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THEME:

THE ROLE OF BRAIN BREAKS IN BOOSTING PARTICIPATION AMONG MIDDLE SCHOOL EFL CLASSROOM: A TEACHER'S PERCEPTIONS.

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Dedication

To my mother,

The one whose love knows no distance,

Your voice echoes in my heart even when I cannot hear it.

Your prayers are the wings that lifted me through my hardest days.

I owe every step of this journey to your strength, your patience, and your sacrifices.

Though far away, you were never absent you were in every word I wrote, in every hope I held.

To my precious sisters, rayan , wafa ,and the little one redouane

You are the pillars I lean on the ones who understood without needing words.

Thank you for your unwavering love, your encouragement, and your quiet pride.

I could never have walked this path without your presence near or far.

To my little stars, israa,hanna,and rahma,

My sweet nieces,

This is for you, too a small piece of the future that belongs to all of us.

Sabrina BENCHIKH

Dedication

I dedicate this dissertation to my mother and father

Dear Mom,

Your strength inspires me every day. Through every challenge, you've taught me resilience and kindness. I hope you know how much you mean to me. You truly are my hero.

Dad, no words will ever be enough to thank you for the love, wisdom, and strength you have given me. You have been my protector, Through every challenge, Every lesson you've shared and every sacrifice you've made have shaped the person I am today.

To my beloved sister Maria. When life gets hard, I know I have a sister who will always lift me up. Thank you for being my strength and my joy.

Without forgetting my crazy brothers I love you.

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the most beautiful chapter of my life Written by God is when He sent you into my life.

To every learner who ever needed a break,

this work is for you may your learning always be filled with joy, movement, and light.

And above all,

to the dreamer inside me who never gave up

you made it.

Torkia BENARIAS

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Dedication

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Your love, support, and unwavering belief in me have been the light through every dark moment.

This work is a reflection of your strength, patience, and the quiet sacrifices you made so I can chase my goals.

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ABSTRACT

This dissertation investigates the role of Brain Breaks in enhancing participation among middle school students in Algerian EFL classrooms. The study addresses the problem of declining focus, motivation, and active involvement in language classes, particularly among young learners.

The research aims to explore how Brain Breaks influence student participation and to examine teachers' perceptions and practices regarding their implementation. It also seeks to identify challenges faced by teachers when using Brain Breaks and to suggest practical strategies for integrating them into EFL teaching.

A mixed-methods approach is employed, combining quantitative data collected through a student questionnaire and qualitative insights obtained via semi-structured interviews with EFL teachers. The sample includes 60 students and a selected group of teachers from various middle schools in Algeria.

The findings reveal that most students respond positively to Brain Breaks, reporting increased focus, reduced fatigue, and greater willingness to participate in lessons. Teachers also view Brain Breaks as beneficial for classroom management and student engagement, although they highlight challenges such as limited time, lack of formal training, and large class sizes.

This research contributes to the understanding of classroom-based movement strategies in EFL contexts and highlights the value of Brain Breaks as a low-cost, high-impact tool. It recommends incorporating Brain Breaks into teacher training programs and curriculum planning to create more engaging and responsive learning environments.

Keywords: Brain Breaks, learner participation, Teacher perspectives, EFL classrooms, Algerian middle schools, Engagement strategies.

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List of Acronyms

EFL English as a Foreign Language

SLA Second Language Acquisition

PA Physical Activity

TAB Transform Us Active Break

SPSS Statistical Package for the Social Sciences

BERA British Educational Research Association

General Introduction

General Introduction

Classroom participation is often regarded as the heartbeat of an effective language learning environment. In the context of English as a Foreign Language (EFL) classroom, active learner participation enables learners to practice, process, and produce the target language more effectively. However, teachers in Algerian middle schools have increasingly observed a noticeable decline in students' engagement and willingness to participate, particularly during lengthy lessons or repetitive activities.

The traditional image of a "good student" who sits quietly and listens attentively has been challenged by contemporary educational approaches that emphasize interaction, movement, and learner autonomy. As Johnson (2017) stated, "A language classroom without interaction is a classroom without oxygen" (p. 25). This pedagogical shift has encouraged educators to adopt strategies that maintain Learner energy and attention throughout lessons, rather than relying solely on direct instruction.

One such emerging strategy is the use of brain breaks short, structured pauses involving physical movement, playful activities, or mental shifts away from academic tasks. These breaks are intended to help learners refresh their focus, reduce fatigue, and return to learning with renewed motivation. Whether through stretching, breathing exercises, or light games, brain breaks have been described by Morris (2019) as "the reboot button for young learners' attention spans" (p. 78). International studies have documented their positive effects on learner focus, classroom behavior, and engagement.

Despite this growing global interest, the implementation of brain breaks in Algerian EFL classrooms remains under-researched. It is not yet clear to what extent Algerian teachers are aware of this strategy, how they implement it, or what effects they observe in terms of Learner participation and classroom dynamics.

This study therefore investigates the role of brain breaks from the perception of Algerian middle school EFL teachers. It seeks to understand how teachers perceive the value of brain breaks in promoting learner participation and managing classroom energy. While learner responses are also considered, they are used primarily to support and enrich the findings from teacher interviews, ensuring that the focus remains on teachers' experiences, strategies, and reflections.

By focusing on teacher's classroom practices, observations, and professional insights, this study aims to contribute to a better understanding of brain breaks in the Algerian EFL context. It also explores the types of brain breaks used, the effects teachers associate with them, and the challenges they encounter in applying these strategies.

1. Background of the Study

Modern education has witnessed a shift in how teachers structure classroom time, moving away from rigid blocks of instruction toward more flexible, learner-centered environments. Many international studies support the integration of movement and short breaks to enhance focus, attention, and classroom dynamics (Williams & Grant, 2020).

For instance, Patel and Jenkins (2018) conducted a study in UK secondary schools examining how scheduled brain breaks influenced learner attention during language classes. They found that even a 3-minute physical activity break significantly increased the frequency of

students' participation after the break. Similarly, Hernández and López (2020) studied brain breaks in Spanish primary schools and concluded that pupils who were exposed to short playful breaks were more likely to answer questions, join group work, and volunteer in class discussions.

Other research shows that brain breaks are especially beneficial in language learning contexts where attention, emotional readiness, and cognitive flexibility are essential (Miller & Tsui, 2019). Brain Breaks allow pupils to mentally recharge, reduce anxiety, and re-enter tasks with more enthusiasm especially in middle school, where attention spans are naturally shorter (Wang & Li, 2021).

Although global studies emphasize the benefits of brain breaks, there is limited research exploring how Algerian middle school teachers and students perceive these strategies. It remains unclear whether Algerian teachers implement brain breaks intentionally or intuitively, and how students themselves experience these moments in the learning process. This study addresses that gap by focusing primarily on teachers' feedback, while learner responses are used to support and contextualize the teachers' perspectives.

2. Statement of the Problem

Every teacher knows the feeling of standing in front of a class that has "switched off" the eyes are dull, hands stay down, and no matter how simple the question is, silence fills the room. This scenario is common in EFL classes, especially among middle school learners who often experience mental fatigue, lack of self-confidence, or boredom during the lesson.

The problem is not always linked to the difficulty of the language, but rather to the natural limits of young learners' attention and engagement. Traditional solutions like calling names,

warning students, or forcing participation often create discomfort rather than genuine involvement.

Brain Breaks offer an alternative: short, energizing, and voluntary activities that invite both the body and mind to reset. However, it is still unclear whether Algerian EFL teachers consider brain breaks effective in boosting participation, or whether students actually find them engaging and useful. There is a clear need to explore how brain breaks are used in Algerian EFL classrooms from the viewpoint of teachers, while also drawing on learner experiences to support and enrich the analysis of teacher practices."

This research aims to address this gap by analyzing classroom practices, teacher perceptions, and learner feedback regarding the use of brain breaks to increase learner engagement.

3. The aim of the Study

The aim of this study is to investigate Algerian middle school EFL (English as a Foreign Language) teachers' perceptions of brain breaks as an instructional strategy to enhance Learner participation. Specifically, it explores teachers' awareness, perceived effectiveness, implementation practices, and challenges associated with integrating brain breaks into the EFL classroom.

This study is grounded in cognitive neuroscience and educational theory, which highlights the benefits of brief mental or physical activities in improving attention, motivation, and classroom engagement (Ratey, 2008; Medina, 2014; Jensen, 2005).

By addressing these areas, the study contributes valuable insights into the practical use of brain breaks in EFL contexts and encourages their inclusion in teacher development programs.

4. Research Questions

This study aims to answer the following questions:

- How do Algerian middle school EFL teachers perceive the role of brain breaks in promoting learner participation?
- What types of brain breaks do teachers use in their classrooms to enhance pupil participation?
- What challenges do teachers face when integrating brain breaks into their regular EFL teaching practices?

5. Significance of the Study

This study may offer practical value for Algerian EFL teachers, curriculum designers, school administrators, and teacher training programs. By focusing on teacher's perceptions and classroom practices, and using learner feedback as supportive evidence, the findings can help shape more effective and engaging teaching strategies in Algerian EFL classrooms. Insights gained may help improve learner participation, classroom energy levels, and student–teacher interaction. If proven effective, brain breaks could be formally integrated into language teaching methodologies, teacher education programs, and curriculum design frameworks to support active learning and improved classroom dynamics in Algerian middle schools.

The present research adopts a mixed-methods approach, combining quantitative data from Learner questionnaires and qualitative insights from teacher interviews. This dual-perceptions approach provides a comprehensive understanding of how brain breaks are implemented, experienced, and perceived within Algerian middle school EFL classrooms.

Quantitative data were collected through a structured, hand-delivered questionnaire administered to middle school students, designed to assess their perceptions of brain breaks and their impact on classroom participation. For the qualitative phase, semi-structured interviews

were conducted with a smaller sample of EFL teachers to explore their experiences, beliefs, and classroom practices related to the use of brain breaks.

The present research adopts a mixed-methods approach, combining qualitative insights from teacher interviews with quantitative data from learner questionnaires. While the primary focus is on understanding how brain breaks are perceived and implemented by teachers, learner feedback is included to strengthen and validate the analysis of teacher perspectives.

6. Structure of the Study

This dissertation is structured into two chapters. The first chapter presents the theoretical framework, including two sections:

The first section introduces the concept of brain breaks, outlining their definitions, types, educational benefits, and relevance to the EFL context. The second section focuses on Learner participation in EFL classrooms, exploring its definitions, significance, types, and the various factors that influence it.

The second chapter deals with research methodology and data analysis. It begins by outlining the research design, participants, and tools, followed by the analysis and interpretation of both questionnaire and interview results.

Chapter One:
Literature Review

Chapter One: Literature Review

Section one: Brain Breaks

1. Introduction

This chapter provides a comprehensive review of the literature related to the study's focus on the role of brain breaks in boosting participation among middle school EFL (English as a Foreign Language) classes from a teacher's perspective. The chapter is structured into two main sections. The first section delves into the concept of brain breaks, offering a definition from various perspectives. It then traces the historical development of brain breaks and examines their cognitive, psychological, and pedagogical impacts on young EFL learners. Moreover, it highlights specific brain break strategies and their potential applications in middle school settings.

The second section focuses on classroom participation, particularly in EFL contexts. It begins by defining participation from multiple viewpoints, followed by a discussion of its significance in fostering effective language acquisition. This section also explores the factors that influence learner participation, including both intrinsic and extrinsic motivators, as well as the challenges faced by teachers in engaging students. Finally, the review incorporates key theories in second language acquisition (SLA) that underpin the current study and identifies gaps in the existing literature regarding the integration of brain breaks as a strategy for enhancing classroom participation. By addressing these gaps, this study seeks to contribute to the growing discourse on innovative teaching practices in EFL classrooms.

2. Definition of brain breaks

Brain Breaks are typically short, structured pauses involving physical or cognitive movement, aimed at re-energizing students during academic tasks (Feiler, 2018; Donnelly & Lambourne, 2011). While Feiler emphasizes the interruption of sedentary time, Donnelly and Lambourne highlight the academic value of integrating physical bursts into daily routines, both pointing to the dual cognitive and behavioral impact of these breaks.

Brain breaks are short, structured intervals of physical or mental activity designed to rejuvenate students, enhancing focus and engagement during academic tasks. The literature identifies several types of brain breaks, each with distinct characteristics and benefits.

3. Types of Brain Breaks

a) Physical Activity Breaks

Engaging in physical exercises during breaks has been consistently shown to enhance cognitive performance and reduce fatigue. For example, short bursts of physical activity such as stretching, jumping jacks, or yoga can improve students' attention and energy levels. Studies indicate that physical activity increases blood flow to the brain, leading to better focus and memory retention.

b) *Relaxation Breaks*

Relaxation exercises during breaks, such as deep breathing, mindfulness meditation, or guided imagery, have been found to reduce stress and improve emotional regulation. For

instance, mindfulness-based brain breaks can help reduce cortisol levels, fostering a calmer and more focused state of mind.

c) Cognitive Activity Breaks

Brain breaks involving cognitive challenges, such as solving puzzles, answering trivia, or engaging in memory games, can provide mental stimulation while allowing recovery from prolonged tasks. Research indicates that cognitive breaks can improve recovery from fatigue by shifting mental effort to different areas of the brain.

4. Timing and frequency of Brain Breaks

The timing and frequency of brain breaks are crucial for enhancing cognitive function and well-being across various age groups. Research indicates that structured breaks, particularly those incorporating physical movement and mindfulness, can significantly improve self-regulation and reduce anxiety in children (Sikic, 2020). Additionally, for adults, frequent short breaks during prolonged sedentary periods can enhance cerebral blood flow and cognitive performance (Heiland et al., 2020).

a) Optimal Timing for Brain Breaks

Teachers need to manage time spent on academic learning and implementation of brain breaks as shift and balance between sedentary and active behaviors is critical (Ma et al., 2014). Research that has been done on the duration of activity indicates specific time periods are more beneficial (Jensen, 2005). Implementing a 5-minute physical activity into the classroom routine proved to increase On-task behavior during academic lessons and overall physical activity throughout the day in school (Podnar et al., 2018). Studies have also found that when brain breaks are implemented for 10 minutes or more, learner cognitive performance improves (Janssen

et al., 2014; Daly-Smith et al., 2018; Howie et al., 2014). Another consideration would be specific age and developmental levels; for example, second to fourth-grade students showed improved on-task behavior after very brief, high-intensity exercise (Ma et al., 2014). Additional research on shorter periods has found that applying brain breaks from one minute to five minutes can improve academic retention and attention (Daly-Smith et al., 2018; Jensen, 2005). Transition time is another factor to consider; an activity may last five minutes, but depending on the activity, it could take 5 minutes to transition back to work from the break (McMullen et al., 2014). Brain Breaks provide an effective approach to fill time whenever students need a break from a lengthy lesson or during a transition period.

b) Frequency of Breaks

Research that has studied Brain Breaks in classrooms recommends that they should be present in the classroom throughout the day (Janssen et al., 2014). While students can participate in unstructured activities such as recess, the imbalance of activity and sedentary behavior prevents students from maximizing cognition (Watson et al., 2017). Based on study findings, teachers can improve several learner outcomes using brain breaks (Janssen et al., 2014; Howie et al., 2014; Carlson et al., 2015; Mead et al., 2016). Specific time periods listed in the literature include mornings immediately after classes begin, transition periods such as from lunch back to class, and near the end of the school day (Cline et al., 2021). The final consideration for when to implement brain breaks might include academic subject matter that requires intense concentration and focus on problem-solving activities. Overall, the frequency of brain breaks should consider the time of day, transition periods during the school day, the cognitive effort of subject matter, and changing learner attitudes (Egger et al., 2019).

5. Importance of brain breaks in educational setting

The implementation of brain breaks in educational settings has garnered attention for its positive impact on students' physical activity levels, attitudes, and overall well-being. These short, structured breaks, which incorporate physical movement and mindfulness, can enhance learning outcomes and reduce anxiety among students. The following sections detail the benefits of brain breaks in educational contexts.

a) Cognitive Health and Mental Fatigue

The importance of brain breaks in reducing mental fatigue and cognitive overload is well-documented. According to Cognitive Load Theory (Sweller, 1988), the brain has limited processing capacity during sustained cognitive tasks. Without regular breaks, students may experience cognitive fatigue, which can impair learning. Brain Breaks allow the brain to recover, facilitating memory consolidation and improving learning efficiency.

Willis and Green (2023) emphasize that brief, well-timed breaks can revitalize working memory and increase attention levels, especially following mentally demanding tasks. This aligns with Sweller's (1988) cognitive load theory, which suggests that managing mental strain through strategic breaks can support better retention.

A study by Thompson et al. (2023) found that brain breaks involving physical activity improved attention span and memory retention. Students who participated in physical activity breaks performed better on subsequent cognitive tasks, highlighting the role of brain breaks in cognitive recovery.

b) Emotional Regulation and Stress Reduction

Brain Breaks are crucial for managing stress and regulating emotions in students. Self-Regulation Theory (Zimmerman, 2002) suggests that students' ability to manage their emotional states is fundamental to their academic success. Breaks that incorporate relaxation techniques like deep breathing or mindfulness can help students calm down, lower anxiety, and improve emotional control.

In their 2024 study, Smith et al. Argue found that incorporating structured relaxation breaks into the classroom environment can reduce stress and anxiety, fostering a calm and focused atmosphere conducive to learning.

Mindfulness activities such as deep breathing and guided imagery have been found to lower stress hormones like cortisol, helping students maintain emotional balance and avoid burnout during academic learning (Kabat-Zinn, 2003).

c) Motivation and Engagement

Brain breaks also play a key role in maintaining motivation and engagement, especially during long or demanding lessons. Vygotsky's Social Constructivism (1978) stresses the importance of engagement and motivation for meaningful learning. Brain Breaks offers opportunities for students to socialize or engage in physical activity, which can rejuvenate their enthusiasm for learning.

Harris and Clark (2023) demonstrated that brain breaks can sustain learner motivation by offering a mental reset during challenging tasks. These activities prevent disengagement and encourage continuous participation throughout lessons.

Davis et al. (2023) also found that breaks incorporating social interaction, such as group discussions or games, helped reduce feelings of frustration and disengagement among students, promoting a positive learning environment.

d) Physical Health and Neuroplasticity

The importance of brain breaks extends to physical health, particularly through activities that promote movement and neuroplasticity in the brain's ability to reorganize itself. According to Ratey (2008), physical activity is crucial for maintaining brain health, improving circulation to the brain, and fostering the growth of new neural connections.

Thompson et al. (2023) found that brain breaks that included physical activity increased students' cardiovascular health, contributing to better concentration and higher cognitive performance. They concluded that physical breaks help develop neuroplasticity, enhancing learning capabilities.

Research by Mahar (2011) showed that children who engaged in active breaks showed significant improvements in attention and academic performance, reinforcing the connection between physical health and cognitive function.

e) *Holistic learner Development*

Brain Breaks contribute to the holistic development of students, addressing cognitive, emotional, social, and physical needs. The integration of breaks allows schools to focus not just on academic achievement but also on overall well-being, which is crucial for fostering lifelong learning and resilience.

Willis and Green (2023) argue that brain breaks support the holistic development of students, highlighting that structured breaks contribute to balanced emotional and cognitive states. By addressing various aspects of learner well-being, brain breaks create a more conducive environment

6. Brain breaks and students' behavior

The number of variables present in a learning environment that teachers need to consider and respond to ensure students meet achievement and learning expectations. Studies have found that when students are sedentary for long periods, they are more likely to engage in disruptive behaviors such as eloping and verbal and physical outbursts that may harm others or damage equipment (Kariippanon et al., 2021). When teachers can track and identify learner cues connected to disruptive behaviors, such as mental fatigue and stale cognitive processes, by integrating physical activity or movement breaks into lessons, students are more likely to meet and exceed the expectations (Turner and Chaloupka, 2017). One specific outcome important to learner performance and learning is being able to attend, focus, and respond to the immediate task (Mavilidi et al., 2021). Attention plays a vital role in students' success as they can interpret the information provided promptly to complete the tasks assigned (Kariippanon et al., 2021). Research has found that positive outcomes include greater content retention, content recall can be accessed faster to respond favorably to the task, and transition between activities more to display maladaptive behaviors that are counterproductive to desired outcomes such as learning and achievement (Moon et al., 2020).

a) Impact on Cognitive Performance

Active breaks have been linked to improved working memory and cognitive function. For instance, students participating in the I-MOVE study showed a significant increase in working memory performance compared to a control group (Masini et al., 2020).

Engaging in cognitively stimulating breaks positively influenced brain efficiency, particularly in the dorsolateral prefrontal cortex, which is crucial for executive functions (Mazzoli et al., 2021).

b) Impact on Attention and Focus

Research indicates that brain breaks can significantly improve students' attention and focus. A systematic review by Vazou et al. (2021) found that incorporating short physical activities during lessons enhanced students' selective attention and concentration. Similarly, a study by Mazzoli et al. (2021) reported that students who participated in movement-based brain breaks demonstrated improved on-task behavior and reduced inattentiveness.

Studies indicate that implementing brain breaks can decrease off-task behavior and improve focus in preschool children (Barker, 2021). While some research suggests positive acute and chronic effects on various attentional outcomes, particularly selective attention, many results were not statistically significant (Infantes-Paniagua et al., 2021). Different types of brain breaks may affect Learner enjoyment and refocusing time differently (Weslake & Christian, 2015). Evidence suggests small to moderate improvements in attention-to-task following physical activity breaks, with effect sizes typically ranging from 0.13 to 0.60 (Mahar, 2011). Classroom-based physical activities incorporating academic concepts have demonstrated significant improvements in attention-to-task compared to control groups (Mahar, 2011).

c) Disruptive/Maladaptive Behavior

There are various ways to define disruptive/maladaptive behaviors. The research establishes maladaptive behaviors as aggression towards oneself or others that can affect

learning (McDaniel and Flower, 2015; Purwati and Japar, 2017; Cholewa et al., 2010). Various forms of disruptive behavior that can take part in the classroom include showing aggression towards oneself or others, screaming, disobeying, breaking class objects, getting attention, or raging (Schroder and Gorden, 2002). As mentioned above, the educational literature has consistently shown that classroom management strategies

Involving activity can be used as preventative measures for both mild and severe disruptive behaviors (Guardino and Fullerton, 2010).

Classroom management strategies that facilitate effective brain breaks mirror specific components of universal design for learning, such as modeling, use of visuals, and pre-teaching (Johnson-Harris and Mundschenk, 2014).

While the focus and intent between classroom management and brain breaks might differ, the outcomes are similar and suggest that students are more positively engaged and on task (Cline et al., 2021). Data shows second to fourth-grade students with a history of maladaptive behaviors were observed to improve off-task behavior after very brief high-intensity bouts of exercise (Ma et al., 2014).

There are distinct parallels between classroom management strategies and brain breaks as they improve attention/focus, disruptive behavior, student engagement, and increased time on task (Yassine et al., 2020).

7. Teacher's perception of brain break

Teachers play a central role in the implementation and effectiveness of brain breaks within the classroom. Their beliefs, experiences, and attitudes significantly influence whether and how brain breaks are integrated into instructional practices. Several studies have explored how teachers perceive these short mental or physical activities and the extent to which they believe they contribute to learner engagement and learning outcomes.

According to Biring (2024), teachers generally recognize brain breaks as a valuable strategy to maintain students' focus and reduce restlessness, particularly in primary school settings. Many teachers have observed improvements in attention spans, classroom behavior, and task persistence following the use of brief movement or mindfulness-based breaks. Similarly, Knight (2016) found that elementary teachers viewed brain breaks and recess as essential tools for improving classroom behavior and enhancing learner well-being. These teachers reported that students returned from breaks with greater concentration and motivation to learn.

Teachers also identify specific benefits of brain breaks beyond cognitive engagement. Northup (2022) reported that upper elementary teachers believe brain breaks positively influence learner behavior, attendance, and emotional health. In her study, teachers shared that brain breaks helped students release built-up energy, reduce stress, and re-engage with academic content. Moreover, Vander Waal (2020) noted that when teachers implemented brain breaks consistently, they observed a significant increase in learner participation and a noticeable decline in disruptive behaviors.

Figure 1 : Themes Identified in Teachers' Perceptions of Brain Breaks

Theme	Description

Types of Brain Breaks	Teachers used physical activities, mindfulness, and mental rest techniques.
Implementation Strategies	Brain breaks were inserted between lessons or when signs of fatigue appeared.
Perceived Benefits	Improved learner behavior, better focus, and a positive class environment.
Challenges Faced	Time constraints and classroom management during transitions.

Source: Adapted from Northup (2022)

Despite these benefits, some teachers also mentioned challenges related to time constraints and classroom management during brain breaks. For instance, some educators reported difficulty in transitioning students back to learning tasks after highly energetic breaks (Dirks, 2023). However, most teachers found that with clear routines and appropriate break selection, brain breaks could be effectively managed and even became a rewarding part of the school day.

In the Algerian EFL (English as a Foreign Language) context, teacher perception of brain breaks is still an emerging topic. Algerian middle school teachers often face large class sizes, limited teaching resources, and a rigid curriculum, which can create challenges for integrating brain breaks into daily practice. However, based on preliminary classroom observations and informal teacher interview conducted for this study, many Algerian EFL teachers view brain breaks as potentially beneficial for improving learner motivation and reducing fatigue during

language instruction. In particular, they see brain breaks as a practical way to renew students' energy and increase participation, especially during grammar-focused or vocabulary-heavy lessons. While formal research on brain breaks in Algerian classrooms remains limited, this study aims to contribute to a better understanding of how Algerian EFL teachers perceive and apply such strategies in their teaching practices.

Section Two: Participation

1. Definition

According to Johnson (2001), participation in the classroom is characterized by students' active involvement in discussions and interactions. This includes offering responses to teachers' prompts, contributing to group activities, and asking questions that show engagement with the

material. For Johnson, participation goes beyond merely speaking; it involves critical thinking and involvement in various forms of interaction within the classroom environment.

In a different view, Smith (2008) defines participation as the process by which learners demonstrate their understanding by interacting with peers and the instructor in both verbal and non-verbal ways. This could involve taking notes, making eye contact, or using gestures that show attention and comprehension. Smith emphasizes that participation is multi-dimensional and includes both visible actions and cognitive processes, such as paying attention and reflecting on what is being taught.

Miller and Duffy (2011) highlight a more collaborative definition, where participation is seen as a mutual exchange between students and instructors. For them, participation is not just about speaking up but involves reciprocal interactions where both students and instructors contribute to the learning process. This interaction is facilitated by a supportive classroom environment that encourages all students to share their thoughts, questions, and perspectives.

For Vygotsky (1978), participation is integral to the concept of social learning. He emphasized that learners actively construct knowledge through interaction with others, and participation is the process through which students negotiate meaning and deepen their understanding in social contexts.

In a broader sense, Rodriguez (2014) points out that participation is not only confined to the classroom but can extend to digital and online spaces in contemporary learning environments. She defines participation as the act of engaging with course content in both physical and virtual settings, such as online forums, chats, or video discussions, where learners have the opportunity to contribute their ideas and reflections beyond the traditional classroom boundaries.

Furthermore, Harris (2010) argues that participation is best understood as a dynamic process influenced by both individual traits and classroom culture. According to Harris, individual differences in motivation, confidence, and communication skills play a significant role in how students participate. Classroom culture, including teacher attitudes, peer interactions, and the nature of the learning material, also shapes how and when students engage.

Freeman and McKinney (2013) view participation as a measure of learner initiative, where students not only respond to teacher prompts but also actively seek out resources and apply classroom content beyond basic requirements. This proactive involvement reflects deeper engagement levels.

2. Types of participation

Participation in language learning classes, especially in English as a Foreign Language (EFL) setting, is a critical factor influencing learner engagement and achievement. Participation is often categorized into various types based on how students interact during the learning process, encompassing both verbal and nonverbal behaviors. Understanding these participation types is essential for educators looking to foster more dynamic and interactive learning environments (Garrison et al., 2000).

2.1. Verbal vs nonverbal participation

2.1.1. Verbal Participation

Verbal (also known as oral or active) participation refers to what learners say in class. That is, giving opinions in the classroom, making comments and answering teacher's or learners‟ questions are considered verbal engagement.

2.1.2. Non-Verbal Participation

In contrast to verbal behaviors, non-verbal (also known as passive) participation in class is associated with learners‟ responses to the instruction during session. These behaviors include nodding heads, raising their hands, body movement, eye contact, taking notes, and listening to the teacher.

2.2. Active Participation vs passive participation

2.2.1. Active participation

Active participation refers to students' direct engagement in classroom activities, which can be expressed verbally or non-verbally. This type of participation is crucial in language learning environments as it helps reinforce language acquisition through practice and social interaction (Garrison & Arbaugh, 2007).

2.2.2. Passive Participation

Passive participation refers to the presence of students in the classroom without active engagement. While these students may attend and listen, they do not contribute much verbally or non-verbally to the learning process, which can limit their language development opportunities (Trowler, 2010).

2.3. Collaborative Participation

Collaborative participation is characterized by students working together in groups or pairs to complete tasks or engage in discussions. This type of participation fosters communication, language practice, and social interaction, which are integral to language learning (Johnson & Johnson, 2009).

3. The Importance of Learner Participation

Learner participation is a critical component of educational settings, playing a pivotal role in enhancing learner engagement and improving learning outcomes. Research has consistently shown that active participation in educational activities fosters a deeper understanding of subject matter, promotes critical thinking, and cultivates essential life skills such as communication and collaboration.

Learner participation is essential for creating an engaging and effective learning environment. It involves students actively engaging in educational activities, contributing to discussions, and taking ownership of their learning process. Research indicates that participation is not merely a passive act but an active process where students become partners in their education, contributing to innovation and change in educational settings. Learner participation is a key driver of innovation in education. By involving students in the teaching-learning process, educators can create an environment where students are not just beneficiaries of education but active agents of change. This shift from passive recipients to active participants is crucial for fostering innovation and promoting continuous improvement in educational practices (Jesús & Azevedo, 2024).

Active learning is a fundamental aspect of learner participation. It involves students engaging in activities such as discussions, problem-solving, and collaborative projects, which enhance their understanding and retention of material. Studies have shown that active learning strategies, such as problem-based learning and collaborative simulations, can significantly improve learner engagement and learning outcomes (Detyna et al., 2023) (Dhamija & Dhamija, 2020).

Participation plays a crucial role in enhancing learners' communicative competence (Berdine, 1986) and social skills (Chu & Kim, 1999). Bransford (1979) emphasizes that for EFL learners to develop proficiency in communication, active participation in classroom activities is essential, as it enables them to practice and internalize the target language. Moreover, consistent engagement facilitates the retrieval of previously acquired knowledge, preventing the loss of retained information.

Furthermore, Armstrong and Boud (1983) highlight that classroom participation fosters the development of essential communicative abilities, including articulating opinions, explaining concepts to peers, adhering to turn-taking conventions, and engaging in meaningful discussions. Additionally, learners who actively contribute to speaking activities by discussing diverse topics not only refine their presentation skills but also enhance their creativity in delivering ideas (Chu & Kim, 1999).

Classroom participation plays a pivotal role in the development of learners' cognitive abilities. As Smith (1977) argues, participation offers students the opportunity to engage with diverse perspectives on various topics, thereby fostering critical thinking, comparative analysis, and the ability to take informed positions. In order to articulate their ideas effectively, learners must analyze ongoing discussions and synthesize both their prior knowledge and current thoughts before formulating their responses. Consequently, the more actively students participate in class, the more frequently they engage in processes of analysis and synthesis, which are fundamental to cognitive development.

Furthermore, teacher feedback on students' responses enhances their ability to retain newly acquired knowledge. Participation enables learners to learn from their mistakes, as timely corrective feedback helps them recognize errors and avoid them in the future (Garside, 1996).

Garside also likens active participation to cooperative learning, emphasizing that students benefit not only from their own errors but also from observing and reflecting on their peers' mistakes.

Additionally, participation provides valuable insight into the effectiveness of the learning process. Linnenbrink and Pintrich (2003) assert that students' responses to classroom activities serve as indicators of their progress, highlighting both their achievements and areas requiring further development. This feedback mechanism also enables educators to assess whether the lesson objectives are being met and to adjust their instructional strategies accordingly.

Beyond its cognitive and pedagogical benefits, participation fosters greater learner engagement and motivation. Jum (1994) notes that students develop a heightened interest in learning when they actively contribute to classroom discussions. Moreover, positive reinforcement from teachers in the form of praise encourages students to participate more frequently. Skinner and Belmont (1993) further argue that when one learner engages in discussion, their peers are more likely to follow suit, thereby creating a dynamic and interactive classroom environment that enhances the overall learning experience.

4. Factors Influencing Learner Participation

Learner participation is a multifaceted concept influenced by a variety of factors, which can be broadly categorized into individual, environmental, and instructional elements. Understanding these factors is crucial for educators and policymakers aiming to enhance Learner engagement and academic success. The following sections detail the key factors influencing learner participation as identified in the provided research papers.

4.1. Individual Factors

According to Rahimi, Najafi, and Shams (2023), individual differences among learners constitute a significant determinant of classroom participation.

Rahimi et al. (2023) explain that variables such as age, gender, cultural background, language proficiency, and socio-economic status directly influence the degree to which students engage in classroom discussions.

Crombie, Pyke, Silverthorn, Jones, and Piccinin (2003) emphasize that personal attributes specifically shyness, self-esteem, and anxiety play a crucial role in determining a learner's willingness to participate.

Crombie et al. (2003) further argue that learners with higher self-confidence are more likely to contribute actively to classroom settings, thereby enhancing the overall interactive learning experience.

Moreover, Rahimi et al. (2023) note that cultural influences and language proficiency are particularly impactful in diverse educational contexts, where learners must navigate between multiple linguistic and cultural frameworks.

Rahimi et al. (2023) also assert that a learner's prior educational experiences and personal learning styles can mediate the relationship between individual characteristics and participation, suggesting that tailored instructional strategies may be necessary to accommodate these differences.

4.2. Instructor Attributes

The characteristics and behaviors of instructors play a pivotal role in influencing Learner participation in classroom settings. According to Rahimi, Najafi, and Shams (2023), the teaching methods and positive traits exhibited by instructors are instrumental in motivating and stimulating verbal engagement among students. They assert that students are more likely to participate actively when instructors are supportive, understanding, and approachable.

Similarly, Crombie, Pyke, Silverthorn, Jones, and Piccinin (2003) found that an instructor's gender can influence students' participation rates. Their study suggests that students' perceptions of their classroom participation and their instructors vary as a function of gender and context, indicating that the instructor's characteristics can significantly impact the learner's reengagement.

Furthermore, Weaver and Qi (2005) highlight that the way instructors organize and manage the classroom can affect learner participation. They emphasize that instructors who create an inclusive and supportive classroom environment encourage more active learner engagement.

In addition, a study by Rocca (2010) indicates that instructor behaviors, such as immediacy and clarity, are associated with increased learner participation. The research suggests that when instructors are perceived as approachable and clear in their communication, students are more likely to engage in classroom discussions.

Moreover, Dallimore, Hertenstein, and Platt (2004) found that instructor-initiated questions serve as invitations for students to speak in class. Their research indicates that the

frequency and type of questions posed by instructors can significantly influence the level of learner participation.

4.3. Classroom Environment

The classroom environment significantly influences learner engagement and participation. A study by Rahimi et al. (2023) demonstrated that students' perceptions of their educational environment are strong predictors of their learning engagement, particularly affecting emotional, cognitive, and behavioral dimensions. Similarly, research by Weaver and Qi (2005) indicated that classroom organization and management directly impact Learner participation, with well-structured environments fostering greater involvement. Moreover, the physical aspects of the classroom, such as seating arrangements and accessibility, can enhance or hinder learner engagement. For instance, flexible seating and collaborative spaces have been associated with increased interaction and participation among students.

4.4. Pedagogical Strategies

Effective pedagogical strategies are crucial in promoting learner participation. Dallimore et al. (2004) found that instructors who employ interactive teaching methods, such as open-ended questioning and group discussions, encourage higher levels of learner engagement. Additionally, the use of active learning techniques, including problem-based learning and peer teaching, has been shown to enhance participation and deepen understanding. For example, a study by Rahimi et al. (2023) highlighted that active learning strategies positively influence learner engagement in blended learning environments. Furthermore, providing timely and constructive feedback has been identified as a key factor in maintaining learner motivation and encouraging ongoing participation.

5. Brain break and participation

Brain breaks have been shown to significantly enhance learner participation by promoting physical and cognitive engagement during lessons. These breaks provide students with opportunities to re-engage with learning material through activities that improve focus, attention, and socially appropriate behaviors. The physical activity involved in brain breaks positively impacts cognitive performance by reducing mental fatigue and enabling students to return to tasks with improved concentration (Erlauer, 2003; Mok et al., 2020).

Additionally, students who participate in brain breaks demonstrate greater content retention, quicker response times, and more efficient transitions between tasks (Guardino & Fullerton, 2010; Moon et al., 2020).

As a result, brain breaks help create an environment that fosters active participation, reduces disruptive behaviors, and enhances overall engagement in classroom activities.

Brain breaks, short physical activity sessions during class time, have shown positive effects on learner participation and motivation. In primary school children, brain breaks-maintained motives for physical activity, including enjoyment, competitiveness, appearance, and psychological condition (Mawar Siti Hajar et al., 2019). For college students, physically active brain breaks increased daily step counts and were perceived positively, with students emphasizing the importance of experience, variety, and engagement (Stapp & Prior, 2018). Gamification of brain breaks in elementary-middle school classrooms significantly increased moderate-to-vigorous physical activity participation by 27% compared to standard interventions (Beemer et al., 2019). This approach resulted in 55% of students accumulating approximately 20 minutes of health-enhancing physical activity per day in their classroom. These studies suggest that brain breaks, especially when gamified, can be an effective strategy for enhancing learner

participation in physical activity across various educational levels. Research indicates that implementing brain breaks can improve attitudes towards physical activity (PA), as evidenced by significant increases in self-efficacy and enjoyment among trainee teachers in Malaysia (Mahale, 2023). Similarly, primary school children demonstrated enhanced motives for participation in PA, particularly in enjoyment and competitiveness, after engaging in structured brain break activities (Hajar et al., 2019). The TransformUs Active Break (TAB) model further emphasizes the importance of integrating active breaks into lessons, positioning them as essential components of effective teaching rather than mere interruptions (Lander et al., 2024). Additionally, college students who participated in physically active brain breaks reported higher daily step counts and positive perceptions of their experiences, highlighting the effectiveness of such interventions in promoting physical activity among young adults (Stapp & Prior, 2018). Overall, brain breaks serve as a valuable tool for fostering a more active and engaged learning environment across different educational levels (Balasekaran et al., 2021).

6. Theoretical Framework

The present study is grounded in several well-established learning and psychological theories that support the integration of brain breaks as a strategy for improving learner engagement, focus, and participation particularly in cognitively demanding environments such as EFL classrooms. These theories provide a foundation for understanding why short, structured breaks may benefit students' learning behavior and how teacher perceptions and classroom practices shape their effectiveness.

One of the central theories guiding this study is Cognitive Load Theory (Sweller, 1988), which proposes that the human brain has limited working memory capacity. When learners are exposed to prolonged instruction without breaks, they may experience cognitive overload,

leading to disengagement and reduced retention. Brain breaks serve to reduce this overload, allowing students to mentally recharge before reengaging academic content more effectively.

Complementing this is Self-Regulation Theory (Zimmerman, 2002), which emphasizes learners' ability to manage their emotional and cognitive states to achieve learning goals. Brain breaks, especially those that include mindfulness, or movement, can support self-regulation by helping students reset their focus, manage stress, and sustain motivation throughout the lesson. These mechanisms are particularly relevant in EFL classrooms, where students may face heightened anxiety, especially when speaking or performing in a foreign language.

Additionally, the study draws on Vygotsky's Social Constructivism Theory (1978), which underscores the importance of social interaction in learning. From this perspective, classroom participation is not just individual behavior but a social process that requires interaction, communication, and engagement. Brain breaks that include collaborative, playful, or interactive components may contribute to this social dynamic by lowering affective filters and creating a more inviting environment for language use.

Finally, the study is informed by Engagement Theory (Kearsley & Shneiderman, 1998), which posits that meaningful learning occurs when students are actively involved in tasks that are interactive and personally relevant. Brain breaks when used purposefully can increase behavioral, emotional, and cognitive engagement by allowing students to step back from passive reception and return to learning with renewed energy and interest.

Together, these theories provide a multidimensional lens through which brain breaks can be understood not merely as moments of pause, but as pedagogical tools that support cognitive function, emotional readiness, social interaction, and participatory learning. By examining how

Algerian EFL teachers perceive and apply these breaks, the study connects theoretical knowledge with real-world educational practice.

While these theories provide a strong foundation for understanding the pedagogical role of brain breaks, it is equally important to examine how such engagement strategies manifest in the Algerian EFL context.

6.1. Studies on Participation and Engagement in Algerian EFL Classrooms

In the Algerian context, Learner participation in EFL classrooms remains a growing concern. While brain breaks have not yet been widely studied locally, several researchers have highlighted barriers to learner engagement. For example, Gouider and Ameziane (2021) found that most classroom time is dominated by teacher talk, leaving few chances for students to interact actively. Similarly, Elbechir (2021) reported that teachers often base their interactions on students' personalities or motivation levels, which can affect how equally students participate.

In terms of curriculum, Khattala (2021) pointed out that many Algerian EFL teachers are excluded from the design of syllabi, which limits their ability to adapt lessons to better engage students. Miliani (2003) also noted that overcrowded classrooms, limited materials, and a focus on traditional methods make active participation more difficult.

Together, these studies suggest that while Algerian teachers strive to create engaging lessons, systemic factors like rigid curricula and large class sizes still pose challenges. This makes it especially important to explore alternative strategies, such as brain breaks, that could support more interactive and student-centered learning.

7. Research Gap

Although international research highlights the benefits of brain breaks in improving focus, reducing stress, and increasing participation, most of these studies are based in primary school contexts or general education settings. Very few have examined how brain breaks function in language learning environments, especially English as a Foreign Language (EFL) classroom. Even fewer adopt a teacher-centered perspective, focusing instead on learner outcomes without exploring how teachers choose, implement, or evaluate these strategies.

In the Algerian context, the gap is even more pronounced. There is no formal research that investigates how brain breaks are used or even understood by Algerian middle school EFL teachers. While some teachers may intuitively use short games, stretching, or humor to re-engage students, these practices remain undocumented and unexamined in academic literature. Moreover, current studies do not address how real classroom challenges in Algeria, such as large class sizes, packed timetables, and limited access to training, influence the use of brain breaks in practice.

In addition, no research to date has looked into how brain breaks could be integrated into Algerian curricula, teacher training, or daily lesson plans. As such, both pedagogical and policy perspectives are missing from the conversation. This leaves a critical gap in understanding not only whether teachers find brain breaks useful, but also how these strategies could be sustainably supported in Algerian middle schools.

By focusing on teacher perspectives and classroom experiences and supporting them with learner feedback, this study aims to fill that gap. It provides a local, classroom-based view of how brain breaks are perceived, adapted, and potentially implemented by Algerian EFL teachers to boost learner participation.

Chapter Two: Research Methodology and Design

Chapter Two: Research Methodology and Design

Section one: research design and approach

Introduction

Building on insights from the literature review, which underscores the significance of brain breaks in fostering learner engagement, this chapter outlines the research methodology adopted to investigate teachers' perspectives on the role of brain breaks in enhancing participation in Algerian middle school EFL classrooms. It defines the research paradigm, details the research design and approach, describes the data collection and analysis procedures, and addresses quality measures and ethical considerations. By presenting a rigorous methodological framework, this chapter ensures transparency and enables readers to evaluate the reliability and validity of the study's findings.

1.1. Research Questions and Objectives

The primary aim of this research is to investigate Algerian middle school EFL teachers' perceptions regarding the use of brain breaks as a strategy to increase classroom participation. By examining how teachers implement brain breaks and the challenges they encounter, this research seeks to provide valuable insights that can inform pedagogical practices and policy decisions regarding learner engagement in Algerian middle schools. To achieve this aim, the study is guided by the following research questions:

- How do Algerian middle school EFL teachers perceive the role of brain breaks in promoting participation?

- What types of brain breaks do teachers use in their classrooms to enhance pupil participation?
- What challenges do teachers face when integrating brain breaks into their regular EFL teaching practices?

Based on these research questions, the study seeks to accomplish the following objectives:

- To investigate Algerian middle school EFL teachers' perceptions of brain breaks as a tool for boosting classroom participation.
- To investigate students' reactions to brain breaks as observed by teachers
- To explore the challenges faced by teachers in incorporating brain breaks into their teaching practices.

The following section discusses the research paradigm and approach adopted in this study.

1.2. Research Paradigm

This study adopts a Pragmatic research paradigm, known for its flexibility and relevance in mixed-methods research. Pragmatism emphasizes practical outcomes and encourages the use of both quantitative and qualitative methods depending on the research problem (Creswell & Plano Clark, 2018). Rather than adhering to a single philosophy, researchers select tools that best suit the study's goals.

The choice of pragmatism aligns with the study's aim to explore Algerian middle school EFL teachers' attitudes toward brain breaks, combining structured questionnaires for measurable data and semi-structured interview for deeper insights. This approach supports the integration of

teacher experiences with supporting observable patterns drawn from learner responses, placing the primary emphasis on teacher perspectives.

Pragmatism also holds that reality is shaped by context and human action (Biesta, 2010), which fits this study's focus on how teachers perceive and apply brain breaks in response to classroom needs. It acknowledges the dynamic nature of teaching decisions while seeking patterns that can inform wider practice.

By adopting this paradigm, the study bridge's objective data and personal narratives, offering a balanced and realistic understanding of how brain breaks may foster participation. This strengthens the study's validity and ensures its findings are relevant to teachers, policymakers, and researchers.

1.3. Research Design

Given the nature of the research questions, which aim to investigate numerical trends and contextual experiences related to teachers' use of brain breaks supported by learner feedback, this study adopts a mixed-methods research design. This approach combines both quantitative and qualitative methods, providing a more thorough and balanced perception of complex educational practices (Creswell, 2014). It suits the study's dual purpose: identifying general patterns in teachers' awareness and use of brain breaks, while also exploring the deeper meanings and personal insights behind these practices.

The quantitative phase involves a structured questionnaire distributed to a wide sample of middle school EFL learners across Bordj Bou Arreridj This phase focuses on gathering measurable data about the frequency, purpose, and effectiveness of brain breaks, offering a clear overview of their use in real classrooms.

Meanwhile, the qualitative phase follows a multiple case study design aimed at uncovering in-depth, real-world experiences of teachers with brain breaks. According to Yin (2009), this approach is valuable when studying a phenomenon in its natural context, especially when the boundaries between the event and its setting are not clear. Selecting teachers from various schools allows comparisons across different environments and teaching cultures.

By combining both phases, the research gains both wide coverage and detailed understanding. The questionnaire highlights common patterns, while the case studies offer deeper insights into personal, institutional, and cultural factors shaping the use of brain breaks. This design enhances the credibility and richness of the findings by addressing both objective data and subjective experiences.

1.4. Research instruments

To effectively address the research questions and fulfill the objectives of the present study, two primary research instruments were employed: semi-structured interview conducted with teachers as the core data source, and a structured questionnaire administered to learners to provide supporting insights.

The questionnaire aimed to gather learners' perceptions of how brain breaks affected their engagement and participation in English classes. The interview aimed to explore teacher's classroom practices, beliefs, and challenges related to brain break implementation.

1.4.1. Structured Questionnaire

A structured questionnaire was administered to middle school EFL learners to gather supporting data about their perceptions of brain breaks and how these may align with or contrast teacher observations. As Cohen, Manion, and Morrison (2018) note, questionnaires are one of the

most effective tools for collecting data in educational research when the aim is to obtain a broad overview of opinions, behaviors, and trends. The structured format of this questionnaire was particularly suitable for ensuring the consistency of responses, enabling the researcher to quantify patterns in teachers' awareness, use, and evaluation of brain breaks as a classroom strategy.

The questionnaire was composed of closed-ended questions designed to limit ambiguity and facilitate ease of analysis. This type of question allowed participants to select predefined responses, ensuring that the data could be systematically coded and statistically interpreted (Dörnyei, 2007). The structured nature of the instrument also minimized the risk of researcher bias, as it limited interpretive influence during the data collection phase.

1.4.2. Semi-Structured Interview

As the primary qualitative instrument of this study, semi-structured interview was employed to explore Algerian EFL teachers' beliefs, practices, and challenges related to brain breaks. Interview is particularly effective for exploring the reasoning, interpretations, and contextual factors underlying teachers' responses, allowing participants to elaborate on their experiences in their own words (Kvale & Brinkmann, 2009). The semi-structured format offered a balance between guided questioning and open dialogue, providing enough structure to ensure that key themes were covered while still allowing for flexibility in the depth and direction of the conversation.

The interviews were conducted with a smaller, targeted group of teachers who volunteered, typically ranging between (15) and (20) participants. These teachers were selected based on their willingness to provide detailed accounts of their experiences and their familiarity with the use of brain breaks. The interview questions were designed to explore teachers'

pedagogical reasoning, the practical challenges they faced in using brain breaks, and the real-world outcomes they observed in terms of learner engagement and participation.

Conducting interviews in this manner allowed the researcher to probe deeper into emerging themes, and gather rich, descriptive data. The inclusion of the interview instrument also enhanced the overall credibility of the research by enabling data triangulation and offering a more comprehensive understanding of the subject matter.

1.5. Sampling

The study employed purposive sampling for both phases. For the questionnaire, a sample of middle school EFL learners was selected from several public schools across different districts. For the interview, teachers were selected based on their years of experience, willingness to participate, and familiarity with brain break strategies.

As described by Creswell and Poth (2018), purposive sampling allows researchers to select participants with relevant knowledge of the topic. This method was well-suited for the study's mixed-methods design, as it focused on gathering both general trends and deeper personal insights about brain breaks.

The sampling process unfolded in two stages:

1.5.1. Structured Questionnaire Sampling

In the quantitative phase, a broad sample of middle school EFL learners was reached through hand-delivered paper questionnaires, administered with the help of cooperating teachers from various schools.

1.5.2. Semi-Structured Interview Sampling

For the qualitative phase, a smaller group of volunteers from the questionnaire respondents were invited for semi-structured interview Selection was based on variation in teaching experience, class size, school location, and familiarity with brain breaks, ensuring a rich and balanced view of classroom realities. Typically, 20) teachers participated, which allowed for depth without overwhelming the analysis.

In total, 50) learners participated in the questionnaire phase. While purposive sampling does not aim for statistical generalization, the variety of participants across regions, experiences, and school types strengthened the credibility of the findings. The researcher also acknowledges that self-selection may have introduced some bias, as teachers interested in innovation were more likely to participate.

1.6. Data Collection

In this study, Data were collected using two main tools:

(1) A structured questionnaire distributed to middle school EFL learners to assess their awareness, enjoyment, and engagement with brain breaks during English classes; and

(2) Semi-structured interviews with middle school EFL teachers, to gather deeper insight into their classroom experiences, implementation strategies, and challenges related to brain breaks.

For learners, the forms were distributed through their teachers with instructions for completion. For teachers, the forms were shared directly before the interview.

To ensure a clear understanding and accurate responses, the learner questionnaire was provided in both English and Arabic. This bilingual format helped accommodate learners' language proficiency levels and ensured that the questions were accessible to all participants. Teachers were also present during administration to offer clarification if needed, without influencing the learners' answers.

The learner questionnaire was designed to gather their opinions and experiences with brain breaks during English lessons.

The teacher interview was semi-structured and conducted with volunteer EFL teachers. This interview allowed them to share their thoughts, experiences, and challenges in using brain breaks in their classrooms.

Using both learner questionnaires and teacher interview allowed the researcher to gain insight into how brain breaks are experienced by learners and interpreted by educators, with a particular focus on the teachers' perception as the central lens of the study.

1.6.1. Administration of the learner Questionnaire

The learner questionnaire was administered during May 2025 across several Bordj middle schools. is completed the questionnaire under the supervision of their English teachers to ensure clarity and voluntary participation.

The questionnaire was anonymous and targeted middle school EFL learners in order to collect data regarding their awareness, perceptions, and responses to brain breaks during English classes. A total of [50] learner responded to the questionnaire. These participants represented a range of middle school levels, generally between 12 and 15 years old, which reflects the standard age of middle school learners in Bordj Bou Arreridj. Most learners were in 2nd and 3rd year,

already exposed to foundational English learning, making them suitable participants for this study The responses were collected and organized using SPSS (or Excel, if used), and analyzed descriptively to identify trends related to learner engagement and participation levels before and after the use of brain breaks.

1.6.2. Conduct of the Semi-Structured Teacher Interview

Semi-structured interview was conducted with a selected group of Algerian middle school EFL teachers to explore their perceptions, experiences, and practices regarding the use of brain breaks in their classrooms. A total of [35] teachers were invited, and [20] agreed to participate in the interview voluntarily.

The interviews were conducted either in-person or online (via Google Meet or phone), based on the teacher's availability and location. Each session lasted between 30 and 60 minutes, allowing sufficient time for open discussion while maintaining focus on the core research questions. With the participants' consent, the interviews were recorded and later transcribed for thematic analysis.

The participants varied in terms of teaching experience, gender, and school environment, providing a diverse perception on the integration and perceived impact of brain breaks in Algerian middle school EFL settings.

Table 1 below summarizes the profiles of the interviewed teachers:

Table 1: Interview Participants' Profiles

Participants	**Gender**	**Year of experience**	Participants	Gender	Year of experience
Teacher 1	Female	6	**Teacher 11**	Male	6

Teacher 2	Male	2	**Teacher 12**	Female	7
Teacher 3	Female	4	**Teacher 13**	Male	5
Teacher 4	Male	8	**Teacher 14**	Female	13
Teacher 5	Female	15	**Teacher 15**	Female	8
Teacher 6	Female	10	**Teacher 16**	Female	10
Teacher 7	Male	7	**Teacher 17**	Male	9
Teacher 8	Male	3	**Teacher 18**	Male	1
Teacher 9	Female	9	**Teacher 19**	Female	2
Teacher 10	Male	11	**Teacher 20**	Female	6

1.7. Data Analysis

The data collected in this study was analyzed using a mixed-methods approach, combining descriptive statistical analysis for the quantitative learner questionnaire and thematic analysis for the qualitative teacher interview. This approach ensured a comprehensive understanding of both learner responses and teacher perspectives regarding the use of brain breaks in middle school EFL classrooms.

1.7.1. Descriptive Statistical Analysis of the Learner Questionnaire

The responses to the structured questionnaire administered to learners were first compiled and organized using Microsoft Excel. Descriptive statistics, including frequencies and percentages, were calculated to summarize the learners' attitudes toward English classes, their experience with brain breaks, and their perceived levels of participation and focus before and after such activities.

The quantitative results were presented using tables and bar charts to clearly Illustrate the distribution of responses. This method provided a clear overview of general trends among participants and allowed for an accessible interpretation of the learner's feedback related to brain breaks.

1.7.2. Thematic Analysis of the Teacher Interview

To analyze the qualitative data collected from semi-structured teacher interview, this study used the six-phase thematic analysis framework proposed by Braun and Clarke (2006). This method helped us make sense of the rich, descriptive responses by identifying patterns and themes that reflect teachers' experiences with brain breaks in their EFL classrooms.

The six steps of thematic analysis used in this study are explained below:

Familiarization with the Data

All interviews were recorded and then transcribed manually. The transcripts were read several times to gain a deep understanding of what the teachers shared. This step helped the researcher notice early patterns and become fully immersed in the data.

Generating Initial Codes

Important ideas and repeated phrases from the interviews were highlighted and labeled with short phrases or "codes." For example, when a teacher said, "They become more focused after a short game," it was coded as "improved focus." This stage followed an inductive approach, meaning that codes were drawn directly from the data, not from a predefined theory.

Searching for Themes

The codes were then grouped into larger categories that shared similar meanings. These categories became the first version of the theme. For instance, codes related to learner excitement, movement, and laughter were grouped under a theme like “Increased Classroom Energy.

Reviewing Themes

All identified themes were checked again to make sure they were supported by enough evidence and made sense in relation to the research questions. Any overlapping, weak, or unclear themes were either revised or removed.

Defining and Naming Themes

Each theme was given a clear and descriptive name that captured its central idea. Definitions were written for each theme, and key examples from the interviews were selected to illustrate what the teachers meant.

Writing the Report

Finally, the results were written in Chapter Three. Each theme was explained in detail and supported with direct quotes from the teachers. Where possible, learner questionnaire results were used to back up the interview findings, providing a more complete picture.

This process ensured that the analysis remained faithful to the teachers' voices while also connecting clearly to the study’s research questions. By combining qualitative themes with learner data, the study offers a fuller, more trustworthy understanding of how brain breaks influence learner participation in Algerian middle school EFL classrooms.

2. Ensuring Research Quality and Trustworthiness

In qualitative and mixed-methods research, ensuring the trustworthiness of findings is essential for producing results that are credible, meaningful, and ethically sound. This study followed the widely recognized framework by Lincoln and Guba (1985), which outlines four key criteria of trustworthiness: credibility, transferability, dependability, and confirmability. In addition, strict adherence to ethical principles was maintained throughout the research process.

2.1. Credibility

Credibility refers to the extent to which the study's findings reflect the actual experiences and perspectives of the participants. To enhance credibility, this study employed triangulation by combining data from two different sources: learner questionnaires and teacher interviews. This helped to cross-verify results and minimize potential researcher bias. Moreover, interviews were conducted in a familiar language and comfortable environment, allowing participants to respond openly and authentically

2.2. Transferability

Transferability concerns whether the findings of this study can be applied to similar educational contexts. Although the research was conducted in a limited number of Algerian middle schools, rich, detailed descriptions of participants, settings, tools, and procedures were provided. This allows other researchers and practitioners to determine whether the findings might be relevant to their own EFL teaching environments. In addition, purposeful sampling of teachers from diverse backgrounds added depth and variability, supporting broader applicability.

Dependability

Dependability refers to the consistency and stability of the research process over time. To establish this, the study followed a well-structured methodology, clearly outlining each stage from data collection to analysis and interpretation. Detailed documentation, regular supervision, and ongoing feedback helped ensure that the process was systematic and replicable, even if conducted by a different researcher in the future.

Confirmability

Confirmability focuses on ensuring that the findings represent the views of the participants and not the biases of the researcher. To maintain objectivity, all interpretations were firmly grounded in the data collected from the interview and questionnaires. Direct quotations from participants were included to support key points, and reflexive notes were kept throughout the research process to help the researcher stay aware of personal assumptions or influences.

Ethical Considerations

This research adhered to ethical guidelines established for educational research, particularly those outlined by the British Educational Research Association (BERA, 2018)

Confidentiality and Anonymity: Participants' identities were protected through the use of pseudonyms or identification codes in all transcripts and reports. No personal or identifying information was disclosed. All data was securely stored and accessed only by the researcher.

Minimizing Harm: Every effort was made to ensure that learners and teachers felt comfortable and respected throughout the research process. The language used in the questionnaire and interview questions was age-appropriate and culturally sensitive.

By observing these ethical standards and prioritizing trustworthiness throughout the research process, this study aimed to produce valid, respectful, and reliable insights into the use of brain breaks in Algerian middle school EFL classrooms.

Limitations of the study

Although this study was carefully planned and conducted, like any academic research, it was not without limitations. These limitations did not affect the validity of the results but are important to consider when interpreting the findings.

The study aimed to explore the role of brain breaks in boosting learner participation in Algerian middle school EFL classrooms. While it successfully gathered valuable insights from both students and teachers, certain practical and contextual challenges were encountered during the research process. The main limitations include:

- Limited time for data collection due to exam periods and school schedules reduced the number of participants that could be reached.
- Lack of familiarity with the term “brain breaks” among some teachers and students, which required explanations before answering, and may have slightly influenced the way questions were understood.
- Sample was limited to a few schools in one region, so while the findings are useful, they cannot be generalized to all Algerian middle schools.

Despite these limitations, the study still provides a strong starting point for future research and gives meaningful insights into how brain breaks can support participation in the EFL classroom context.

Conclusion

This chapter summarized the significance of integrating brain breaks in enhancing classroom participation among Algerian middle school EFL learners. It also emphasized the role of teachers’ perspectives in shaping the implementation of brain breaks and their impact on

students' engagement and motivation. A mixed-methods approach and relevant tools, namely, the learner questionnaire and teacher interview, were employed to obtain reliable and valid insights into how brain breaks support learners' focus, emotional comfort, and active involvement in English language learning.

Chapter Three: RESULTS, DISCUSSION, CONCLUSIONS AND RECOMMENDATION

Chapter Three: result discussion conclusions and recommendations

Introduction

This chapter presents the findings of the current study through a thematic integration of data collected from two instruments: learner questionnaires and semi-structured teacher interview. The results are organized into six themes that reflect the research questions and the central aim of exploring how brain breaks influence classroom participation in Algerian EFL middle schools. Each theme includes qualitative insights supported by quantitative trends to provide a comprehensive interpretation of the data.

Presentation of results

Teacher Awareness and Familiarity with Brain Breaks

The first theme explores teachers' awareness and understanding of brain breaks. Among the 20 EFL teachers interviewed, only six were initially familiar with the term "brain breaks" prior to this study.

However, upon explanation, nearly all participants recognized that they had informally used similar strategies such as short games, songs, or stretches during lessons. This indicates a gap in formal knowledge but highlights an intuitive practice among teachers.

"I didn't know it was called a brain break, but I often ask learners to stand and stretch between activities." Teacher 3

"Sometimes I use music or jokes, just to bring the energy back." Teacher 7

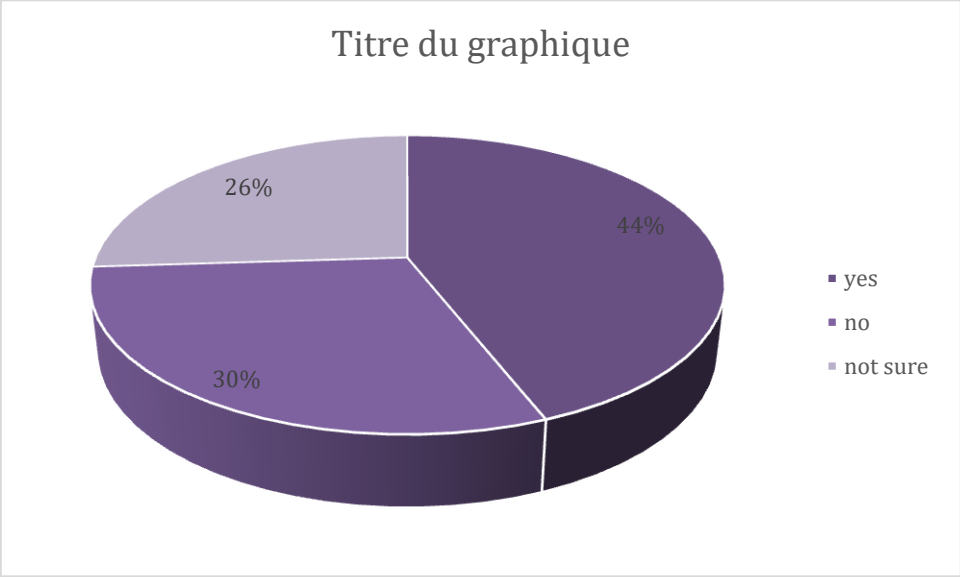
"Word Match and Word Search are the most commonly used word games… Teachers reported adapting games to meet pupils' needs" Teacher 10

"Studying through Pose help them to relax and motivate them to study." Teacher 17

These findings suggest that while the concept is not widely known by name, the practice is present in various improvised forms. This aligns with the pragmatic teaching strategies often adopted in Algerian classrooms where teachers rely on their own creativity.

To verify this pattern, learners' responses to the question “Has your teacher ever used short games or movement breaks in class?” were analyzed.

Figure 1 below presents the results from questionnaire item (3), (Has your teacher ever used short games or movement breaks in class?)



44% answered “Yes,” 26% “Not Sure,” and 30% “No.” The high percentage of “Not Sure”

Suggests a lack of formal identification or terminology, reinforcing the idea that these practices are happening informally.

Interpretation: This theme reinforces the need for structured teacher training on brain breaks. While teachers already apply such strategies, the lack of formal recognition may hinder their optimal use or integration into curriculum planning.

Impact of Brain Breaks on learner Engagement and Participation

This theme explores how teachers perceive learner engagement before and after the brain breaks. Teachers unanimously agreed that these activities boost energy, reduce fatigue, and create a more responsive learning environment.

"When I start with a riddle or quick song, learners smile and participate more, even those who are usually passive." – Teacher 1

"In long grammar lessons, if I don't do something fun, they shut down. Brain breaks are like fuel." – Teacher 9

Many teachers noted that even a one-minute activity could reignite attention.

Several teachers reported that after brain breaks, students displayed fewer off-task behaviors such as talking, yawning, or looking distracted. One teacher noted:

"When I do a fun 2-minute activity, even the noisy ones calm down and focus again. "Teacher 2

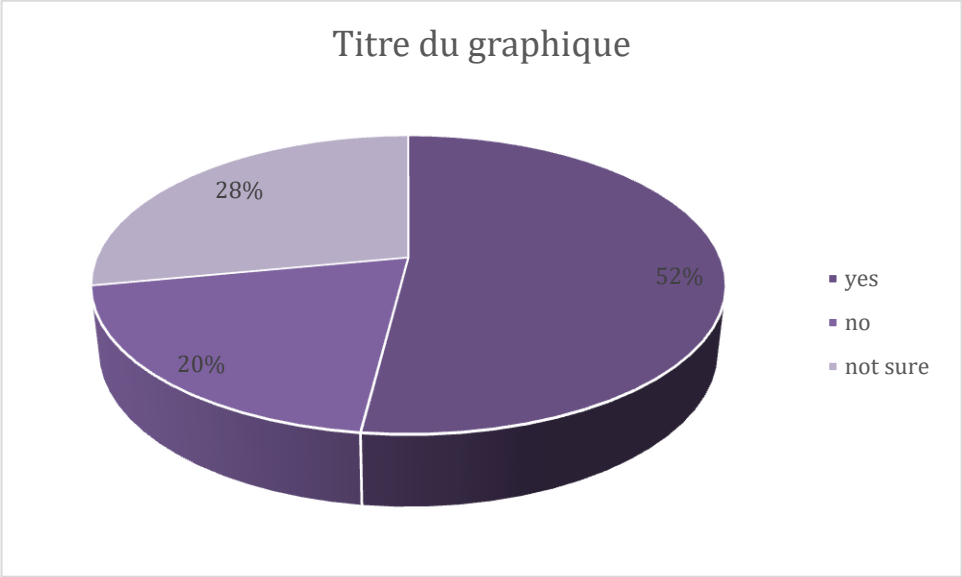
Another teacher highlighted:

"After a short role-play or movement break, students are more willing to raise their hands in grammar exercises." Teacher 19

It lets you appreciate the hour of English…'' Teacher 7

Students were asked: "Do you participate more in class after a brain break?"

Figure 2 below presents the results from questionnaire item (6), (Do you participate more in class after a brain break?)



52% said “Yes,” 28% said “Sometimes,” and 20% said “No.”

Interpretation: The strong agreement between teachers and students supports the theoretical framework based on Self-Regulation Theory (Zimmerman, 2002). Brain breaks enhance students’ ability to manage attention and emotional energy, contributing to a participative classroom environment.

Types of Brain Breaks Used and Preferred

Teachers described using a variety of brain break strategies, including:

Physical activities (stretching, clapping games) ،Songs or chants short riddles or vocabulary games Breathing or mindfulness exercises.

These methods were often chosen based on the energy level of the class or the time available. Most teachers reported improvising based on what had worked in the past rather than using a planned routine.

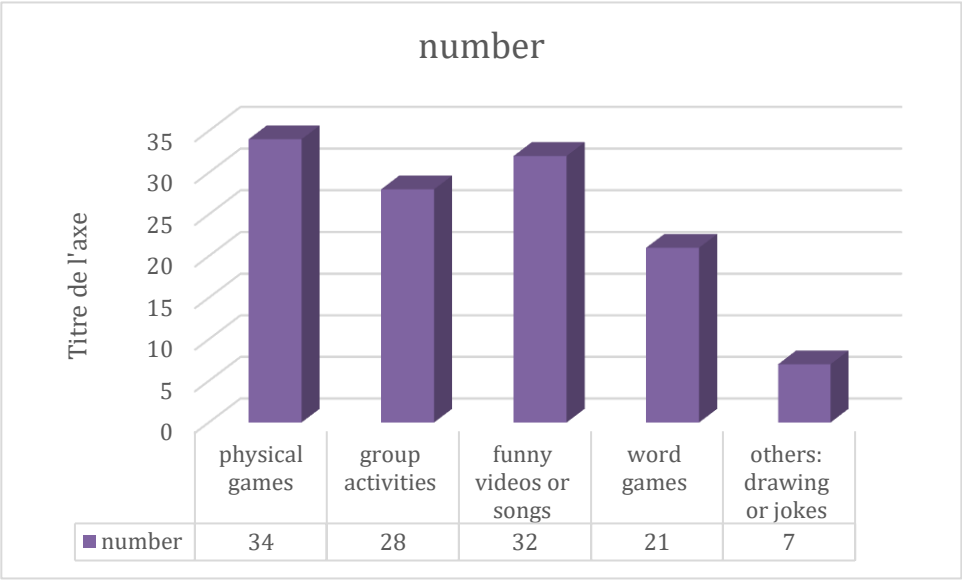
“My best one is the game where they pass the word quickly; it becomes funny and engaging.” – Teacher 4

A few teachers noted improved participation in pair or group work after brain breaks.

Teacher 14 said: “They talk more in English after we play a quick vocabulary game.”

Students were asked which brain breaks they preferred.

Figure 3 below presents the results from questionnaire item (7), (What kind of brain breaks do you enjoy most?)



Physical games and songs were the top choices, supporting the idea that movement-based breaks are the most engaging.

Interpretation: This variety supports the applicability of Vygotsky’s Social Constructivism (1978), as many of the activities involve peer interaction and collaborative engagement.

Impact on Classroom Participation and Dynamics

This theme addresses the changes in learner engagement, confidence, and classroom energy following the use of brain breaks. Many teachers reported that brain breaks created a more relaxed environment, especially typically shy or passive students, and enhanced overall participation.

“I’ve seen shy students raise their hands after a simple dance or joke. It removes tension.” Teacher 12

Some teachers used brain breaks strategically:

“I plan them before hard topics. It helps the transition, and they don’t resist the lesson.” Teacher 16

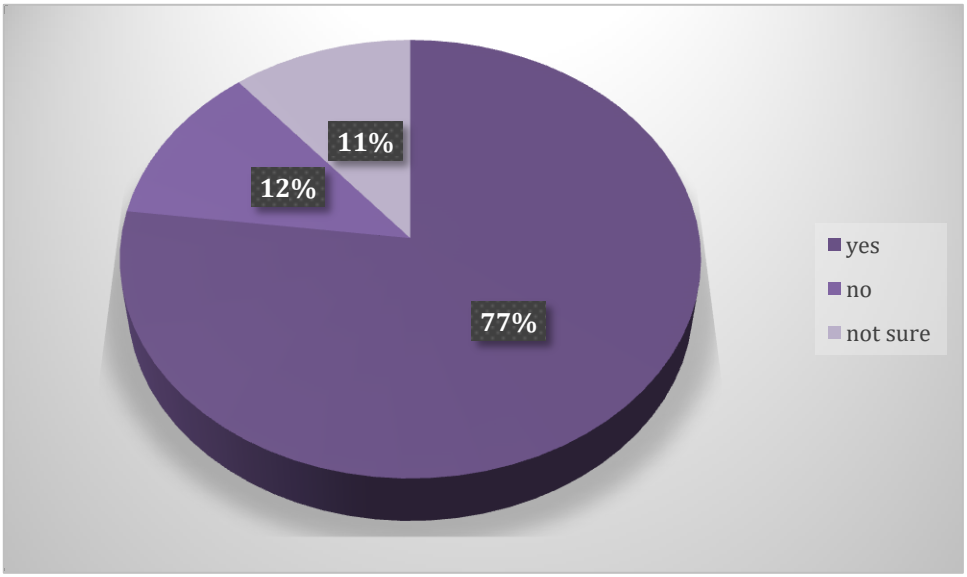
Teacher 5 stated: “I had some extra time after the lesson ended, and I wanted to check if my students really understood the lesson, and I also had a group of very shy students who never liked participating. So, I decided to try a fun activity instead of asking direct questions. I used a simple clapping game called ‘Clap for the Right Word’. At first, they were quiet and unsure, but after a few tries, they started laughing and clapping on their own even the shy ones joined in without me asking. This small game helped them feel comfortable, and I could see that they were really following the lesson. They just needed a little fun to feel more confident and involved.”

One teacher told a vivid story:

“In one lesson, students were struggling with past simple verbs. I paused and played a quick ‘charades’ game where they acted out verbs like ‘jumped’ or ‘slept.’ Afterwards, they remembered the verbs much better and even corrected each other later.” Teacher 11

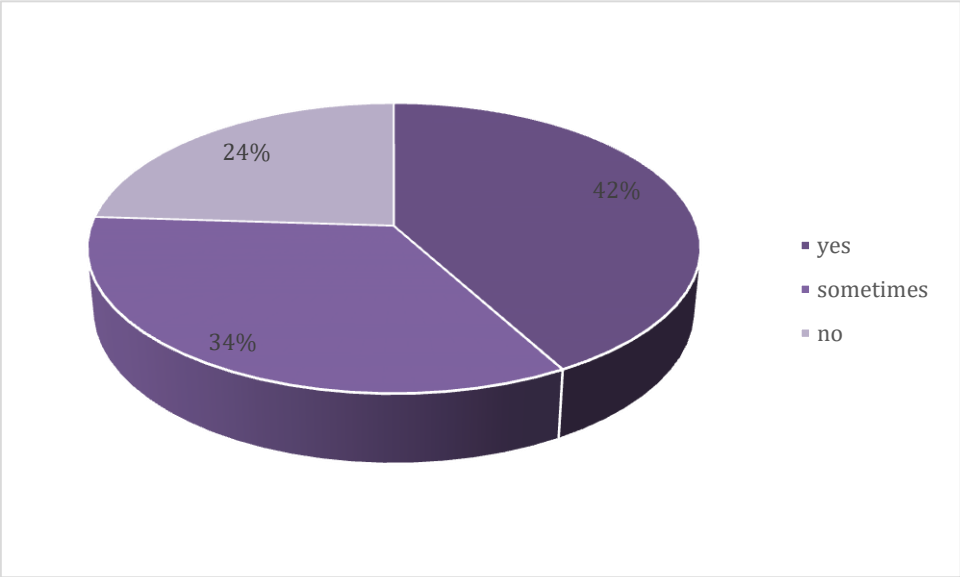
Students were asked: Do brain breaks make your English classes more fun?

Figure 4 below presents the results from questionnaire item (5), (Do brain breaks make your English classes more fun?).



Interpretation: The findings suggest that brain breaks contribute to a positive shift in classroom dynamics, particularly by encouraging hesitant students to participate more actively. This aligns with Cognitive Load Theory (Sweller, 1988), which emphasizes the importance of reducing mental fatigue to improve learning outcomes. Short, enjoyable breaks help re-energize learners and re-engage them cognitively, especially when transitioning into or out of challenging topics.

Figure 5 below presents the results from questionnaire item (4), (How do you feel after a brain break?).



Implementation Challenges and Teacher Concerns

This theme addresses the fourth research question: What challenges do teachers face when attempting to implement brain breaks in middle school EFL classrooms? Teachers shared a range of difficulties related to both institutional and classroom-specific factors. The most frequently mentioned were time limitations, lack of professional development, student behavior, and overcrowded classrooms.

This section answers the fourth research question regarding challenges faced by teachers. Despite the positive effects, several implementation barriers were mentioned:

Time pressure: “With 45-minute classes, I struggle to include everything, let alone extra activities.” Most of teachers

Lack of training: “I just do what I think helps. I never got official training about this.” Teacher 7

Classroom control: “Sometimes they get too loud or distracted and I lose time regaining focus.” Teacher 15

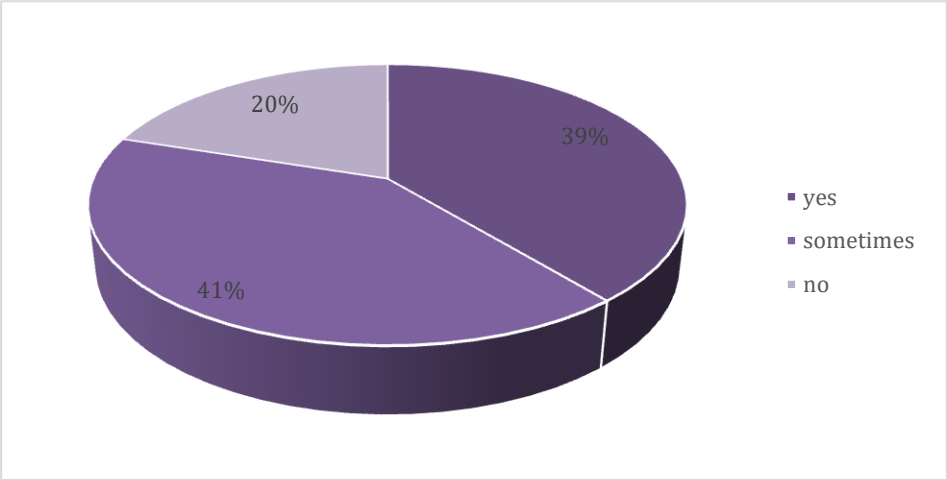
Overcrowded Classrooms: “My class has 40 pupils. There’s barely enough room to walk, let alone move or do activities.” Teacher 4

The majority of teachers indicate the number of 35 to 40 learner in class

“Managing a large class and trying to keep order during energizers is very stressful.” Teacher 13

Students’ perceptions mirrored these teacher concerns. Two questionnaire items offered key support:

Figure 6 below presents the results from questionnaire item (2), (Do you feel tired or bored during your English lessons?).



Interpretation: These barriers reflect structural issues in Algerian schools Bordj Bou Arreridj large class sizes, rigid time allocations, and the absence of pedagogical training contribute to an environment in

which teachers must rely on personal intuition and improvisation rather than informed strategy. Nonetheless, the willingness to adopt such strategies, despite the challenges, highlights their perceived value.

Teacher Willingness to Adopt Brain Breaks Systematically

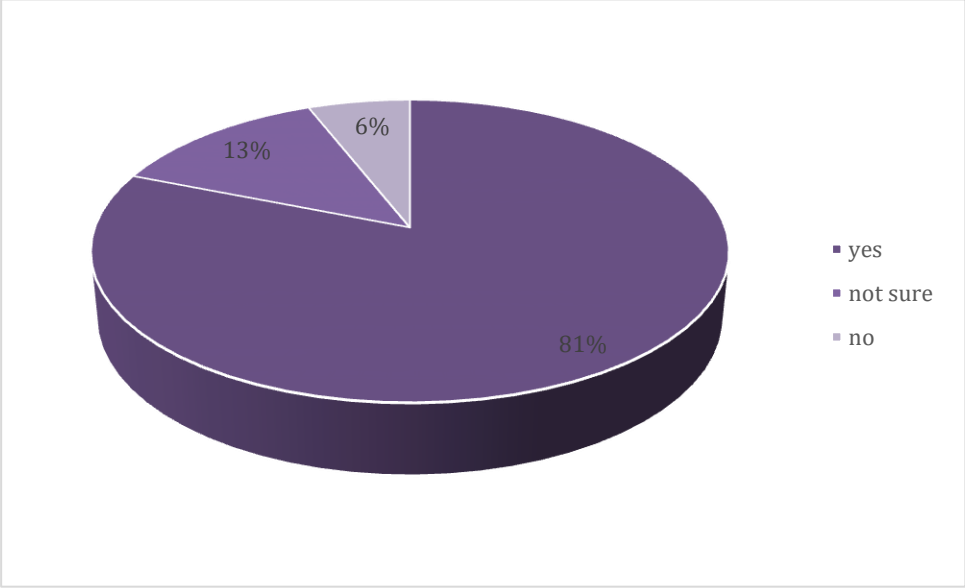
Almost all teachers expressed interest in using brain breaks more often if they received proper training or resources.

> "If someone gives me a list of activities or videos, I will use them regularly." Teacher 6

> "I believe in them now, but I need help to do it right." Teacher 10

This finding is strongly echoed in the student data. The following questionnaire item directly aligns with teacher intentions:

Figure 7 below presents the results from questionnaire item (8), (Would you like your teacher to use more brain breaks?).



Interpretation: This finding supports the need for professional development workshops or inclusion of brain breaks in EFL teaching guides within Algerian teacher training programs. Thus, a logical implication is the need for teacher training programs in Algeria to incorporate modules on brain breaks, possibly integrated into pre-service and in-service programs.

Overall Discussion

This study aimed to explore Algerian middle school teachers' perceptions of brain breaks and how these strategies affect classroom participation in EFL lessons. By using a mixed-method approach that included teacher interview and learner questionnaires, a clearer understanding emerged regarding the awareness, application, challenges, and outcomes of brain breaks in the Algerian context.

The first major finding related to teachers' awareness of brain breaks. While only a few teachers had heard about the term before, most were already using similar strategies such as games, songs, or stretching. This shows that although brain breaks are not officially integrated into training or curriculum, many teachers use them intuitively. The learner responses supported this; however, a large number of students were unsure whether their teachers used brain breaks. This reflects a lack of shared terminology between teachers and students and points to a need for greater awareness and professional development.

The second key finding concerned the Impact of brain breaks on learner engagement. Both teachers and students agreed that brain breaks helped boost energy and improve participation, especially during long or difficult lessons. Teachers observed that even short, fun activities made students more responsive and reduced off-task behavior. This is supported by Self-Regulation Theory (Zimmerman, 2002), which suggests that breaks help learners manage their attention and emotional state essential for staying involved in classroom tasks.

The third theme focused on the types of brain breaks used and preferred. Teachers mentioned using a wide variety of activities, most of which were chosen spontaneously depending on the mood or energy level of the class. Students preferred physical games and music, confirming that movement and fun are essential elements for engagement. These findings support Vygotsky's Social Constructivist theory, which emphasizes the role of interaction and social activity in learning.

In terms of classroom dynamics, teachers shared that brain breaks helped create a more relaxed, open atmosphere. Shy and passive students became more confident and willing to participate after engaging in simple games or humorous tasks. These activities reduced stress and helped learners retain information

better. This reflects the principles of Cognitive Load Theory (Sweller, 1988), as reducing mental strain allows students to focus more effectively and learn with ease.

However, the study also uncovered several challenges. Teachers reported difficulty implementing brain breaks due to limited time, large class sizes, noise control issues, and lack of formal training. These challenges are common in many Algerian schools, where classrooms are overcrowded and teaching time is tightly scheduled. Despite these issues, most teachers showed a strong interest in adopting brain breaks more systematically provided they receive support, guidance, and ready-to-use materials.

Finally, both teachers and students expressed a clear willingness to use brain breaks more often. Students said they enjoyed these moments and wanted more of them, while teachers emphasized their usefulness but requested help in applying them more effectively. This reveals a promising opportunity for educational stakeholders to introduce brain breaks formally into teacher training programs in Algeria.

In summary, this study shows that brain breaks are not just enjoyable for students, but also effective in improving classroom participation and learning atmosphere. While currently underused and informally applied, they hold strong potential to become a valuable part of EFL teaching practice, especially if supported by training, resources, and policy.

General conclusion

Classroom participation plays a fundamental role in the process of foreign language learning, especially for middle school EFL learners where engagement is directly linked to motivation and achievement. However, as demonstrated in recent educational studies, maintaining learner attention in long or traditional lessons remains a common challenge for teachers.

The data collected through the learner questionnaire and teacher interview confirmed that brain breaks though often unrecognized by name are already being used informally in Algerian classrooms through games, movement, or humor. These activities were shown to have a noticeable impact on students' readiness to participate, particularly after periods of mental fatigue or during grammar-heavy sessions.

The aim of this research was to explore how Algerian EFL teachers perceive the use of brain breaks and how these short activities influence classroom participation. The use of a mixed-

methods approach allowed for both numerical trends and detailed personal insights to emerge. Teachers described how students became more attentive, cooperative, and confident after brain breaks, while students themselves reported enjoying the sessions and feeling more willing to engage in class.

In light of the findings, the initial assumption of the study has been confirmed: brain breaks have a positive influence on learner participation when used appropriately. If supported by structured resources and training, they can become a valuable tool in improving the classroom atmosphere and promoting active learning among EFL learners in Algerian middle schools.

Pedagogical recommendations

Based on the findings of this study, several recommendations can be made for teachers, school administrators, and future researchers. These recommendations aim to improve the use of brain breaks in Algerian middle school EFL classrooms and support better Learner participation.

The main recommendations are:

1. Provide training workshops for EFL teachers on how to use brain breaks effectively, including examples of physical, mental, and relaxation activities.
2. Integrate brain breaks into teacher education programs so that new teachers can learn how to use them as part of their regular lesson planning.
3. Encourage schools to include brain breaks in the official timetable or teaching guidelines to give teachers permission and time to use them during lessons.
4. Design and distribute simple brain break resources (like posters, cards, or short videos) in Arabic, French, or English to help teachers apply them easily.

5. Conduct future research with classroom observations, larger samples, or experimental designs to measure the exact effects of brain breaks on learning outcomes.

These recommendations are made to help teachers apply brain breaks with more confidence and to support learner engagement in a fun and effective way.

Pedagogical Implications

The findings of this study suggest that brain breaks have a positive impact on students' participation and motivation in Algerian middle school EFL classrooms. Teachers reported that short breaks helped reduce tension, especially for shy or less motivated learners, and improved classroom focus. This implies that student engagement is not only linked to teaching content, but also to classroom atmosphere and learner psychology. Brain breaks appear to support both academic learning and emotional well-being, creating a more balanced and effective teaching environment.

Suggestions for further research

Although this study focused on teachers' perspectives and student feedback regarding brain breaks in middle school EFL classrooms, further research is needed to deepen the understanding of this topic. The following suggestions are offered for future studies:

- Researchers may conduct classroom-based experiments to measure the direct impact of brain breaks on students' academic performance and concentration.
- Future studies could explore how brain breaks affect different age groups, such as primary or secondary school learners, to compare effectiveness across levels.
- Studies involving teacher training programs can investigate how professional development influences the implementation of brain breaks in real classrooms.

- More research is needed on students' emotional responses to brain breaks using interviews or classroom observations, to go beyond questionnaires.
- Investigating the role of digital brain breaks in online or blended classrooms can offer insights into how technology supports active learning in Algeria.

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Appendices

Appendices

Appendix one: Teachers' interview

Title of the Study:

The Role of Brain Breaks in Boosting Participation in Algerian Middle School EFL Classrooms: A Teacher's Perspective

Dear Participant,

You are kindly invited to participate in this study, which seeks to explore Algerian middle school English teachers' perspectives and experiences regarding the use of brain breaks as a strategy for enhancing student engagement and participation. Your responses will remain anonymous and confidential, and all data will be used solely for academic purposes. Your contribution is voluntary and deeply appreciated.

Section 1: Background and Teaching Context

1. Can you briefly introduce yourself?

- How long have you been teaching English at the middle school level?
- What is the average number of students in your classroom?

2. How would you describe your teaching style or approach in the EFL classroom?

Section 2: Awareness and Use of Brain Breaks

3. Can you recall when and how you first learned about brain breaks?

4. Have you ever used brain breaks in your classroom?

If yes: What types of brain breaks have you tried (physical, cognitive, mindfulness, games, etc.)?

5. What inspired you to try (or avoid) brain breaks in your classes?

6. How often do you use them in a typical week?

If not: What do you think has prevented, you from trying them?

Section 3: Perceived Impact on Students

5. In your experience, how do students usually respond to brain breaks? Do they enjoy them? Take them seriously?

6. Have you noticed any changes in student participation after using brain breaks?

Can you give an example of a specific lesson or moment when a brain breaks improved student engagement?

7. What specific impact, if any, have you observed on students' concentration or motivation after using brain breaks?

Section 4: Challenges and Support

8. What challenges have you faced while trying to implement brain breaks? (e.g., time constraints, student behavior, lack of support, etc.)

9. Have you received any training or guidance on how to use brain breaks effectively?

If yes, please describe the nature of this training.

If not, would you be interested in such training

Section 5: Recommendations and Reflections

10. Would you recommend brain breaks to other middle school EFL teachers? Why or why not?

11. What do you think could make brain breaks more effective or practical in Algerian EFL classrooms?

12. Is there anything else you'd like to add regarding your experience with brain breaks?

Thank you for your time and thoughtful responses!

Appendix two: Student Questionnaire (for Middle School EFL Students)

Title: Brain Breaks and My English Class Experience

Part 1: General Information. معلومات عامة

Age: _____ العمر:

Gender: Male ☐ Female ☐ الجنس: ذكر / انثى

Part 2: Attitudes Toward English Lessons الجزء الثاني: المواقف من دروس الإنجليزية

1. Do you enjoy English classes? هل تستمتع بدروس اللغة الإنجليزية؟

Yes ☐ / No ☐ / Sometimes ☐ نعم / لا / احيانا

2. Do you feel tired or bored during your English lessons? هل تشعر بالتعب أو بالملل خلال دروس اللغة الإنجليزية

Never ☐ / Rarely. ☐ / Often. ☐ / Always ☐ ابدا / نادرا / غالبا / دائما

Part 3: Experience with Brain Breaks الجزء الثالث: تجربتك مع فترات الاستراحة العقلية

3. Has your teacher ever used short games or movement breaks in class (e.g., stretching, quick games, clapping)? ☐

هل استخدم أستاذك يوماً ألعاباً قصيرة أو حركات تنشيطية في القسم (مثل التمدد، ألعاب سريعة، التصفيق)؟

Yes ☐ / No ☐ / Not sure. ☐ نعم / لا / لست متأكد

4. How do you feel after a brain break? كيف تشعر بعد فترة الاستراحة العقلية؟

- More focused أكثر تركيزا
- More relaxed أكثر استراحا
- More tired أكثر تعبأ
- No change لا يحدث أي تغيير

5. Do brain breaks make English classes more fun? هل تجعل فترات الاستراحة العقلية دروس الإنجليزية أكثر متعة؟

Yes ☐ / No ☐ / Not sure. ☐ نعم / لا / لست متأكد

6. Do you participate more in class after a brain break? هل تشارك أكثر في القسم بعد فترة الاستراحة العقلية؟

Yes ☐ / No ☐ / sometimes ☐ نعم / لا / احيانا

7. What kind of brain breaks do you enjoy most? ما نوع فترات الاستراحة العقلية التي تستمتع بها أكثر؟ (اختر ما يناسب)

(You can choose more than one) يمكنك اختيار أكثر من واحد

Physical games ألعاب حركية

Group activities أنشطة جماعية

Funny videos or songs فيديوهات أو أغاني مضحكة

Word games ألعاب كلمات

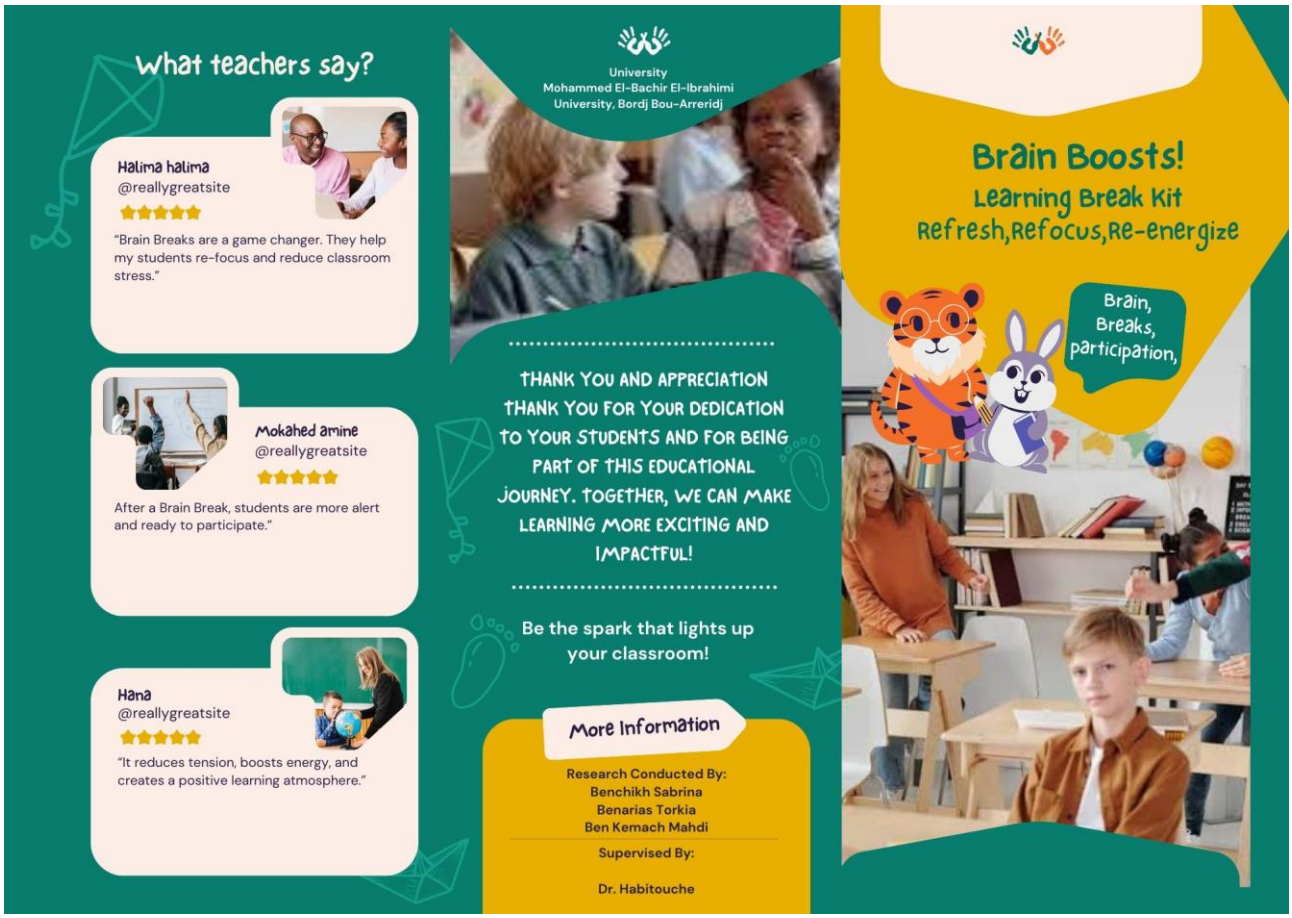
Other: _____ أخرى

8. Would you like your teacher to use more brain breaks? هل تود أن يستخدم أستاذك فترات استراحة عقلية أكثر؟

Yes ☐ / No ☐ /maybe ☐ نعم / لا / ربما

Appendix three: awareness Brochure

Introduction to Brain Breaks for Algerian EFL Teachers



الملخص

في في تعزيز مشاركة التلاميذ داخل أقسام اللغة الإنجليزية كلغة أجنبية تتناول هذه الدراسة دور فترات الاستراحة الذهنية المدارس المتوسطة الجزائرية، وذلك من منظور الأساتذة. تنبع أهمية هذه الدراسة من تزايد القلق حول ضعف تفاعل التلاميذ في حصص اللغة الإنجليزية، إضافة إلى غياب تطبيق منظم لفترات الاستراحة الذهنية داخل النظام التربوي الجزائري. تم

اعتماد منهجية مختلطة جمعت بين البيانات النوعية المستخلصة من مقابلات شبه مهيكلة مع أساتذة اللغة الإنجليزية، والبيانات الكمية المستمدة من استبيانات موجّهة للتلاميذ. مكّنت المقابلات من تسليط الضوء على أنواع الأنشطة المستخدمة كفترات استراحة، وكيفية تنفيذها، والصعوبات التي يواجهها الأساتذة أثناء إدماجها في الدروس. أما الاستبيان الموجّه للتلاميذ فقد استُخدم لتأكيد ما إذا كانت هذه الأنشطة تؤثر فعلاً على مشاركتهم داخل القسم. أظهرت النتائج أن معظم الأساتذة لاحظوا تحسنًا كما أبلغ .''الاستراحات الذهنية''في انتباه التلاميذ وسلوكهم بعد استخدام هذه الأنشطة، حتى وإن لم يكونوا على دراية بمصطلح التلاميذ عن ارتفاع مستوى تفاعلهم بعد مثل هذه الفترات القصيرة. تبرز هذه النتائج أهمية دمج فترات الاستراحة الذهنية ضمن الممارسات التربوية، وتشير إلى الحاجة لتوفير التكوين والموارد اللازمة لضمان استخدامها الفعّال في المدارس المتوسطة الجزائرية.

الكلمات المفتاحية:

فترات الاستراحة الذهنية، مشاركة التلاميذ، وجهات نظر الأساتذة، أقسام اللغة الإنجليزية، المدارس المتوسطة الجزائرية، استراتيجيات التفاعل الصفي.