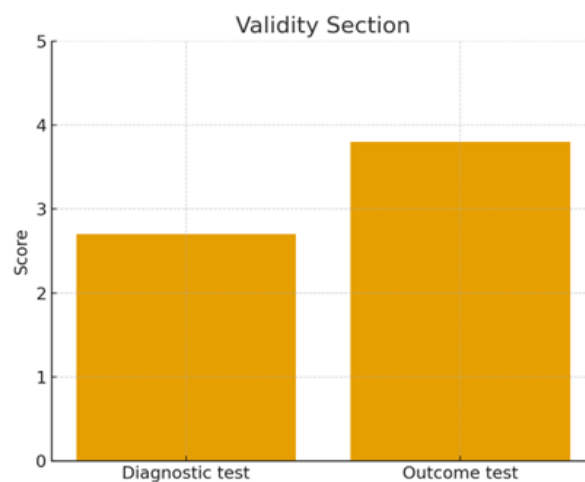
Source: Data obtained from Table 2.

Author: The researcher

The Argumentation section improved from 2.0 to 4.2, representing a 110% increase. These results show that students expressed their reasoning with greater clarity, provided more relevant support for their ideas, and articulated more coherent arguments by the end of the intervention.

Figure 5

Diagnostic and outcome scores for the Validity section.



Source: Data obtained from Table 2.

Author: The researcher

The Validity section increased from 2.7 to 3.8, which corresponds to a 40.7% improvement. After the debate sessions, learners demonstrated clearer criteria when making decisions and offered more consistent justifications for their choices.

4.2.1. Qualitative Comparative Analysis

The comparison between the diagnostic and outcome tests shows consistent progress in all components: Evaluation, Analysis, Synthesis, Argumentation, and Validity. The overall score increased from 11.88/25 to 19.3/25, and the qualitative review supports this numerical change by highlighting clearer reasoning, more organized ideas, and more complete responses after the intervention.

In the Evaluation component, responses in the diagnostic test tended to be short and focused mainly on basic descriptions. In the outcome test, students incorporated more relevant elements into their explanations and considered simple contrasts within each scenario. The rise from 3.0 to 3.7 represents a 23.3% increase, showing a more attentive handling of information rather than merely describing it.

The Analysis component presents one of the most evident changes. At the diagnostic stage, many responses did not distinguish between ideas, nor did they identify basic logical relations. In the outcome test, students organized their answers with greater clarity and differentiated concepts more effectively. The increase from 2.0 to 3.6 (a 50% rise) reflects a more deliberate and structured approach to examining information.

In the Synthesis component, the diagnostic test revealed responses limited to simple or obvious solutions. After the intervention, students offered more complete explanations and integrated multiple aspects of each situation to justify their choices. The change from 2.0 to 4.0, which represents a 100% increase, indicates a better capacity to combine information and articulate fuller responses.

The Argumentation component shows the largest rise of all areas. Initially, many responses relied on unsupported personal statements. In the outcome test, students presented clearer reasons and expressed their ideas with greater coherence. The progression from 2.0 to 4.2, a 110% increase, shows a more consistent link between claims and explanations.

Finally, the Validity component, related to decision making, also shows meaningful development. In the diagnostic stage, choices were often based on convenience or on the

simplest option. In the outcome test, students considered consequences more carefully and justified their decisions with more precise criteria. The variation from 2.7 to 3.8, a 40.7% rise, reflects a more thoughtful approach to selecting alternatives.

Taken together, the results show a steady pattern of growth across all components. Students moved from brief and minimally supported responses in the diagnostic test to more organized and reasoned explanations in the outcome test. While their performance does not yet reach advanced levels, the progression suggests a shift toward more reflective and structured thinking aligned with the aims of the instructional intervention.

4.3. DISCUSSION

The qualitative and quantitative evidence from the diagnostic and outcome tests, along with the field diary entries, shows a clear and consistent pattern in how students developed their critical thinking, confidence when speaking, and ability to work with others. Each source highlights different parts of the learning process, but together they provide a complete picture of how students grew both cognitively and socially throughout intervention.

The comparison between the diagnostic and outcome tests reveals a shift from simple, unstructured reasoning to more thoughtful and organized thinking. At the beginning, many students gave answers based on quick impressions and surface-level details. Their explanations often mixed opinions with facts and did not clearly separate evidence from conclusions. By the outcome test, however, their reasoning improved. Students began using connectors, giving basic but relevant justifications, and considering more than one possible explanation. Their ideas were still simple, but they were more organized and showed a better understanding of how their thoughts connected.

This cognitive improvement matches what was observed in the field diaries. During the first debate sessions, many students were hesitant, quiet, and unsure about speaking in front of others. As time passed, the diaries described a noticeable change: students who were originally silent started sharing “short but clear opinions.” This suggests that as they learned to organize their thoughts better, they also gained confidence to express them. The debates helped strengthen both their thinking and their communication skills.

Progress in problem-solving and argumentation was also evident. In the diagnostic test, students often proposed simple, obvious solutions to problems. The debates, however, encouraged them to examine situations more deeply and from different angles. According to the diaries, students gradually began considering emotional, physical, and economic consequences of real-life issues. By the later sessions, they were able to integrate more elements into their reasoning, question information, and show more complete and thoughtful answers.

Another important improvement was in the structure of their arguments. Early responses often contained statements without reasons to support them. Over time, both the diaries and the outcome test showed that students learned to give clearer explanations. As

they practiced debating, they learned to listen, take turns, support classmates, and present ideas in a more organized way. This shift from spontaneous comments to structured contributions helped them build stronger arguments and better understand different points of view.

Students also showed growth in decision-making. In the initial test, their choices were often based on personal preference or convenience. Throughout the debates, however, they were constantly required to explain their decisions, compare alternatives, and think about consequences. By the end of the process, they were able to justify their choices using clear criteria. This shows that the debates not only improved their speaking skills but also helped them build the reasoning skills later seen in the final test.

Overall, the two sources of evidence, the tests and field diaries, show how cognitive development and communication skills supported each other. As students became more confident when speaking, they were better able to analyze information, justify their ideas, and consider different perspectives. Likewise, as their reasoning improved, they participated more actively and interacted more thoughtfully with their peers.

CHAPTER V.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. CONCLUSIONS

- The diagnosis of students' initial critical thinking skills showed clear weaknesses in evaluation, analysis, synthesis, argument structure, and decision-making. The diagnostic results revealed a tendency toward intuitive and superficial reasoning, confirming the initial gap described in the problem statement. These findings provided a solid starting point and showed the need for a structured teaching strategy to support more reflective and organized thinking.
- The implementation of debate sessions directly supported the development of critical thinking. The qualitative evidence from the field diaries showed growing communicative confidence, more organized and collaborative interaction, and the appearance of deeper analytical and argumentative reasoning. These behavioral changes matched the quantitative improvements seen in the outcome test, where all criteria showed progress, confirming that the strategy was effective in promoting reflective and evidence-based thinking.
- The comparative analysis of the diagnostic and outcome tests showed clear and measurable growth in all areas of critical thinking, especially in decision-making, deductive reasoning, and problem-solving. This progress matched the improvements seen in students' oral participation, collaboration, and ability to justify their positions during debates. Overall, the results show that debate worked not only as a communication activity but also as a teaching strategy that strengthened students' cognitive, social, and argumentative skills in a connected way.

5.2. RECOMMENDATIONS

- It is recommended that debate be included regularly in the curriculum as a strategy for developing critical thinking. To support steady progress, teachers should choose debate topics connected to the course content and provide clear rubrics that guide students in their reasoning, argument structure, and use of evidence.
- Teachers should receive training on how to moderate debates, use qualitative rubrics, and manage classroom interactions in ways that encourage fair participation. Strengthening teacher guidance will help students analyze information better, express their ideas clearly, and participate respectfully in collaborative discussions.
- Future students should participate regularly in debate workshops, reflection activities, and short analytical exercises that strengthen the skills evaluated in the diagnostic and outcome tests. Keeping these activities throughout the semester will help students reinforce their critical thinking and apply these abilities in academic, professional, and everyday situations.

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ANNEXES

Annex 1: Diagnostic and outcome test to measure critical thinking for the first and third objectives.



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CARRERA DE
PEDAGOGÍA DE LOS
IDIOMAS NACIONALES Y
EXTRANJEROS

Test de Habilidades de Pensamiento Crítico

Fecha: _____

Objetivo:

Este test está diseñado para estudiantes de primer semestre de la carrera de Pedagogía de los Idiomas Nacionales y Extranjeros de la Universidad Nacional de Chimborazo. Este mismo forma parte de un proyecto de investigación titulado **"The usage of debate as a pedagogical strategy for the development of critical thinking"**, cuyo objetivo principal es analizar cómo el debate contribuye al desarrollo del pensamiento crítico.

Instrucciones:

El objetivo principal de este test es evaluar las habilidades de razonamiento y pensamiento crítico. No hay respuestas **"correctas"** o **"incorrectas"** en el sentido tradicional; lo más importante es el proceso de razonamiento que muestres en tus respuestas. Lee atentamente cada situación y responde de la manera más completa y justificada posible. Tu capacidad para analizar, evaluar y proponer soluciones es lo que será calificado. Finalmente, sé lo más honesto/a posible.

Duración aproximada una hora

Sección I: Evaluación

Esta sección evalúa tu capacidad para identificar, analizar y criticar la fiabilidad de fuentes de información y datos, reconociendo posibles sesgos.

1. Estás haciendo una **investigación** para tu clase de "Comunicación Oral y Escrita" sobre el impacto del Metro de Quito en la movilidad urbana. **Encuentras tres fuentes: un reportaje de Ecuavisa, un post viral en TikTok de un influencer que se queja del servicio, y un informe técnico publicado en la página web del Municipio de Quito.**

¿Cuál de estas tres fuentes escogerías para tu tarea? Explica por qué elegiste esa.

2. Recibes por **WhatsApp una cadena que afirma que el Ministerio de Salud iniciará una campaña de vacunación obligatoria** con un nuevo fármaco experimental la próxima semana en todos los centros de salud del país. La cadena pide **difusión masiva para "alertar a la población"**.

Antes de compartir esa cadena, ¿qué harías para saber si esta campaña es verdadera?



3. Tu profesor de inglés te recomienda una nueva app para aprender vocabulario, mencionando que **"tiene una calificación de 4.8 estrellas en la Play Store"**. Al revisar las reseñas, notas que la mayoría de los comentarios de 5 estrellas son muy cortos y genéricos **"Excelente app"**, **"La mejor"**, mientras que algunas reseñas de 1 estrella son muy **detalladas, explicando fallos técnicos y problemas con los pagos**.

Con esta información, ¿crees que la app es realmente buena? ¿la usarías?

Sección II: Análisis

Esta sección evalúa tu habilidad para distinguir premisas y conclusiones, identificar falacias y reconstruir la coherencia lógica de los argumentos.

4. Un amigo te dice: **"El profesor de Inglés A2 es muy exigente. El semestre pasado, mi primo reprobó la materia con él. Por lo tanto, si tomo clases con ese profesor, yo también voy a reprobado"**.

El razonamiento de tu amigo, ¿te parece lógico? Explica por qué sí o por qué no.

5. En una discusión sobre la selección de fútbol de Ecuador, alguien afirma: **"O apoyas incondicionalmente al técnico Sebastián Beccacece, o no eres un verdadero hincha de "La Tri"**.

¿Qué problema ves en esta frase? ¿Realmente para ser hincha de un equipo es necesario apoyar a su director técnico?



6. Un político declara en un mitin en el sur de Quito: "Mi **oponente** propone aumentar los impuestos a las empresas. Esto es inaceptable, porque claramente **odia el progreso**, quiere que la gente se quede sin trabajo y que el país vuelva a la pobreza".

¿Crees que el político está respondiendo de forma justa la idea de su oponente o está exagerando para hacerlo quedar mal?

Sección III: Síntesis (Resolución de Problemas)

(Esta sección evalúa tu capacidad para proponer soluciones viables, creativas y holísticas a problemas complejos, integrando diferentes tipos de información).

7. Eres el representante de tu curso. El 50% de tus compañeros se queja de que las **clases virtuales** son **poco interactivas** y se sienten **desconectados**. El otro 50% prefiere la **virtualidad** por la **comodidad** y el **ahorro en transporte**. El decano les ha pedido una propuesta para mejorar la satisfacción del curso el próximo semestre.

¿Qué solución propondrías para que ambos grupos se sientan a gusto?

8. En un barrio de Riobamba, hay un problema de acumulación de basura en una esquina porque el camión recolector a veces no pasa. Los vecinos se quejan en el chat grupal, pero nadie hace nada más.

¿Qué solución se te ocurre para este problema? Tu propuesta debe ir más allá de solo "llamar al municipio".

9. Como futuro docente de idiomas, notas que tus compañeros tienen **pocas oportunidades** de practicar inglés de manera oral fuera de clase.



¿Cuál crees que sería una solución viable para que los estudiantes tengan espacios donde practicar y mejorar sus habilidades orales?.

Sección IV: Argumentación

Esta sección evalúa tu habilidad para construir argumentos complejos y bien estructurados, con una tesis clara, evidencia de soporte y consideración de contraargumentos.

10. La Universidad está considerando hacer **obligatoria** la asistencia a un 80% de las clases para poder **aprobar** una materia.

¿Estás a favor o en contra? Explica tu elección y tus razones.

11. Tu familia cree que estudiar una carrera de educación como "**Pedagogía de los Idiomas nacionales y extranjeros**" no es práctico y no garantiza un buen futuro económico, sugiriendo que te cambies a una ingeniería.

¿Qué les dirías para convencerlos de que tu carrera tiene mucho valor y futuro?

12. Se discute la idea de que el Kichwa debería enseñarse como segunda lengua **obligatoria** en todos los colegios de la Sierra ecuatoriana.

¿Estás a favor o en contra de esta idea? Explica tu elección y tus razones



Sección V: Validez

Esta sección evalúa tu capacidad para tomar decisiones razonadas y justificadas, alineando tus propuestas con criterios, regulaciones y marcos teóricos pertinentes.

13. Has recibido **dos ofertas** de pasantías para el verano. La primera es en una academia de idiomas muy **prestigiosa** en Riobamba, pero **no es remunerada**. La segunda es en un **call-center** bilingüe, con un **buen sueldo** que te ayudaría a pagar el próximo semestre, pero **no está** directamente **relacionada con la pedagogía**.

¿Cuál de las dos ofertas aceptarías? Explica cómo llegaste a tu decisión y por qué crees que es la mejor opción para ti.

14. Te mudas a Riobamba para estudiar en la UNACH y tienes un presupuesto mensual de **\$250 para cubrir vivienda, alimentación y transporte**. Has encontrado un **cuarto económico por \$80 lejos de la universidad**, lo que implicaría un **gasto** diario en bus. Otra opción es **un cuarto por \$150 a poca distancia**, lo que te permitiría caminar. Sin embargo el valor **aumenta** significativamente.

¿Qué opción de vivienda elegirías? Justifica tu decisión

15. Quieres comprar un nuevo celular con un presupuesto máximo de \$300. Has visto un Xiaomi con **mejores características** y un Samsung con **menores especificaciones** pero con fama de ser más duradero y tener mejor servicio técnico en Ecuador.

¿Qué celular comprarías? Explica tu decisión

Annex 2: Rubric for grading the diagnostic test and outcome test.

Category / Score	1	2	3	4	5
Evaluation (Inductive Reasoning)	No identification of relevant sources or data.	Superficially recognizes information without relevance criteria.	Critically evaluates sources, partially noting biases.	Prioritizes key information and contrasts its validity with theoretical frameworks.	Rigorously critiques source reliability, integrating multidisciplinary and contextual evidence.
Analysis (Deductive Reasoning)	Fails to distinguish premises, conclusions, or fallacies.	Identifies argument elements with major interpretive errors.	Explains common fallacies and their relation to logical structure.	Deconstructs complex arguments, identifying multiple fallacies and biases.	Reconstructs arguments with logical coherence, eliminating contradictions and reinforcing premises.
Synthesis (Problem Solving)	Proposals disconnected from reality or unfeasible.	Fragmented ideas without information integration.	Proposes viable solutions lacking innovation or depth.	Designs creative strategies linking theory and educational practice.	Develops holistic solutions balancing resources, regulations, and cultural diversity.
Argumentation (Structure)	Absence of thesis or evidence.	Isolated claims without logical or empirical support.	Organized argument with partially valid premises and evidence.	Solid argumentation with interconnected premises and disciplinary evidence.	Complex argumentation with counterarguments, theoretical synthesis, and interdisciplinary application.
Validity (Decision Making)	Arbitrary decisions without rationale.	Isolated criteria unrelated to context or regulations.	Partial alignment with legal or theoretical frameworks.	Proposals aligned with disciplinary standards and educational policies.	<i>Innovative decisions integrating legal frameworks, local knowledge, and global pedagogical trends.</i>

Photography register



Annex 3: Field diary for debate sessions for second specific objective.

Field Diary for Discussion Sessions		
Observer Name		
Date		
Start – End Time		
Classroom		
Topic		
Session objective		
Thematic Axes – Description - Reflection		
Affirmative role student		
Negative role student		
Replies and closing		
Turns of speech and dynamics of interaction		
Group dynamics: collaboration, conflicts, mutual support		

Researcher's reactions (emotions, level of confidence observed)		
Effects on critical thinking: analysis, evaluation, synthesis		
Key findings of the session		
Ideas for improvement, aspects to reinforce in the next class		

Photography register

