The Power of Brain Breaks: Transforming Emotions, Engagement, and Attention in Adolescent EFL Learners

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Abstract

The present case study examined the effects of three types of Brain Breaks (mindfulness practices, physical activities, and sensory exercises) on adolescents' emotions, attention, and engagement in a ninth-grade EFL classroom, with the participation of 22 students from a public school in Bogotá, Colombia. The research addressed the specific challenges that adolescents face in managing their affect and focus during EFL classes.

Framed by the humanistic theory of learning, which underscores the role of emotions in education, and the communicative approach to language teaching, which prioritizes meaningful interaction, the study was situated within a pragmatic paradigm that enabled the integration of qualitative and quantitative methods. Over the course of four weeks, six Brain Breaks, two for each type, were systematically embedded into English lessons. Data were collected through pre- and post-intervention surveys, classroom observations, and a student focus group.

Findings revealed a clear shift from predominantly neutral affective states to more positive emotions, with 77% of participants reporting positive emotional responses and 64% reporting higher levels of attention and engagement. Sensory and movement activities promoted motivation and active participation, while mindfulness fostered emotional regulation and sustained focus. The study demonstrated that Brain Breaks, when approached as a multidimensional strategy rather than isolated practices, can function as flexible tools to support socio-emotional well-being and cognitive readiness. Beyond aligning with previous research, this project contributes novel evidence from a Colombian adolescent EFL context, highlighting the need to reimagine classroom practices in ways that value students' emotional lives as much as their linguistic progress.

Keywords: attention, Brain Breaks, EFL class, engagement, positive emotions.

Resumen

Este estudio de caso analizó los efectos de tres tipos de Brain Breaks (prácticas de atención plena, actividades físicas y ejercicios sensoriales) sobre las emociones, la atención y el nivel de participación de adolescentes en una clase de inglés como lengua extranjera (EFL) de noveno grado, con la participación de 22 estudiantes de una institución educativa pública en Bogotá, Colombia. La investigación respondió a los desafíos particulares que enfrentan los adolescentes para regular sus emociones y mantener la concentración durante el aprendizaje de una lengua extranjera.

El estudio se fundamentó en la teoría humanista del aprendizaje, que resalta el papel de las emociones en la educación, y en el enfoque comunicativo de la enseñanza de lenguas, que prioriza la interacción significativa. Asimismo, se enmarcó en un paradigma pragmático que permitió integrar métodos cualitativos y cuantitativos. Durante cuatro semanas, se implementaron de manera sistemática seis Brain Breaks ; dos de cada tipo, en las clases de inglés. La recolección de datos se realizó mediante encuestas aplicadas antes y después de la intervención, observaciones en el aula y un grupo focal con estudiantes.

Los resultados mostraron un cambio evidente de estados emocionales predominantemente neutros hacia emociones más positivas: el 77% de los participantes reportó respuestas emocionales favorables y el 64% manifestó mejoras en la atención y la participación. Mientras las actividades sensoriales y de movimiento impulsaron la motivación y la participación activa, las de atención plena favorecieron la autorregulación emocional y la concentración sostenida. En conjunto, el estudio evidenció que los Brain Breaks, concebidos como una

estrategia multidimensional y no como prácticas aisladas, pueden funcionar como herramientas flexibles para fortalecer tanto el bienestar socioemocional como la disposición cognitiva de los estudiantes. Más allá de coincidir con estudios previos, esta investigación aporta evidencia novedosa desde un contexto adolescente colombiano de EFL, resaltando la importancia de replantear las prácticas de aula de manera que se valore la dimensión emocional de los estudiantes al mismo nivel que su progreso lingüístico.

Palabras clave: atención, Brain Breaks, emociones positivas, compromiso, clases de inglés.

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Chapter I

This chapter provides the foundation for the study by presenting the background, justification, problem statement, research questions, and objectives. It contextualizes the emotional challenges faced by adolescents in the EFL classroom and underscores the need for innovative strategies such as Brain Breaks. Furthermore, it highlights the relevance of the study within the Colombian context, specifically in English classes with adolescents.

Introduction

This project aimed to strategically implement three types of Brain Breaks (mindfulness practices, physical activities, and sensory exercises) at different stages of the English class, in order to examine their effects on students' emotional well-being, attention, and engagement. The intervention was carried out with ninth-grade adolescent students from a public school in Bogotá and emerged from the recognition that emotions are a central yet often overlooked dimension of second language learning.

To contextualize this intervention, preliminary observations and diagnostic instruments applied in the class revealed that students frequently experienced a predominantly neutral emotional state during English lessons. These findings underscore the need for pedagogical strategies capable of fostering more positive emotional climates and sustaining learners' attention. In this regard, Brain Breaks were designed and adapted throughout the lessons according to the emerging needs of the classroom.

As English language educators, it is essential to constantly seek opportunities within the classroom that not only enhance the teaching and learning of English but also promote students' emotional well-being. In this regard, Brain Breaks are understood as short, intentional pauses incorporated into classroom routines to help students reset their minds. They are designed to reduce stress, release energy, and refocus attention, thereby promoting engagement and supporting academic learning (Biring, 2024). Throughout the project, each Brain Break was designed to function as more than a simple pause; it operated as a reflective and affective exercise capable of shaping students' learning experience and their overall disposition toward the English class.

Some authors suggest that teaching English from a pedagogy of emotions can help students develop their linguistic abilities in a loving, joyful, motivating, and empathetic environment (Gardner & MacIntyre, 2018, p.3). Within this perspective, the proposed activities were expected to facilitate the transition from negative to positive emotional states, thereby increasing students' engagement in subsequent academic tasks. The research was thus based on the premise that emotions play a crucial role in the process of second language acquisition, as they directly influence students' attention and engagement.

The pedagogical intervention was carried out with the purpose of adapting Brain Breaks to real contexts experienced by teachers and students in English language classes. As a case study, this implementation intended to address the guiding research question of this study: What effects do Brain Breaks have on adolescents' emotions, attention, and engagement in the EFL classroom?

Following the intervention, the findings were analyzed and organized into categories that allowed for a more precise approach to the research question, underscoring the potential of Brain Breaks as a flexible pedagogical tool in language teaching. By connecting students' responses with the analysis of previous studies discussed in the literature review, this project sought to contribute evidence regarding how Brain Breaks can foster the creation of learning environments that promote academic development and socio-emotional growth.

The following chapters are organized to guide the reader through the different components of this study. Chapter 2 presents the literature review, which examines key theoretical concepts and prior studies relevant to the research focus, concluding with a discussion that situates the present study within the existing body of knowledge. Chapter 3 outlines the

research design, describing the methodological framework and the instruments employed for data collection. Chapter 4 introduces the instructional design, which details the pedagogical intervention implemented, the specific activities developed, and the theoretical perspectives on language and learning that underpin the project. Chapter 5 provides an in-depth analysis of the data, presenting and interpreting the main findings. Finally, Chapter 6 offers the conclusions of the study, along with its pedagogical implications and limitations.

Justification

In language teaching, emotions have traditionally been viewed as irrational and unmeasurable compared with quantifiable facts about second language learning from the 1970s (White, 2018). However, a shift to affective factors in L2 learning has prompted a reconsideration of the roles that emotions play in language learning. Just as it has been figured out, language learning involves more than just cognitive processes and the development of language skills; it also includes feelings and emotions. (Swain, 2013). Thus, this project suggested the meticulous selection, adaptation, and application of Brain Breaks activities to alter the emotional atmosphere in English learning environments and, thereby, improve students' attention and engagement in English classes. This also provides EFL teachers with valuable and accurate materials conducive to the effectiveness of their teaching classes.

Adolescence is marked by the emergence of diverse states, including distraction, aggression, anxiety, depression, sleep disturbances, defensiveness, and learning difficulties. These phenomena stem from neural processes involving the limbic system, thalamus, amygdala, and neurotransmitters like norepinephrine, epinephrine, and cortisol within the brain (Siegel, 2007). Furthermore, as students grow up, there is a corresponding increase in anxiety levels

when endeavoring to master listening and speaking skills in a second language, thereby influencing the attainment of successful learning outcomes (Cabrera et al., 2019). Building upon this foundation, the need to transform these adverse emotions into positive ones within English classes was underscored, particularly concerning adolescents, who constitute the primary focal point of this study.

Drawing from the outlined challenges, it became evident that English educators require strategies, recommendations, and insights to cultivate positive emotions and consequently enhance students' attention through easily implementable measures adaptable to their specific academic environments. As a result, the outcomes produced from this project provide a compendium of Brain Breaks activities adapted for English teachers. Each of these activities was examined in depth, highlighting their effects at different stages prior to, during, and following their application. In addition, this work serves as a key resource for educators and pre-service teachers, supporting the development and refinement of their pedagogical approaches and classroom management practices.

The advancement of educational boundaries relies heavily on the concerted efforts of educators. Thus, it becomes essential to collaborate in comprehending students' genuine requirements, commencing with the recognition of their emotional states during classroom interactions. Hence, this project offers an idealistic proposal that resonates with the realities of English classroom dynamics. Acknowledging the critical need to adapt these techniques to bolster student motivation and engagement in the English classroom is crucial, considering the developing educational paradigms and the shifting demands of our student body.

English teachers frequently face challenges in capturing and maintaining students' attention. Consequently, it is crucial to strengthen the curriculum with Brain Breaks to address this issue effectively. In many educational settings, the significance of such activities is not yet fully recognized. Therefore, it is essential to acknowledge the value of these interventions, which play a vital role in altering and improving the classroom atmosphere.

Problem Statement

The final product of this research was developed through the analysis and study of a group of EFL teenagers from a public school. Hence, the main focus was on the emotions that young people undergo in their English classes. This is because, at this stage of their lives, they are experiencing a highly crucial emotional period, where their emotions can be quite unpredictable. Consequently, they are susceptible to experiencing demotivation.

Throughout English classes, students undergo a spectrum of emotional states. The interplay of these affective experiences holds significant ramifications for the trajectory of students' acquisition of the English language. Negative emotions such as anxiety have a dampening effect on learners' motivation, performance, and progress in learning a foreign language (FL) (Botes et al., 2020). In contrast, positive emotions could be the key to strengthening the pathway from motivation to behavioral engagement, a prerequisite for a variety of desirable learning outcomes. (Liu, 2022). Nevertheless, the transition of emotions embodies a complex process, intricately linked to a multitude of factors. EFL learners may, for example, be anxious about their grades, feel apprehensive about their ability to talk in a foreign language, or get bored by their lessons. They may also feel utterly distressed until they receive positive feedback. (Almesar, 2022)

Given the critical role emotions play in language acquisition, addressing these affective states is essential for fostering a conducive learning environment. This is where Brain Breaks can play a pivotal role. Brain Breaks are short, well-structured recesses integrated into intensive educational programs to help students reset their focus. These breaks can include movement, mindfulness exercises, or sensory activities, and may be done individually or in groups. (Mori, 2014, cited in Orellana & Vega, 2023). These short recess activities were proposed to transform negative emotions into positive ones. This approach acknowledges insights from neuroscience regarding the operation of emotions in the brain and their potential influence on the learning process.

When students engage in intensive tasks, their affective filter is often elevated. To reduce this, some researchers suggest that Brain Break activities help students attain a sense of calm and refocus their brain's neural circuits through either stimulating or calming practices, particularly in the prefrontal cortex, where problem-solving and emotional regulation take place (Desautels, 2016; Dennison & Dennison, 1997; cited in Orellana & Vega, 2023).

This section includes an analysis of previous studies conducted on the topic, as well as an examination of their limitations in comparison to the present study. Parra & Vega (2023) implemented mental breaks for university students using mixed methods and found that these breaks allowed students to feel calm and refocused after a period of time. Furthermore, they concluded that this type of activity enhances retention and improves writing skills comprehension in English classes.

Similarly, Dirsk (2023) also applied Brain Breaks, but with sixth-grade students. His findings indicated that these activities positively impact students' academic performance and

socio-emotional well-being; however, the effectiveness depends on the specific type of Brain Break used. Likewise, Singh (2023) investigated the effects of such activities on students' academic performance, focusing on both primary and secondary school students. He observed a positive impact but suggested that movement breaks can be beneficial; however, further research was needed to explore the methods and types of Brain Breaks that might enhance academic performance.

Additionally, Jaeger & McWilliams (2023) examined the effects of Brain Breaks on the engagement of fourth-grade students. Through observations and interviews, they found that the most effective strategy for maintaining student focus after a break was the combination of different types of Brain Breaks. Kasparek (2021) also identified positive effects on student engagement following the implementation of Brain Breaks in her study with twelve- and thirteen-year-old students.

Considering the studies cited above, it became evident that very few focused on adolescents, as most research had been conducted with primary school children or, in some cases, university students. However, the present study was specifically designed to focus on adolescents, a critical developmental stage in human life. Additionally, there was a noticeable gap in the application of Brain Breaks within the EFL context, as most studies implement them in a general manner across various subject areas rather than targeting language learning specifically. More importantly, this study stood out for its application of Brain Breaks within the Colombian context, where no prior research has been conducted on this topic.

Another key distinction is that most previous studies have not categorized Brain Breaks into specific types but have instead applied them in a general, undifferentiated manner. In

contrast, this study systematically classified Brain Breaks into three categories: physical activities, sensory activities, and mindfulness practices. This structured approach aimed to determine which type of Brain Break was most effective or whether a combination of all three yields greater positive outcomes.

In comparison to prior research, this study offered a more precise definition of Brain Breaks and sought to identify their benefits by focusing on the enhancement of positive emotions. While other studies have generally examined the potential benefits of Brain Breaks on students, they have not explicitly addressed the transition from negative or neutral to positive emotions. By emphasizing this emotional shift, the present study provided a more nuanced understanding of how Brain Breaks contribute to student engagement and well-being.

Under the aforementioned, this project developed effective Brain Breaks strategies to enhance positive emotions and subsequently improve the attention of EFL adolescent learners. Through this approach, it was expected that students would stimulate the emotional center of the brain, fostering a more engaging environment that enhanced their ability to regain focus and motivation in English class. This initiative was inspired by my experiences as both a student and a teacher. From these dual perspectives, I identified a significant lack of motivation among students to learn English, the adverse effects of negative emotions on their performance, and the monotonous nature of current teaching methods.

Drawing from my own experiences, as I mentioned above, I had to learn English hastily with little time to consider how I was feeling or if the teaching methods were suitable for my learning style. As a result, during my teenage years, I completely lost my motivation to learn English. However, I realized that a simple action by a teacher can make a significant difference.

This is how this research was born. Arising from the acknowledgment of emotions in English language learning, there exists a common discourse on the topic, but it is unknown how to work the direct integration of emotional development into the curriculum. By that, English teachers need strategies, suggestions, and ideas to enhance those positive emotions with simple actions that they can adapt to their own academic contexts.

My interest in this topic also originated from observations made during my teaching practicum at the university. I encountered a teacher who incorporated various activities similar to Brain Breaks, and I noticed how these activities significantly transformed students' emotions and their perception of learning English. However, I also observed that not all students were equally motivated by the same activities. This led me to consider an approach that encompassed a diverse range of activities, allowing for adaptation to the varying emotional transitions and interaction styles of students in relation to the language.

Initially, I focused on mindfulness as a potential strategy. However, through practical teaching experiences, I became increasingly aware of the need to provide multiple alternatives to address students' varying states of energy and engagement. The concept of Brain Breaks proved to be particularly suitable, as it effectively encompassed the diverse types of activities I had envisioned based on my classroom practice. For example, if students arrived feeling tired and lacking energy, physical movement activities could help them regain vitality. On the other hand, if they came to class overly active or restless, mindfulness or sensory activities could help them calm down and refocus.

Therefore, the relevance of this study lies in showing how teachers can draw on a range of options to adapt to different classroom scenarios and better support students' attention and

emotional balance. Presented below are the questions and objectives that served as the foundation for this investigation.

Research Questions

How does the implementation of Brain Breaks in the English as a Foreign Language (EFL) classroom influence adolescents' emotions, engagement, and attention?

Sub Questions

- How does the application of Brain Breaks impact the emotions during English class?
- How do different types of Brain Breaks (mindfulness, physical activities, and sensory activities) affect engagement and attention in adolescents in a public school setting, and which is the most effective?

Objectives

General Objective

To analyze the impact of Brain Breaks on adolescents' emotions, engagement, and attention in the English as a Foreign Language (EFL) classroom.

Specific Objectives

- To evaluate how the implementation of Brain Breaks facilitates the transition from negative to positive emotions during English class.
- To assess the effects of different types of Brain Breaks (mindfulness, physical activities, and sensory activities) on students' engagement and attention in the EFL class.

- To determine which type of Brain Break is the most effective in enhancing engagement and attention among adolescents in a public school EFL setting.

Chapter II

This chapter is organized into three sections. The first section provides definitions of the key constructs relevant to this research and incorporates insights from various authors who have defined or explored these constructs. The second section reviews prior studies on the application of Brain Breaks and all their implications for this research. The third section presents the discussion, which compares the findings of the present study with previous research, integrating them into a broader perspective.

Literature Review

Brain Breaks

According to Weslake & Christian (2015), Brain Breaks are short periods of downtime that allow students to refresh and refocus their brains, which is essential for optimal learning. These breaks can take various forms, including physical movement, relaxation, and mental activities, and are particularly important in a classroom setting to help students manage concentration and retention of information during lessons.

However, some authors have adopted the term more specifically, referring to Brain Breaks as physical activities implemented within the classroom setting. Lander et al. (2024) define Brain Breaks as short bouts of physical activity incorporated into the classroom setting to provide students with a break from sedentary learning. These breaks are designed to enhance focus, engagement, and enjoyment in class, allowing students to refresh their minds and bodies. On the other hand, Hajar et al. (2020) define Brain Breaks as a physical activity video that is

designed for school settings to stimulate students' physical health, learning, and cognitive function.

Nevertheless, this study endeavors to conceptualize Brain Breaks not only as physical exercises, but as a multifaceted approach that integrates different types of activities adapted to the specific context of each class. Accordingly, these activities were designed to either calm or energize students, depending on the situation and the emotions observed. The Brain Breaks implemented encompassed mindfulness exercises, physical activities, and sensory activities.

Mindfulness, conceptualized as the dynamic process of regulating emotions to focus on the present moment while disregarding concerns about the past or future (Li, 2021), was proposed as a means to relax students and refocus their attention when they become distracted or are emotionally overwhelmed.

Furthermore, Fernandez- Barrionuevo et al. (2021), defined physical activities as motivating methods that enhance EFL learning in students, while simultaneously improving their health and increasing their motivation. These activities were primarily used as energizers aimed at physically and mentally stimulating students when they were in a state of excessive calm or discouragement.

According to Badawi (2016), sensory activities are activities that involve the use of all five senses: sight, hearing, smell, taste, and touch. Overall, these authors highlight the positive impact of brain breaks on students' engagement, attention, and well-being through different approaches. In this study, these activities were implemented with the expectation of fostering a positive emotional climate and enhancing students' affective states, while also aiming to improve

their attention and engagement in the classroom, depending on the specific circumstances in which they were applied.

Emotions

Emotions are complex reaction patterns, involving experiential, behavioral, and physiological elements, by which an individual attempts to deal with a personally significant matter or event. The specific quality of the emotion (e.g., fear, shame) is determined by the specific significance of the event. For example, if the significance involves threat, fear is likely to be generated; if the significance involves disapproval from another, shame is likely to be generated. Emotion typically involves feeling but differs from feeling in having an overt or implicit engagement with the world. (American Psychological Association, 2018).

Emotions can be positive or negative. On the one hand, Oladrostam et al. (2022) mention that positive emotions lead students to adopt broader mental states, enabling them to become more dynamic, creative, and better equipped with strategic thinking skills. On the other hand, Alrabai (2022) defines positive emotions as those that facilitate learning, such as hope, interest, confidence, and enjoyment. “These moods are powerful motivators and regulators of human behavior and cognition" (Li, Wu, & Wang, 2024,p.1). Therefore, it is essential to analyze what occurs with students' emotions in the English classroom. These emotions significantly influence students' cognitive processes and serve as a critical factor in regulating other brain functions, such as concentration, memory, and the willingness to absorb new information.

In the case of negative emotions,” these are unpleasant, often disruptive, emotional reactions designed to express a negative effect. Negative emotion is not conducive to progress toward obtaining one’s goals. Examples are anger, envy, sadness, and fear”. (American

Psychological Association, 2018, p.1). As previously mentioned, this study focuses on adolescents due to the critical emotions they experience during this developmental stage.

Consequently, the primary goal of implementing Brain Breaks is to facilitate the transition from negative to positive emotions, as negative emotional states can hinder students' ability to achieve their academic objectives. Moreover, students' attention and engagement in English classes are significantly influenced by their emotional state. By addressing this emotional dimension, the study strove to enhance learning conditions and foster a more effective and supportive educational environment.

Engagement

Engagement refers to getting students focused on a task, encouraging their attention, helping them complete assignments, and motivating them to ask insightful questions. Students feel relaxed, energized, and joyful in their learning process (Oga- Baldwin, 2019). Engagement requires a holistic understanding of students' feelings, attitudes, and active behavior, as well as their psychological connections within academic contexts (Liu & Feng, 2023). According to Dincer et al. (2019), it refers to active involvement or participation in learning related activities, such as asking questions in class and doing housework.

In this way, engagement becomes essential in the English classroom, as it defines the interest and commitment students have toward the learning process. However, as for attention, engagement depends on multiple factors. Carefully observing what occurs behind each class allows for the measurement of students' engagement. From the perspective of this study, strengthening positive emotions could serve as a valuable strategy to enhance engagement in English classes.

Attention

According to Kao (2023), attention is a cognitive function that allows individuals to encode and store language cues in short-term and working memory, as well as retrieve them from long-term memory. It is linked to brain activation and effective language learning, which requires optimal brain activation along with selective attention (Oishi, 2007). Similarly, Pearsons & Taylor (2011) define attention as the student's willingness, need, desire, and motivation to participate and succeed in the learning process.

Relating this concept to English Teaching, its analysis becomes essential, as learning a second language requires attention and concentration. This attention refers to the brain's capacity to receive and apply specific information. It is influenced by various factors, such as the emotional state of the students. Therefore, to measure students' attention, it is crucial to examine the underlying factors that affect it.

Adolescence

According to the definition of the World Health Organization (2025), adolescence is the stage of life that bridges childhood and adulthood, typically ranging from ages 10 to 19. It represents a distinct phase of human development and a crucial period for establishing the foundation of long-term well-being. During this stage, people undergo rapid physical, cognitive, and psychosocial growth, which significantly influences how they feel, think, make decisions, and interact with their environment.

Adolescence is further characterized by rapid and multidimensional change, as highlighted by the National Academy of Sciences (2019). This trajectory between those ages involves a profound amount of change in all domains of development: biological, cognitive,

psychosocial, and emotional. Personal relationships and settings also change during this period, as peers and romantic partners become more central and as the adolescent moves into and then beyond secondary school or gains employment. (National Academy of Sciences, 2019, p.37)

EFL

It is important to highlight that the entire content of this research is framed within the English as a Foreign Language (EFL), defined as the teaching or learning of a non-native language outside the environment where it is commonly spoken (Moeller & Catalano,2015). According to Ajaca (2020), EFL (English as a Foreign Language) is a field of study that focuses on the learning and use of English by non-native speakers, examining their needs, perceptions, and preferences to enhance language acquisition and communication. As an expanding area of research, EFL also explores effective teaching methodologies, linguistic challenges, and cultural influences that shape the learning process in diverse educational contexts.

In the Colombian context and within the scope of this proposal, English is considered a foreign language, since this language is not spoken in this country. Given its significance as a global language, the Ministry of Education in Colombia has incorporated the improvement of English language teaching quality into its policy, aiming to enhance students' proficiency in the language. Consequently, the goal is for students to achieve a B1 (Pre-Intermediate) level of English competency upon completing their schooling. (Ministry of National Education,2018). Likewise, according to the Ministry of Education in Colombia, the Foreign Language Competency Standards-Guia (EFL) are clear and public criteria that establish the fundamental quality benchmarks for English language teaching, based on the Common European Framework of Reference for Languages (CEFR; Council of Europe, 2001).

These concepts were fundamental in the present research, as they are all interconnected in achieving a final purpose. Brain Breaks were positioned as the core element of this study, since they were expected to strategically transform the classroom environment by addressing the emotional, cognitive, and behavioral dimensions that directly influence adolescent learning. In this project, Brain Breaks are conceived as a comprehensive set of activities (mindfulness, physical movement, and sensory activities) designed to energize or relax students depending on the needs of the moment. This adaptability is particularly relevant in the English as a Foreign Language (EFL) classroom, where attention and engagement are deeply linked to students' emotional states.

By interrupting monotonous or routine learning cycles, Brain Breaks foster positive emotions such as enjoyment and confidence, which in turn promote greater engagement and attention, both of which are fundamental for effective language acquisition. Adolescence, as one of the most critical stages of human development, made the implementation of Brain Breaks especially relevant. Adolescents face intense emotional transitions and cognitive changes that can easily affect their academic performance. In this context, The Power of Brain Breaks emphasized that enhancing emotions, engagement, and attention is not a secondary aspect of language learning but rather a necessary foundation for it, particularly for adolescents who are in a crucial stage of their lives.

At the same time, learning a foreign language also presents significant challenges that can trigger a wide range of emotions. Students often experience anxiety, fear of speaking in public, frustration when they cannot express themselves clearly, and insecurity about making mistakes.

These emotions may hinder participation and reduce motivation, especially in adolescent learners who are highly sensitive to peer perception and social approval.

Review of Previous Studies on Brain Breaks

As part of this research, ten studies on the use and application of Brain Breaks, as well as their benefits and underlying implications, were analyzed. These studies were sourced from databases such as Google Scholar, ERIC, Research Gate, and Springer. In addition, the selection of studies was limited to works published within the last five years (2021–2025). Initially, I made efforts to focus on studies conducted within the field of EFL; however, not all of the studies reviewed were found specifically within this area of research. Consequently, as a last resource, studies involving the application of Brain Breaks in any educational context were included. It is important to note that all studies selected for this literature review were the result of original research rather than mere theoretical reviews.

In order to organize and systematize the different studies identified, a table was created summarizing the most relevant aspects of each study, including the sample and context, methodology, instruments, and key findings. This structure was designed to facilitate a strategic comparison across the studies and to uncover meaningful insights among them.

Table 1

Previous Studies on the issue

Title	Year /Country	Population	Methods/ Instruments	Findings

Effects of brain breaks on EFL students' writing skills at the tertiary level.	2023 Ecuador (Parra & Vega)	50 university students	Mixed methods. - A pre-test and a post-test. - Teacher observation and students' surveys. - Writing test based on A2 CEFR standards.	Brain breaks allowed students to feel calmed and refocused after 45 minutes of desk-based classes. - Increased retention and understanding of writing structures.
Stop, Stretch, and Think: Incorporating Brain Breaks in EFL classrooms	2025 Saudi Arabia (Mohamed, Halim &Halim)	22 EFL teachers and 60 students at the tertiary level.	Quantitative research. - Questionnaire on a 5- point likert scale	The study found that brain breaks enhance attention, memory, language skills, and motivation in tertiary-level students. It also showed that teachers and students value them, but activities must be age-appropriate, and teachers need more training.
Impact of Mindfulness Training on EFL Learners' Willingness to Speak, Speaking Anxiety Levels, and Mindfulness Awareness Levels	2022 Turkey (Ersanli & Unal)	41 students aged 20–23 from the Department of Aviation Management.	Mixed methods. -Likert Scales - Pre-test, post-test, and semi-structured interviews.	Mindfulness training helped students lower their speaking anxiety and increase their willingness to communicate in English. It also showed that students became more focused, confident, and aware, applying mindfulness techniques both in and outside the classroom.
Breaking up classroom sitting time with cognitively engaging physical activity: Behavioural and brain responses	2021 Australia (Mazzoli, Salmon, Pesce, He, Ben-Soussan & Barnett).	141 children, aged between 6 and 8 years	Mixed methods. -Scales -Tests - Systematic observations.	The cognitively engaging active breaks improved children's inhibition and reduced lapses of attention. There were no significant effects on working memory or classroom behavior. Children reported enjoyment and effort.

Impact of Brain Breaks on Student Engagement in an Upper Elementary Classroom	2023 Minnesota (Jaeger & McWilliams)	53 students - 4th grade	Qualitative research -Observation -Surveys	The physical brain breaks were the most highly rated by students; the mindfulness ratings were lowest. But the most effective for student focus following the break was the combination breaks.
The Academic and Socioemotional Effects of Brain Breaks in a Title 1 Elementary Classroom	2023 USA (Dirks)	32 sixth-grade students	Mixed methods. -Academic assessments. - A survey and focus group interviews.	Brain breaks would have a positive effect on the academic performance and socioemotional health of the students, but the extent of the effect may be dependent on the type of brain break. After socioemotional breaks, they had higher assessment scores than after a physical activity break.
Short breaks at school: effects of a physical activity and a mindfulness intervention on children's attention, reading comprehension, and self-esteem	2021 Germany (Müller, Otto, Sawitzki, Kanagaligngam,Scherer,Lindberg)	162, 4th grade students and 79, 5th grade students.	Quantitative research. - Pre-test and post-test.	The study found that physical activity breaks improved children's attention speed and performance (but not accuracy), while mindfulness breaks improved reading comprehension.
Enhancing Foreign Language Enjoyment and Well-Being Through a Mindfulness-Based Intervention Program in the EFL High School Classroom - Teachers' Insights	2023 Israel (Fayerberger)	Students from a 10th-grade EFL class in a high school	Qualitative research.. -Semi-structured interviews	The mindfulness program improved their well-being, helping all of them reduce anxiety, some manage difficult emotions, and many improved classroom focus. Students experienced greater enjoyment and interest in English, suggesting potential positive effects on academic achievement.
Brain Breaks and Student Engagement	2021 USA (Kasparek)	23 twelve and thirteen	-Mixed methods. Observation and recordings. A tally mark system.	The implementation of brain breaks did have a positive effect on students' engagement by decreasing off-task behaviors.

		-year-old students		
The effect of Brain Breaks on Student academic performance and behaviors in the K-12 school setting: a meta- analysis.	2023 USA (Singh)	K-12 educational setting	-Mixed methods. Academic databases. -Standardized test scores	The confidence interval was positive; however, the large variability suggests that movement breaks may be effective but require further study of methods and types of brain breaks that may produce improvements in academic outcomes.

Note: The table presents previous studies on the research topic.

A total of 15 studies were initially identified, of which 10 met the inclusion criteria by specifically addressing the concept of Brain Breaks. The remaining studies were excluded because their focus did not align with the objectives of this research. Among the selected studies, 4 were conducted in the United States, 1 in Ecuador, 1 in Saudi Arabia, 1 in Turkey,1 in Australia, 1 in Germany, and 1 in Israel. No studies were found in Colombia, which allows us to conclude that this topic has not yet been explored by Colombian educators.

Parra & Vega (2023), in Ecuador, explored the effects of Brain Breaks on the writing skills of 50 university students through a mixed-methods design. They relied on pre- and post-tests, teacher observations, student surveys, and a writing test aligned with A2 CEFR standards. Their results indicated that Brain Breaks helped students regain focus after prolonged desk lessons and improved the retention of writing structures.

Similarly, Mohamed et al. (2025) examined Brain Breaks in Saudi Arabia with a larger sample involving 22 EFL teachers and 60 tertiary-level students. Unlike Parra & Vega, their study adopted a quantitative design, applying a questionnaire on a five-point Likert scale. The findings reinforced the cognitive and affective benefits of Brain Breaks, showing positive effects

on attention, memory, language skills, and motivation. However, a distinctive aspect of this study was its emphasis on teachers' perspectives. The findings highlighted concerns regarding the need for specific teacher training, as well as the importance of adapting the activities to students' ages.

Kasparek's (2021) study in the United States offers a contrasting perspective by shifting the context from tertiary education to middle school, involving 23 students aged 12–13. Employing a mixed-methods approach that combined classroom observations, recordings, and a tally mark system. Kasparek found that Brain Breaks significantly increased student engagement, primarily by reducing disruptive behaviors. Unlike Parra & Vega (2023), who focused on specific language skills, and Mohamed et al. (2025), who emphasized broader cognitive and motivational gains, Kasparek's research highlighted behavioral engagement as the central outcome. This underscores how Brain Breaks may serve different purposes depending on the educational level and the evaluative lens applied.

Differing from earlier studies that tended to examine Brain Breaks as a general practice, these three studies (Jaeger & McWilliams, 2023; Dirks, 2023; Müller et al., 2021) take a more differentiated approach by analyzing the specific effects of various types of Brain Breaks on students' learning and socioemotional outcomes. The study by Jaeger & McWilliams (2023), conducted with 53 fourth-grade students in Minnesota through classroom observations, focus groups, and surveys, revealed that students rated physical Brain Breaks most positively, while mindfulness breaks were less favored. However, a combination of both types of breaks proved to be the most effective in restoring focus after interruptions, suggesting that variety and balance may enhance their impact.

In contrast, Dirks (2023) investigated the effects of Brain Breaks on 32 sixth-grade students in a Title 1 elementary classroom in the United States, with a particular focus on academic and socioemotional dimensions. Using a mixed-methods design that included surveys, academic assessments, and focus group interviews, the study found that Brain Breaks positively influenced performance and well-being, although the degree of influence differed according to the type of break. Specifically, socioemotional breaks were linked to higher assessment scores, while physical activity breaks appeared less effective in comparison, suggesting that attending to students' emotional needs may play a more decisive role than physical movement activities.

Meanwhile, Müller et al. (2021) carried out a quantitative study in Germany with 241 students across fourth and fifth grades. Using a pre- and post-test design with standardized attention and reading assessments, their findings provided a more detailed picture by showing that physical activity breaks improved attention speed and task performance, though not accuracy, whereas mindfulness breaks were more effective in enhancing reading comprehension. Additionally, the study linked mindfulness to gains in self-esteem, underscoring its broader relevance beyond cognitive outcomes.

Taken together, these three studies (Jaeger & McWilliams, 2023; Dirks, 2023; Müller et al., 2021), contribute an important comparative dimension to the field by moving beyond general evaluations of Brain Breaks to reveal how the type of activity, whether physical movement activities, mindfulness, socioemotional, or a combination of all, determines the specific benefits for learners. This suggests that the strategic selection and integration of diverse brain breaks may be key to maximizing academic and socioemotional gains in the classroom.

While the majority of studies identified in this review addressed specific categories of Brain Breaks, such as mindfulness or physical activities, only a limited number explicitly framed their interventions under the general scope of "Brain Breaks." This suggests that much of the current literature, although relevant, tends to reduce its focus to particular practices rather than addressing the concept more holistically. To illustrate this point, some studies will be examined, which focus exclusively on mindfulness interventions and provide valuable information on how this single type of Brain Break shapes emotional and academic outcomes in language learning contexts.

Ersanli &Unal (2022), working with 41 undergraduate students of Aviation Management in Turkey, explored the effects of mindfulness training on EFL learners' willingness to speak, speaking anxiety, and mindfulness awareness. Using a mixed-methods approach with pre- and post-tests, Likert scales, and semi-structured interviews, they found that mindfulness techniques significantly reduced students' speaking anxiety and increased their willingness to communicate in English. Beyond these measurable outcomes, the study highlighted that learners became more focused and attentive to their own thought processes.

Conversely, Fayerberger (2023) conducted a qualitative study in an Israeli high school EFL classroom, focusing on the teacher's insights into how a mindfulness-based program influenced learners' well-being and classroom experience. This intervention revealed improvements in students' emotional regulation and general enjoyment of language learning. Participants reported reduced anxiety, greater capacity to handle difficult emotions, and enhanced focus during lessons.

Taken together, these two studies (Ersanli & Unal, 2022; Fayerberger, 2023) underscore the multidimensional impact of mindfulness as a form of brain break, but they highlight different facets of its effectiveness depending on learner age and research focus. Among university students, mindfulness training appeared especially effective for lowering language-related anxiety and fostering communicative confidence. By contrast, in the high school setting, the mindfulness program's primary benefits focused on enhancing emotional well-being and classroom enjoyment, results that connect with broader socioemotional findings in earlier research (Dirks 2023; Müller et al, 2021).

Similar to the previous observations regarding mindfulness interventions, these two studies (Singh,2023; Mazzoli et al., 2021) focus specifically on physical activity Brain Breaks, rather than addressing the broader concept of Brain Breaks in general. Singh (2023) conducted a meta-analysis across K–12 educational settings in the United States, drawing on mixed methods and standardized test scores from multiple academic databases. The study found that physical activity breaks had a positive effect on academic performance. However, Singh indicated that the effectiveness of movement breaks is influenced by the methods and types of activities used, and further research is necessary to determine which designs reliably enhance academic outcomes.

Mazzoli et al. (2021), on the other hand, examined 141 Australian children aged 6–8 using mixed methods, including scales, tests, and systematic observations. Their study found that active breaks improved children's inhibitory control and reduced lapses in attention. Yet, no significant effects were observed on working memory or broader classroom behavior. Children reported enjoying the activities and putting effort into participation, highlighting the motivational

and engagement benefits of physical activity breaks even when direct academic outcomes were limited.

Discussion of Literature Review

A critical analysis of previous studies reveals similarities and differences when compared to the present research. Many of the reviewed studies, such as those by Singh (2023) and Mazzoli et al. (2021), have provided valuable insights into the role of physical activity in enhancing attention, behavior, and, to some extent, academic achievement. Similarly, other studies have focused specifically on mindfulness interventions (Ersanli & Unal, 2022; Fayerberger, 2023), emphasizing improvements in emotional regulation, anxiety reduction, and students' overall well-being. Although these contributions are highly relevant, they tend to isolate specific practices, examining either physical activity or mindfulness in a targeted manner rather than addressing the broader spectrum of Brain Breaks.

In contrast, the present study attempted to integrate mindfulness, physical activities, and sensory activities into a cohesive set of tools and flexible alternatives that teachers can adapt according to classroom dynamics, students' emotional states, and situational needs. This holistic approach not only aimed to address attention and engagement, as emphasized in previous research, but also placed particular emphasis on learners' emotions, a key factor in sustaining motivation in language learning. While teachers frequently focus on students' performance and engagement, the humanistic dimension of education is often overlooked. When students face demotivation, it often stems from deeper affective factors; hence, emotions should be acknowledged as an essential element of the teaching–learning process.

Another significant distinction concerns the educational contexts in which previous studies have been conducted. Most of this research has taken place in primary schools or at the university level, frequently within North American, European, or Australian settings. For instance, Singh (2023) focused on the K–12 educational environments in the United States, while Mazzoli et al. (2021) examined physical activity interventions in Australian primary schools. These contexts differ substantially from the Colombian adolescent population in secondary education, which constituted the focus of the present study. As Calatrava (2009) points out, adolescence represents a particularly critical stage, often characterized by reduced motivation toward learning, especially in the domain of foreign language acquisition; however, this developmental period has been largely overlooked in existing research on Brain Breaks.

It is also important to highlight that Brain Breaks have not been extensively explored within the field of foreign language learning. Only a limited number of previous studies have been conducted in the EFL context (Fayerberger, 2023; Ersanli & Unal, 2022; Mohamed et al. , 2025; Parra & Vega, 2023). Most of these investigations have focused on their effects on concentration, attention, memory, and language skills in general. However, only the studies by Fayerberger (2023) and Ersanli & Unal (2022) specifically examined the impact of Brain Breaks on learners' emotions.

Against this background, the present study focused directly on English language classes, addressing the need to foster motivation among adolescents, since English lessons can often become monotonous or overwhelming. Furthermore, it concentrated particularly on the emotions experienced by students, based on the assumption that successful language learning depends not only on attention and engagement but also on the establishment of a positive emotional climate.

In this regard, while previous studies have provided valuable insights into the cognitive and behavioral outcomes of Brain Breaks, their scope remained limited to specific types of brain breaks and target populations. The contribution of the present study resided precisely in addressing these gaps: it examined three types of Brain Breaks simultaneously (mindfulness, physical activities, and sensory activities), implemented them with a Colombian adolescent population, and assessed their impact on attention, engagement, and emotions; three dimensions that are crucial for second language acquisition, but had not been explored in an integrated manner.

The present study's results, obtained through classroom observations, student surveys, and interviews, contribute a nuanced picture of how different types of Brain Breaks (mindfulness, physical movement, and sensory activities) operate in the adolescent EFL classroom. Overall, the evidence from this study aligned with prior research in showing that Brain Breaks influence affective, attentional, and engagement processes; however, important differences emerge in the specific effects of each type of Brain Break and in how those effects manifest in adolescent learners.

One of the most evident contributions of the present research emerges from the differentiated emotional profiles associated with each type of Brain Break. Sensory and physical movement activities elicited a distinctly positive affect, characterized by joy, enthusiasm, and energized participation, whereas mindfulness tended to cultivate calmness and emotional neutrality. These patterns align with several previous findings, while also enhancing them. For instance, Ersanli & Unal (2022) reported that mindfulness reduced speaking anxiety and increased willingness to communicate, findings that align with the present study's evidence that

mindfulness promotes emotional self-regulation and facilitates readiness for cognitively demanding tasks requiring sustained concentration. Similarly, Fayerberger (2023) documented improvements in well-being and reductions in anxiety following a mindfulness program implemented in a secondary EFL context.

Furthermore, the data from the present study demonstrated that mindfulness and sensory activities were particularly effective as cognitive refreshers, enabling students to mentally reset and return with greater concentration, whereas physical movement sometimes overstimulated students and hindered rapid reorientation. In contrast, Müller et al. (2021) reported that physical activity breaks enhanced attentional speed and task performance, though not accuracy, suggesting that movement may support certain components of attention without uniformly improving all attentional measures.

Similarly, Singh (2023) highlighted generally positive effects of physical activities but also emphasized considerable variability across studies, underscoring the importance of activity type, dosage, and implementation details. Taken together, this comparative perspective suggests that mindfulness and sensory activities may be particularly effective when the objective is rapid attentional recovery and focused cognition, while physical movement activities may be more beneficial when the goal is to increase alertness.

Overall, the present study opens new avenues for research by addressing an underexplored population: adolescents learning English as a foreign language in Latin American contexts, and by framing Brain Breaks as a multidimensional set of tools (mindfulness, sensory activities, and physical activities) rather than isolated practices. In doing so, this research bridges significant gaps in the literature and positions Brain Breaks as a promising and flexible

pedagogical strategy, primarily to enhance students' emotional well-being, an aspect largely overlooked in previous studies, which have tended to focus exclusively on attention and engagement. While these cognitive and behavioral dimensions were also analyzed in the present study, particular emphasis was placed on the affective domain within the EFL classroom context.

Chapter III

This chapter outlines the research design and methodology adopted, drawing on the contributions of experts in the field. It begins by examining the participant selection process and the context in which this population is situated, emphasizing relevant demographic and situational factors. The researcher's role is then discussed, focusing on her functions as an observer, interpreter, mentor, and supporter throughout the study. Additionally, the chapter elaborates on the instruments employed for data collection, ensuring they are consistent with the chosen methodology and research approach. Lastly, it addresses key aspects such as the ethical principles guiding the research and the strategies implemented to guarantee the reliability and credibility of the findings, thus reinforcing the academic rigor of the study.

Research Design

The research was approached from the pragmatic paradigm in which, as Kivunja1 & Bawa (2017) mention, a combination of methodologies is employed to provide comprehensive insight into the genuine behavior exhibited by participants, the underlying beliefs that inform such behavior, and the potential consequences that may arise from varying behavioral patterns. It is crucial to note that this study did not adhere to specific theories regarding the effectiveness of Brain Breaks. Instead, it anticipated direct observation of outcomes through the application of instruments and ensuing result analysis. Moreover, the study anticipated variations in technique

effectiveness, contingent upon different factors. Thus, these findings illustrated the subjectivity of results, indicating that outcomes may fluctuate depending on the criteria of analysis and that their effectiveness can only be verified in direct practice.

According to Taherdoost (2022), research can be classified into qualitative and quantitative approaches, depending on the nature of the data being investigated. Additionally, a combination of these two methods, referred to as a mixed-methods approach, integrates the strengths of both frameworks to provide a more comprehensive analysis. In quantitative research, information about observed behaviors of samples is obtained through statistical data collection of the observed behaviors of the samples (Brannen, 2005). As highlighted by Taherdoost (2022), quantitative research involves the use of numerical data obtained through observations to analyze and describe the phenomena that those observations represent.

Taherdoost (2022) emphasizes that qualitative data collection procedures draw on a range of empirical evidence, including case studies, personal narratives, and lived experiences, to illuminate the everyday struggles and complexities individuals face. By delving into the deeper meanings and underlying motivations behind these experiences, these methods uncover insights that cannot be captured or quantified through numerical data alone. Qualitative studies focus on meanings, while quantitative research is concerned with behavior and is also not fully supported, since both may be concerned with people's views and actions. (Branen,2005). Thus, the quantitative approach is characterized by its objectivity and its ability to yield precise and definitive answers, whereas the qualitative approach is inherently more subjective in nature.

The mixed-methods approach integrates qualitative and quantitative methodologies, carefully adapted to align with the objectives of the study and the specific nature of the research

question. Likewise, this approach aims to provide a more holistic and nuanced understanding of the subject matter (Taherdoost, 2022). The integration of both methodologies facilitates a more comprehensive investigation, enabling the examination of both surface-level and intricate aspects of the subject. This approach ensures a thorough evaluation and addresses all the objectives established within the scope of the study.

This study was conducted using a mixed content analysis method, where the researcher had to integrate the two approaches, qualitative and quantitative, to come up with a complete understanding of a research problem (Lakshmi, 2019). Through the application and meticulous analysis, every aspect of the research could be thoroughly examined, thereby facilitating the construction of a comprehensive understanding of reality. This approach is well-suited to the study as it enables a nuanced analysis of English learners' emotions and behaviors through qualitative methodological instruments, namely, focus groups and classroom observations. In addition, through the use of surveys as a quantitative instrument, it became possible to identify trends in students' perceptions regarding the implementation of Brain Breaks. Likewise, this quantitative tool enabled comparisons between students' emotional states before and after the application of Brain Breaks.

In this way, a mixed content analysis method enabled a comprehensive analysis of students' perspectives, including their opinions and emotional responses to each type of Brain Break, as well as their levels of engagement and attention during specific class activities. Employing a single methodological framework would likely fail to capture the full scope of these techniques' implications, as it is essential to consider the interconnected roles of both students and teachers, along with students' emotional outcomes before and after the intervention. This

comprehensive method was necessary in order to establish meaningful comparisons and gain a clear understanding of the impact of Brain Breaks.

Additionally, it is important to note that this research was framed as an instrumental case study. As Creswell (2013) explains, an instrumental case study involves the examination of a specific case not out of intrinsic interest in the case itself, but because it provides a means to reveal a broader issue or refine a theoretical explanation. In this design, the case assumes a secondary role, serving as an instrument through which the researcher gains a deeper understanding of a phenomenon that extends beyond the immediate boundaries of the case.

An instrumental case study is particularly appropriate for this research because the primary objective was not only to describe the experiences of one specific group of learners, but also to use this group as a means to explore a broader pedagogical issue: the role of Brain Breaks in supporting emotions, attention, and engagement in the EFL classroom. The case itself was developed with ninth-grade adolescent students from a public school in Bogotá, serving as a bounded system that provides the contextual foundation of the study, while the ultimate purpose extends beyond this single classroom. In this sense, the case was fundamental in illustrating the potential of Brain Breaks as pedagogical tools to enhance learning in similar educational contexts.

Furthermore, this study aligns with Creswell's characterization of instrumental case studies in its use of multiple sources of evidence to gain a comprehensive understanding of the phenomenon. Classroom observations, focus groups, and surveys were employed not merely to describe what happened in one group, but to triangulate findings and generate insights into how Brain Breaks influence the emotions, attention, and engagement of EFL adolescents. The

insights gained from this case, therefore, go beyond its immediate boundaries, offering practical recommendations for language teachers and contributing to the growing body of literature on the role of affective well-being, attention, and engagement in fostering more supportive and effective foreign language learning environments.

Data Collection Instruments

In research, data collection instruments are fundamental for collecting the information and evidence necessary to guide the study outcomes. This study employed classroom observations, interviews, and surveys. Each of these tools contributed to enhancing the reliability and credibility of the research. Therefore, all instruments played a critical role in ensuring the study's rigor and validity.

As a starting point, this study utilized classroom observations as a qualitative data collection instrument. According to Baker (2006), observations serve as a method designed to understand individuals within their everyday contexts by closely and authentically exploring their reality. Observations enable the researcher to gain an insider's view of the dynamics and phenomena that occur directly within the classroom setting. Observational research differs from other methods in that it requires the researcher to have more specialized training on how to observe, what and how to record the data, how to enter the field and leave it, and how to remain detached and involved at the same time. (Baker, 2006).

Classroom observations enabled the collection of firsthand data on students' behaviors, levels of participation, and emotional responses during the implementation of Brain Breaks. Consequently, they provided valuable insights into how Brain Breaks influence attention and engagement in real-time classroom dynamics. To ensure consistency, a structured observation

protocol was developed, outlining the key aspects to be kept before, during, and after the Brain Breaks activities

As a second data collection instrument, a focus group was conducted. According to Breen (2006), focus-group discussions are a research method particularly suitable for generating new ideas within a social context, where the collective interaction among participants contributes to the emergence of insights that would be less likely to arise in individual settings. “The focus-group moderator should spend a large portion of the discussion time probing participants’ experiences, asking them to share and compare experiences, and discussing the extent to which they agree or disagree with each other.” (Breen,2006, p.6).

A focus group was particularly effective for the present study, as it enabled a natural and flexible process of data collection in which students could openly share their feelings without the pressure often associated with individual interviews. Such flexibility encouraged learners to collectively express how Brain Breaks influenced their emotions, attention, engagement, motivation, and classroom participation. In this way, the focus group fostered a supportive space where participants could validate or contrast their experiences, providing richer insights into the role of Brain Breaks in the EFL classroom. The responses were then coded to identify recurr ing patterns, offering a comprehensive picture of students’ learning experiences.

As the final data collection instrument, surveys were administered as a quantitative instrument. According to Rubenfeld (2004), surveys are essential tools for investigating knowledge, attitudes, and behaviors, as they are not intended to produce right or wrong answers but rather to capture individuals’ personal feelings and opinions about a particular topic. Likewise, Hochberg & Eakin (2024) define a survey as a methodological tool designed to gather

and analyze data regarding the knowledge, attitudes, and beliefs of a defined population, offering meaningful insights into social patterns and behaviors.

In alignment with the above, the present study employed surveys to provide measurable evidence of changes in students' performance and perceptions before and after the implementation of Brain Break. A preliminary survey was conducted prior to the implementation of Brain Breaks in order to establish a baseline of students' initial levels of attention, engagement, and emotional state during English classes. Upon completion of the implementation of the Brain Breaks, a follow-up survey was conducted to assess participants' experiences and emotions related to these interventions. This allowed for a reliable comparison of outcomes, as the use of pre- and post-intervention surveys provided structured evidence-based insight into the impact of Brain Breaks.

Thus, the combination of classroom observations, focus groups, and surveys ensures a comprehensive and effective approach to data collection in this study. Classroom observations provided baseline insights into students' behaviors, levels of participation, and emotional responses within the real-time classroom dynamic. The focus group complemented these findings by capturing students' perceptions and subjective experiences, offering a deeper understanding of their engagement and motivation. Additionally, surveys generated measurable data to assess changes and the overall impact on students before and after the implementation of Brain Breaks.

The Research Setting

The instrumental case study was carried out in a public school in Bogotá, Colombia. This educational institution was selected due to its heterogeneous student body, which encompasses

individuals from various neighborhoods across Bogotá. In addition, the school is renowned for its commitment to fostering a culture of coexistence and innovation, with a distinctive emphasis on creative pedagogical approaches to the teaching of the English language. As such, it presents an exemplary context for the implementation of transformative strategies aimed at affecting substantial, positive changes in both the student population and the English language acquisition process.

The Research Participants

The research was conducted with adolescent students in the ninth grade, aged between 14 and 17 years. These students possessed an English proficiency level ranging from A1 to B1, as outlined by the Common European Framework of Reference. The participants did not receive any additional English instruction beyond what was already provided at their school. The selected grade comprised 22 students, of whom 11 were girls and 11 were boys. This grade was chosen to facilitate the development and analysis of the present study.

The primary focus of this study was on the emotional experiences of young people in their English classes. This is particularly relevant at this stage of their lives, as adolescence is a critical period characterized by emotional volatility and unpredictability. As a result, adolescents are highly susceptible to experiencing demotivation, a phenomenon commonly observed in Colombian schools. Unlike studies that have primarily focused on children, who are often perceived as more active and energetic, this research centered on adolescents.

Adolescents were chosen based on the understanding that adolescence is a period in which the motivation to learn English is quite crucial. “it represents a sort of grey area: they are adolescents who need to be constantly encouraged by the teacher and stimulated with activities

that meet their tastes, make them enjoy the course and improve their attitude towards the English lessons" (Bier, 2023, p.450). During this time, students' shifting priorities and their prior experiences with the language could significantly influence their attitudes toward learning English, either shaping or challenging their approach to the subject.

Ethical Issues

This study strictly adhered to ethical guidelines throughout every stage of the research process. Since the participants were under 18 years old, an informed consent form (see Appendix A) was sent to their parents, explaining the objectives of the study and providing a brief description of the activities in which their children would be involved. Likewise, the students received a general explanation of the research, including its goals, purpose, and the activities to be carried out. Special attention was given to protecting the participants' privacy and safeguarding their personal information. The students' real names and any personally identifiable information were completely omitted throughout the study to ensure anonymity.

Throughout the implementation of each activity, the physical and emotional well-being of the students was always a priority. They were clearly informed that their participation was voluntary and that they could withdraw from the study at any time without facing any negative consequences. Moreover, the researcher maintained an impartial and respectful stance at all times. The data and the findings were analyzed and reported honestly and accurately, with the aim of providing meaningful insights to the educational community.

In terms of participant selection, the population for this research was selected using convenience sampling. According to Makwana et al. (2023), convenience sampling is a non-

probability sampling method in which participants are selected due to their easy accessibility and availability to the researcher. Furthermore, Etikan et al. (2016) define this as a form of non-random sampling in which individuals from the target population are selected based on practical considerations, such as accessibility, geographical proximity, availability at a specific time, or willingness to take part in the study.

In line with these definitions, the sampling method used in this study is convenience sampling, as I gained access to the school through a teacher I had met during a university practicum a few semesters ago. This teacher facilitated contact with the principal, which made it possible for me to access the school and its student population without major difficulties. However, I ensured that the selected institution was a public school, since the aim of this research is grounded in a typical educational setting characterized by student diversity, varying proficiency levels, and different approaches to English language instruction.

Chapter IV

This chapter presents the learning theory and the theory of language that guided the study and informed the design of the pedagogical intervention. It also describes the activities implemented for each type of Brain Break, including their objectives, the roles of teachers and students, and the materials used.

Instructional Design

Learning Theory

The present study was grounded in the principles of humanistic learning theory, which emphasizes the holistic development of learners. According to Johnson (2014), humanistic learning theory highlights the learner's personal growth while simultaneously supporting

academic achievement and intellectual development. Rather than treating academic learning and personal development as opposing aims, the theory views them as complementary processes that reinforce one another. By valuing aspects such as self-concept, emotions, and personal values, humanistic education strengthens the learning experience through meaningful connections to students' lives and individual experiences (Johnson,2014).

Within the field of English as a Foreign Language (EFL), the humanistic approach proves essential for fostering a positive and inclusive learning environment. As stated by Amini, et al. (2025) humanistic approach has shaped pedagogies that go beyond grammar and vocabulary instruction, highlighting instead the importance of creating supportive, affective environments where communication feels authentic and personally meaningful. "This humanistic orientation leads students to be successful in learning a language since they are able to express themselves in the target language more easily." (Marsafy et al., 2018, p. 54).

This theoretical lens supports the rationale for incorporating Brain Breaks in the EFL classroom. Brain Breaks align with humanistic principles because they are designed to respond to learners' holistic needs, providing moments for emotional regulation, physical movement, and mental reset. Rather than serving as interruptions to academic work, these activities enhance attention, motivation, and engagement, creating a classroom climate that values the learner as a complete person. By integrating short mindfulness practices, physical exercises, or sensory activities, Brain Breaks make space for learners to reconnect with themselves, reduce stress, and re-engage with language tasks in a more focused and positive manner.

Moreover, framing the present study within the humanistic theory allows for a richer understanding of Brain Breaks as pedagogical tools. They are not simply classroom management

strategies but interventions that align with a vision of education centered on the well-being and personal growth of learners. For adolescent EFL students, whose academic performance is often shaped by emotional and motivational factors, Brain Breaks serve as a practical strategy to put the humanistic commitment to holistic education into practice. Thus, the study underscores how Brain Breaks can foster emotional balance, sustain attention, and promote meaningful engagement in the process of learning English.

Language Theory

Building upon the humanistic perspective, the present study also drew on the communicative approach to language learning. While humanistic theory emphasizes the learner's holistic growth and emotional well-being, the communicative perspective highlights the importance of meaningful interaction as the central process through which language is acquired. "Communicative Language Teaching (CLT) goes beyond teaching grammatical rules of the target language, and proposes that, by using the target language in a meaningful way, learners will develop communicative competence. The communicative approach is concerned with the unique individual needs of each learner".(Thamarana,2015, p.91.)

In light of this reasoning, the humanistic and communicative orientations intersect, since focusing on the learner as a whole person, with emotions and personal contexts, makes the language learning process closer to real life. Brain Breaks, by fostering emotional balance, enhancing attention, and encouraging engagement, create conditions where communication emerges not as a forced academic exercise but as a natural extension of positive classroom interactions. When students feel emotionally regulated and mentally ready, they are more likely to participate actively and meaningfully in communicative exchanges.

I ground this study in humanistic and communicative perspectives, as I share the view that learning a foreign language entails far more than cognitive mastery of structures; it is, at its core, a relational, emotional, and social process.

Within this framework, Brain Breaks provide adolescents learning EFL with a concrete pedagogical strategy that bridges well-being and communicative practice, given that their motivation and self-expression are deeply connected to their emotional states. Drawing on these theoretical orientations offers a stronger foundation for understanding how Brain Breaks can reshape classroom dynamics and promote meaningful language acquisition through students' emotions and overall well-being.

Pedagogical Intervention

The pedagogical intervention was carried out over a period of four weeks and 8 sessions. The first session was dedicated to observing the classroom context and applying an initial survey aimed at analyzing the students' emotions prior to the intervention. From the second session, the planned Brain Breaks activities were progressively implemented, seeking to foster attention, engagement, and positive emotional states during the English lessons. Finally, the last session was designated for conducting a focus group and administering the post-intervention survey, which allowed the collection of students' perceptions and reflections on the overall experience. This structure ensured a systematic process of observation, intervention, and evaluation throughout the implementation.

To better understand the effects of each type of Brain Break, two activities were designed for each category: mindfulness, physical movement, and sensory activities, making a total of six

activities. These activities were designed to be simple, easy to explain, and short, so they would not take away much class time, as Brain Breaks are meant to be short pauses. The activities were also created to be practical and accessible for teachers in their daily practice.

The six activities were not always applied in the same order as shown in the table. Instead, they were included in the lesson depending on the classroom situation. Before choosing an activity, students' emotions, energy levels, the class atmosphere, and the ongoing task were briefly observed. After this quick analysis, a decision was made on whether to calm the group, activate them, or help them refocus, and accordingly, a mindfulness, physical, or sensory activity was applied. This flexible use of Brain Breaks aimed to select the most appropriate activity according to the students' needs in each particular lesson.

Table 2

Pedagogical Intervention

TYPE OF BRAIN BREAK: MINDFULNESS			
Name	**Pedagogical Objective**	**Description**	**Teacher's & Student's Role**
1."Mindful Mountain."	The students will be able to center their attention in the present moment, calm their minds, and release emotional tension through a guided breathing activity with visualization and music, in order to reduce stress and prepare themselves mentally for the learning process. **Time:** 10 -12 minutes	A breathing app was projected on the computer screen, displaying a visual mountain that guided the rhythms of inhalation and exhalation. Students were asked to follow these rhythms simultaneously, while calming background music played. During the session, students were invited to close their eyes in order to better focus on their breathing and the relaxing sensations it brings. At the end, a fun "breathing challenge" was proposed, where students followed a more	**Teacher´s role:** Create a calm and focused environment, projecting the breathing app and giving clear instructions. Also, guide students through the breathing rhythm and monitor their participation throughout the activity. **Student´s role:** Follow the breathing rhythm attentively, close their eyes if comfortable, and focus on calming their

		demanding rhythm that tested their ability to breathe slowly and deeply. This playful and engaging moment aimed to boost motivation and create a sense of group connection in an enjoyable way.	body and mind. Participate actively in the final breathing challenge. **Materials:** Computer, projector, app
2. "The Black Box Ritual."	The students will be able to reflect on their recent negative emotions, identify their causes, and symbolically release them through a writing and ritual-based activity, in order to promote emotional awareness, personal growth, and a sense of mental relief. **Time:** 10-15 minutes.	Students were invited to close their eyes while soft, reflective music played in the background. In a calm tone, the teacher guided them to recall the recent negative emotions they've experienced. They were asked to reflect on why they felt that way and what situations might have caused those emotions. After this short reflection, students were encouraged to think about what they can do to stop feeling that way or how they can begin to work through those emotions. Then, each student received a piece of black paper. In this paper, they wrote down those negative emotions, including the causes or specific situations that made them feel that way. Once they finished writing, they were invited to throw their papers into a large black box, which was later burned (symbolically or in a safe space) as a way of releasing those emotions. This moment was followed by a short reflection. **Materials:** Black sheets of paper, pens or markers and a black box.	**Teacher´s role:** Guide the reflective process, provide instructions clearly and calmly, create a safe and supportive emotional environment where students feel secure, and encourage deep personal reflection. And, distribute materials, and lead the symbolic release ritual. **Student´s role:** Reflect on their emotions, write them down honestly, participate in the symbolic release, and engage in personal emotional awareness. **Materials:** Black sheets of paper, pens or markers, and a black box.

Note: The table presents the design of the mindfulness activities.

TYPE OF BRAIN BREAK: PHYSICAL MOVEMENT ACTIVITIES

Name	Pedagogical Objective	Description	Teacher's & Student's Role
1."The Circle of Chaos."	The students will be able to improve their	Students stood in a circle, and a ball was thrown to a random participant. The two	**Teacher´s role:** Lead the game by explaining the rules clearly,

	physical coordination, reflexes, and spatial awareness through an engaging movement-based group activity. **Time:** 12-15 minutes	students positioned on either side of the receiver quickly crouched down. Once the ball was passed to another student, those two crouched students stood back up. As the ball continued moving around the circle, a category was introduced (e.g., animals, food, colors, etc.). Each time a student caught the ball, they had to quickly say a word in English that belonged to the assigned category, without repeating any previous answers. After students became familiar with the dynamic, a second ball was added, creating two simultaneous passes around the circle. This increased the level of difficulty and challenged their attention and coordination. If a student hesitated for too long, repeated a word, or made a mistake, they were required to complete a fun challenge or "penalty.	organizing students in a circle, and keeping the rhythm of the activity. Introduce categories, ensure safety, and encourage participation in a fun and energetic atmosphere. **Student´s role:** Follow the instructions, participate actively by catching and passing the ball, say a word from the category, and stay alert and engaged throughout the game. **Materials:** Balls (2)
2. "Ballon Race."	The students will be able to improve their focus, coordination, and group collaboration through a dynamic physical activity that encourages teamwork and body awareness **Time:** 10- 12 minutes.	Students were divided into three groups, and each group lined up in a straight row. A balloon was given to the first student in each line. At the teacher's signal, the students passed the balloon over their heads to the person behind them, using only their hands. Once the balloon reached the last person in the line, it was passed back to the front between the students' legs. When the balloon reached the front again, it was then passed behind the backs to the right side of each student until it reached the end. Finally, it was passed to the left, all the way back to the first student.	**Teacher´s role:** Organize the students into groups and ensure everyone understands the rules. Supervise the game, encourage fair play, and keep the atmosphere energetic and fun. **Student´s role:** Listen carefully to the instructions, work as a team, and follow the movement patterns (over the head, under the legs, to the right, to the left) accurately. Stay focused, cooperate with teammates, and try to complete the relay as fast as possible.

		The first team to complete all four movements and return the balloon to the front won the challenge.	**Materials:** Balloons

Note: The table presents the design of the physical movement activities.

TYPE OF BRAIN BREAK: SENSORY ACTIVITIES			
Name	**Pedagogical Objective**	**Description**	**Teacher's & Student's Role**
1. **"Twisted Colors"**	The students will be able to activate their focus and cognitive flexibility by quickly identifying and naming colors, enhancing attention and reaction speed through a playful and mentally engaging task. **Time:** 15 minutes	A color-word challenge sheet was displayed on the board (see Annex 1), where the names of colors were written in different ink colors. The task was to say the color of the ink, not the word itself (for example, if the word "BLUE" was written in red, the correct response was "red"). To start, a few students completed the activity in Spanish. Then, the rest of the class completed the challenge in English. The goal was to read the colors as quickly and accurately as possible, which activated focus, attention, and quick thinking. All students took turns participating in a fast-paced and fun way. **Materials:** A printed or projected color-word chart.	**Teacher´s role:** Prepare and display the color-word chart. Clearly explain the instructions and model the activity. Encourage participation, create a fun and supportive environment, and ensure that students feel comfortable making mistakes and trying again. **Student´s role:** Listen to the instructions carefully, focus their attention, and quickly say the color of the ink (not the word). Participate actively, support their classmates, and enjoy the challenge.
2. **"Echo Challenge."**	The students will be able to develop focused listening skills and strengthen their sensory memory by attentively identifying and recalling environmental sounds, fostering a mindful connection with the present	A series of different ambient sounds (e.g., rain, waves, forest, traffic, fire crackling, birds, wind, etc.) was played one after another, without any visual aid. Students closed their eyes and focused deeply on what they heard. As they listened, they silently tried to identify and remember each sound. Once the sequence ended, they were given a few minutes to write down all the sounds they believed they had heard, in the order they remembered them.	**Teacher´s role:** Guide the activity, creating a calm and focused environment. Play the sequence of environmental sounds, encourage students to listen attentively, and lead the comparison and reflection at the end. **Student´s role:** Listen carefully to each sound, stay focused, and write down what they hear.

	moment, and enhancing their concentration in a relaxed classroom atmosphere. **Time:** 10- 12 minutes	Finally, the teacher revealed the actual list of sounds in the correct order, and students compared their responses. **Materials:** Audio track, computer, notebooks, and pens.	After the activity, compare their list with the original sequence and reflect on their listening accuracy and emotional responses.

Note: The table presents the design of the sensory activities.

The pedagogical intervention was carefully designed to integrate Brain Breaks as short but powerful strategies to enhance students' attention, emotional regulation, and engagement during English classes. The planning was structured around the three types of Brain Breaks proposed in this study: mindfulness, physical movement, and sensory activities.

The first mindfulness activity was called "Mindful Mountain". This activity was a guided breathing exercise projected on the screen through a breathing app. The visual of a mountain rising and falling was synchronized with calm background music, allowing students to match their inhalations and exhalations to the rhythm. To enhance concentration, they were invited to close their eyes and focus only on their breathing and the relaxing sensations it produced. At the end of the exercise, a "breathing challenge" was introduced, in which students attempted to follow a slower and more demanding rhythm. This playful moment not only motivated them but also encouraged a sense of connection and group cohesion while preparing them mentally for the continuation of the lesson.

In turn, the second mindfulness activity, "The Black Box Ritual", focused on reflection and symbolic release of negative emotions. Students were first invited to close their eyes while soft, reflective music played in the background. Through guided meditation, they were asked to recall recent negative emotions and identify their possible causes. Afterwards, each student

received a sheet of black paper and wrote down their emotions, along with the situations that had triggered them. Once finished, they placed their papers into a large black box, which represented letting go of those feelings. To close the activity, a short group reflection was carried out, reinforcing the idea of emotional release and personal growth. This practice helped students become more aware of their emotions and provided a sense of relief, leaving them mentally and emotionally prepared to engage in the rest of the class.

The physical activities were designed to energize students and activate their bodies through dynamic and interactive tasks. The first activity, “The Circle of Chaos”, consisted of students standing in a circle while a ball was passed randomly among them. Each time a student caught the ball, the classmates standing next to them had to crouch quickly, which demanded alertness and reflexes. Additionally, every time the ball was caught, the student had to name a word in English according to a category suggested by the teacher (e.g., animals, colors, food, sports) without repeating answers. As students became familiar with the activity, a second ball was introduced to increase the level of challenge, forcing them to focus, coordinate, and stay attentive. Mistakes, such as repeating a word, led to fun penalties that kept the atmosphere playful and motivating.

Similarly, the second physical activity, “Balloon Race”, was designed as a group competition to reinforce cooperation and concentration. Students were divided into teams and had to pass a balloon along the line of players using different movement patterns: over the head, under the legs, and then from side to side. The objective was to complete the sequence as quickly and accurately as possible, with the winning team being the first to return the balloon to the

starting point. This activity encouraged teamwork, precise coordination, and group collaboration, while also maintaining a lively and fun environment.

Finally, the sensory activities focused on stimulating attention, cognitive flexibility, and listening skills. In “Twisted Colors”, a chart with words of colors written in mismatched ink colors was projected. The task was to say the color of the ink, rather than the written word (if the word “blue” was written in red ink, the correct answer would be “red”). To ease students into the activity, a short practice was first done in Spanish, and then repeated in English, allowing them to strengthen focus and quick thinking while also using the target language. Students took turns participating in a fast-paced and engaging manner, which kept the atmosphere dynamic and supportive.

The second sensory activity, called “Echo Challenge”, was designed to develop listening accuracy and memory. A sequence of environmental sounds, such as rain, wind, birds, or waves, was played without any visual cues, requiring students to close their eyes and focus entirely on what they heard. After the sequence ended, students wrote down the sounds in the order they remembered them, and then compared their answers with the original sequence. This activity not only enhanced attentive listening and memory but also created a relaxed and mindful atmosphere within the classroom.

The Teacher´s Role

In this study, the researcher assumed a multifaceted role, as she was responsible for facilitating the implementation of Brain Breaks and guiding students throughout the process.

Additionally, her focus centered on evaluating the effectiveness of various types of Brain Breaks and their impact on students' emotions, engagement, and attention within the English classroom.

Initially, the teacher acted as a planner and facilitator, which required a thorough understanding of the students' context. This involved carefully organizing and selecting English language activities that incorporated Brain Breaks. These Brain Breaks were chosen based on their potential to bring about physical and emotional benefits for the students, tailored to the specific needs and demands of each lesson. The researcher required effective planning to assess the nature of each class and determine the most suitable type of Brain Break. By aligning Brain Breaks with the class objectives and dynamics, the teacher aimed to optimize their impact, ensuring Brain Breaks addressed the students' needs at specific moments during the lesson.

Additionally, the researcher assumed the role of a mediator in the implementation of Brain Breaks. These entailed guiding students by providing clear and precise instructions for the activities, closely monitoring their responses, and overseeing their participation throughout the process. Furthermore, the teacher- researcher assumed the role of an evaluator, as she collected and analyzed student feedback following the implementation of the activities. This process involved the meticulous application of all instruments utilized in the study. Subsequently, the researcher analyzed and assessed the results to achieve the objectives of the study, determining the effectiveness of Brain Breaks.

The Students' Role

In the case of the participants, they were a group of adolescent students from a public school in Bogotá, Colombia, who assumed an active and responsible role throughout the entire research process. As the central subjects of the study, they were directly involved in the

implementation of Brain Breaks within the English as a Foreign Language (EFL) classroom, and their participation was essential for evaluating the effects of these interventions on emotional well-being, attention, and engagement.

Students were expected to follow each activity attentively, participate in an organized manner, and maintain a receptive and collaborative attitude during the sessions. They took part in the three types of Brain Breaks: mindfulness activities, physical movement exercises, and sensory activities, which were strategically applied at various stages of the lessons. Their active and natural participation was fundamental to ensuring the reliability and validity of the data collected.

Additionally, participants were observed and interviewed. They were also required to complete surveys designed to explore their emotional states, attention levels, and degree of engagement before and after the implementation of the Brain Breaks. Their honest and reflective responses were crucial for evaluating the impact of the intervention from cognitive and affective perspectives. In summary, the role of the participants went beyond passive involvement; they were expected to engage meaningfully with the activities and the evaluation instruments, thereby making a significant contribution to the development and success of the present study.

Chapter V

This chapter aims to present and analyze the findings of the current research. It begins by outlining the instruments used for data collection, which include classroom observations, student surveys, and focus groups. Following this, the collected data is categorized and analyzed to address the research question concerning the impact of different types of brain breaks:

mindfulness, physical movement, and sensory activities on the emotional responses, engagement levels, and attentional focus of adolescent learners in the English classroom.

Data Analysis

As previously outlined in the research design, this research adopted a mixed-methods design, combining quantitative and qualitative approaches to obtain a more holistic understanding of the phenomenon under study. The quantitative component was addressed through the use of a student survey, which aimed to gather measurable data on participants' perceptions and experiences related to the use of Brain Breaks.

Complementing this, qualitative data were collected through classroom observations and a focus group. These instruments allowed for a deeper exploration of students' emotional responses, levels of engagement, and attentional shifts during and after the implementation of the Brain Break activities. The use of multiple data sources ensured a more comprehensive analysis and contributed to answering the overarching research question guiding this study: How does the implementation of Brain Breaks in the English as a Foreign Language (EFL) classroom influence adolescents' emotions, engagement, and attention?

Before the intervention, a diagnostic survey (see Appendix B) was administered to evaluate the initial emotional states, engagement levels, and attention of the participants during English classes. The survey was conducted in person at a public school in Bogotá, Colombia. The sample consisted of 22 ninth-grade students in total, including 11 girls and 11 boys, aged between 13 and 16 years. All of them belonged to the same English class. The survey consisted

of a series of closed-ended questions structured on a five-point Likert scale, where 1 indicated "Not at all," 2 "A little," 3 "Somewhat," 4 "Quite a bit," and 5 "A lot."2

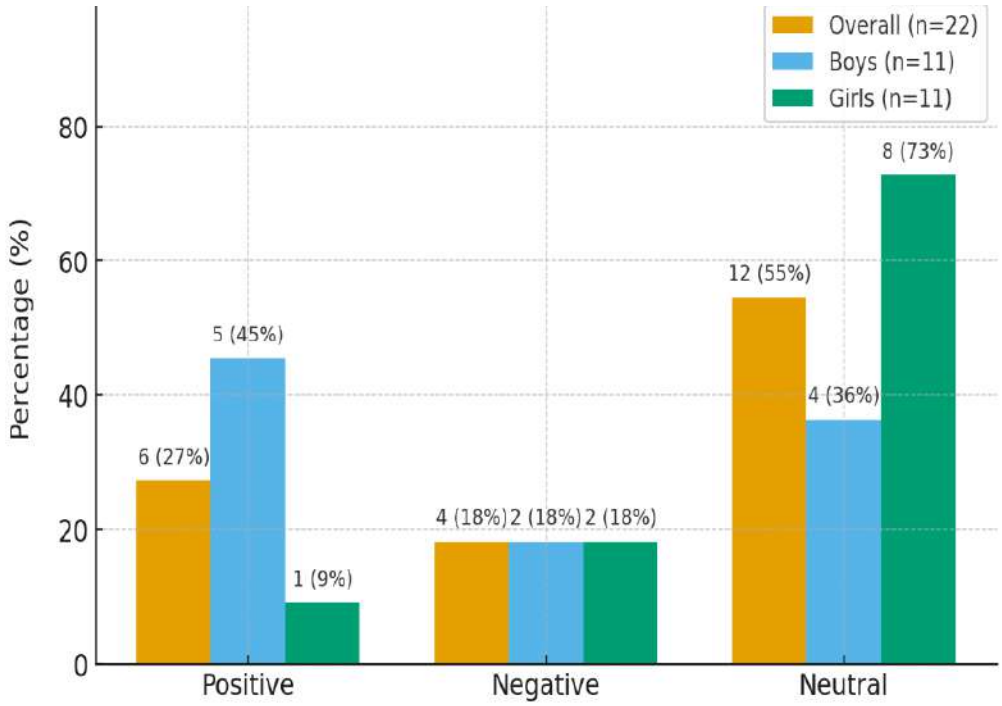
The survey items were carefully categorized to facilitate thematic analysis under the three constructs (emotions, attention, and engagement), which constitute the central focus of the present study and represent the main dimensions the intervention aimed to measure. Each of the three categories included five questions. In the emotions section, students were asked about their levels of happiness, motivation, boredom, nervousness, and calmness during English class. The attention section focused on students' levels of concentration, distraction, and attentiveness, as well as their ability to understand instructions and their sense of connection with the content being taught in each lesson. Finally, the engagement category assessed students' enjoyment of the English class, their effort in completing tasks and exercises, their participation during lessons, and their collaboration with peers.

For the analysis of the survey results, each of the three main categories: emotions, engagement, and attention, was further divided into specific subcategories to allow for a more detailed interpretation of the data. In the case of emotions, this category was subdivided into three groups: positive emotions (happiness and motivation), neutral emotions (calmness), and negative emotions (nervousness and boredom). The attention category was divided into two subcomponents: concentration and distraction. Lastly, student engagement was categorized into three levels: active, neutral, and passive. Active engagement involves visible participation, sustained attention, and genuine interest. Neutral engagement is marked by task compliance and attentiveness without emotional involvement. Passive engagement reflects low participation, minimal attention, and a lack of motivation.

In the category of emotions evidenced during English class, the survey results revealed a varied distribution among positive, negative, and neutral emotions. Of the 22 students surveyed (11 boys and 11 girls), 6 students (27%) expressed positive emotions, 4 students (18%) reported negative emotions, and 12 students (55%) showed neutral emotions regarding their experience in class. When analyzing the data by gender, it becomes evident that boys demonstrated a higher proportion of positive emotions (5 out of 11, or 45%), whereas only 1 out of 11 girls (9%) exhibited this type of emotional response. In contrast, neutral emotions predominated among the girls, with 8 students (73%) reporting emotionally neutral experiences, which suggests a lower emotional engagement in comparison to their male peers. These results are visually represented in Figure 1, which illustrates the distribution of students' emotional responses before the Brain Breaks intervention.

Figure 1

Emotions during English classes.

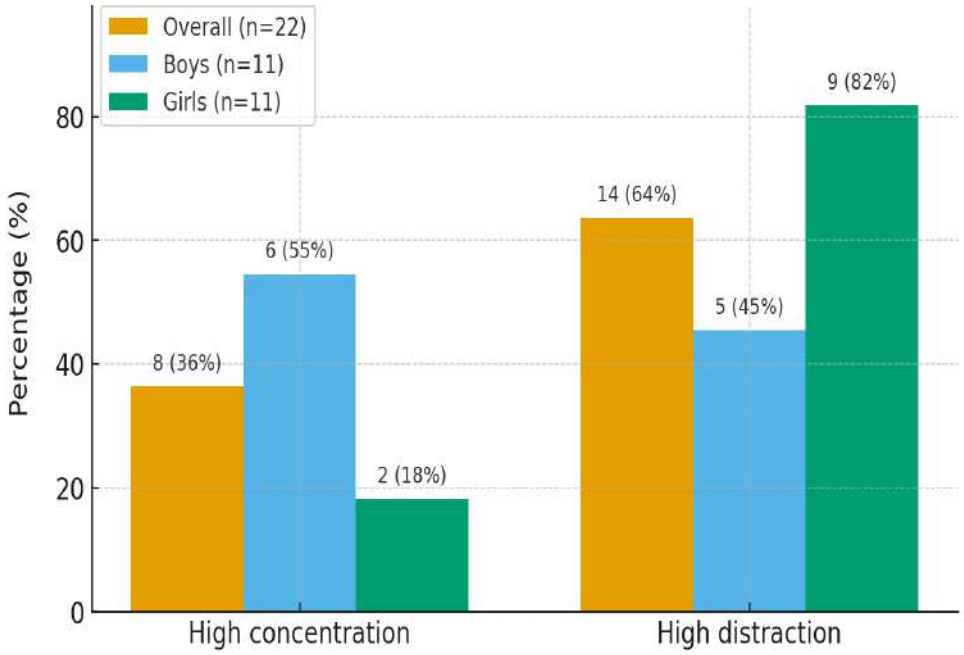


Note: Results from the survey on students' emotions before applying Brain Breaks.

Moving from emotional responses to cognitive factors, the category of attention revealed notable differences in concentration levels among students. Out of the 22 participants, 8 students (36%) demonstrated high levels of concentration, while 14 students (64%) showed signs of low concentration or high levels of distraction during English class. Breaking down the results by gender, the results indicate that 6 out of 11 boys (55%) exhibited high levels of concentration, whereas 5 boys (45%) displayed high distractibility. In contrast, among the girls, only 2 out of 11 (18%) reported high concentration, while 9 (82%) experienced high levels of distraction. Figure 2 shows the distribution of students' attention levels prior to the intervention

Figure 2

Attention levels during English classes.



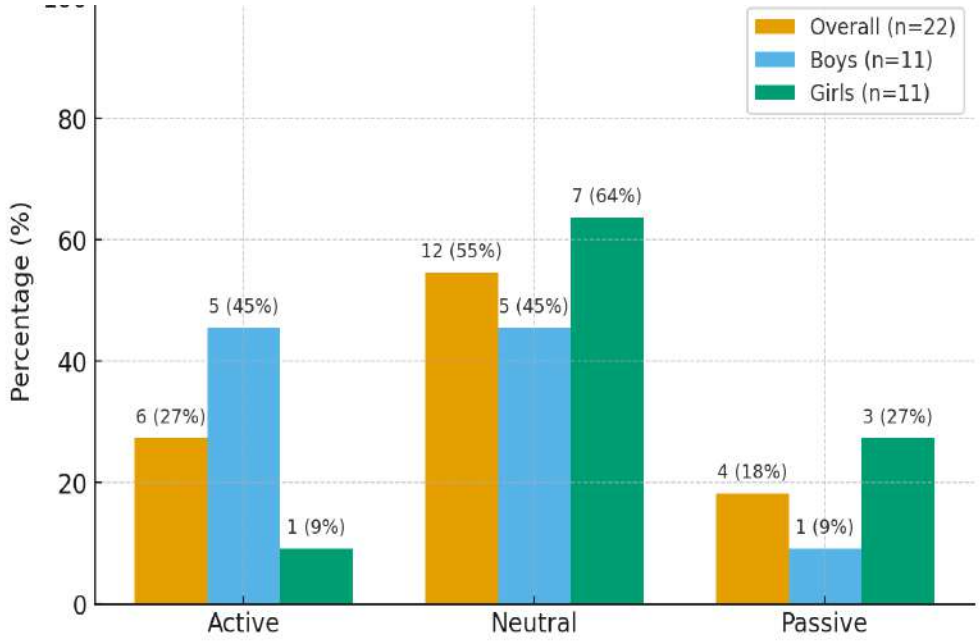
Note: Results from the survey on students' attention levels before applying Brain Breaks.

Regarding students' engagement during class, the survey results illustrated varying levels of engagement among students during English class. Out of the 22 participants, 6 students (27%)

demonstrated active engagement, 12 students (55%) exhibited neutral engagement, and 4 students (18%) showed passive engagement. When examining these results by gender, 5 out of 11 boys (45%) displayed active engagement, 5 boys (45%) reported neutral engagement, and 1 boy (9%) showed passive engagement. Conversely, among the girls, only 1 out of 11 (9%) exhibited active engagement, while 7 girls (64%) demonstrated neutral engagement and 3 girls (27%) displayed passive engagement. These results are visually represented in Figure 3, which illustrates the distribution of students' engagement levels before the Brain Breaks intervention.

Figure 3

Engagement Levels During English Classes.



Note: Results from the survey on students' engagement levels before applying Brain Breaks.

Overall, these results suggested that most students experience a neutral or indifferent emotional state toward the English class, which may be limiting their motivation and participation levels. Additionally, a majority of students face challenges in maintaining attention

during class, with female students exhibiting a notably higher tendency toward distractibility. Furthermore, the findings indicated that while most students demonstrated a neutral level of engagement, boys are more likely to show active participation compared to girls. Taken together, these observations point to a learning environment in which motivation, emotional connection, and cognitive focus were not being fully activated. This combination of factors suggests a disconnect between students and the English learning experience.

In this regard, the findings highlighted the need for innovative strategies that strengthen students' emotional responses in the English classroom, while also enhancing their motivation and concentration. For this reason, this project proposed the integration of Brain Breaks into English lessons, as the inclusion of brief and structured activities, such as mindfulness exercises, physical movement, and sensory experiences were expected to interrupt passive or distracted states, regulate emotional responses, and restore students' mental and emotional engagement. Thus, the observed patterns of emotional disconnection and attentional difficulties among adolescent students underscored the relevance of incorporating Brain Breaks as a specific intervention to improve the overall quality of the English as a Foreign Language (EFL) learning experience.

Data Management

Following the implementation of Brain Breaks in English classes, a post- survey (see appendix C) was administered to assess the impact of Brain Breaks on students' emotional responses, attention, and classroom engagement. Additionally, the survey aimed to gather insights into students' experiences with the Brain Breaks and to identify which type of activity was most positively received. This post-intervention survey was conducted in the same public

school and with the same participant group. However, the sample this time consisted of 22 ninth-grade students, including 11 girls and 11 boys, aged between 13 and 16 years. This group was selected because ninth-grade students are at a key stage of adolescence, where motivation and attention strongly affect learning. The balanced gender distribution and age range also made the sample more representative, adding validity and richness to the data.

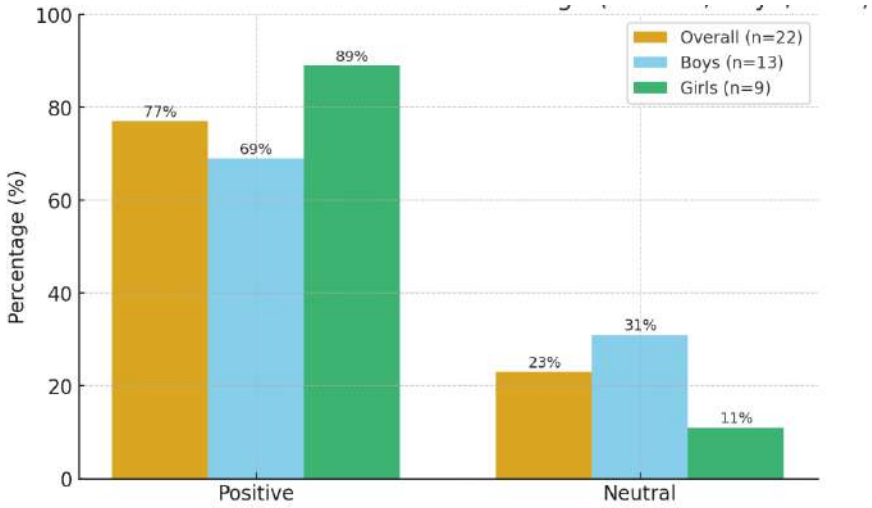
The first section of the survey maintained the same structure and categorization as the initial diagnostic instrument. It consisted of a series of closed-ended questions organized using a five-point Likert scale. In this first section, students were asked whether the Brain Breaks helped them feel better during English class, whether they felt more energized after completing the activities, whether the Brain Breaks improved their concentration, whether they felt more motivated and calm, and whether the activities helped them better understand the English lesson. However, in order to conduct a more detailed and structured analysis, these items were subsequently subcategorized according to the three core constructs of the research: emotions, attention, and engagement.

In the category of emotions observed after the implementation of Brain Breaks in English class, the results indicated a notable shift toward positive emotional responses among students. Out of the 9 female participants, 8 (89%) reported experiencing positive emotions following the intervention, while only 1 student (11%) expressed a neutral emotional state, suggesting that the Brain Breaks had no emotional impact. Similarly, among the 13 male students, 9 (69%) reported positive emotional responses, whereas 4 (31%) described their emotional state as neutral. Overall, when combining both groups, 17 out of 22 students (77%) reported positive emotional responses, while 5 students (23%) expressed neutral emotions following the intervention. These

results are visually represented in Figure 4, which illustrates the analysis of students' emotions after the implementation of Brain Breaks in the English classroom.

Figure 4

Emotions after Brain Breaks.

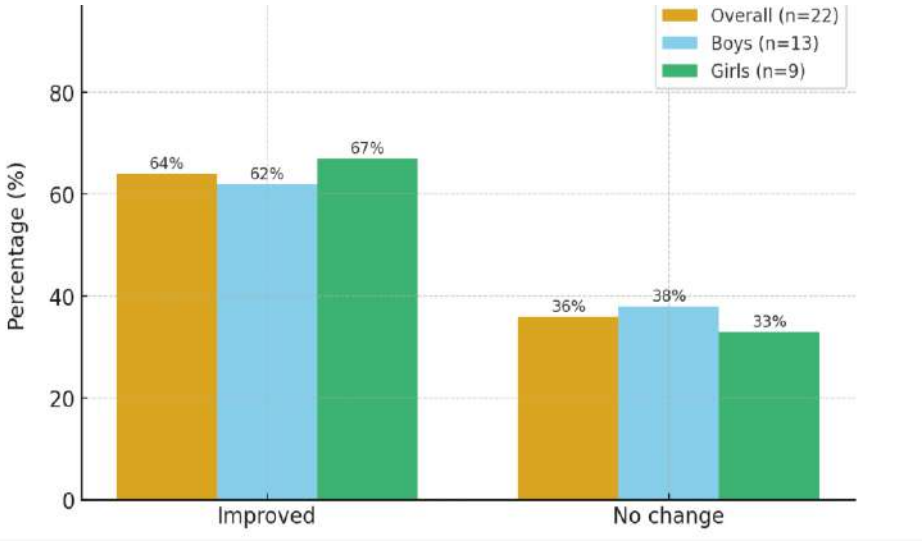


Note: Analysis of students' emotions after Brain Breaks.

Regarding the attention of the students, the survey results following the intervention showed that among female students, six out of nine (67%) reported an increase in their attentional focus after the implementation of Brain Breaks, while the remaining three (33%) maintained the same level of attention as before the intervention. Among male students, eight out of thirteen (62%) perceived an improvement in their ability to concentrate, whereas five (38%) reported no change in their attention levels. Overall, 14 of the 22 students (64%) experienced improved attention, while 8 students (36%) did not perceive any change. Figure 5 presents the analysis of students' attention levels following the implementation of Brain Breaks.

Figure 5

Attention Levels after Brain Breaks.

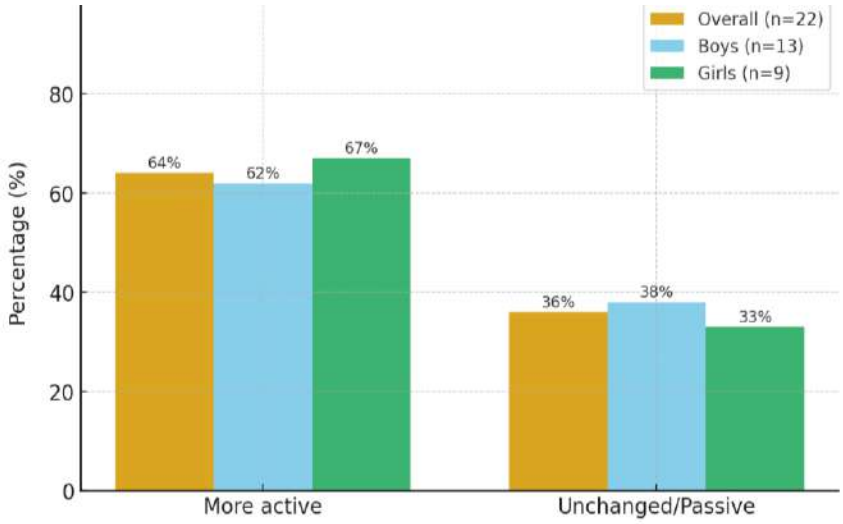


Note: Analysis of students' attention levels after Brain Breaks.

In the analysis of student's engagement, the survey results revealed a moderate increase in active participation following the Brain Breaks intervention. Among the nine female students, six (67%) reported more active engagement compared to before the intervention, while three (33%) indicated passive or unchanged levels of engagement. Similarly, eight out of thirteen male students (62%) experienced a heightened level of active engagement, whereas five (38%) reported engagement that remained passive or consistent with their previous experience. Overall, these findings suggest a positive shift in students' involvement during English class, with 14 of 22 students (64%) demonstrating increased active engagement and 8 (36%) maintaining passive or stable participation levels. These results are visually represented in Figure 6, which illustrates the analysis of students' engagement levels after the implementation of Brain Breaks.

Figure 6

Engagement Levels After Brain Breaks.



Note: Analysis of students' engagement after Brain Breaks.

Importantly, the analysis data were derived from the triangulation of the different instruments applied: student survey, classroom observations, and focus group (see Appendix D), which ensured a more comprehensive and reliable interpretation of the findings. Based on the above, and in order to respond more accurately to the main research question and its sub-questions, the analysis and interpretation of the data were guided by the strategies proposed by Leavy (2022). The process began with in vivo coding, which, according to Leavy (2022), prioritizes and preserves the participants' voices. Once the codes were identified, they were organized into categories that synthesized the information and addressed different aspects of the research question. These codes served to reduce and classify the data, ultimately leading to the construction of broader themes that encapsulate the core ideas emerging from the participants' voices. Each of these themes was then interpreted in light of the theoretical framework supporting the study.

To ensure a coherent presentation of the findings, the analysis was organized around key categories that directly respond to the sub-questions of the study. These categories, derived from the data itself, reflect the main areas influenced by the implementation of Brain Breaks in the English classroom. Each one captures a specific dimension of the students' experience, such as their emotional responses, levels of attention, and classroom engagement, and also allows for a deeper understanding of how these activities shaped their behavior and perceptions. The first category addressed was emotions, which shed light on the affective impact observed throughout the intervention.

Sensory and Movement Activities as a Positive Emotional Shift

To address the first sub-question, how does the application of Brain Breaks impact emotions during English class? The theme, namely "Sensory and movement activities as a positive emotional shift," was developed based on the observed positive effects of Brain Breaks on students' emotional states. This emotional shift was particularly evident during sensory and physical movement activities, which consistently elicited visible signs of joy, enthusiasm, and heightened energy among the participants.

In contrast, the mindfulness activities tended to foster states of calmness and emotional neutrality rather than overt expressions of positive affect. This distinction highlights the varying emotional responses elicited by different types of Brain Breaks and supports the relevance of tailoring these activities to specific classroom needs and objectives. In this regard, classroom observations revealed that students appeared noticeably happier and more energized during the sensory and physical movement activities.

The positive emotional response mentioned above is evidenced in some students' opinions expressed in the focus group, such as *"We all felt calmer,"* and *"It helped us release the stress of the class."* Similarly, the individual surveys reflected a high frequency of responses that emphasized the emotional benefits of the Brain Breaks, with comments such as: *"During the activity I felt happy, and afterwards I felt calmer," "It's fun to do Brain Breaks," "I felt less stressed and a bit more motivated,"* and *"They (the brain breaks) take away the stress of the class and help you disconnect."* Taken together, these findings indicated a significant emotional impact resulting from the implementation of sensory and physical movement activities, highlighting their potential to foster emotional well-being within the EFL classroom context.

The sensory and movement-based Brain Breaks serve as intentional emotional regulators within the EFL classroom, as they help students in the transition from states of emotional fatigue or disinterest to more positive, energized, and engaged emotional states. As noted by Fernandez-Barrionuevo et al. (2021), physical activities not only enhance motivation in EFL learners but also contribute to emotional well-being. Similarly, Badawi (2016) emphasizes that sensory activities activate multiple senses, creating dynamic learning experiences that support emotional balance and cognitive engagement. In this way, the incorporation of Brain Breaks, understood as brief moments that interrupt the routine and provide mental or physical relief (Weslake & Christian, 2015), serves as a catalyst for such emotions.

By offering a shift from the cognitive demands of the lesson, brain breaks help students experience a psychological renewal, which contributes to joy and increased emotional regulation. As Lander et al. (2024) state, Brain Breaks are designed to enhance enjoyment and focus in the classroom, directly influencing learners' engagement and emotional states. In other words, they

interfere with the ongoing classroom dynamic, also impacting students' feelings and the emotions they experience. The shift in activity encourages and alters the neutral emotional states students may have been maintaining during the class. Since it is something different, they perceive it as a positive disruption that breaks the monotony of the lesson.

However, as previously mentioned, the most notable positive effects were observed primarily during sensory and physical movement activities. Mindfulness, on the other hand, proved especially effective in promoting emotional calmness and neutrality, particularly in moments when students experience stress, anxiety, or overstimulation in the context of English learning. By guiding learners to focus on the present moment and disengage from emotional distractions, mindfulness fosters emotional self-regulation. As Li (2021) emphasizes, mindfulness is a dynamic and ongoing process that enables students to manage their emotions and redirect their attention to the present, thereby cultivating a more composed and balanced emotional state.

The findings from this first category showed that Brain Breaks, especially sensory and movement-based activities, positively influenced students' emotions by fostering joy, energy, and motivation, while mindfulness activities supported emotional calm and self-regulation. These varied responses highlight the emotional value of incorporating different types of Brain Breaks in the EFL classroom, as they contribute to creating a more dynamic and emotionally supportive learning environment.

Beyond their emotional benefits, the implementation of Brain Breaks also appeared to influence students on a cognitive level, particularly in terms of their capacity to sustain and recover attention during class. While positive emotional states can enhance general classroom

dynamics, the ability to remain mentally focused and engaged is essential for effective learning. As such, the second theme, namely, "Brain Breaks as Cognitive Refreshers to Enhance Students' Attention and Focus in EFL Classroom," centered on attention, offering insight into how different types of Brain Breaks supported students' concentration during English lessons.

Brain Breaks as Cognitive Refreshers to Enhance Students' Attention and Focus in EFL Classrooms

To answer the second sub-question regarding the influence of Brain Breaks on students' attention during English class, the theme "Brain Breaks as Cognitive Refreshers to Enhance Students' Attention and Focus in EFL Classrooms" emerged. The analysis revealed that these short, purposeful breaks helped students regain mental clarity, reduce cognitive overload, and return to classroom tasks with improved focus. This improvement was particularly noticeable after students participated in mindfulness and sensory activities, which proved especially effective in helping them reset mentally and return to the lesson with greater concentration. In contrast, physical movement activities did not show the same level of impact on attention; instead, they often overstimulated students, making it more difficult for them to refocus immediately afterward.

This positive impact on students' attention levels is supported by data from interviews, where students shared reflections such as: *"The whole group said they could fully concentrate after each active break," "We cleared our minds after every break,"* and *"These pauses changed how we felt during the class."* Similarly, survey responses collected during the lessons also revealed increased levels of attention. Some students expressed: *"I felt much calmer and could focus better," "My energy changed during the class," "It feels like a break and helps me*

concentrate," and *"My attention improved,"* along with *"I felt more focused in class."* When combined with classroom observations, this evidence clearly shows a noticeable improvement in students' concentration and attentiveness following the implementation of Brain Breaks.

While physical movement activities did energize students, they often overstimulated them, leading to decreased concentration levels. In contrast, mindfulness and sensory stimulation functioned as complementary strategies to enhance students' attention and restore their mental energy during English lessons. Mindfulness supported selective focus and emotional regulation, enabling learners to return to tasks with greater clarity and cognitive readiness (Li, 2021). At the same time, sensory activities by engaging multiple senses offered a refreshing and stimulating experience that reactivated cognitive processes and promoted sustained attention (Badawi, 2016).

The role of Brain Breaks as cognitive refreshers becomes especially evident when considering the relationship between attention, emotion, and learning. According to Kao (2023), attention is the mental mechanism that enables learners to encode and retrieve linguistic information, a process that depends on optimal brain activation and selective focus (Oishi, 2007). Brain Breaks contribute to this process by providing a reset point in the learning sequence, which allows students to recover from mental fatigue and sustain their concentration over time. These breaks can take various forms, including physical movement, relaxation, and mental activities, and are particularly important in a classroom setting to help students manage concentration and retention of information during lessons (Weslake & Christian,2015).

The findings from this second category demonstrated that Brain Breaks serve as powerful cognitive refreshers that enhance students' attention and focus in EFL classrooms. Through short, purposeful interruptions, these breaks allowed learners to regain mental clarity, reduce

cognitive overload, and return to academic tasks with improved concentration. This effect was most clearly observed after mindfulness and sensory activities, which proved especially effective in helping students reset mentally and sustain their focus.

While the influence of Brain Breaks on students' attention highlights their cognitive benefits, attention alone does not fully capture the extent of their impact on the learning experience. In adolescent learners, the ability to concentrate must be supported by a sense of emotional and cognitive connection to the class itself. It is not enough for students to stay focused; they must also feel motivated, involved, and interested in what they are doing. In this sense, engagement becomes a key element in understanding how Brain Breaks shape classroom dynamics. Therefore, the final theme, namely, "Brain Breaks as Tools to Promote a More Dynamic Learning Environment," centered on engagement, exploring how these short interventions contributed to building a more participatory and stimulating English learning environment.

Brain Breaks as Tools to Promote a More Dynamic Learning Environment

The theme "Brain Breaks as Tools to Promote a More Dynamic Learning Environment" was developed to answer the overarching research question: *How do different types of Brain Breaks (mindfulness, physical activities, and sensory activities) affect engagement and attention in adolescents in a public school setting, and which is the most effective?* This theme emerged from the data, in which students reported increased levels of motivation and participation during English class. Moreover, they expressed that the incorporation of Brain Breaks made their English lessons feel more dynamic and enjoyable. The analysis suggests that Brain Breaks not

only support attention regulation but also foster a more stimulating and interactive classroom atmosphere, enhancing overall learner engagement.

The interviews conducted revealed a clear positive impact on student engagement, with participants providing responses such as: *"Everyone enjoyed the activities," "They made the classes more dynamic," "The active breaks made English lessons more fun; we felt more energetic,"* and *"They made the class more entertaining."* Similarly, the analysis of survey responses reflected highly positive perceptions regarding students' engagement. Students noted: *"The classes felt more dynamic," "I felt more active, and when I returned to the activity, I had a better understanding," "I felt more willing to complete the tasks,"* and *"I felt more motivated."* These responses highlight how the implementation of Brain Breaks not only revitalized students' energy but also contributed to a more engaging and participatory classroom experience.

Classroom observations further supported these findings, revealing a noticeable shift in students' behavior and level of commitment following each Brain Break. After disconnecting momentarily from the lesson, students often returned more energized and ready to re-engage with the class activities. However, these observations also indicated that the level of engagement varied depending on the type of Brain Break implemented. In several instances, physical movement activities led to visibly higher motivation and enthusiasm upon returning to the lesson. In contrast, mindfulness activities often resulted in a state of emotional neutrality, with less noticeable changes in engagement levels. Sensory activities also contributed to increased engagement, though the intensity and expression of this engagement varied among students.

This shift in engagement levels may be attributed to the fact that these brief interruptions facilitate a transition from passive to more active states by reactivating students' attention and

reducing stress or monotony within the classroom. As noted by Weslake & Christian (2015), Brain Breaks serve to refresh both the mind and body, thereby fostering a classroom environment that gently encourages greater student participation.

Likewise, these brief purposeful interruptions not only help manage students' attention and mental energy but also introduce an element of change and movement that positively impacts the classroom atmosphere. According to Lander et al. (2024), these activities, whether physical, sensory, or mindfulness-based, are specifically designed to increase engagement and enjoyment, which are essential emotional conditions for effective language learning. When students feel more relaxed, energized, and emotionally connected to the class, their willingness to participate and interact in English classes increases.

These patterns mentioned above suggest that while all Brain Breaks offer benefits, their effects on engagement are not uniform and depend on the nature of the activity and the students' individual responses.

Drawing on the analysis of the three core categories: emotions, attention, and engagement, it becomes evident that Brain Breaks play a multifaceted role in enhancing the overall learning experience in the EFL classroom. The findings revealed that while all types of Brain Breaks contribute positively, their effects vary in intensity and nature depending on the type of activity. Sensory and physical movement activities were particularly effective in generating emotional uplift and enhancing student engagement, making the classroom environment feel more dynamic and enjoyable. Mindfulness activities, though less likely to produce visible excitement or immediate participation, proved essential in promoting emotional regulation and sustained attentional focus. These distinctions underscore the importance of

strategically selecting Brain Breaks based on the specific needs and emotional or cognitive states of learners.

Moreover, the triangulation of data from surveys, the focus group, and classroom observations confirmed that Brain Breaks serve not only as cognitive refreshers but also as emotional and motivational catalysts. By providing intentional pauses that reset students' mental states, reduce stress, and disrupt classroom monotony, Brain Breaks foster a more engaging, emotionally balanced, and cognitively focused learning environment. Thus, integrating a variety of Brain Breaks into the EFL classroom emerges as a valuable pedagogical approach to support adolescents' emotional well-being, attention regulation, and active engagement in language learning.

Chapter VI

This final chapter presents the main conclusions of the study, along with its pedagogical and research implications. It discusses the limitations and challenges encountered during the implementation of the project and outlines possible directions for future research. The chapter also includes a personal reflection on the process of conducting research as a teacher-researcher and on the transformative role of reflective practice in professional growth.

Conclusions

This research study aimed to explore the impact of strategically implemented Brain Breaks, specifically mindfulness, physical movement, and sensory activities, on the emotional responses, attention, and engagement of ninth-grade adolescent learners in an EFL classroom at a public school in Bogotá, Colombia. The project sought to understand how different types of

Brain Breaks influence students' classroom experience and to identify which strategies are most effective in promoting a positive and focused learning environment. Moreover, this study aimed to contribute to the broader discussion on the importance of addressing students' emotional and cognitive needs in EFL classes by emphasizing the value of Brain Breaks as effective tools to enhance focus, emotional well-being, and active participation in the EFL classroom.

Initially, the emotional responses of ninth-grade adolescent students during English class were observed and analyzed. Following this preliminary stage, six intervention sessions were conducted, during which three types of Brain Breaks were implemented: mindfulness, sensory activities, and physical activities. Each intervention was accompanied by systematic classroom observations focused on three core categories central to this study: students' emotions, attention, and engagement during English lessons. In addition to these observations, a post-intervention survey was administered to evaluate the perceived impact of Brain Breaks on the students. Furthermore, a focus group was conducted to gather in-depth qualitative insights regarding students' experiences and emotional reactions to the implementation of Brain Breaks in the classroom.

Through the implementation of Brain Breaks, each research instrument was individually analyzed, followed by an integrated analysis, as described in the previous chapter. From this comprehensive examination, three core themes emerged, which provide answers to the research question and its sub-questions. These themes are: "Sensory and Movement Activities as a Positive Emotional Shift", "Brain Breaks as Cognitive Refreshers to Enhance Students' Attention and Focus in EFL Classrooms", and "Brain Breaks as Tools to Promote a More Dynamic Learning Environment".

Regarding the first sub-question that was intended to know: How does the application of Brain Breaks impact the emotions during English class? We can say that the application of Brain Breaks during English class has a notable and multidimensional impact on students' emotional responses.

The findings from this study indicated that Brain Breaks, particularly sensory and physical movement activities, contribute to a positive emotional shift among adolescent learners. These activities often elicit visible signs of enjoyment, increased energy, and emotional uplift, serving as intentional regulators of classroom affect. Students expressed feelings of happiness, motivation, and stress relief following these interventions, highlighting the emotional value of incorporating dynamic, engaging moments into the learning process.

Mindfulness, although not marked by overt emotional display, played a significant role in promoting emotional calmness and self-regulation. Rather than eliciting excitement, Mindfulness fostered neutrality and emotional balance, especially in moments of stress or cognitive overload. As such, mindfulness is proposed as a means to relax students and refocus their attention when they become distracted or are emotionally overwhelmed (Li,2021).

Taken together, the evidence suggests that Brain Breaks influence emotions in two distinct but complementary ways: they either uplift students' mood through sensory and movement activities or regulate emotional states through mindfulness. This dual function highlights the potential of Brain Breaks to enhance emotional well-being and create a more emotionally supportive atmosphere in the EFL classroom, contributing to more positive and productive learning experiences.

Now, regarding the second sub-question: How do different types of Brain Breaks (mindfulness, physical activities, and sensory activities) affect engagement and attention in adolescents in a public school setting, and which is the most effective? It can be stated that Brain Breaks had a measurable impact on both attention and engagement among adolescents. Each type of activity influenced these dimensions in distinct ways, revealing both their strengths and limitations.

In terms of attention, mindfulness and sensory activities were the most effective in helping students regain focus and reduce cognitive overload. Students reported feeling calmer, more focused, and mentally refreshed after participating in these types of breaks. Mindfulness, in particular, supported selective attention by encouraging students to disengage from distractions and reorient themselves toward the present moment. Similarly, sensory activities stimulated multiple senses and offered a change of pace, which reactivated students' cognitive processes and allowed them to return to classroom tasks with increased concentration.

Conversely, physical activities, while effective in re-energizing students and boosting motivation, occasionally led to overstimulation, making it more challenging for some learners to regain focus immediately afterward. Although these activities promoted a positive emotional response, their impact on sustained attention was less consistent compared to the other types.

Regarding engagement, physical and sensory activities had the most noticeable effects. These Brain Breaks increased students' participation, enthusiasm, and willingness to complete tasks. Findings highlighted a renewed sense of energy and enjoyment after these breaks, contributing to a more dynamic and participatory learning environment. In contrast, mindfulness

activities, although beneficial for emotional regulation, did not consistently enhance behavioral engagement, as they fostered a state of calm rather than active involvement.

Overall, the effectiveness of each Brain Break type depends on the desired outcome. For enhancing attention and focus, mindfulness and sensory activities proved to be the most effective. For fostering engagement and classroom participation, physical and sensory activities had the strongest impact. Sensory activities, in particular, demonstrated the most balanced effect across both categories, making them the most consistently effective in addressing students' cognitive and emotional needs.

In response to the main research question: How does the implementation of Brain Breaks in the English as a Foreign Language (EFL) classroom influence adolescents' emotions, engagement, and attention? The findings of this study indicate that Brain Breaks have a significant and multifaceted impact on the emotional, cognitive, and behavioral dimensions of adolescent learners in a public school EFL context.

The data revealed that the implementation of Brain Breaks in the EFL classroom positively influenced adolescents' emotions, attention, and engagement. Sensory and physical movement activities were particularly effective in generating emotional uplift, increasing joy, motivation, and energy, while also reducing stress. Mindfulness activities, though subtler, supported emotional regulation and calmness, especially in moments of anxiety. In terms of attention, mindfulness and sensory activities helped students reduce cognitive overload and regain focus, acting as mental refreshers that improved their readiness to learn. Additionally, physical and sensory activities played a key role in boosting student engagement, enhancing motivation, participation, and the overall classroom atmosphere.

Overall, the findings suggested that Brain Breaks serve as powerful pedagogical tools that support adolescents' emotional well-being, attention regulation, and active engagement in the English as a Foreign Language (EFL) classroom. When implemented strategically and purposefully, Brain Breaks can help create a more emotionally balanced, cognitively focused, and engaging learning environment, enhancing the quality and effectiveness of English language teaching for adolescent learners in public school contexts.

However, it is essential to note that the effectiveness of Brain Breaks depends heavily on the specific classroom context. Not all Brain Breaks benefit the learning process in the same way; their impact varies according to factors such as students' emotional states, the topics being addressed, and the overall classroom atmosphere. For this reason, it is the teacher's responsibility to carefully assess the context and anticipate students' needs in order to select the most appropriate type of Brain Break. This requires having a repertoire of varied options and the flexibility to adapt based on the classroom dynamics.

Moreover, not all students will respond equally to the same activity, and the effectiveness of each Brain Break may differ from one session to another. Therefore, this research highlights the importance of teachers conducting a thorough study of their group and learning, through experience and reflection, how to combine and adapt Brain Breaks effectively. In doing so, teachers can foster a more supportive and responsive learning environment that strengthens the teaching of English to adolescents in public education settings, grounded in students' emotions and lived experiences.

Implications

As a result of this research, a range of potential research directions has been identified, which may contribute to a more comprehensive understanding of Brain Breaks in pedagogical contexts. Since this study focused on adolescents in a public school, it would be worth exploring how Brain Breaks affect other age groups, such as children in early education or adult learners in language classrooms. It could also be suggested to examine how Brain Breaks function in virtual or hybrid environments, where emotional and attentional dynamics differ significantly from face-to-face settings.

Likewise, it may be valuable to investigate how students' individual differences, such as learning styles, neurodiversity, or emotional profiles, influence the effectiveness of different types of Brain Breaks. Since the present study revealed interesting differences in the pre-intervention survey, future research could also examine potential gender differences in students' responses to these interventions, that is, whether girls or boys benefit more. Additionally, future research could consider the long-term impact of Brain Breaks on students' academic performance and emotional development, as well as how teachers' reflective practices evolve as they implement these strategies in diverse classroom contexts.

Limitations

Although the research objectives were successfully addressed, several limitations emerged throughout the implementation of the project that constrained the full execution of the initial plan. One of the primary limitations was related to the restricted duration of the intervention. The study was carried out over six sessions, which, although sufficient for initial

observation and data collection, proved insufficient to capture the full range of potential long-term effects of Brain Breaks on students' emotions, attention, and engagement. Given the complexity and variability of these dimensions, a longer period of sustained application would be necessary to more thoroughly assess how these strategies influence adolescent learners over time.

Another important limitation was associated with time constraints during each class session. While the intervention aimed to incorporate a variety of Brain Breaks: mindfulness, physical, and sensory activities, some of these activities required more time than was available within the rigid structure of the English class. As a result, several Brain Breaks had to be shortened or adapted, which may have affected their effectiveness and the overall impact on students' learning experiences.

Furthermore, it is important to acknowledge the variability in individual student responses. Not all learners reacted to the Brain Breaks in the same way, and some appeared more receptive or engaged than others. This underscores the need for a more individualized or flexible approach when implementing these strategies, as their impact is not uniformly distributed across all students. Despite these constraints, the research provided valuable insights and set the foundation for further exploration into the role of Brain Breaks in supporting adolescent learners in EFL classrooms.

Teacher´s Reflection

As a future English teacher, I can say that this project offers a meaningful opportunity to go beyond the traditional focus of language instruction and recognize the importance of

attending to students' emotional, cognitive, and behavioral needs. This experience allowed me to reflect on how classroom practices can be transformed, incorporating strategies that foster emotional well-being, promote sustained attention, and encourage active participation, dimensions that are often overlooked in the design of English language classes, especially in public school contexts.

In addition, I realized the huge impact that small, intentional actions such as the implementation of Brain Breaks can have within the classroom. Teachers often prioritize academic performance as the central focus of instruction; however, this experience underscored the importance of going beyond academic outcomes and understanding the emotional foundation behind students' behaviors and learning processes. A meaningful educational experience must begin by acknowledging students as individuals with emotions, needs, and inner worlds that directly influence their engagement and performance.

This process also emphasized the essential role of reflective teaching. Understanding our students, recognizing that each group has unique characteristics, dynamics, and responses. It is fundamental for determining not only when to intervene, but also how and with which type of Brain Break. The classroom is an ever-changing space, and as such, it demands constant observation, adaptability, and proximity to students in order to evolve alongside their learning processes and respond more accurately to their needs and challenges. As teachers, we should always apply these kinds of activities to our curriculum and make them part of English classes, so that teachers can exchange strategies such as Brain Breaks and, through practice, select and enhance the activities that can most benefit students' learning.

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