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Sustained attention in learning English language

Atención sostenida en el aprendizaje del idioma inglés

Atenção constante na aprendizagem da língua inglesa

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RESUMEN

Introducción: Las pausas activas son breves periodos de actividad física integrados dentro del ámbito escolar como una estrategia pedagógica que estimula el interés de los estudiantes y promueve un ambiente de aprendizaje propicio para adquirir nuevos conocimientos. La presente investigación tiene como objetivo evaluar la efectividad de las pausas activas como estrategia pedagógica para potenciar la atención sostenida en el aprendizaje del idioma inglés como lengua extranjera en los estudiantes de octavo año EGB de la Unidad Educativa “Carlos Pomerio Zambrano” de la parroquia Canuto del cantón Chone. Materiales y métodos: El estudio adoptó un enfoque mixto con un diseño cuasiexperimental, utilizando métodos teóricos para la recolección de información y empíricos para evaluar su eficacia, tales como la ficha de observación, entrevista, pre-tests y post-tests, considerando un único grupo experimental. Resultados y discusión: Los resultados obtenidos mostraron que aplicar pausas activas durante las clases de inglés intensifica la atención sostenida de los estudiantes, lo que impactó eficazmente en el aprendizaje de nuevo vocabulario en inglés: en el pre-test de atención sostenida el 5% de la muestra presentó un nivel alto, mientras que, en el post-test este porcentaje ascendió al 43%. Asimismo, en el pre-test de vocabulario el 48% de los estudiantes se situó en nivel bajo, porcentaje que se redujo al 29% en el post-test. Conclusiones: En conclusión, las pausas activas incrementan la atención sostenida optimizando el aprendizaje del idioma inglés.

Palabras clave: Atención sostenida, aprendizaje de vocabulario, pausas activas, inglés.

ABSTRACT

Introduction: Active breaks are brief periods of physical activity integrated into the school setting as a pedagogical strategy that stimulates student interest and promotes a learning environment conducive to acquiring new knowledge. This research aims to evaluate the effectiveness of active breaks as a pedagogical strategy to enhance sustained attention in learning English as a foreign language among eighth-grade students at the "Carlos Pomerio Zambrano" Educational Unit in the Canuto parish of the Chone canton. Materials and methods: The study adopted a mixed-methods approach with a quasi-experimental design, using theoretical methods for data collection and empirical methods to evaluate its effectiveness, such as observation checklists, interviews, pre-tests, and post-tests, considering a single experimental group. Results and discussion: The results showed that incorporating active breaks during English classes intensifies students' sustained attention, effectively impacting their learning of new English vocabulary. In the pre-test for sustained attention, 5% of the sample demonstrated a high level, while in the post-test this percentage rose to 43%. Similarly, in the vocabulary pre-test, 48% of the students were at a low level, a percentage that decreased to 29% in the post-test. Conclusions: In conclusion, active breaks increase sustained attention, optimizing English language learning.

Keywords: Sustained attention, vocabulary learning, active breaks, English.

RESUMO
Introdução: Os intervalos ativos são breves períodos de atividade física integrados ao ambiente escolar como estratégia pedagógica para estimular o interesse dos alunos e promover um ambiente de aprendizagem propício à aquisição de novos conhecimentos. Esta pesquisa teve como objetivo avaliar a eficácia dos intervalos ativos como estratégia pedagógica para aprimorar a atenção sustentada na aprendizagem de inglês como língua estrangeira entre alunos do oitavo ano da Unidade Educacional "Carlos Pomerio Zambrano", na paróquia de Canuto, cantão de Chone. Materiais e métodos: O estudo adotou uma abordagem mista com delineamento quase-experimental, utilizando métodos teóricos para a coleta de dados e métodos empíricos para avaliar sua eficácia, como listas de verificação de observação, entrevistas, pré-testes e pós-testes, considerando um único grupo experimental. Resultados e discussão: Os resultados mostraram que a incorporação de intervalos ativos durante as aulas de inglês intensifica a atenção sustentada dos alunos, impactando efetivamente a aprendizagem de novo vocabulário em inglês. No pré-teste de atenção sustentada, 5% da amostra demonstrou um nível elevado, enquanto no pós-teste essa porcentagem subiu para 43%. De forma semelhante, no pré-teste de vocabulário, 48% dos alunos apresentaram um nível baixo, percentual que diminuiu para 29% no pós-teste. Conclusões: Em suma, pausas ativas aumentam a atenção sustentada, otimizando o aprendizado da língua inglesa.
Palavras-chave: Atenção sustentada, aprendizado de vocabulário, pausas ativas, inglês.

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Introducción

Currently, education has undergone certain changes in the teaching and learning process of the English language, which has become a fundamental pillar within the educational system. In this context, vocabulary constitutes the basis for students to understand and communicate effectively. However, to achieve this mastery, students need to maintain their concentration for long periods of time in order to grasp, process, and retain new information. For this reason, sustained attention emerges as an essential element in the development of linguistic competence, especially in vocabulary learning, which is fundamental to strengthen receptive (listening and reading) and productive (writing and speaking) language skills.

In the Ecuadorian context, factors such as stress, fatigue, lack of motivation, and the school environment directly affect sustained attention, also known as vigilant attention, “understood as the ability to maintain focus and concentration on a specific task for an extended period of time” (Huilca Alvarado & Villacís Ordoñez, 2023). In particular, these elements hinder the development of sustained attention and, as a result, have an impact on the English language learning process, making it a challenge for educational institutions.

Thus, at the “Carlos Pomerio Zambrano” Educational Unit in the Canuto Parish, Chone canton, it was found that eighth-grade students have difficulty maintaining attention during English classes, where learning requires a constant level of concentration. This behavior, observed repeatedly during the school day, reflects an imbalance in the conditions for developing sustained attention, as various factors such as demotivation, distraction, and cognitive overload interfere with the attentional process, which directly affects English language learning.

From this perspective, neuroscience recommends the application of effective and dynamic strategies that promote sustained attention in the learning environment. Several studies have shown that the use of active breaks has a positive effect on student concentration and attention. A study conducted by Páez ***et al***. (2024) showed that a program of active breaks applied in secondary schools improved students’ ability to concentrate and maintain attention in class, as these breaks provided opportunities for relaxation and rejuvenation. Another study carried out by Fernández Barrionuevo ***et al***. (2023) determined that developing classes with active breaks improves reading comprehension in a foreign language.

In light of the aforementioned, the purpose of this research was to evaluate the effectiveness of active breaks as a pedagogical strategy to enhance students’ sustained attention during the learning of English as a foreign language. Accordingly, the theoretical foundations of sustained attention and learning English as a foreign language were examined, and the factors that influence the development of sustained attention during English lessons were identified. In addition, active breaks were applied as a pedagogical strategy to strengthen sustained attention in the process of learning new English vocabulary. Subsequently, changes in sustained attention and English vocabulary learning were analyzed before and after the intervention with active breaks.

In this sense, the present study contributes to expanding the range of educational alternatives available for teaching and learning English, presenting a methodology that can be applied in real learning contexts and

adapted to different situations and educational levels. Consequently, it promotes a flexible and interactive approach to language teaching and learning that moves away from traditional models and focuses on more active practices centered on student well-being.

Literature Review.

Sustained attention.

Slattery ***et al***. (2022) mentioned that sustained attention is the ability to maintain the focus of attention on a specific task over a long period of time, especially in conditions of monotony and repetition. As it is a complex process that requires concentration on an activity, it is the attentional focus that allows attention to be directed and maintained on relevant stimuli while inhibiting those that are irrelevant.

Posner's theory of attentional networks mentions that there are three functional networks of attention: the alertness or vigilance network, responsible for maintaining a state of readiness to process stimuli and perform tasks optimally, which is located in the brainstem and right hemisphere systems dedicated to sustained vigilance; the posterior or orienting network, which directs attention toward relevant stimuli; and the executive network, which establishes voluntary control in situations involving rapid responses (Parra Bolaños, Peña, & caballero Hernández, 2012). Sustained attention is particularly linked to the alertness network, as it involves maintaining a continuous state of vigilance and readiness for prolonged periods. In other words, this neural network is what allows the brain to stay focused on the task and increase its level of alertness and concentration during the performance of tasks over long periods of time. As such, understanding this dynamic is essential in educational contexts, especially in second language learning, where students must maintain attention on repetitive or cognitively demanding activities.

Attentional focus.

Attentional focus can manifest itself internally or externally: Externally, the individual is able to perceive information from the environment, while internally, the individual processes that information cognitively. In the educational setting, the focus of attention is directed toward information on-topic and information off-topic. On the one hand, the internal focus of attention on-topic refers to the student's ability to reflect on and conceptualize new information cognitively, due to the prior exercise of external focus of attention when paying attention to class material or the teacher's explanation. Correspondingly, internal attention focus outside the subject is linked to the act of suddenly focusing on intrusive thoughts, while external attention focus outside the subject refers to the process of paying attention to distracting stimuli from the environment (Keller, Davidesco, & Tanner, 2020).

Molina (2018) states that the duration of sustained attention manifests itself based on the age of the student, indicating that at two years of age, attention can be sustained for a period of 7 minutes. Subsequently, at age five, it tends to double simultaneously, increasing significantly between ages 8 and 9. On the other hand, Requena Montes (2022) argues that children can maintain attention for a period of 15 to 20 minutes until the end of late childhood, between ages 11 and 12. Therefore, from the age of 12, adolescents begin to experience significant changes in their attention span, which increases considerably to an hour in terms of the activity being performed.

According to Bernabéu (2017), sustained attention level decline throughout the day when performing different tasks. Therefore, when introducing new topics, it is important not to exceed fifteen minutes and to include five- to ten-minute breaks during each class session, given that meaningful learning requires full and constant attention.

From a Neuroscience perspective, the use of active breaks is recommended as a pedagogical strategy incorporated into the classroom, since the absence of active breaks in the classroom can have negative effects on learners' concentration and attention, as well as on their ability to acquire new knowledge. Because of this, "physical activity in the classroom is a promising strategy for students around the world to be active during school hours" (Jiménez Parra ***et al***., 2022, cited by Páez Cornejo, Pérez Guevara, & Verdugo Arcos, 2024).

Active breaks or pauses are brief periods of physical activity incorporated into the educational environment with the aim of interrupting long class sessions, improving students' physical and cognitive health. In terms of mental health, active breaks help reduce stress and anxiety by releasing endorphins, which are hormones that promote feelings of well-being and lower stress levels. Physically, they increase blood flow to the brain, supplying oxygen and essential nutrients to enhance cognitive functions.

In this regard, studies have confirmed that temporary sessions of physical activity benefit concentration and attention span, enabling students to retain knowledge efficiently, as well as reducing mental fatigue and decreased performance during long working hours.

However, these activities depend on the environment in which they take place, as they can range from simple exercises, such as stretching and deep breathing, which are suitable for small spaces, to more dynamic and structured games that involve greater movement and require large spaces for proper execution (Castillo Cortez, Cheza Castro, Figueroa Sacón, Revelo Gordón, & Rosas Páez, 2024).

Cognitive Functions.

Sustained attention is a cognitive variable that requires the use of several interconnected cognitive functions that are essential for the development and maintenance of attention. Selective attention is closely related to sustained attention, since while selective attention ignores irrelevant factors and focuses on those that are significant, sustained attention is responsible for maintaining that selection constantly during prolonged learning tasks, which is why it is called selective sustained attention (Danahy Ebert, Pham, Levi, & Eisenreich, 2024).

In addition, sustained attention facilitates verbal and visuospatial review processes that manifest themselves in working memory. This interaction allows for the temporary storage of information and the management of cognitively demanding activities, such as understanding and producing English language. Consequently, sustained attention and working memory function in an integrated manner, since while the former maintains the focus of attention, the latter stores and adapts the information necessary for learning the English language (Medina Pulido, Olivella López, Araujo, & Pérez Esmeral, 2021).

Furthermore, sustained attention and inhibitory control are executive functions that interact systematically and play an essential role in learning. In particular, inhibitory control is responsible for ignoring internal or external distractions and paying attention to alternatives in live with one's own goals (Altamirano Droguett, & others, 2024). In this way, inhibitory control plays a modulating role that promotes the continuity of sustained attention directed toward specific goals, which strengthens information assimilation and academic performance.

Factors that influence sustained attention.

Various elements can significantly affect students' ability to maintain attention during class, especially in the process of learning English. Among the most influential factors is a lack of motivation, since when learners do not perceive usefulness, interest, or connection with the content, their willingness to participate actively decreases, which affects their concentration. Another important factor is environmental distractions, such as noise, conversation among classmates, or use of electronic devices, which interrupt the focus needed to promote sustained attention.

Similarly, cognitive overload from long, complex, or poorly paced activities causes mental fatigue, reducing students' ability to stay focused for long periods. If these factors are not properly considered during the development of the lessons, they can limit performance and make learning English harder (Le, 2021).

Learning English.

Learning English as a foreign language is a dynamic process that, in addition to involving the development of the main linguistic skills of a language, requires the constant activation of cognitive functions such as attention, memory, perception, and motivation. According to Tokuhama (2018), these processes must be intentionally stimulated through teaching practice. Furthermore, it is influences by multiple internal and external factors, which shape the context in which the foreign language is taught and learned. As Rosales (2025) points out, "The acquisition of a second language is a complex process that involves multiple factors, including cognitive, affective, and socio-familial factors."

Linguistic Competence.

Linguistic competence in a foreign language involves activating neural networks related to attention and working memory. As Mora (2020) points out, sustained attention is enhanced when the learning environment activates curiosity and the brain's reward system, which can be achieved through activities that integrate visual, auditory, and kinesthetic stimuli.

Listening comprehension, as indicated by Mendoza ***et al***. (2023), involves decoding sounds and interpreting

intentions and emotions, while oral production requires speech planning and vocabulary retrieval in real time.

Vocabulary is an essential component in learning English as a Foreign language. Lexicon allows students to understand what they are listening and reading, and to express their ideas clearly, since without sufficient words, it is difficult to communicate, even if one knows the grammar rules. However, vocabulary does not develop automatically; it requires constant exposure to new words, repeated practice, and attention to their use in different contexts. The results of a study conducted by Martinez-Vicente et al. (2023) show that a greater sustained and selective attention predicts better academic performance in English as a foreign language, suggesting that lexical development is closely relates to attentional executive functions. Acquiring vocabulary in a foreign language such as English is a complex cognitive process. According to Jung et al. (2025), attentional control plays a predictive role in determining the ability of foreign language learners to memorize new verbal and lexical forms more solidly, because the response to an activity always depends on the demands of the environment.

Components of learning.

The role of the teacher is an integral part of teaching English as a foreign language, since "the teacher not only conveys information, but also inspires, motivates, and guides students in their learning process" (Moreira Zambrano, Proaño Muñoz, Párraga Cedeño, & Ganchozo Villavicencio, 2024). On the other hand, Rodríguez Vite (2019) emphasizes that the environment should foster a climate of harmony, trust, security, and respect that facilitates positive interaction between teachers and students, as well as among students themselves. A good learning environment encourages participation, the free expressions of ideas, and the resolution of doubts, promoting effective learning. Finally, active learning involves students in the construction of their knowledge (Ramos Vallecillo, Murillo Ligorred, & Lozano Blasco, 2024). This is the opposite of traditional models based on a one-way transmission of information, where students take on a passive role. In other words, student participation goes beyond presence in the classroom, involving the ability to influence pedagogical decisions such as the methodology used and assessment methods (Ochoa Cervantes, Martínez Day, & Garbus, 2020).

Educational Resources.

Educational resources are defined as the set of materials used to facilitate the teaching-learning process, both physical and virtual, which aim to spark students' interest and adapt to their individual characteristics. These resources, as stated by Blázquez (1983) cited in Sandoval (2024), help to create the right situations for teachers and students to interact as human beings in a suitable environment, especially because of their ability to facilitate understanding and increase information retention. Among the main visual resources are: flashcards or educational cards, graphic organizers, among others. A study performed by Numonova (2024) concluded that "The use of visual aids has been shown to enhance the comprehension and usage of language." In turn, auditory resources play a crucial role in the development of listening comprehension and pronunciation in English as a foreign language (Barrera,2019). These materials help students become familiar with different accents, intonations, and natural speech patterns of the language.

Materiales y métodos

This research adopts a mixed approach, which enables the collection, analysis, and linking of both qualitative and quantitative information to gain a deep understanding of the study carried out (Guelmes Valdés & Emilio, 2015). The population consisted of 167 students and two teachers from the upper elementary school of the "Carlos Pomerio Zambrano" Public School. The non-probabilistic, intentional sample consists of 21 students and two teachers from the eighth grade of the "Carlos Pomerio Zambrano" Public School, as this group meets the characteristics of interest to the researcher, such as age and educational level, in addition to intentionally selecting individuals from the population who are generally easily accessible (Hernández & Carpio, 2019).

The research was carried out under a single-group quasi-experimental design, which is characterized by observations and measurements before and after the intervention. In this type of design, participants are not selected randomly but belong to a previously established group. After applying the intervention, the data obtained in the pre-test and post-test phases of sustained attention were analyzed and compared, as well as a second pre-test and post-test of vocabulary, in order to determine the changes generated by the intervention (Ramos Galarza, 2021).

This study made use of the scientific method to carry out a systematic procedure, completing several phases

such as observation and obtaining results during the research, since this method correlates theory with practice in order to generate new knowledge. Therefore, "the scientific method would be the procedure by which we can achieve objectives knowledge of reality, trying to answer questions about the order of nature" (Barahona Tapia, Rosillo Abarca, Ayala Ayala, & Barcos Arias, 2023).

In addition, the empirical method was implemented in order to discover and gather information that served as the basis for diagnosing and validating the research. To this end, the theoretical method was used to process, interpret, and analyze the results obtained through the empirical methods employed, with the aim of reaching reliable conclusions (Hernández ***et al***., 2021 cited by López Falcón & Ramos Serpa, 2021).

RESULTADOS Y DISCUSIÓN

The diagnostic phase lasted two weeks. Data was collected using an observation checklist during five class sessions, supplemented by a semi-structured interview with eighth-grade English teachers. A pre-test of English vocabulary consisting of five questions with a total of 23 items was administered to determine the students' basic vocabulary level. Similarly, Cognifit's CAT-STA sustained attention test was implemented to assess the children's sustained attention level prior to the intervention.

Table 1. Contrast between the observation form and the interview

Dimensions	Indicator	Observation sheet	Teachers' interview
Attention span.	Duration.	Attention is not maintained from the beginning to the end of the lesson.	Teachers believe that students maintain attention throughout the class.
	Recovery of attention span.	Limited use of active breaks to regain attention.	Teachers report using brief physical activities when students become distract-ed.
Cognitive Functions.	Working memory.	Difficulty following oral instruc-tions.	Teachers mention verification through questions and activities on the white-board.
Factors influencing sustained attention.	Motivation.	Little interest and frustration are observed when tasks are com-plex.	Teachers indicate that lack of interest sometimes occurs when topics are diffi-cult.
	Environmental dis-tractions.	It is evident that students are often distracted by external stimuli such as noise or conver-sation among classmates.	Parameters such as external noise, con-versation among classmates, and in some cases, student restlessness when not engaged in an activity.
Language proficiency.	Vocabulary compre-hension.	Difficulties in reading and under-standing simple sentences in English.	Teachers consider the vocabulary level to be very low.
Components of the English language teach-ing and learning pro-cess.	Teacher role.	Students receive timely guidance in understanding language con-tent.	Teachers report that they conduct assess-ments and connect prior knowledge with new content.
	Learning environ-ment.	Whereas the classroom environ-ment is safe, there are distractions due to conversation among classmates.	Teachers say that the school environment depends on leadership.
Teaching resources.	Visual and auditory.	Limited use of visual and audito-ry resources such as images, cards, or speakers.	Teachers mention using flashcards, post-ers, and auditory resources such as a speaker.
	Student participation.	Although there is a good level of participation, there is difficulty in respecting turns and rules.	Teachers say they encourage participation through songs and motivation.

The results of the instruments applied reveal that students' sustained attention has limitations, especially in terms of duration and recovery of focus, due to the lack of pedagogical strategies such as active breaks. Although teachers perceive that students maintain attention and use various strategies, observation shows discrepancies between planning and classroom practice. Equally, factors such as a low motivation, environmental distractions, and difficulties in understanding English vocabulary negatively influence the learning process. However, the guiding role of the teacher and the promotion of student participation are recognized as strengths, reflecting the need to promote the use of teaching strategies that favor sustained attention and effective English Language learning.

Table 2.CAT-STA pre-test for sustained attention

Level	Score range	Participants	Percentage
Low	70-91	11	52%
Medium	92-97	9	43%
High	98-100	1	5%
Total		21	100%

The Cognifit CAT-STA Sustained Attention Test, administered to students prior to the intervention, allowed for the assessment of their initial level of sustained attention during prolonged activities. The pre-test results show that 52% of the students are at a low level, 43% at a medium level, and only 5% at a high level. This Distribution highlights difficulties in developing sustained attention during long school days, which justifies the implementation of pedagogical strategies aimed at strengthening sustained attention and optimizing the learning process.

Table 3. Pre-test for vocabulary assessment

Level	Score range	Participants	Percentage
Low	0-10	10	48%
Medium	11-17	11	52%
High	18-23	0	0%
Total		21	100%

The diagnostic vocabulary test administered to eighth-grade students in General Basic Education, Class "A", prior to the pedagogical intervention allowed us to identify the initial level of lexical mastery corresponding to their grade level. The results show that 48% of students are at a low level, while 52% are at an intermediate level, with no students at a high level. This distribution reflects limitations in vocabulary development in line with the requirements of the educational level, highlighting the need to strengthen language skills.

The educational intervention was implemented over a period of six weeks with children aged 12 and 13, who were in the eighth year of general basic level. The purpose of the intervention was to use active breaks as an educational strategy to strengthen sustained attention in the process of learning new English vocabulary. During the lessons, active breaks were planned in relation to the topics taught in class, which were based on the English vocabulary diagnostic test. Each active break, applied after 20 minutes of class, had between 5-8 minutes per 45-minutes session, which promoted students' concentration and participation, helping to reduce stress and mental overload.

Table 4. Intervention - Class descriptions

Section.	Topic.	Objective.	Material.	Active break.	Results.
1	Body parts	Students will recognize and use body parts vocabulary to describe people applying "Demonstrative Pronouns"	Pictures Flashcards Board Markers Notebook Pencils/ Pens	"Simon says": the teacher instructed the action and the students carried it out.	The students felt motivated, participated in class, and maintained their attention throughout the lesson

2	Clothes	Students will identify and use vocabulary about clothing to describe what a person is wearing using the present continuous tense.	Pictures Flashcards Board Markers Speaker	Dance and answer: The students danced while short musical snippets played, then the music was paused so the student could answer a question asked by the teacher.	The students demonstrated a high level of satisfaction with implementing this active break, which was reflected in their enthusiasm during the development of classroom activities.
3	Emotions	Students will identify and use emotion-related vocabulary to describe their mood using the verb "to be".	Pictures Speaker Board Markers Worksheets	Freezing Dance: When the sound stopped, the students adopted a static position and imitated the expression of the emotion mentioned by the teacher.	The students demonstrated a high level of satisfaction with implementing this active break, which was reflected in their enthusiasm during the development of classroom activities.
4	Daily routines	Students will talk about your daily routines using the simple present tense	Pictures Flashcards Speaker Board Markers	Mirror game: The children imitated the body movements performed by the teacher.	The teenagers showed happiness while develop-ing the active break, which was reflected in their good academic performance during the lesson.
5	Feedback	Students will reinforce vocabulary related to body parts, clothes, emotions and daily routines in real contexts.	Pictures Flashcards Speaker Board Markers	Moving with the bottle: The students moved following the movement of a bottle guided by the teacher	The students maintained their attention throughout the lesson, and felt motivated to carry on participating in class.

Table 5. Post-test for sustained attention

Level	Score range	Participants	Percentage
Low	70-91	0	0%
Medium	92-97	12	57%
High	98-100	9	43%
Total		21	100%

The results of the post-test on sustained attention demonstrate the effectiveness of the active breaks incorporated after the intervention, reflecting a significant improvement in students' sustained attention. While the pre-test 52% of learners were at a low level according to the ranges established by Cognifit, in the post-test there was a favorable redistribution of performance level, with the low level being eliminated. In this sense, 57% of students are at an intermediate level and 43% are at a high level. This contrast between the pre-test and post-test results shows that the use of active breaks in English classes contributes significantly to increased sustained attention during long class sessions.

Table 6. Post-test for vocabulary assessment

Level	Score range	Participants	Percentage
Low	0-10	6	29%
Medium	11-17	7	33%
High	18-23	8	38%

Total		21	100%

The post-test administered after the educational intervention, showed favorable results in the development of the students' vocabulary. The data obtained show that only 29% of students are at the low level, while 33% are at the medium level and 38% are at the high level according to their level of education. When comparing these results with those of the pre-test a significant improvement in lexical mastery can be observed, considering that initially 52% of students were at the medium level and no participants were at the high level. These results indicate that active breaks increase sustained attention during English vocabulary learning.

Discussion.

The objective of this research was to evaluate the effectiveness of active breaks as a pedagogical strategy to enhance sustained attention in learning English as a foreign language. The results showed improvements in sustained attention and a significant impact on English vocabulary learning, revealing that active breaks boost cognitive functions such as sustained attention, which is the main function that gives way to other cognitive processes.

The data obtained through Cognifit's CAT-STA test indicate an improvement in sustained attention after the intervention with active breaks, evidencing a higher average post-test score compared to the pre-test. This supports Rodríguez (2020) statement that the implementation of active breaks allows students to recharge their energy, which translates into greater concentration and attention in academic activities. Furthermore, this coincides with the study conducted by Páez et al. (2024) in which an active break program implemented in secondary school students improved their ability to concentrate and maintain attention in class, as these breaks provided opportunities for relaxation and rejuvenation.

In the same way, the increase in sustained attention levels showed its impact on vocabulary learning after the intervention, as the post-test showed a big difference compared to the pre-test. A study by Martínez-Vicente et al. (2023) shows that greater sustained attention and selective attention predicts better academic performance in English as a foreign language, suggesting that lexical development is closely related to attentional executive functions. According to Jung et al. (2025), attention control plays a predictive role in determining the ability of foreign language students to memorize new verbal and lexical forms more solidly, because the response to an activity always depends on the demands of the environment. This coincides with the study carried out by Fernández Barrionuevo et al. (2023), which mentions that developing classes with active pauses improves reading comprehension in a foreign language.

From a cognitive perspective, these findings align with the limited nature of sustained attention over time. According to Bernabéu (2017), the level of sustained attention decreases throughout the day when performing different tasks. Hence, when introducing new topics, it is important not to exceed fifteen minutes and to include five- to ten- minute breaks during each class session, given that meaningful learning requires full and constant attention. Thus, in learning English as a foreign language, this dynamic becomes highly relevant, since the acquisition and retention of new words demands a high level of sustained attention for the comprehension and interpretation of new messages, a condition that can be affected when breaks are not incorporated to allow for attentional recovery.

Hence, Posner's theory of attentional networks explains how the efficient functioning of the alertness network is responsible for maintaining optimal levels of vigilance over time. Accordingly, active breaks go beyond being simple interruptions in the rhythm of the class; they directly influence the reactivation of this network. As Parra Bolaños, Peña, & Caballero Hernández, (2022) indicate, the alertness or vigilance network is responsible for maintaining a preparatory state for processing stimuli and performing optimally in tasks. It is located in the brainstem and in systems of the right hemisphere dedicated to sustained vigilance. In this context, sustained attention does not depend solely on the student's willingness, but on the ability of the educational environment to generate conditions that neurologically support this cognitive state.

Essentially, the study demonstrated that integrating active breaks as a pedagogical strategy during language learning in the classroom improves students' attention span, allowing them to concentrate on the task at hand while also contributing to the strengthening of their working memory, which enables them to perform tasks instantly and follow the teacher's instructions. Particularly, it confirms the need to prioritize student's physical

and emotional well-being during long school days, especially when the task demands high mental effort and factors such as fatigue or academic stress prevent sustained attention. If these factors are not adequately considered in the development of the class, they can limit academic performance and hinder the process of learning English (Le, 2021). In this sense, an innovative pedagogical approach is promoted, transcending traditional pedagogical approaches and prioritizing the well-being of educational actors.

Conclusiones

In conclusion, the implementation of active breaks as a pedagogical strategy is ef-fective in enhancing sustained attention in learning English as a foreign language, with evi-dence of improvements in attention levels and vocabulary learning afterwards the interven-tion. The findings highlight the relevance of incorporating active breaks into English classes as a pedagogical strategy that promotes student well-being and attentional recovery, con-tributing to the creation of more favorable cognitive conditions for vocabulary learning, which in turn helps to optimize macro language skills. For this reason, it is considered cru-cial for teachers to incorporate this type of pedagogical strategy in various subjects, given that the brain requires periods of cognitive rest that promote the recovery of attention and allow for greater readiness to continue with academic content. Future research could ex-pand on these results by considering more diverse samples or the inclusion of control groups.

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