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SCHOOL OF PEDAGOGY OF NATIONAL AND FOREIGN LANGUAGES-
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**Application of critical thinking while reading classical literature among
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We certify that this research project was presented by **Campoverde Ochoa, Doménica Ivonne; Garzón Ramos, Javier Antonio** as a partial fulfillment of the requirements for the **Bachelor's Degree in EFL Pedagogy**.

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ABSTRACT

The present study aims to explore how Harvard Thinking Routines (HTR) contrasts with traditional methods for developing Critical Thinking, especially in the Middle Years Programme (MYP) Language and Literature subject at an IB school. This work employed a comparative research design and adopted a mixed-method focus for analyzing quantitative and qualitative data analysis. Three HTR techniques applied to eighth-graders were observed and analyzed. It was used a qualitative technique for gathering all the information regarding behaviors when using HTR, as well as, during traditional approach sessions. It was used a quantitative technique for gathering all the scores students obtained during HTR sessions and traditional approach sessions for comparing both techniques. After analyzing all the information obtained, it was found that students are more engaged in the learning process with HTR. A training program was designed to assist teachers in adopting Harvard Thinking Routines (HTR) techniques for proper usage in the classrooms.

Keywords: Critical Thinking, Classical Literature, International Baccalaureate, Harvard Thinking Routines, 8th graders, Traditional Approach

INTRODUCTION

Critical Thinking (CT) is necessary for institutions that have implemented the International Baccalaureate (IB). As a cognitive skill, it allocates vital high-order thinking skills such as analyzing, evaluating, and creating. CT is known as a worthwhile skill for improving reasoning and motivating actions to address, avert, or ameliorate real-world problems (Halpern & Dunn, 2021). We live in an era dominated by trends, biases, assumptions, and misinformation that expands among those who do not have a proper critical thinking skill comprehensively developed. Furthermore, going beyond the information portrayed by different sources is the aim of the International Baccalaureate (IB) Programme.

Few CT skills can emerge from traditional techniques, it is a matter of unpacking and deconstructing new methods. A constant approach to such skills must be taken with the proper use of different strategies that may engage IB students. Incorporating the Harvard Thinking Routines (HTR) is a useful strategy that will lead teachers to design a class promoting CT. As stated by Rejeki, Masitoh, & Arianto, 2022 “Thinking routines allow students to explore ideas, practice, and reflect on their thought processes” (p. 641)

In the Middle Years Programme (MYP), Language and Literature provides content regarding classical literature which needs to be covered through specific Harvard Thinking Routines (HTR). This is where certain innovative techniques take place in the classroom environment. As stated before, it is a matter of unpacking, hence teachers need to acquire techniques to help their students develop CT skills at a proper pace.

Teachers, as the heads of the class should be aware of such an approach to assisting students in analyzing classical literature texts. Teaching techniques must be warranted by quality training to help students find the essential information to comprehend literature passages deeply.

PROBLEM STATEMENT

Reading comprehension is a fundamental skill in English classes, and its value increases when it involves literature. However, educators' primary goal should extend beyond merely reading books. They should fully involve the book in their lessons and engage students with the events described. This is where critical thinking (CT) becomes essential in literature lessons since it encourages learners to extrapolate implicit features from classical books, helping them to form a significant understanding of the material. According to Paige, Rupley, and Ziglari (2024), critical thinking (CT) applied to reading comprehension involves using executive function processes, such as comprehension monitoring and inference-making.

In the International Baccalaureate (IB) continuum program of a school in Samborondón, students receive instruction gained during three different IB programs. The Primary Years Programme (PYP) from second graders to sixth graders, the Middle Years Programme (MYP) from seventh graders to first baccalaureate, and the Diploma Programme (DP) from second baccalaureate to third baccalaureate. Students in eighth grade who are part of the MYP receive five hours a week of Language Acquisition, where they are asked to analyze literature, organize semantic structures and opinions, produce written and spoken texts, and use language.

Paige, Rupley, and Ziglari (2024) emphasize the importance of CT in reading comprehension, pointing out that CT skills such as induction and deduction are fundamental to understanding complex texts. These skills help students decode the text and understand it in depth and critically, which underlines the importance of integrating CT into reading instruction to improve comprehension and interpretative skills.

Within the subject of Language Acquisition, Literature is included as part of the course; students are devoted to reading classical literature in specific units. This approach allows students to engage deeply with classic texts that enrich their vocabulary knowledge and help them understand complex narratives and

themes, enhancing their reading comprehension skills. Eighth-grade students often encounter significant challenges when analyzing classical literary works.

Students from the school mentioned consistently engage with classical literature throughout the school year, exploring adapted A2-level readers such as Robin Hood, Sleppy Hollow, and Huckleberry Finn, among others. While these adaptations allow students to grasp vocabulary and the main idea, they often need help with more profound analysis. Students tend to focus on extracting factual information during reading comprehension exercises but find it extremely challenging to engage in CT. They typically do not interpret hidden messages, characterizations, or historical context of the book, which are often presented metaphorically or symbolically in the text.

At the age of 12, students are just beginning to develop Literature analysis skills, making it difficult for them to engage thoroughly with complex tasks such as analyzing themes, character development, symbols, or writing reviews about classical books. Currently, their limited domain of critical thinking skills (CTS) hinders their ability to engage deeply and appreciate classical texts.

This research paper describes students' reactions when they encounter critical thinking tasks while reading Literature and how these difficulties could be overcome by applying Harvard Thinking Routines in their activities.

JUSTIFICATION

The following undergraduate research will analyze the effectiveness of implementing Harvard Thinking Routines to enhance critical thinking skills during literature sessions in an IB school. The study will concentrate on eighth-grade students who are in the process of developing abstract thinking abilities. This focus is based on Jean Piaget's theory of Stages of Cognitive Development, which highlights that children around the age of 12 years old are transitioning to the formal operational stage.

The finding of this study will be advantageous for students enrolled in the International Baccalaureate (IB) programme. This is because students in the IB programme are encouraged to develop specific attributes during their scholastic life, such as reflective, thinkers, open-mindedness, and communication. Besides that, the International Baccalaureate aims to develop significant skills in their students, such as thinking skills, self-management, communication, and research. These demands are only possible by exposing learners to exercises requiring critical analysis and providing them with the tools to formulate valid arguments that go beyond the explicit and objective.

This research aims to provide valuable support to educators by presenting a comparison between the traditional approach and Harvard Thinking Routines. This could serve as a beneficial teaching tool for fostering critical thinking, particularly within the IB programme when teaching classical literature.

Furthermore, the educational institution will benefit from this research since the school offers the IB continuum programme, including the Middle Years Programme for 8th-1st Baccalaureate, which places a strong emphasis on developing critical thinking skills to mold their students into future analytical thinkers and global citizens.

Research questions

- To what extent are critical thinking skills necessary for reading comprehension during the classical literature lessons at an International Baccalaureate (IB) school?
- Which critical thinking techniques or strategies are effective for eighth graders when reading classical literature texts?

General objective

To explore the effectiveness of critical thinking strategies while reading classical literature in eighth graders of an IB school.

Specific objectives

- To describe literature sessions that integrate critical thinking strategies.
- To explore how classical text exercises enhance reading comprehension skills.
- To evaluate the application of thinking routines as a strategy to enhance critical thinking while reading literature.

THEORETICAL FRAMEWORK

Critical thinking

The word “critical” is derived from the Greek word “kritikos” which is often confused with “criticize” in a negative sense. However, this etymology means to judge or “to discern,” placing emphasis on analyzing events using a logical approach (Neuronswave, 2023). Fisher (2001) states that John Dewey is considered the father of modern critical thinking (CT). He coined the term “reflective thinking” for the metacognitive process that consists of a rational analysis of a situation based on observation, reflection, and reasoning. According to Dewey (1910), “Critical thinking refers to the active, persistent, and careful consideration of a belief or supposed form of knowledge in the light of the grounds which support it and the further conclusions to which it tends” (p.6). According to Murawski (2014) “Critical thinkers tend to see the problem from many perspectives, to consider many different investigative approaches, and to produce many ideas before choosing a course of action” (p.26).

Spector & Ma (2019) established that CT often begins with simple experiences such as observing a slight difference, encountering a puzzling question or problem,, or questioning someone’s statement, leading in some instances to an inquiry applying higher-order thinking skills. According to Arisoy & Aybek (2021) “Critical thinking refers to analyzing a question, a discipline and/or a subject in terms of these components and understanding the logic of how they adapt to each other” (p. 101).

According to Bassham, Irwin, Nardone, & Wallace (2011):

Critical thinking is the general term given to a wide range of cognitive skills and intellectual dispositions needed to effectively identify, analyze, and evaluate arguments and truth claims; to discover and overcome personal preconceptions and biases; to formulate and present convincing reasons in support of conclusions; and to make reasonable, intelligent decisions about what to believe and what to do (p.1).

The usage of critical thinking in school subjects

Critical thinking has become crucial when developing a subject-based curriculum. According to Rahman & Lakey (2023), “A HASS education does not simply impart knowledge for future recitation; rather, it focusses on preparing students to think, critique, and persuade.” (p. 1) HASS subjects, which refer to Humanities and Social Sciences, have enhanced students’ attributes, such as CT. At this point, teaching goes beyond just acquiring facts to be memorized; students must acquire the ability to think critically.

When developing HASS topics, teachers tend to identify problem-based and real-world issues to start with. Students can learn from alternatives to promote a solution. According to Arisoy & Aybek (2021), “We think within a specific point of view. When we think deeply, we realize that there are always alternatives. We always deeply think within a context” (p. 101). CT is vital when the answer to the question could go further, implying an argument provided by the students’ point of view. As mentioned by Sham (2016), CT fosters an atmosphere of learning where learners are free to express and exchange their opinions on both academic and personal topics (Sham, 2016). Freedom in every subject, especially HASS subjects, can promote a dynamic and inclusive atmosphere while receiving classes.

As stated by Moghadam, Narafshan, & Tajadini (2023):

In addition, active and collaborative learning was emphasized, along with a range of information-based, experience-based, and reflective-based activities, as well as providing learners with opportunities to engage in meaningful and critical negotiation and communication (p. 5).

This learning environment prioritizes active and collaborative learning in school subjects. In addition to outstanding participation with proper CTS usage, students participate in discussions, which are fundamental for the success of these subjects.

The importance of critical thinking in classroom settings

Looking beyond the traditional classroom settings must be a new challenge for teachers. From analyzing students' learning outcomes to implementing feedback processes, these key features should be considered in the learning process. According to Norris (1985), "Teachers should look for the reasoning behind students' conclusions. Coming up with a correct answer may not be the result of critical thinking." (p. 44). The most important goal teachers must achieve is the understanding of such harsh processes that students face when coming up with conclusions. How students arrive at answers to any underlying topic, may give teachers a clue whether students are meeting a proper comprehension or just a superficial grasp of the topic. According to Moghadam, Narafshan, & Tajadini (2023) "Critical thinking is one of the fundamental 21st-century skills that should be incorporated into pedagogical environments" (p. 2) This welcomes a new classroom climate where the learning settings could trigger a proper learning process, leading better learning outcomes where students are leaders of their own learning.

As stated by Moghadam, Narafshan, & Tajadini (2023):

Considering reading comprehension as one of the essential language skills, it necessitates the reader to incorporate the thinking process to decode not only the literal meaning of the words in the passage but also the implicit and hidden meanings beyond the words (p. 3).

Interpreting the explicit meaning of the words in a text and the underlying implicit concepts gives students a fundamental ability to use CT throughout different contexts. According to Bennett (2018), the way we might prepare students to navigate an increasingly complex world and labor market is the way they must think of their living. Developing CTS in the classroom will let learners improve their problem-solving abilities. These abilities will tell them what steps they might take when facing the complex world.

Barriers to critical thinking

Aouaf, Azzouzi, & Housni (2023) pointed out the various factors that could impede CT in education. Further research has identified four key elements that

may obstruct the development of the skill if is not appropriately applied in the teaching-learning process. Those factors are 1) academic teaching and assessment practices, 2) learners' motivation and knowledge, 3) education structure, and 4) the socio-cultural environment. Regarding teaching, traditional methods do not support the development of CT since the protagonist in the classroom is the teacher, not the student, as it should be. The student has a passive role and is considered merely a recipient of information.

In contrast, in classes that adopt a problem-solving approach, students are invited to activate their CTS and go beyond the obvious. Motivation plays a crucial role in fostering CTS among learners; some barriers to motivation include a lack of prior knowledge, which prevents students from fully engaging with session topics and contributing new ideas. On the other hand, proficiency in the language sometimes makes students feel insecure and prevents them from participating in class discussions. Additionally, when classes focus solely on rote memorization and neglect CT, it discourages learners from analyzing events deeply.

The pressure to develop CT in education often falls heavily on teachers since they are "the instruction providers". However, students must also try to learn autonomously and not become dependent on the instructions given by the educators. According to Dwyer (2023):

All the attention is placed on what educators are teaching their students to do in their critical thinking sessions as opposed to what educators should be recommending their students to look out for or advising what they should not be doing (p.2).

Another barrier to consider when discussing critical thinking is the different stages of cognitive development. The term development in biology and psychology refers to the changes that occur in human beings from conception to death. Educators must take into account physical and psychological changes, acknowledging that in a classroom setting, students develop at different rates (Woolfolk, Malcolm, & Vivienne, 2013).

The renowned Swiss psychologist Jean Piaget developed a model explaining how humans engage with the world through the senses by organizing and developing information acquired through experiences. Piaget classified these developments into four stages, corresponding to specific age ranges:

Stage	Age of Development	Description
Sensorimotor	From birth until approximately 2 years	Babies imitate and begin to understand the existence of objects.
Preoperational	2-7 years old	Children gradually develop language use; however, they find it challenging to consider other people's viewpoints as they do not yet understand symbolic forms.
Concrete Operational	Ages 7-11	This marks the beginning of pre-adolescence when children can logically solve concrete (hands-on) problems and classify elements into different categories.
Formal Operational	Develops from 11 into adulthood.	Adolescents are aware and capable of solving abstract problems that require them to infer and extract information that is not explicitly stated.

Table 1 Cognitive Development stages, Piaget in Woolfolk, Malcolm, & Vivienne, 2013.

Based on the previous information, cognitive development could be a major barrier for preteens since they have recently moved from the concrete operational to the formal operational stage. Woolfolk, Malcolm, and Vivienne (2013) pointed out that pre-teens struggle to grasp abstract concepts because they still think in concrete terms. Thinking processes in human beings change radically, though slowly, from birth to maturity because we constantly strive to make sense of the world, and it's a process obtained through maturation, activity, and social experiences.

Formal Operational Stage

The formal operational stage starts in pre-teens at 11 years old, it is the fourth and last stage of cognitive development. During this stage, adolescents move beyond concrete experiences and begin to think abstractly and logically. They start to engage in conceivable outcomes for the future and are intrigued with what they can be. Formal operational masterminds are more efficient in handling issues and using logical reasoning (Ahmad, Hussain, Batool, Sittar, & Malik, 2016).

According to Woolfolk, Malcolm, & Vivienne (2013),

Some learners remain at the concrete-operational stage throughout their school years, even throughout life. However, new experiences, usually those that take place in school, eventually present most learners with problems that they cannot solve using concrete operations. What happens when several variables interact, as in a science experiment? Then a mental system for controlling sets of variables and working through a set of possibilities is needed. These are the abilities Piaget called formal operations (p.45).

Rogers (2023) pointed out that learners who have reached the formal operational stage are able to contemplate hypothetical scenarios that may not be rooted in their own experiences. They can analyze various possibilities and take into account multiple viewpoints. Additionally, adolescents who have reached this stage are adept at seeking practical solutions.

An important fact worth mentioning at this stage is the development of the adolescent brain; the brain is fully developed after birth in terms of the cerebral cortex; however, it is the maturity process that continues to develop during adolescence. Thus, maturation involves changes in the brain's gray and white matter. The maximum density of gray matter is reached first in the primary sensorimotor cortex and last in the higher association area. The prefrontal cortex, responsible for higher cognitive functions like behavioral control, planning, and analyzing risk decisions, matures later than areas related to sensory and motor skills. As the volume of gray matter decreases, the volume

of white matter increases. White matter consists of myelinated axons that conduct neural signals rapidly. (Konrad, Firk, & Uhlhaas, 2013)

How to teach critical thinking

According to Willingham (2019), one of the key advantages of CT is its versatility across different settings, although they play different roles in different subjects. For instance, in history classes, students employ critical thinking to analyze documents and ensure the accuracy of gathered information, among other tasks. This demonstrates that critical thinking skills can be transferred across disciplines and can be tailored to suit specific subject requirements. Educators should address this variability by aligning CTs with the educational objectives they aim to achieve.

There is no specific approach to teaching critical thinking since it is a skill that is mostly practiced rather than taught. However, there are several strategies that educators may implement into their sessions to help pupils expand their CT and their capacity to solve situations by applying abstract knowledge. Some of these will be mentioned in the following chart.

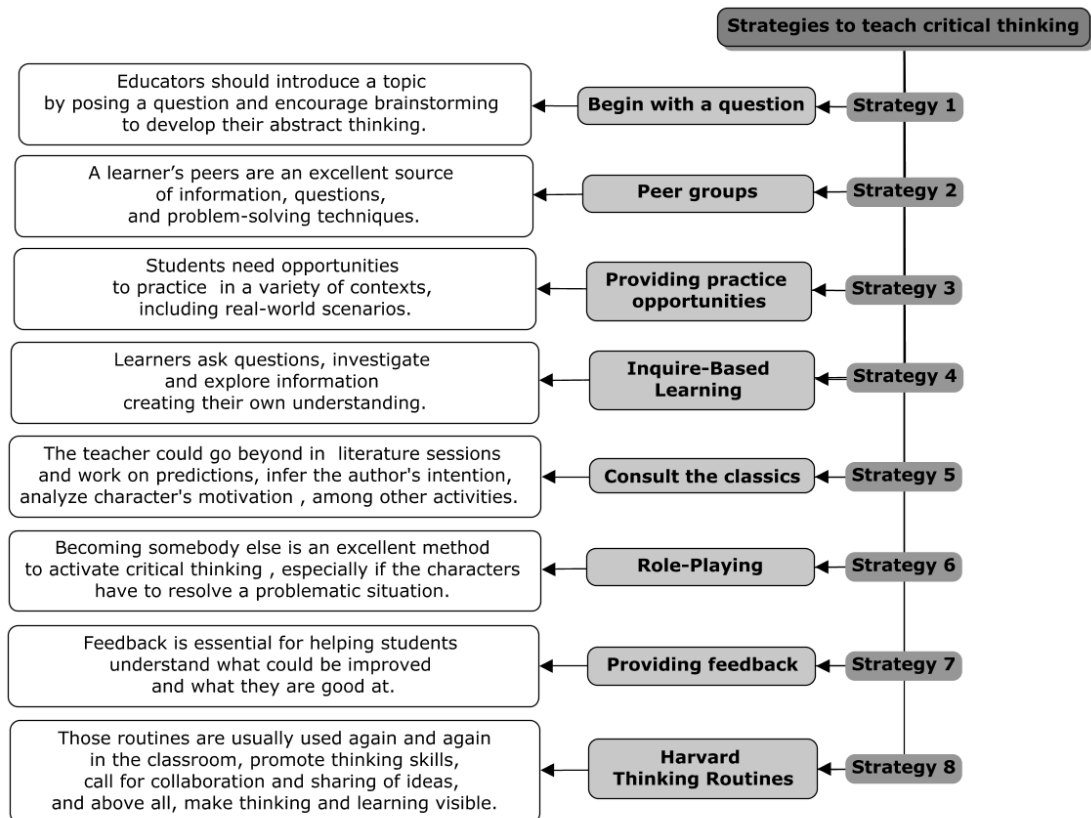


Figure 1 Graphic organizer of the strategies to teach critical thinking.

This research project will mainly focus on Harvard's Thinking Routines as a new approach to be examined, based on the previous chart on strategies to promote critical thinking in the classroom.

Evaluating critical thinking

Tests, which are known as the traditional instruments to evaluate student's performance during a period, that are offered provide a numerical score that does not represent or quantify the procedures that students employ to arrive at their responses (Sharma, Doshi, Verma, & Verma, 2022). Teachers must think out of the box when designing different ways to assess critical thinking. It is time to let other assessment instruments be incorporated into the learning environments. According to Sharma et al. (2022), "the capacity to ask and evaluate questions was among the most crucial parts of critical thinking. Students can take ownership of the project when they collaborate with their classmates, which develop independence and critical thinking" (p. 119). This specific performance of asking their peers questions for evaluating their

projects among them can lead them into a self-learning strategy where they can avoid any misconception of what will happen with their evaluations.

One concern regarding the design of critical thinking assessments is the proper mapping of the content with the alignments of academic skills.

According to Lai (2011):

Benjamin Bloom and his associates are included in this category. Their taxonomy for information processing skills is one of the most widely cited sources for educational practitioners when it comes to teaching and assessing higher-order thinking skills. Bloom's Taxonomy is hierarchical, with "comprehension" at the bottom and "evaluation" at the top. The three highest levels (analysis, synthesis, and evaluation) are frequently said to represent critical thinking (p. 8).

As Lai (2011) pointed out, Bloom's Taxonomy of educational objectives is a widely recognized framework that categorizes various types of learning into a hierarchical structure. This taxonomy is extensively applied in the development of educational goals, instructional methods, and assessment techniques. Bissel & Lemons (2016) indicate that this could be done by organizing learning objectives into different levels ranging from basic knowledge and comprehension to higher-order thinking skills like analysis, synthesis, and evaluation.

If we take a closer look at Bloom's Taxonomy objectives, we can categorize them into categories that are aligned with critical thinking:

Categories	Descriptions
Basic knowledge:	Memorizing facts, figures, and basic processes.
Secondary comprehension:	Understanding and illustrating the facts.
Application:	Generalizing the facts to other contexts and situations.
Analysis:	Understanding why the facts are the way they are; breaking problems down.

Synthesis:	Making connections between different elements on one's own.
Evaluation:	Critically using one's knowledge to ascertain the quality of information.

Table 2 Chart of Bloom's Taxonomy categories.

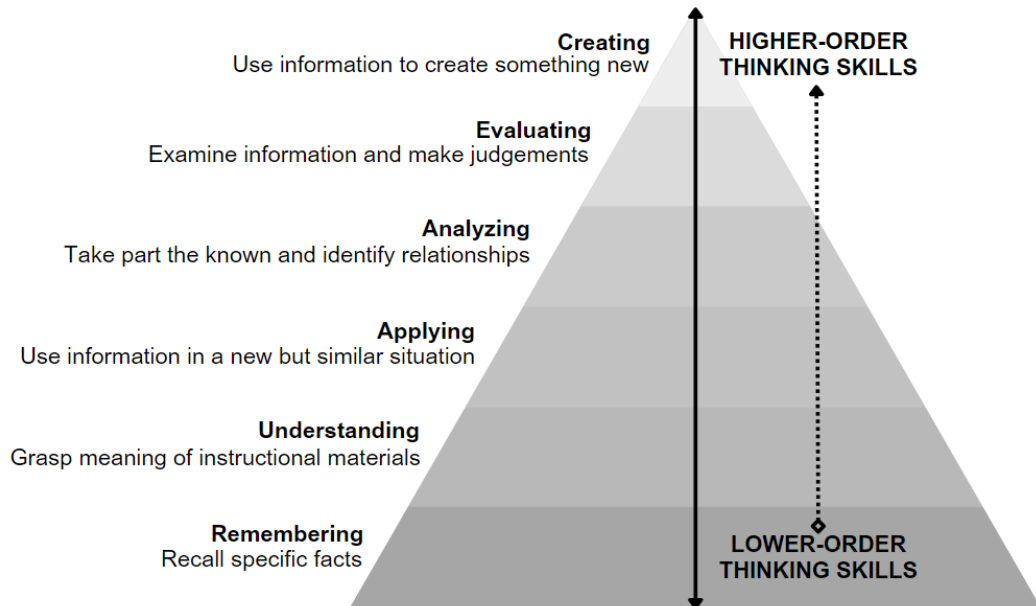


Figure 2 The hierarchical pyramid of Bloom's Taxonomy is based on the order of thinking skills. Elaborated by the authors.

From the previous figure, we can deduce that the first three categories are viewed as hierarchical, which implies that remembering involves no critical thinking skills. Understanding builds on basic knowledge but still does not require critical thinking. Applying involves higher-order thinking related to the knowledge a student constructs. The last three categories are also higher-order skills that need critical thinking, though they are not necessarily hierarchical.

Critical thinking may encounter some boundaries during the process of assessment. According to Lai (2011) "It is difficult to assess critical thinking transfer, because transfer to other contexts is confounded with subject-specific knowledge that is necessary for exercising critical thinking" (p. 37). Critical thinking often relies on a deep understanding of subject-specific content.

Without sufficient knowledge in a particular area, students may struggle to apply critical thinking skills effectively.

Classical Literature

Talking about literature automatically makes us think about structure or shape regarding literary works. According to Britannica Encyclopedia (2017), “Classical Literature is also used for the literature of any language in a period notable for the excellence and enduring quality of its writers’ works”. Regarding the content of literature, such exquisite and notable writings are recognized for their exceptional quality, significance, and influence over time. Classical literature leads the readers to immerse in cultural insights as literary heritage transmits values and beliefs of different cultural contexts.

As noted in the Oxford English Dictionary (2023), Literature is referred to as “writing which has a claim to consideration on the ground of beauty of form or emotional effect”. Understanding the word “beauty” gives us a certain nutshell of some aesthetic appeal where literary devices such as imagery, symbolism and lyrical prose may cause an emotional impact on the reader. Evoking both, cultural insights and emotional impact may put the reader into a new world of knowledge.

According to Thornton (2003) “Classics is the discipline that studies the language, literature, history, and civilizations of ancient Greece and Rome, two cultures that bequeathed to the West the greater part of its intellectual, political, and artistic heritage” (p. 1). Such an area is an academic discipline dedicated to exploring and analyzing the languages, literature, history, and cultures of ancient Greece and Rome. These ancient civilizations have profoundly influenced the development of Western thought, politics, and art. By studying classical texts in their original languages, Greek and Latin, scholars gain insights into the philosophical ideas, political theories, and artistic expressions that have shaped Western civilization.

Moreover, in contemporary society, classics is a small, shrinking discipline kept alive, where it can be afforded, more because of prestige and tradition than because of a recognition of its central role in liberal education and in

teaching the foundations of Western civilization (Thornton, 2003). The field of Classics is becoming increasingly marginalized, often surviving in academic institutions due to its prestigious and traditional status rather than an acknowledgment of its vital role in a liberal education and its importance in understanding the foundations of Western civilization.

Benefits of literary study

Teachers should be aware that the exposition of literature can result in several benefits.

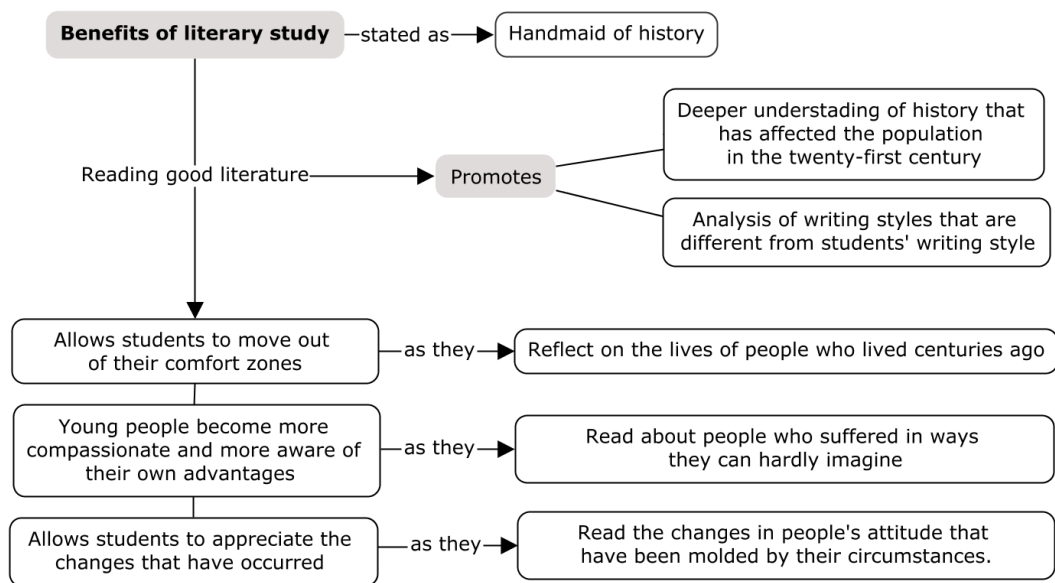


Figure 3 Graphic Organizer of the benefits of literature study.

LITERATURE REVIEW

Harvard Thinking routines

Many bilingual schools in Guayaquil follow the International Baccalaureate Diploma Programme (IB). The International Baccalaureate Organization offers four high-quality and demanding programs for students aged 3 to 19. These programs foster students' personal and academic development and encourage them to think critically and transdisciplinary without fearing questioning events. One of the programs from the IB continuum is the Middle Years Programme (MYP). The Middle Years Programme is a rigorous academic framework that encourages 11-16-year-olds to make practical connections between their theories and the real world. Some authors believe that the potential of the MYP in developing critical thinking is one of the main factors for offering this programme. (International Baccalaureate Organization, 2024)

Thinking skills are one of the dominant skills in the IB curriculum, as students are encouraged to go beyond the explicit. However, as an abstract skill, it is difficult for the teacher to fully participate in developing this skill. The educator can use multiple strategies to promote CT. One example could be Harvard's Thinking Routines (HTR), which were developed as part of "Project Zero" (PZ) by former students with the intention of aiding students in constructing valid arguments and promoting learners to question events. According to the Harvard Graduate School of Education (2022), a thinking routine refers to a set of questions or short steps that scaffold and support student thinking. Researchers at PZ designed thinking routines to deepen students' thinking and facilitate the visualization of their thought processes.

In a formal study conducted in an IB school in China, Jeyaraj (2023) annotated that some teachers participated in an experiment using thinking routines in their classrooms. Five thinking routines were selected: "See, Think, Wonder," "Think, Pair, Share," "4 C's", "3 2 1 Bridge", and "What Makes You Say That." These routines are adaptable to language classes and can be used at different times during the class. For example, they could be used as a warm-up to boost students' curiosity, as the main activity to analyze events thoroughly, or as a

wrap-up to reflect on what was learned during the session. In conclusion, the research experiment results were satisfactory because by using these techniques, students were not afraid to ask the teacher questions and had the opportunity to critically exchange ideas with their peers. This participation in class by some students encouraged others who were initially less motivated and waiting for others to share their responses.

Classification of thinking routines

Thinking routines are a structured set of questions or a concise sequence of steps intended to provide a framework for scaffolding and supporting student thinking. These routines are flexible based on educators' needs; hence they are divided into 10 categories, which are: 1) core thinking routines, 2) introducing and exploring ideas, 3) digging deeper into ideas, 4) synthesizing and organizing ideas, 5) investigating objects and systems, 6) perspective-taking, 7) considering controversy, dilemmas and perspectives, 8) generating possibilities and analogies, 9) exploring art, images, and objects, 10) global thinking.

Each category has a set of thinking routines, more than 80 of which are mentioned in the following chart.

Category	Explanation	Thinking routines
Core Thinking Routines	Basic routines that are applicable across disciplines, topics, and age groups serving as a versatile tool throughout the learning experience or during a unit of study. These routines are particularly valuable for individuals who are seeking an introduction to thinking routines, be they educators or learners.	<ul style="list-style-type: none"> • Circle of Viewpoints • Claim, Support, Question • Compass Points • Connect, Extend, Challenge • I Used to Think... Now I Think... • See, Think, Wonder • Think, Pair, Share • Think, Puzzle, Explore • What Makes You Say That?
Digging Deeper into Ideas	Routines that support students in developing a deeper understanding of topics or experiences by	<ul style="list-style-type: none"> • Beauty and Truth • Circle of Viewpoints • Claim, Support, Question • Creative Hunt

	<p>prompting them to analyze, evaluate, identify complexity, and establish connections.</p>	<ul style="list-style-type: none"> • Creative Question Starts • Creative Questions • Facts or Fiction • Hotspots • Layers • Options Diamond • Options Explosion • Outside In • Parts, People, Interactions • Peel the Fruit • Projecting Across Distance • Projecting Across Time • Red Light, Yellow Light • Reporter's Notebook • See Think Me We • Step Inside • Take a Stand • Think, Feel, Care • Tug for Truth • Tug of War • Unveiling Stories • Values, Identities, Actions • What Can Be • What Makes you Say That? • Who am I?
<p>Introducing & Exploring Ideas</p>	<p>Routines that help students articulate their thinking at the beginning of a learning experience and spark student curiosity and wonder, motivating further exploration.</p>	<ul style="list-style-type: none"> • 3-2-1 Bridge • Chalk Talk • Compass Points • Creative Question Starts • Imagine if... • Lenses • Name, Describe, Act • Outside In • Parts, Perspectives, Me • Parts, Purposes, Complexities • Peel the Fruit • See Think Me We

		<ul style="list-style-type: none"> • See, Think, Wonder • Step in - Step out - Step back • The Explanation Game • Think, Puzzle, Explore • Walk the Week • Ways Things Can Be Complex
Investigating Objects & Systems	Routines that encourage students to examine everyday objects and systems appreciate their design features and explore their complexity.	<ul style="list-style-type: none"> • Creative Hunt • Imagine if... • Parts, People, Interactions • Parts, Perspectives, Me • Parts, Purposes, Complexities • Slow Complexity Capture • Think, Feel, Care • Ways Things Can Be Complex
Perspective-taking	Thinking Routines foster students' ability to transcend their own viewpoints and contemplate the experiences, thoughts, and feelings of others.	<ul style="list-style-type: none"> • Circle of Viewpoints • Compass Points • Creating Space for Learning • Feelings and Options • Lenses • Options Diamond • Options Explosion • Pass the Parcel • Projecting Across Distance. • Projecting Across Time • Same and Different • Same Different Connect Engage • See Think Me We • Seek to See • Step in - Step out - Step back • Step Inside • Stop, Look, Listen • Stories • Take a Stand

		<ul style="list-style-type: none"> • The 3 Whys • True for Who? • Values, Identities, Actions • Ways Things Can Be Complex • What Can Be
Considering Controversies, Dilemmas, and Perspectives	Routines that promote students' inclination to seek out and explore differences and tensions among multiple facets of complex issues.	<ul style="list-style-type: none"> • Circle of Viewpoints • Does it fit? • Facts or Fiction • Feelings and Options • Here Now / There Then • Hotspots • Options Diamond • Options Explosion • Same and Different • See Feel Think Wonder • Step in - Step out - Step back • Sticking Points • Stop, Look, Listen • Take a Stand • The 4 C's • Think, Pair, Share • True for Who? • Tug for Truth • Tug of War • Values, Identities, Actions • Who am I?
Generating Possibilities and Analogies	Routines that help students learn to formulate questions, consider alternatives, and make comparisons.	<ul style="list-style-type: none"> • 3-2-1 Bridge • Creative Comparisons • Creative Question Starts • Creative Questions • Digital Habits Checkup • Feelings and Options • Options Diamond • Options Explosion • True for Who?
Synthesizing & Organizing Ideas	Routines that help students find coherence, draw conclusions, and	<ul style="list-style-type: none"> • +1 Routine • Circles of Action • Color, Symbol, Image

	<p>distill the essence of topics or experiences.</p>	<ul style="list-style-type: none"> • Creating Space for Learning • Generate-Sort-Connect-Elaborate • Headlines • How Else and Why? • I Used to Think... Now I Think... • Portable Surprise • Take Note • The 4 C's • Word-Phrase-Sentence
<p>Exploring Art, Images, and Objects</p>	<p>Routines aimed at fostering student's capacity for observation, interpretation, and critical questioning through meaningful interaction with artworks and tangible artifacts</p>	<ul style="list-style-type: none"> • Beginning, Middle, End • Colors, Shapes, Lines • Creative Comparisons • Creative Hunt • Creative Questions • Elaboration Game • Headlines • I Used to Think... Now I Think... • Lenses • Listening: Ten Times Two • Looking: Ten Times Two • Parts, Purposes, Complexities • See Think Make Discuss • See Think Me We • See Wonder Connect x2 • See, Think, Wonder • Slow Complexity Capture • Step Inside • The Complexity Scale • The Explanation Game • Think, Puzzle, Explore • Thinking With Images • Values, Identities, Actions • What Makes You Say That?

Global Thinking	This set of routines aims to slow down students' thinking, inviting them to reflect on how different topics work.	<ul style="list-style-type: none"> • Beauty and Truth • Circles of Action • How Else and Why? • Same Different Connect Engage • See Feel Think Wonder • Seek to See • Step in - Step out - Step back • Sticking Points • The 3 Whys • True for Who? • Unveiling Stories • Values, Identities, Actions
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Table 3 Chart of the classification of Thinking Routines.

Thinking Routines applied in literature

According to the teachers' guide for Language and Literature of The International Baccalaureate Organization (2023):

All IB programmes value language as central to developing critical thinking, which is essential for the cultivation of intercultural understanding, as well as for becoming internationally minded and responsible members of local, national and global communities. Language is integral to exploring and sustaining personal development, cultural identity, and provides an intellectual framework to support conceptual development (p. 4).

Language is emphasized as vital for fostering critical thinking, promoting intercultural understanding, becoming internationally minded, and being responsible members of local, national, and global communities. Language is

essential for exploring and maintaining personal growth and cultural identity, and it offers an intellectual structure that supports conceptual development.

When discussing cultural identity, we can depict a profound concept that students may encounter as a challenge when researching or learning it deeply.

According to Meirysa (2021):

Literary work is a form of a person's ideas through views of the social environment around him using beautiful language. Literature exists as an author's reflection on existing phenomena. Literary works generally contain problems surrounding the author. These problems can be problems faced by the author or problems faced by other people who are appointed by the author into a literary work (p. 742).

Even authors of different works may differ in their points of view. Literary works are ways to show individuals' ideas shaped by different observations of the social environment. They serve as reflections of the author's perspectives on situations. By incorporating thinking routines, readers can gain diverse viewpoints when analyzing literature, deepening their understanding of the themes and issues presented.

According to Rejeki, Masitoh, & Arianto (2022) "Thinking routines also provide a wide area to share their thoughts by asking for students' perspectives. Since thinking routines focus more on students' reasoning and not only on the relevance of concepts according to the reading" (p. 155). These routines emphasize students' reasoning skills, focusing not just on the relevance of concepts from one reading but also on how students interpret and analyze the material. This approach fosters deeper engagement and critical thinking, allowing for a richer discussion and a more comprehensive understanding of the literary work.

The usage of Thinking Routines in literature sessions

Thinking routines suitable for literature sessions	Explanation of the Thinking Routine	Application of the routine in literature sessions.
See, Think, Wonder	<p>This routine has three main steps: See, Think, and Wonder.</p> <p>This routine invites learners to observe, interpret, and reflect on a literary text.</p>	<p>Present an extract from a literary work to the students, giving them enough time to observe it. If the book contains illustrations, it would be better. The following step is to ask learners specific questions, inviting them to describe events and answer follow-up questions. The last step is encouraging students to suppose the reasons behind the author's intention.</p>
Think, Puzzle, Explore	<p>This routine has three main steps: Think, Puzzle, and Explore.</p> <p>This routine invites students to activate prior knowledge, generate ideas and curiosity, and preparation for deeper inquiry.</p>	<p>Present an extract from a literary work to the students, giving them enough time to observe it. The following step is to ask learners the first question "What do you think you know about this topic?" It is vital to give students adequate time to think about and identify their ideas. The next step is to ask them the second question "What questions or puzzles do you have about this topic?". Finally, the last step is to ask them the following question "How might you explore your puzzles about this topic?" It is crucial to encourage students to think about things that are truly puzzling or interesting to them.</p>
What Makes You Say That?	<p>This thinking routine fosters the willingness of students to look closely at something</p>	<p>Present the first question "What's going on?" while the students are discussing, giving opinions, making</p>

	and uncover their reasoning about the way it works, how it came to be, or why it is the way it is.	assumptions, or offering interpretations about a literary work. The next step is to introduce the next question “What makes you say that?” so that students can explore what’s underneath their thoughts and assertions.
Circle of Viewpoints	<p>This thinking routine gauge students’ exploration of multiple perspectives.</p> <p>This routine invites students to understand that different people can have different kinds of connections to the same thing, and that these different connections influence what people see and think.</p>	<p>Present an extract from a literary work to the students, giving them enough time to read it. The first step is that students must brainstorm a list of difference perspectives that the literature work could have. The second step is that students need to choose one perspective from the previous brainstorm and explore ir using these sentences-starters “I am thinking of... the literary work... from the viewpoint of... the viewpoint the student has chosen” “I think...” “A question I have from this viewpoint is...”</p>
Headlines	<p>This thinking routine triggers students’ ability to identify the essence, or the core idea, of the literary work being discussed and reinforces taking notice of central themes as an essential tool in cultivating understanding.</p>	<p>Present the following task to the students “Write a headline that captures the most important aspect of this literary work. For this, it is vital that students have already consolidated the literary work, so that they are able to capture the most important aspect that should be remembered from the literary work. Then, introduce the following question to the students “How does your headline differ from what you would have said yesterday?” so that they can notice and</p>

		recognize whether there were changes in their thinking.
Connect, Extend, Challenge.	<p>This thinking routine invites students to connect new ideas to those they have already studied.</p> <p>This routine helps students to encourage their reflection upon how they have extended their thinking as a result of what they are learning about any literary work.</p>	<p>Present an extract from a literary work to the students, giving them enough time to read it. The first step is to ask the students the following question “How are the ideas and information connected to what you already know?”. It is vital that students make explicit connections to something previously learned so that there is visual information. The following step is to ask students the second question “What new ideas did you get that broadened your thinking or extended it in different directions?” Students can bullet point different answers. Finally, the last step is to ask students the third question “What challenges or puzzles emerge for you?”</p>
I used to Think...Now I think...	<p>This routine has two main steps: I used to think..., Now I think...</p> <p>This routine invites learners to reflect on their thinking about a topic or issue and explore how and why their thinking has changed.</p>	<p>Present the following task to the students “Think about what you have learned about the literature work we have been studying and complete the following sentence stems”. It is crucial you students give time enough to think about the literature work they have been covering. The first step is to give them the first stem “I used to think...”. Students can write many sentences using that stem. The second step is to give them the second stem “Now I think...”. Students can</p>

		write many sentences using that stem.
3-2-1 Bridge	This routine helps students to understand their own process of learning by considering their knowledge of a topic before and after a learning experience and how their conceptions changed.	Present the following task to the students “Write down 3 words or thoughts, 2 questions, and 1 metaphor or simile about the literary work”. It is vital that students do the first part just using their prior knowledge, so they must not review something of the literary work. The following step is to ask students the following task “Write down 3 words or thoughts, 2 questions, and 1 metaphor or simile about the literary task”. It is crucial that they do this step at the end of the session so that they can compare their previous knowledge which will be called “After learning” and the consolidated knowledge that will be called “Before learning”
Step Inside	<p>This routine has three main steps: Perceive, Know About, and Care About.</p> <p>This routine encourages students to consider various perspectives and viewpoints as they work to reimagine things, events, problems, or issues in new ways.</p>	<p>Present an extract from a literary work to the students, giving them enough time to read it. The first step is to ask the students the following question “What can the person or thing perceive?” For this, students need to write down their answers. The second step is to ask them to second question “What might the person or thing know about or believe?”</p> <p>“What might the person or thing care about?”</p>

<p>Think, Pair, Share</p>	<p>This routine has three main steps: Think, Pair and Share.</p> <p>This routine helps students understand through active reasoning and explanation. As students listen to and share ideas with others, it also encourages them to understand multiple perspectives.</p>	<p>Present an extract from a literary work to the students, giving them enough time to observe it. The following step is to ask learners to pair up with a partner, so that they can perform this routine correctly. Then, they must write in the “Think” box their individual ideas from the literature work they have read. The next step is to tell them to write their partners' ideas in the “Pair” box. It is vital to remind students to take turns, listen carefully, and ask clarifying questions of each other. Finally, they must write together the “Share” merging both “Think” and “Pair” boxes ideas.</p>
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Table 4 Chart of the usage of Thinking Routines in literature sessions.

METHODOLOGY

In this research work, the utilization of critical thinking strategies among 8th graders in an IB school to teach literature is described through a comparative approach, which was chosen for the purpose of comparison. It aims to explore and define a problem about critical thinking skills in a specific educational institution. Bray, Adamson, and Mason (2007) explain that comparative research involves examining and comparing different educational systems, policies, and practices across different contexts. Furthermore, Elnaz and Latifnejad (2022) pointed out that comparative research methodology involves examining the similarities and differences between two or more events. This study primarily describes the participants' performance, their development, and how the application of HTR could enhance their capacity to deal with abstract thinking questions while reading classical novels.

Additionally, Esser and Vliegthart (2017) stated that comparative research sets itself apart from other forms of research by aiming to draw conclusions that extend beyond individual cases. It seeks to explain differences and similarities between objects of analysis and relations between objects against the backdrop of their contextual conditions.

Comparative research was considered the most accurate method for this project since the aim is to explore the impact of Harvard's Thinking routines on students' performance when analyzing abstract questions and utilizing critical thinking skills. This research study will compare learners' responses with those from another group that did not use the routines.

The research focus chosen is a mixed-methods study. This study intends to explore the effectiveness of critical thinking strategies while reading classical literature in eighth graders of an IB school. This investigation will use quantitative and qualitative instruments to measure the relationship between the integration of Harvard's Thinking Routines and reading comprehension skills along with classical literature texts.

Lodico, Spaulding, and Voegtler (2006) stated that mixed-methods research collects both quantitative and qualitative data. While one approach might be

emphasized more than the other, both data types are considered essential to the study. One type of data may be collected first, followed by the other, or both quantitative and qualitative data may be collected simultaneously.

According to Creswell (2009), The increasing recognition of both qualitative and quantitative research within the social and human sciences has led to a surge in the popularity of mixed-methods research. This approach, combining quantitative and qualitative approaches, has gained popularity. This popularity can be attributed to the ongoing evolution and advancement of research methodologies by utilizing the strengths of both qualitative and quantitative research. Also, the problems addressed by social and health science researchers are complex, and the use of either quantitative or qualitative approaches by themselves is inadequate to address this complexity. The interdisciplinary nature of research also contributes to forming research teams with individuals with diverse methodological interests and approaches. Finally, more insight can be gained from the combination of qualitative and quantitative research than either form by itself. Their combined use provides an expanded understanding of research problems.

Participants

The researchers selected a sample of 40 eighth graders to conduct the study. They were divided into groups: 8th C and 8th D from an IB school in Samborondon. The participants, aged between 12 and 13, received 25 hours of English sessions per week. Five of these hours were assigned to Language Acquisition, where Literature is taught.

Gender	8th C	8th D
Number of girls	12	11
Number of boys	7	10

Table 5 Chart of Participants

Protocol and data-gathering tools

To explore the efficiency of the Harvard Thinking Routines, the following routines were chosen: 1) Think, Pair, Share (Collaborative); 2) See, Think, Wonder (Individual); 3) 3-2-1 Bridge.

The HTR: See, Think, Wonder was assigned 45 minutes, which is equivalent to 1 entire class session. It was ministered by the classroom teacher of Language Acquisition. During the same week, a task was presented to learners by applying the traditional method of an excerpt from the Huckleberry Finn reader.

After a week, the HTR Think, Pair, Share was administered to learners for another 45 minutes. The same book was used, but the analysis focused on a different chapter from Huckleberry Finn.

Data gathering tools

The open observation technique, also known as the narrative recording technique, was employed to document the educator's observations of students engaged in critical thinking exercises using HTR and the second group using the traditional method without HTR. In this technique, the researcher assumed the role of an observer rather than a participant. An unstructured field note was used to record the events as they occurred, enabling the acquisition of pertinent information.

According to Kumar (2011):

In this form of recording, the researcher records a description of the interaction in his/her own words. Such a type of recording clearly falls in the domain of qualitative research. Usually, a researcher makes brief notes while observing the interaction and then, soon after completing the observation, makes detailed notes in narrative form. In addition, some researchers may interpret the interaction and draw conclusions from it (p.135).

When assessing students' performance in both critical thinking exercises using HTR and critical thinking exercises without using HTR, the Criteria

Assessment from the MYP Guideline is an essential tool for gathering information. According to the MYP Language and Literature guide (2024), “Assessment for language and literature in all years of the program is criterion-related, based on four equally weighted assessment criteria: 1) Criterion A: Analyzing; 2) Criterion B: Organizing; 3) Criterion C: Producing text; 4) Criterion D: Using language” (p. 27). Criterion A will be chosen to assess all the tasks. These criteria are assessed under eight achievement levels (1–8), categorized into four bands that indicate varying degrees of performance: limited (1–2), adequate (3–4), substantial (5–6), and excellent (7–8). Each band has a specific descriptor that teachers use to make "best-fit" evaluations of students' progress and performance.

Criterion A will be chosen to assess all the tasks. This Criterion aims to assess students breaking down texts to identify key elements and extract meaning by understanding the creator's choices, the relationships between different components, and making inferences. Recognizing the importance of critically evaluating texts and applying analytical processes in various contexts while reading any literature work is a key aspect that is assessed as well.

As stated in the MYP Language and Literature guide, Language and Literature Year 1 (2024):

Through the study of language and literature, students are enabled to deconstruct texts in order to identify their essential elements and their meaning. Analyzing involves demonstrating an understanding of the creator's choices, the relationship between the various components of a text and between texts, and making inferences about how an audience responds to a text (strand i), as well as the creator's purpose for producing text (strand ii). Students should be able to use the text to support their personal responses and ideas (strand iii). Literacy and critical literacy are essential lifelong skills; engaging with texts requires students to think critically and show awareness of, and an ability to reflect on, different perspectives through their interpretations of the text (strand iv).

Strand I is considered suitable for evaluating both critical thinking exercises using HTR and critical thinking exercises without using HTR. This strand is about supporting and defending students' opinions and ideas by providing relevant examples, clear explanations, and appropriate terminology. It emphasizes the importance of backing up statements with concrete evidence and logical reasoning to effectively communicate and persuade others (International Baccalaureate Organization, 2024).

Data Analysis

The following is an analysis of critical thinking session one during literature classes. The following rubric, taken from the IB program guide, was used to evaluate the student's performance in a critical thinking task using both HTR and the traditional method.

CRITERION A: ANALYZING					
i. analyse the content, context, language, structure, technique, and style of text(s) and the relationship among texts.					
Level of achievement	0	1 - 2	3 - 4	5 - 6	7 - 8
Indicator Task-specific clarification	The student does not reach a standard described by any of the descriptors below.	The student: i. provides minimal identification and comment upon significant aspects of texts.	The student: i. provides adequate identification and comment upon significant aspects of texts.	The student: i. provides substantial identification and comment upon significant aspects of texts.	The student: i. provides perceptive identification and comment upon significant aspects of texts

Table 6 Chart of the Criterion Assessment A: Analyzing

Quantitative analysis of session 1 without HTR

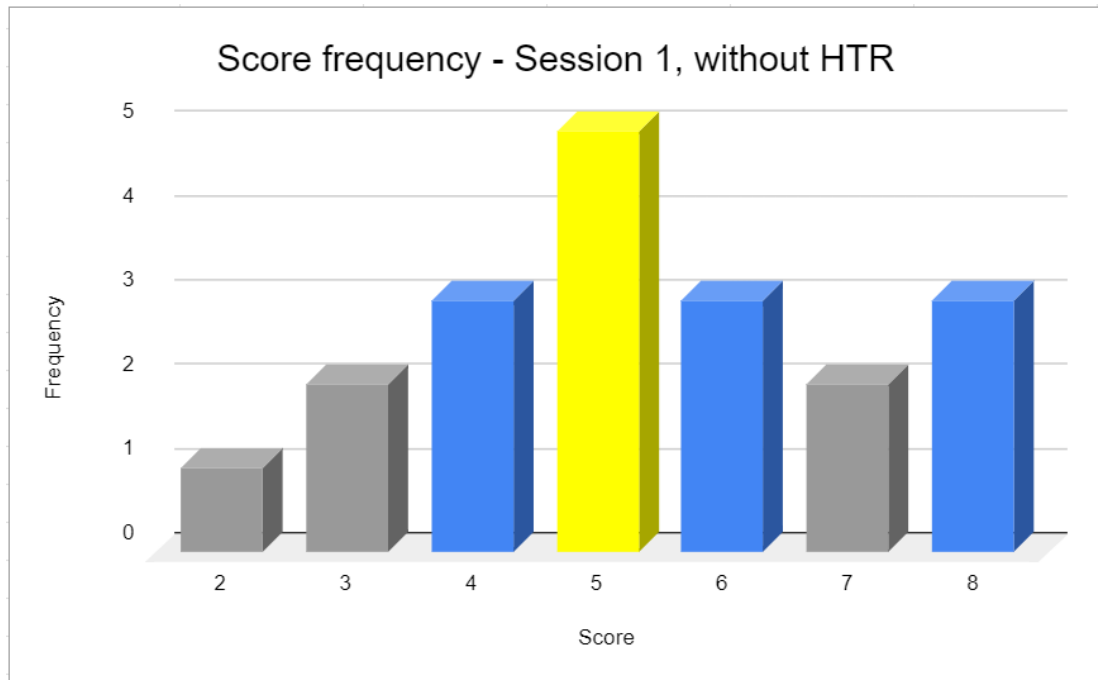


Figure 4 Score frequency after session one without HTR application. Elaborated by the authors.

The previous bar chart showed that the majority of students obtained five points over eight during critical thinking (CT) sessions, followed by marks 8,6,4. According to the rubric established, students performed at a substantial level. Few students demonstrated excellent performance, and just one student showed a limited degree of performance.

Quantitative analysis of session 1 with HTR

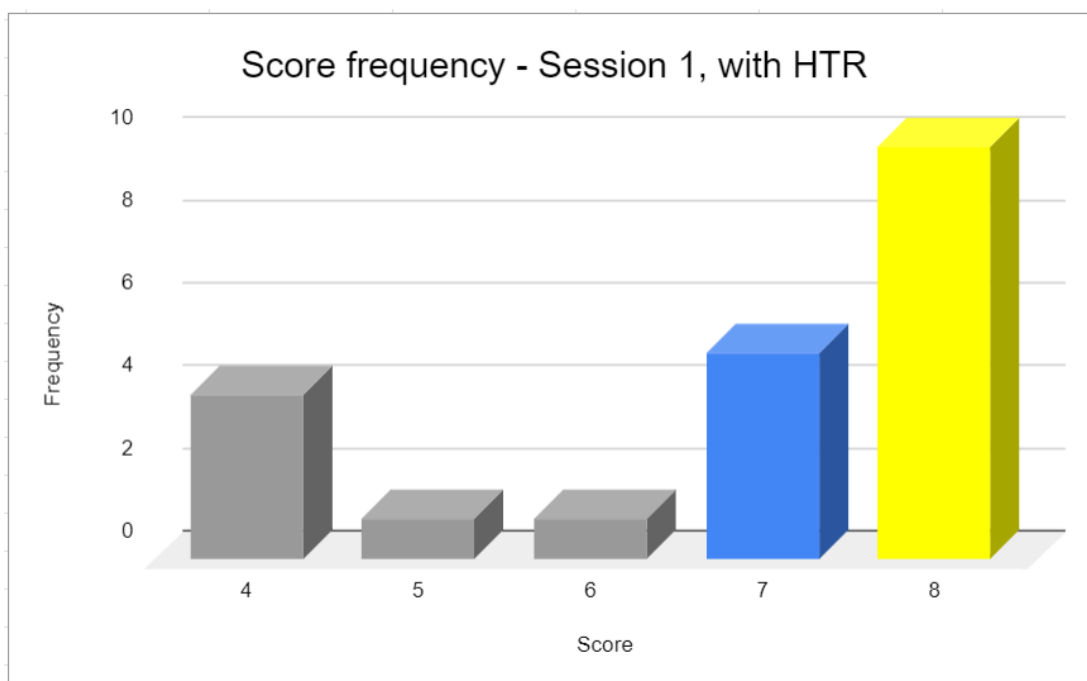


Figure 5 Score frequency after session 1 with HTR application. Elaborated by the authors.

The previous bar chart showed that the majority of students obtained eight points over eight during critical thinking (CT) sessions, followed by a mark of 7. Four students obtained the lowest score (4). According to the rubric established, students performed to an excellent degree. This activity resulted in 71,42% of students obtaining an excellent degree of performance, according to the rubric provided by the MYP Language and Literature guide.

Qualitative unstructured observation field note: Session 1

This observation comparison table was filled out with notes taken during observation session 1: See, Think, Wonder.

Using HTR	Traditional method
<p>8th “D”:</p> <p>Students actively participated and confidently shared their perspectives without hesitation. They were eliciting ideas orally while shaping ideas in written form. During the “see” phase, they meticulously comment on every detail of the</p>	<p>8th “C”:</p> <p>Students were asked the same questions but on a small sheet of paper. The children assumed it was a graded activity, and the activity lasted the whole class, they remained silent while writing. Their answers were more explicit, even</p>

<p>projected image, including elements that were often overlooked, such as facial expressions.</p> <p>In the "Think" phase, students were encouraged to make conjectures. For example, students speculated on the topics of conversation between the two characters.</p> <p>During the Wonder phase, two questions were presented, prompting active engagement from the students, going beyond the obvious. Even those students who tend to stay quiet during the classes end up participating, resulting in a student-centered class.</p>	<p>quoting certain parts of the book. The answers were very similar to each other. There was no room for discussion.</p> <p>Students were very insecure and kept asking the teacher if their writing made sense (they needed constant validation from the teacher).</p>
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Table 7 Chart of the unstructured observation field note: Session 1

Semantic network session 1: With HTR

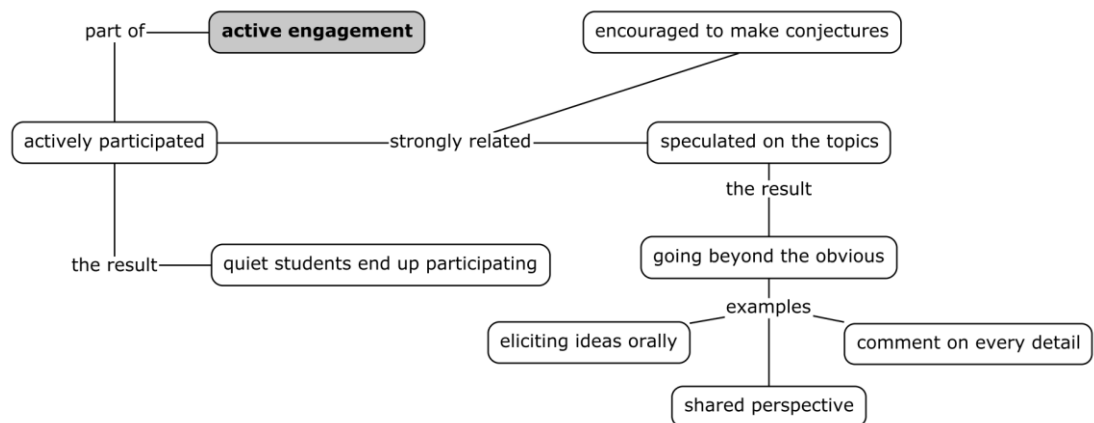


Figure 6 Semantic network session 1: With HTR, created by the authors

During critical session 1 with HTR, it was noticed an active engagement and participation. As a result, quiet students ended up participating. Students were encouraged to make conjectures which is strongly related to going beyond the obvious and speculating on topics. For instance: eliciting ideas orally, commenting on every detail, and sharing perspectives.

Semantic network session 1: Without HTR

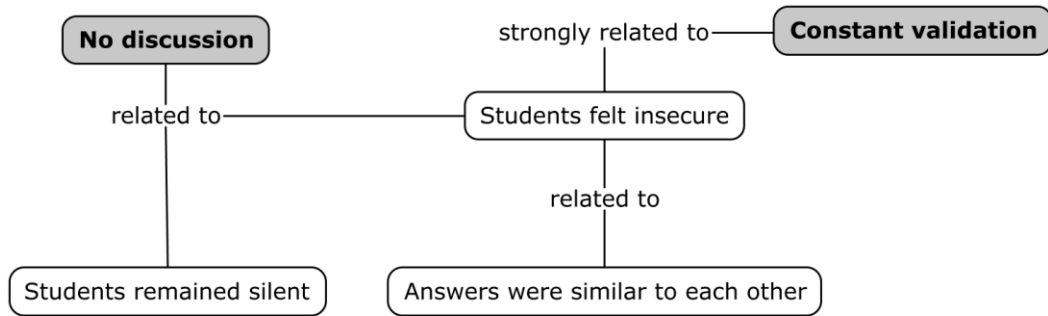


Figure 7 Semantic network session 1: Without HTR, created by the authors

During critical session 1: Without HTR, it was noticeable that there were no discussions, and students remained silent. It was observed that constant validation is related to insecure conduct, which is probably why the answers were similar to each other.

Quantitative analysis of session 2 without HTR

The following is an analysis of critical thinking session two during literature classes. Students' performance was evaluated using the same rubric as in the critical thinking session 1.

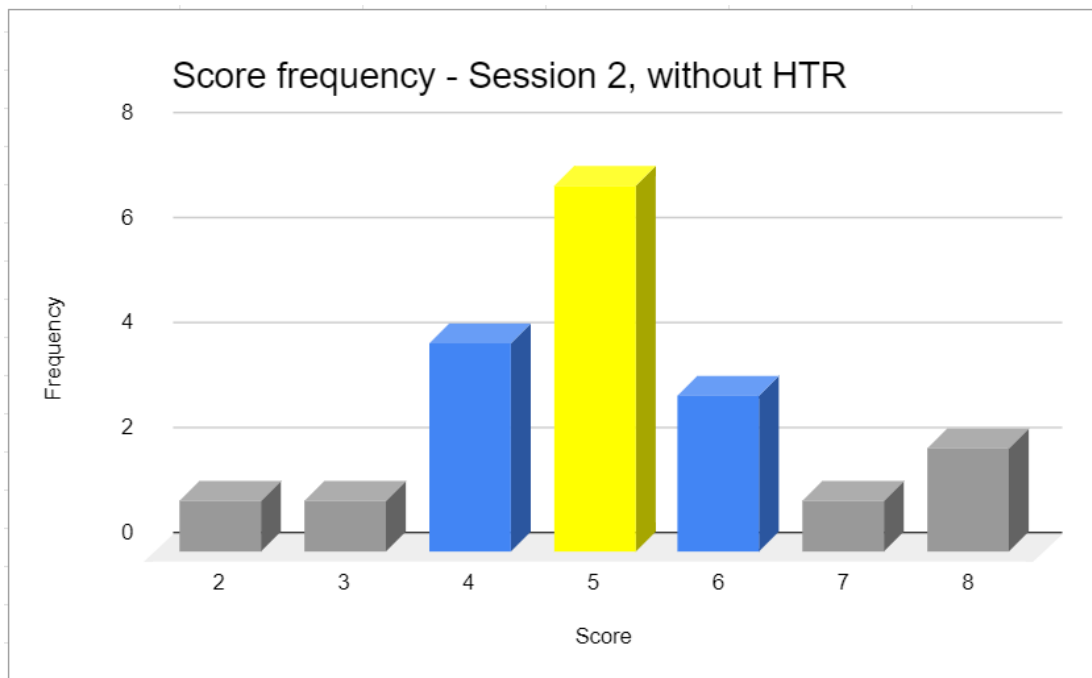


Figure 8 Score frequency after session 2 without HTR application. Elaborated by the authors.

The previous bar chart showed that the majority of students obtained five points over eight during critical thinking (CT) sessions, followed by marks 4 and 6. One student obtained the lowest score (2). According to the rubric provided by the MYP Language and Literature guide, this activity resulted in 26,32% of students obtaining an adequate degree of performance.

Quantitative analysis of session 2 with HTR

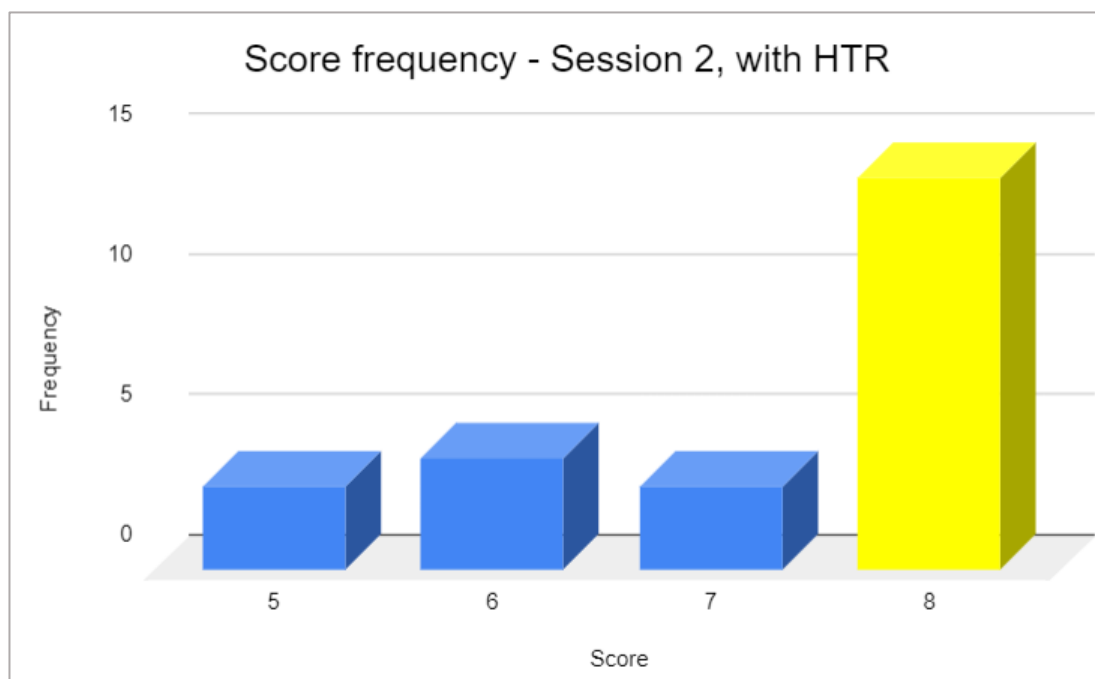


Figure 9 Score frequency after session 2 with HTR application. Elaborated by the authors.

The previous bar chart showed that the majority of students obtained eight points during critical thinking (CT) sessions applying HTR, followed by marks 7 and 6. No student obtained a grade below 5. This activity led to 70.83% of students achieving an excellent degree of performance, as per the rubric outlined in the MYP Language and Literature guide.

Qualitative unstructured observation field note: Session 2

This observation comparison table was filled out with notes taken during observation session 2: Think, Pair, Share.

Using HTR	Traditional method
<p>8th “D”:</p> <p>This collaborative thinking routine was conducted in pairs, allowing students to enhance their collaboration skills and choose their preferred partners. Initially, they engaged in a thorough re-reading of Chapter 5 again to review the key events. Several groups highlighted essential facts from the chapter. It was observed that learners discussed and provided observations about what could have been the explanation resulting from the problem or what could be the suitable possibility regarding the question provided by the teacher. The classroom atmosphere was characterized by animated conversations and emotive reactions. The class was noisy during the 5 minutes given to complete the activity.</p>	<p>8th “C”:</p> <p>When using the traditional method, students were not enthusiastic about the activity. Even though they had the same 5-minute time limit, they only took two minutes to complete it without carefully analyzing the task. This led to basic responses such as short answers that did not contribute to producing logical answers. The classroom atmosphere remained quiet during the activity, but their lack of interest was notorious.</p>

Table 8 Chart of the unstructured observation field note: Session 2
Semantic network session 2: With HTR

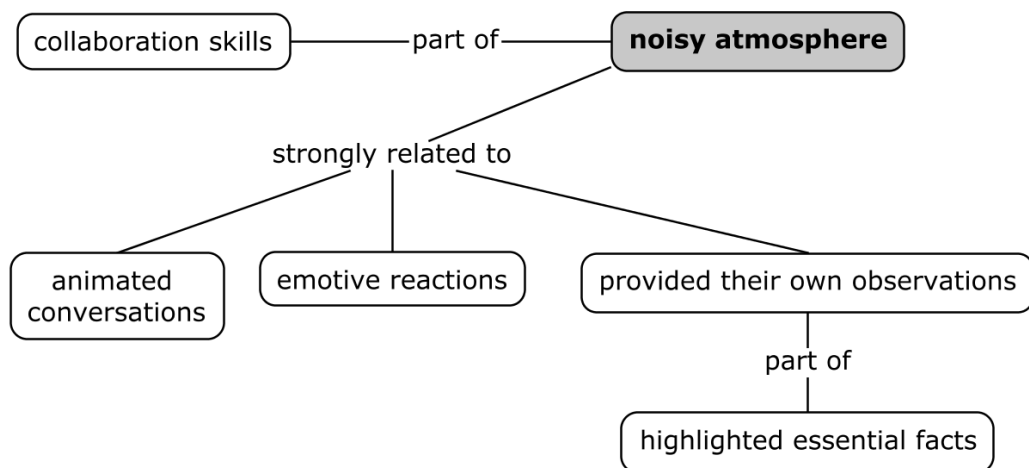


Figure 10 Semantic network session 2: With HTR, created by the authors

During critical session 2: With HTR, the classroom atmosphere was noisy as the session embraced a collaborative approach. Students provided their insights by highlighting essential facts from the novel and engaged in animated conversations, exhibiting emotive reactions during conversations.

Semantic network session 2: Without HTR

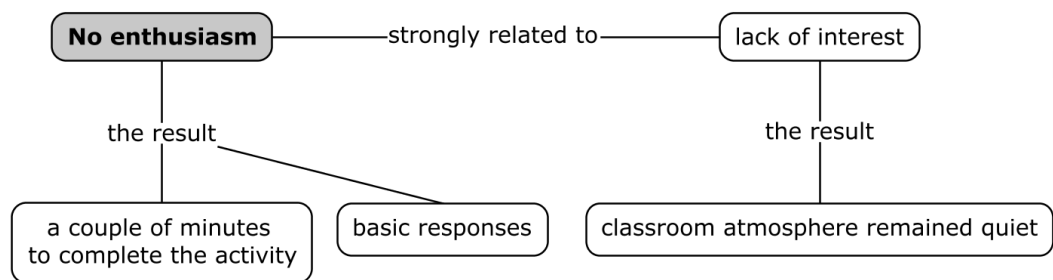


Figure 11 Semantic network session 2: Without HTR, created by the authors

During critical session 2: Without HTR, learners demonstrated a noticeable lack of enthusiasm, which is strongly related to a lack of interest in the activity. Learners took only a couple of minutes to complete the assigned activity, resulting in a quiet classroom atmosphere, this was probably the reason why students provided basic responses.

Quantitative analysis of session 3 without HTR

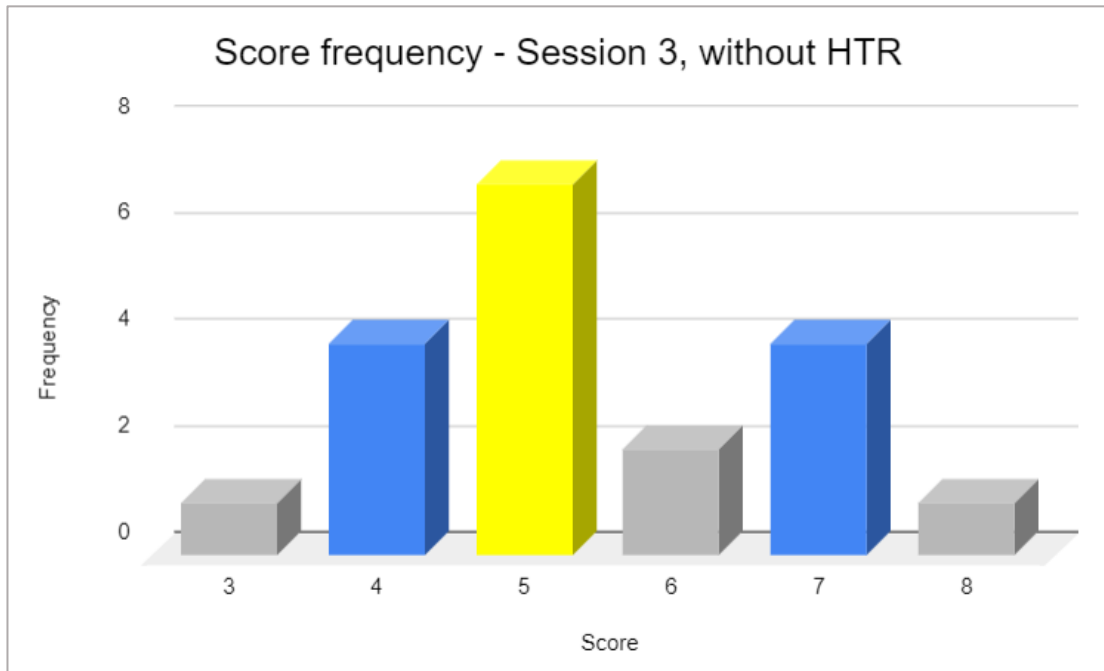


Figure 12 Score frequency after session 3 without HTR application. Elaborated by the authors.

The previous bar chart indicates that most of the students scored five out of eight points in critical thinking (CT) sessions, followed by scores of 7 and 4. Based on the established rubric, 26.32% of students performed at a substantial level. Only one student demonstrated excellent performance, while just one student showed an adequate degree of performance.

Quantitative analysis of session 3 with HTR

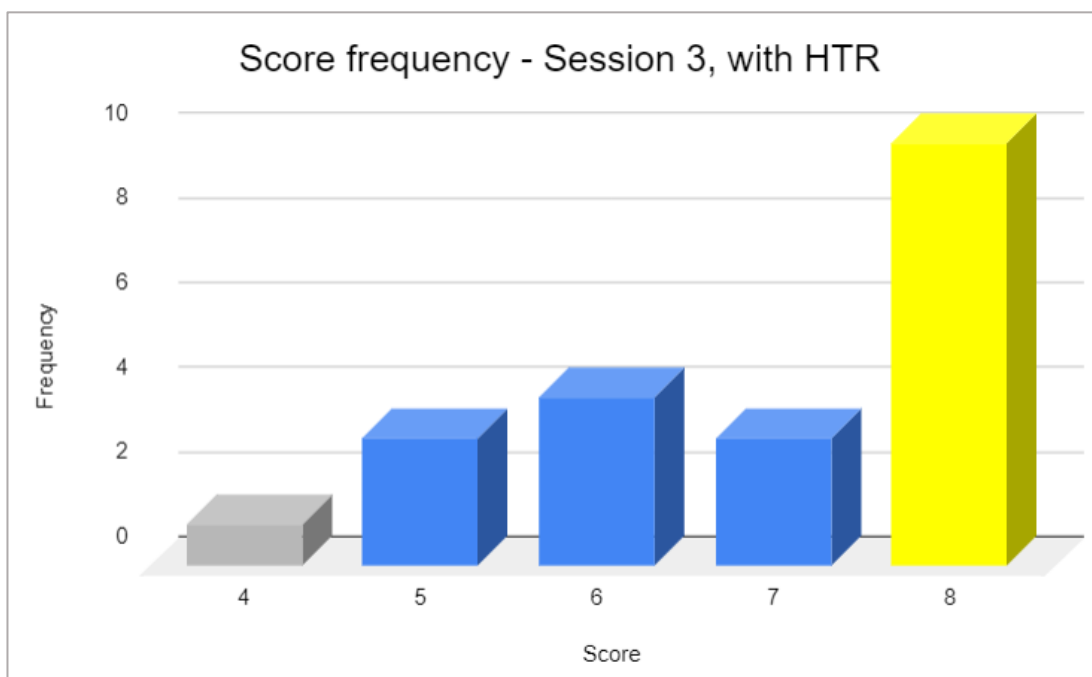


Figure 13 Score frequency after session 3 with HTR application. Elaborated by the authors.

The previous bar chart showed that the majority of students obtained eight points during critical thinking (CT) sessions applying HTR, followed by marks 6,7 and 5. One student obtained a score of 4. This activity led to 54.17% of students achieving an excellent degree of performance, according to the rubric outlined in the MYP Language and Literature guide.

Quantitative unstructured observation field note: Session 3

This observation comparison table was filled out with notes taken during observation session 3: 3-2-1 Bridge.

Using HTR	Traditional method
<p>8th "D":</p> <p>The class was interactive; students were open-minded and engaged in a discussion about the theme. The main focus of the activity was one of the themes from the book: child abuse. Some students shared real-life stories they had encountered online and made assumptions about</p>	<p>8th "C":</p> <p>Some students shared opinions about the book's theme, but not all students participated in the discussion. They were not open to sharing real-life situations but stuck more with just the events portrayed in the book. They were given the</p>

<p>certain events not mentioned in the book. This thinking routine contains two parts: Bridge 1, which is before the discussions, they share their initial doubts. In the second bridge, their responses and questions were more elaborated. The enthusiasm and engagement displayed by the learners reflected a high level of motivation among the students.</p>	<p>same amount of time as the other group but finished soon.</p>
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Table 9 Unstructured observation field note: Session 3

Semantic network session 3: With HTR

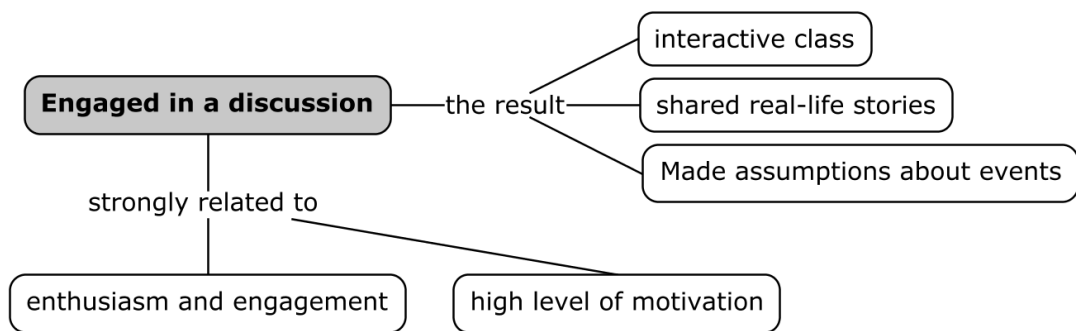


Figure 14 Semantic network session 3: With HTR, created by the authors

During critical session 3: With HTR, students were engaged in a discussion as a result they shared real-life stories, made assumptions about events, and the class turned into an interactive one. The students show enthusiasm and engagement with a high level of motivation.

Semantic network session 3: Without HTR

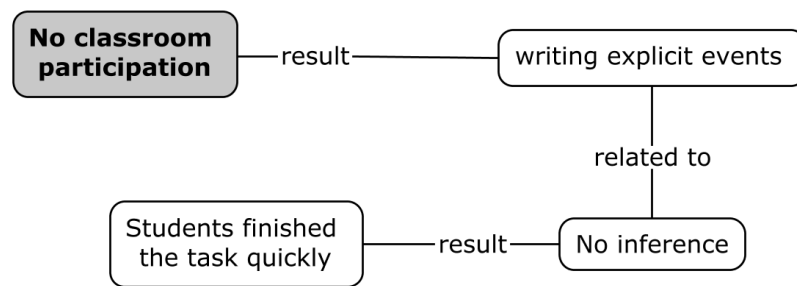


Figure 15 Semantic network session 3: Without HTR, created by the authors

During critical session 3 without HTR, the classroom environment failed to facilitate meaningful discussion and instead focused solely on reporting explicit events from the book without making any assumptions or inferences. As a result, students completed the task within a few minutes.

CONCLUSIONS

This research study has predominantly focused on demonstrating the correlation between critical thinking and reading classical literature. The research findings have culminated in the following conclusions.

- Critical thinking is crucial in helping students go beyond mere understanding to interpret texts at a classical literature level, which is indispensable in an IB program.
- The following critical thinking techniques, proposed by Project Zero and developed by Harvard University, have been shown to be effective for developing critical thinking skills when using classical texts: a) See, think, wonder; b) Think, pair, share; and c) 3-2-1 Bridge.
- A feature of critical thinking sessions that incorporate Harvard Thinking Routines is the noisy classroom atmosphere. Students display enthusiasm in generating ideas related to the themes presented in the novel. The atmosphere is dynamic because there are open discussions, fostering an environment in which students who usually remain silent are encouraged by their peers to participate.
- Students go beyond the obvious explicit information and project assumptions about potential future events, resulting in an entire student-centered class. Teachers assume the role of moderators rather than traditional lecturers. Moreover, students seamlessly integrate real-life stories, associating events from the book with current events from the modern world.
- The classroom atmosphere remains silent during the traditional critical thinking sessions without the integration of HTR, with students primarily focusing on task completion out of a sense of obligation.
- Learners generally spend only a few minutes on their tasks without thorough analysis, resulting in basic and sometimes illogic responses.

Students are reluctant to engage in discussions and, if prompted, often cite information directly from the book with no personal inference.

- The analysis indicates that the group that used the See, Think, Wonder Thinking Routine effectively provided perceptive identification and commented on significant events to a greater extent compared to the group using the traditional approach, as stated in the MYP Programme rubric. This implies that they achieved a higher level of performance than the traditional group.
- The analysis demonstrates that the Think, pair, share Thinking Routine yielded the highest success rate, meaning that learners provide perceptive identification and comment upon significant aspects based on the rubric provided by the IB Language and Literature guide. In contrast, according to the rubric, the group that used the traditional approach achieved a lower level than the group that used HTR, which provided substantial identification and comments on significant aspects.
- The analysis indicates that the 3-2-1 Bridge Thinking Routine resulted in students offering perceptive identification and commenting upon significant aspects, resulting in the highest strand of the rubric. In contrast, the group using the traditional approach scored two levels lower, resulting in providing substantial identification and comment upon significant events.

RECOMMENDATIONS

Critical thinking skills are essential for effective reading comprehension and play a crucial role in developing analytical engagement, particularly within the IB framework literature sessions. Based on the findings, this project provides some recommendations for educators on integrating critical thinking skills into their literature sessions, emphasizing the use of Harvard Thinking Routines as a tool for this skill development.

- It is highly recommended to use Harvard Thinking Routines during critical thinking sessions in Literature classes, especially in IB schools.
- It is recommended to use the following thinking routines for literature sessions: a) See, think, wonder; b) Think, pair, share; and c) 3-2-1 Bridge.
- When implementing collaborative thinking routines, it is essential to consider students' behavior. If the group tends to be disruptive, it is advisable to opt for whole-class discussions rather than working in pairs.
- When initiating a session on critical thinking, it is recommended to present an open-ended question that stimulates curiosity and resonates with the learner's emotions. For instance, questions such as: How would you respond if you were in a situation similar to Huck? Would your reaction differ, or would it have been the same?
- When using the different thinking routines, it is recommended to introduce one specific question at a time to concentrate the learner's attention on making inferences about a particular event.
- When using the Thinking Routine: See, Think, Wonder, it is more effective to show students a visual representation of a specific event from the book rather than just focusing on analyzing a particular extract. This approach allows students to notice and comprehend small details

such as facial expressions, the setting of the picture, and other details frequently overlooked during traditional sessions.

- It is advisable for the authorities of IB institutions to undergo thorough training sessions from experts who conduct workshops for educational institutions seeking to cultivate critical thinking techniques in their teachers. Despite the MYP encouragement to use HTR, this approach has yet to be widely known due to its limited implementation.

PROPOSAL

The current approach to developing critical thinking skills lacks opportunities for discussion, making assumptions, and drawing inferences. Harvard University has designed a project to address this issue by proposing an innovative approach to engage learners in thinking creatively and critically that could be useful for literature sessions when learners have to engage with classical books. The following proposal aims to encourage teachers to use Harvard Thinking Routines during literature sessions. A Linoit dashboard will be created to upload resources guiding teachers in effectively using and implementing Harvard Thinking Routines.

General Data				
Project Title:	Thinking beyond the obvious.			
Link to the digital project:	http://linoit.com/users/javier_garzon/canvases/inbox			
Project Team:	Domenica Campoverde - Javier Garzón			
Main Objective:	To propose Literature workshops that achieve the 75% of eighth graders improvement in critical thinking skills by using the Harvard's Thinking Routines strategy during the whole scholastic year.			
Specific Objectives:	To define specific pedagogical goals for teachers aimed at enhancing student's critical thinking			
	To prepare educational materials that integrates Harvard's Thinking routines for teachers to use it in their classes.			
	To conduct training workshops on Harvard Thinking Routines with Literature teachers.			
	To conduct monthly assessments that evaluate the practical integration of the workshops in the Literature lessons of teachers by using a check list.			
Execution time:	Starting	20/05/24	Ending	25/01/25
Evaluation time:	Starting	05/02/25	Ending	20/02/25
Project Description				
<p>Justification: This project aims to facilitate the integration of Harvard Thinking Routines into teachers' sessions with the goal of fostering critical thinking abilities among eighth graders. This is particularly important given that the school system is aligned with the IB continuum program, where critical thinking is a key requirement. The project aims to help students overcome interpretative barriers in order to enhance their critical thinking skills.</p>				

Execution Matrix						
Objective (number)	Activity	What will be done	What change is expected - Outcomes	Resources	Time	Responsibility
S.O.1	Define specific pedagogical goals for teachers aimed at enhancing student's critical thinking	Create a syllabus for 8th grade literature units.	Educators are required to be mindful of the curriculum they are expected to cover, as well as the modifications they must incorporate into their lesson plans.	Human resources Teachers Project director Team member 2	10 days (2 hours per day)	English and Spanish teachers
S.O.2	Provide a teachers' guide with the usage of different individual and collaborative thinking routines	A digital teacher's guide with different thinking routines (Usage and templates) that they can apply in their classes	Teachers will get prepared with different individual and collaborative thinking routines templates	Canva templates and Linolt	5 days	English and Spanish Teachers Project Director Team member 2
S.O.3	To conduct training workshops on Harvard Thinking Routines with Literature teachers.	Teachers will receive workshops from IB exponents that encourage the use of Harvard Thinking Routines as a method to activate critical thinking in adolescents	Teachers will start applying Harvard Thinking Routines into their sessions as a method to activate critical thinking in their students	Human resources Teachers Project director IB exponents	10 days	English and Spanish Teachers Project Director Team member 2 IB exponents
S.O.4	Monthly assessments that evaluate the practical integration of the workshops in the Literature lessons of teachers by using a check list.	- To require the coordinator to perform class observation by using check lists templates. -An online self-assessment survey for 8th graders teachers from English and Spanish subjects that implement critical thinking exercises.	Teachers will be able to improve their practical integration of critical thinking workshops in Literature sessions and look for new ways to apply them by analyzing their results on the class observation checklist	Class observation checklists	During the whole project	English and Spanish coordinators

		UNIT COST	SUBTOTAL
Diagnostic phase	Equipment		
	Laptop	\$267,68	\$267,68
	Printer machine	\$185,00	\$185,00
Implementation phase	Per diem		
	Transportation spendings (flight ticket)	\$200,00	\$200,00
	Food expenses	\$5,00	\$50,00
	Salary (hour payment)	\$30,00	\$600,00
	Office Supplies		
	A3 Cardboards	\$2,50	\$125,00
	Paper ream	\$5,00	\$50,00
	B/W Ink	\$10,00	\$30,00
	Glue	\$0,50	\$7,50
	Sticky notes	\$0,50	\$10,00
	Pens	\$0,25	\$10,00
	Highlighters	\$0,75	\$15,00
	Equipment		
	Internet	\$45,00	\$45,00
Project evaluation	Office supplies		
	Paper ream	\$5,00	\$25,00
	Printer ink	\$10,00	\$100,00
	Subtotal	\$767	\$1.720
	Contingency reserves	5%	\$86
		TOTAL BUDGE	\$1.806

REFERENCES

- Ahmad, S., Hussain, A., Batool, A., Sittar, K., & Malik, M. (2016). Play and Cognitive Development: Formal Operational Perspective. *Journal of Education and Practice*, 7(28). Retrieved June 6, 2024, from <https://files.eric.ed.gov/fulltext/EJ1118552.pdf>
- Aouaf, S., Azzouzi, L., & Housni, H. (2023). Perceived Barriers to Critical Thinking Development: The Student's View. *International Journal of Linguistics, Literature and Translation*, 65. doi:10.32996/ijlt
- Arisoy, B., & Aybek, B. (27 de February de 2021). The Effects of Subject-Based Critical Thinking Education in Mathematics on Students' Critical Thinking Skills and Virtues. *Eurasian Journal of Educational Research*, 120. doi:10.14689/ejer.2021.92.6
- Bassham, G., Irwin, W., Nardone, H., & Wallace, J. (2011). *Critical Thinking : A Student's Introduction*. Retrieved June 30, 2024, from <https://dimparato.wordpress.com/wp-content/uploads/2016/08/critical-thinking.pdf>
- Bennett, D. (2018). Graduate employability and higher education: Past, present and future. *HERDSA Review of Higher Education*, 5. Retrieved June 20, 2024, from https://www.researchgate.net/publication/332369627_Graduate_employability_and_higher_education_Past_present_and_future
- Bissell, A., & Lemons, P. (2006). A New Method for Assessing Critical Thinking in the Classroom. *BioScience*, 56(1). Retrieved July 3, 2024, from https://watermark.silverchair.com/56-1-66.pdf?token=AQECAHi208BE49Ooan9kkhW_Ercy7Dm3ZL_9Cf3qfKAc485ysgAAA3EwggNtBgkqhkiG9w0BBwagggNeMIIDWgIBADCCA1MGCSqGSib3DQEHATAeBglghkgBZQMEAS4wEQQMMV3FUynZPaR0kHPFAgEQglIDJIJMIjXJQJnA01svEjn9_xu_6Fsqd6qupUGOSpYwmhITiyE

- Bray, M., Adamson, B., & Mason, M. (2007). *Comparative Education Research: Approaches and Methods*. Springer. Retrieved July 16, 2024, from [http://ndl.ethernet.edu.et/bitstream/123456789/31038/1/77.Mark%20B ray.pdf](http://ndl.ethernet.edu.et/bitstream/123456789/31038/1/77.Mark%20B%20ray.pdf)
- Britannica Encyclopaedia. (2017, November 7). *Encyclopedia Britannica*. Retrieved May 5, 2024, from Britannica: <https://www.britannica.com/art/classical-literature>
- Creswell, J. (2009). *Research Design*. SAGE Publications, Inc. Retrieved from [https://www.ucg.ac.me/skladiste/blog_609332/objava_105202/fajlovi/C reswell.pdf](https://www.ucg.ac.me/skladiste/blog_609332/objava_105202/fajlovi/Creswell.pdf)
- Dajani, M. (2016). Using Thinking Routines as a Pedagogy for Teaching English as . *Journal of Educational Research and Practice*, 1. doi:10.5590/JERAP.2016.06.1.01
- Dewey, J. (1910). *How we think*. New York: Heath & CO. Retrieved May 29, 2024, from <https://bef632.wordpress.com/wp-content/uploads/2015/09/dewey-how-we-think.pdf>
- Dwyer, C. (31 de May de 2023). An Evaluative Review of Barriers to Critical Thinking in. *Journal of Intelligence* 11, 11(105), 2. doi:10.3390
- Elnaz, I., & Latifnejad, R. (2022). Comparative Research: An Old Yet Unfamiliar Method. *Journal of Midwifery and Reproductive Health*. Retrieved July 16, 2024, from [https://jmrh.mums.ac.ir/article_20785_a9d64bc89fe5a80857b034a371 2a3fe8.pdf](https://jmrh.mums.ac.ir/article_20785_a9d64bc89fe5a80857b034a3712a3fe8.pdf)
- Esser, F., & Vliegthart, R. (2017, August 01). Comparative Research Methods. *The International Encyclopedia of Communication Research Methods*. doi:<https://doi.org/10.1002/9781118901731.iecrm0035>
- Fisher, A. (2001). *Critical Thinking , An Introduction*. Cambridge, Cambridgeshire, United Kingdom: Cambridgeshire. Retrieved May 28,

- 2024, from
<https://assets.cambridge.org/052100/9847/sample/0521009847ws.pdf>
- Halpern, D., & Dunn, D. (2021, April 7). Critical Thinking: A Model of Intelligence for Solving Real-World Problems. *Journal of Intelligence*. doi:<https://doi.org/10.3390/jintelligence9020022>
- Harvard Graduate School of Education. (2022). *Harvard Graduate School of Education*. Retrieved from Harvard Graduate School of Education: <https://pz.harvard.edu/thinking-routines>
- International Baccalaureate Organization. (24 de Junio de 2024). *International Baccalaureate*. Obtenido de International Baccalaureate: <https://www.ibo.org/es/programmes/middle-years-programme/>
- Jeyaraj, J. J. (2023, April 9). Developing Critical Thinking in EFL through Visible. *International Journal of English Language Education*. doi:<https://doi.org/10.5296/ijele.v11i1.20894>
- Konrad, K., Firk, C., & Uhlhaas, P. (2013). Brain Development During Adolescence. *Dtsch Arztebl Int*. doi:10.3238/arztebl.2013.0425
- Kumar, K. (2011). *Research Methodology- a step-by-step guide for beginners*. London: SAGE. Retrieved July 28, 2024, from http://www.sociology.kpi.ua/wp-content/uploads/2014/06/Ranjit_Kumar-Research_Methodology_A_Step-by-Step_G.pdf
- Lai, E. (2011). *Critical Thinking: A Literature Review*. Pearson's Research Reports. Pearson. Retrieved July 4, 2024, from <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=b42cfa5a2ad63a31fcf99869e7cb8ef72b44374>
- Lodico, M., Spaulding, D., & Voegtler, K. (2006). *Methods in Educational Research*. Jossey Bass. Retrieved July 18, 2024, from https://stikespanritahusada.ac.id/wp-content/uploads/2017/04/Marguerite_G._Lodico_Dean_T._Spaulding_KatherinBookFi.pdf

- Meirysa, S. (2021, August 30). Social context and literature sociological functions in the novel about you by tere liye. *Jurnal Penelitian Guru Indonesia*, 6, 742 - 747. doi:<https://doi.org/10.29210/21122jpgi0005>
- Moghadam, Z. B., Narafshan, M. H., & Tajadini, M. (2023). The effect of implementing a critical thinking intervention program on English language learners' critical thinking, reading comprehension, and classroom climate. *Asian-Pacific Journal of Second and Foreign Language Education*. doi:<https://doi.org/10.1186/s40862-023-00188-3>
- Murawski, L. (2014). Critical Thinking in the Classroom...and Beyond. *Journal of Learning in Higher Education*, 10, 26. Retrieved June 30, 2024, from <https://files.eric.ed.gov/fulltext/EJ1143316.pdf>
- Neuronswave. (2023). *Critical Thinking, logic & problem solving*. NeuronsWaves LAB. Retrieved May 28, 2024, from https://read.amazon.com/?_encoding=UTF8&asin=B0CK9WJVWT&consumptionLimitReached=false&deviceAccountIds=A0376540853QTOXEC1TG&hasMultimedia=false&requiredCapabilities=EBOOK_PURCHASE_ALLOWED&ref=yb_qv_ov_kndl_rn_rw&yourBooksUrl=https%3A%2F%2Fwww.amazon.com%2F
- Norris, S. (1985, May). Synthesis of Research on Critical Thinking. *Educational Leadership*. Retrieved June 13, 2024, from https://files.ascd.org/staticfiles/ascd/pdf/journals/ed_lead/el_198505_norris.pdf
- Oxford English Dictionary. (2023, September). *Oxford English Dictionary*. doi:<https://doi.org/10.1093/OED/1835472099>
- Rahman, N., & Lakey, E. (2023). Learning to learn: Empowering students to articulate the value of their HASS degree. *Journal of University Teaching & Learning Practice*, 20(4). doi: <https://doi.org/10.53761/>
- Rejeki, M., Masitoh, S., & Arianto, F. (2022, November 30). How Thinking Routines Enhance Critical Thinking of Elementary Students.

International Journal of Recent Educational Research, 3, 640-650.
doi:<https://doi.org/10.46245/ijorer.v3i6.260>

Rejeki, M., Masitoh, S., & Arianto, F. (2022, December 12). Using thinking routines to improve the reading and writing skills of elementary students. *The Journal of Technology and Science*, 33(3). doi:10.12962/j20882033.v33i3.14953

Rogers, K. (2023, July 12). Formal operational stage. *Encyclopedia Britannica*. Retrieved June 30, 2024, from <https://www.britannica.com/science/formal-operational-stage>

Sham, D. (2016). Teaching and Learning ESL Writing by Critical Thinking. *American Journal of Educational Research*, 4(12). doi:10.12691/education-4-12-1

Sharma, M., Doshi, B., Verma, M., & Verma, A. (2022). Strategies for Developing Critical-Thinking Capabilities. 12(3). doi:10.5430/wjel.v12n3p117

Spector, J. M., & Ma, S. (2019, September 11). Inquiry and critical thinking skills for the next generation: from artificial intelligence back to human intelligence. *Smart Learning Environments*, 6. doi:10.1186/s40561-019-0088-z

Thornton, B. (2003). *A Student's Guide to Classics*. Delaware: ISI Books. Retrieved July 3, 2024, from ISBN 1-932236-15-5

Willingham, D. (2019). How to Teach Critical Thinking. *Education for a Changing World*. Retrieved June 30, 2024, from <https://education.nsw.gov.au/content/dam/main-education/teaching-and-learning/education-for-a-changing-world/media/documents/How-to-teach-critical-thinking-Willingham.pdf>

Woolfolk, A., Malcolm, H., & Vivienne, W. (2013). *Psychology in Education*. London, United Kingdom: Pearson. Retrieved June 13, 2024

ANNEXES



FAH-PINE-006-2024

Miércoles, 26 de junio del 2024

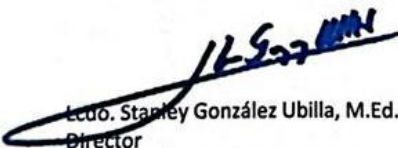
Lcda. Susana María Zambrano Quiroz
Directora de Secundaria
Monte Tabor de Nazaret
De mis consideraciones:

Reciba un cordial saludo. Por el presente solicito a usted muy comedidamente, salvo su mejor criterio, se permita a la Srta. Doménica Ivonne Campoverde Ochoa con C.I. 0926300401 estudiante del 8vo ciclo de la carrera de Pedagogía de los Idiomas Nacionales y Extranjeros – inglés, de la Facultad de Artes y Humanidades de la Universidad Católica de Santiago de Guayaquil, realizar observaciones áulicas que le permita recolectar información para elaborar su Trabajo de Integración Curricular.

Las Srta. Campoverde estaría realizando dicha actividad durante la clase de inglés que reciben los estudiantes, durante los meses de julio y agosto del presente.

De antemano agradezco la atención brindada.

Atentamente,


Lcdo. Stanley González Ubilla, M.Ed.
Director

Carrera de Pedagogía de los Idiomas Nacionales y Extranjeros – inglés
Facultad de Artes y Humanidades
Universidad Católica de Santiago de Guayaquil
Stanley.gonzalez@cu.ucsg.edu.ec




3

2

1

Bridge

 **3**
things I found interesting

- I think the father is dealing with
- Maybe Huck is hoping on social
- I think his dad scared him with the gun he had.


Some thing.

 **3**
things I found interesting

- The father is going to be more mature.
- Now does Huck know what he is doing


 **2**
things I found confusing

- did the mom died or not?
- does the father know about Huck's feelings?




 **2**
things I found confusing

- Why does Huck stops his dad' abuse by killing him?
- does Huck knows how his father started drinking?





 **1**
question I have

- Why the authority of the town didn't take Huck away before childhood trauma?





 **1**
question I have

- Can Huck also thought a harsh way to stop all of thing that are happening to him? (suicide)

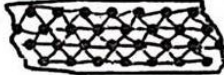
 <h2>SEE</h2> <p>I see a forest and on front of it I see a river and on top of it I see Huckleberry and Jim on a boat talking with each other.</p> 	 <h2>THINK</h2> <p>I think they are escaping from Huckleberry's dad and planning what they are going to do.</p>	 <h2>WONDER</h2> <ul style="list-style-type: none"> • I think he would react in a better way and he would be and feel happier. • I think it affect Huck's actions in the way that he has a bad model to follow and now he join to blang and escape from home.
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- **How would Huck feel and react if he was allowed to live in a safe and stable home?**
He wouldn't escape from his house
- **How do you think Huck's tough times with his dad affect his actions and thoughts?**
I think that Huck will be a better person and he will not escape from his home.



- Why was there so much killing in the ranch?

THINK	PAIR	SHARE
<p>I think... My own thoughts and wonderings</p>	<p>My partner thinks... Notes on my partners thoughts</p>	<p>We will share... What we plan to share with others</p>
<p>I think it is because the two families were enemies and when Miss Sophia ran with the other family the men went out to look for them</p> 	<p>I think it was because Miss Sophia ran off with one of the shepherds boys.</p>	<p>In conclusion it better to tell your family what you are going to do.</p> 

WHY WAS THERE SO MUCH KILLING IN THE RANCH?



Because both sides (both families) had a feud (a feud) so they fight and they kill others.

HOW DOES HUCK'S FATHER TREAT HIS SON
AND HOW DOES THIS AFFECT HUCK?

~~But~~ the father of huck is a mean man
that do to huck want to escaped and he
was sad because he never had a good
children.



Ivanna Calvo R.





DECLARACIÓN Y AUTORIZACIÓN

Nosotros, Campoverde Ochoa, Doménica Ivonne, con C.C: #0926300401 y Garzón Ramos, Javier Antonio, con C.C: #0952480531, autores del trabajo de titulación: **Application of critical thinking while reading classical literature among eighth graders in an IB school**, previo a la obtención del título de **Licenciados en Pedagogía de los Idiomas Nacionales y Extranjeros- Inglés** en la Universidad Católica de Santiago de Guayaquil.

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<p>The present study aims to explore how Harvard Thinking Routines (HTR) contrasts with traditional methods for developing Critical Thinking, especially in the Middle Years Programme (MYP) Language and Literature subject at an IB school. This work employed a comparative research design and adopted a mixed-method focus for analyzing quantitative and qualitative data. Three HTR techniques applied to eighth-graders were observed and analyzed. It was used a qualitative technique for gathering all the information regarding behaviors when using HTR, as well as, during traditional approach sessions. It was used a quantitative technique for gathering all the scores students obtained during HTR sessions and traditional approach sessions for comparing both techniques. After analyzing all the information obtained, it was found that students are more engaged in the learning process with HTR. A training program was designed to assist teachers in adopting Harvard Thinking Routines (HTR) techniques for a proper usage in the classrooms.</p>			
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