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Using the Brain-Based Approach to Teach English Vocabulary to Pupils: The Case of Third-Year Pupils at Bendjaloul Primary School, Maghnia

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Declaration

I hereby state that I have personally authored this dissertation, and I verified that I have acknowledged all external materials used in this work through appropriate referencing.

Ms. Mestari Amina Sara

14/06/2023

Dedication

To the enduring spirit of my father, my resilient mother, my courageous brothers and to the younger version of myself, I sincerely hope to make you proud.

Abstract

The main purpose of this study was to instil a love for the English language in young learners right from the beginning of their language learning journey, help them learn easily new vocabulary, and remember it effectively. For this sake, a novel approach was implemented which is the Brain Based Learning Approach with the aim of improving pupils' vocabulary learning. The study utilized a combination of a case study and experimental design to gather information from 35 third-year primary school pupils at Bendjaloul Abldekder, Maghnia and their teacher. The investigation combined four research instruments to assess the impact of a new teaching approach on pupils' vocabulary learning: classroom observation, teacher questionnaire, tests, and post-experiment questionnaire. The findings revealed that this innovative approach had a positive effect on pupils' outcomes, leading to better feedback from learners. However, the teacher's lack of experience in teaching young learners affected their performance, as seen in their questionnaire responses and classroom observation. Despite this, the Brain-Based Learning Approach had positive results in improving pupils' memory and vocabulary acquisition. This was confirmed through tests conducted before and after the treatment, which showed an improvement in pupils' scores. Additionally, an experimental questionnaire indicated that implementing this approach in the classroom was accepted and effective. Overall, the Brain-Based Learning approach was beneficial for pupils' vocabulary retention when specific strategies and methods were used, helping the teacher achieve her main objective. The investigation also identified potential future research areas in the same field, such as training teachers on implementing the Brain-Based Learning Approach, evaluating the role of parental involvement, and examining how the proposed approach can be adapted to the Algerian educational and cultural context.

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List of Abbreviations and Acronyms

BBA: Brain Based Approach

BBLA: Brain Based Learning Approach

CBA: Competency Based Approach

EFL: English as a Foreign Language

FMRI: Functional Magnetic Resonance Imaging

General Introduction

The BBA in education combines insights from cognitive neuroscience research with educational methodologies to improve the effectiveness of teaching and learning. It places emphasis on comprehending how the brain functions in terms of information processing and memory retention, aiming to optimize educational experiences (Duman, 2010). The concept was first proposed by Leslie Hart in 1983, but it initially received limited attention due to thenarrow, knowledge and research tools available at the time.

The recognition and development of Brain-Based Learning (henceforth, BBL) gained traction with Caine and Caine (1991) whose work highlighted the importance of aligning instructional methods with the brain's natural learning processes, resulting in improved comprehension, retention, and engagement among students. Bruer's (2003) skepticism challenged the immediate practical implications of brain-based research in the classroom. He advocated for prioritizing established findings from cognitive science and psychology rather than relying heavily on evolving neuroscience research.

As neuroscience research and technology have advanced, brain-based education has gained significant recognition. Sophisticated methods such as Functional Magnetic Resonance Imaging (FMRI) have provided valuable insights into the brain's functioning during the learning process. In contemporary educational settings, brain-based strategies concentrate on establishing learning environments that align with the natural learning mechanisms of the brain. This involves incorporating active learning methods, engaging multiple senses, and considering individual differences in students' learning styles and strengths. Educators also acknowledge the importance of emotions, motivation, and cognitive load in the learning process, aiming to create supportive and captivating environments that optimize learning outcomes (Duman, 2010).

Within the specific context of the ongoing research at Bendjaloul Abdelkader Primary School, the objective is to enhance pupils' memory retention of English vocabulary. The study aims to identify strategies that facilitate easier and long-lasting retention of vocabulary items, with the ultimate goal of cultivating a love for the

English language right from their first year of learning it. By exploring various brain-based techniques, the research endeavors to enhance the students' learning experience and offer practical insights to educational practices, particularly in the realm of vocabulary acquisition. This is crucial as the children demonstrate fast initial learning but struggle with retaining information over time. The first year of learning a new language serves as the foundation for their future learning journey.In light of these assumptions, the flowing research questions are formulated:

- RQ1: How can the brain-based approach be useful to third-year pupils at Bendjaloul Primary School, Maghnia, in learning English vocabulary?

- RQ2: What is the attitude of third-year pupils at Bendjaloul Primary School, Maghnia, towards learning English vocabulary using the brain-based strategies?

To answer the afore-mentioned questions, the upcoming hypotheses are suggested:

- Hyp1: The enjoyable and creative aspect of the brain-based approach helps third-year pupils better remember English vocabulary.

- Hyp2: Third-year pupils hold a positive attitude towards learning English vocabulary using the brain-based strategies as they consider it to be fun and more motivating way of learning than the traditional way.

To confirm or reject the hypotheses, the current research utilizes a mixed-method approach, combining an intrinsic case study and a pre-experimental design. The case study is conducted to gain a comprehensive understanding of the proposed research approach. Data is collected through classroom observation and a questionnaire administered to the only English teacher at Bendjaloul Primary School in Maghnia. While the classroom observation helps identify weaknesses and assess the classroom environment, the questionnaire gathers information about the teacher's experience and educational system.

The experimental design is employed to test the effectiveness of the suggested approach on vocabulary acquisition. Thirty-five pupils within the same research setting are administered tests, and a post-experiment questionnaire is given to gather

their feedback and opinions on the applied approach.The research work is divided into two chapters. The first chapter of the study focuses on the theoretical aspect, specifically a review of existing literature on the approach being studied and its connection to vocabulary learning. It begins by discussing vocabulary itself, including its strategies and the difficulties involved in learning it. It then moves on to the proposed approach, explaining its emergence, principles, strategies, and the benefits it offers..The second chapter of the study involves applying the approach in a real-life setting with a group of thirty-five third-year primary school children and their teacher. This application is done using four different instrumentations such as: classroom observation, questionnaire to the teacher, tests and the post experiment questionnaire .By analyzing the data collected through these tools, the study arrives at its final results, which align with the initial hypothesis proposed.

Chapter One:

Literature Review

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1.1 Introduction

This chapter aims to consolidate information on the research topic by gathering insights from various aspects and domains. It specifically focuses on the Brain-Based Approach in education and its interconnectedness with learning, teaching, vocabulary, and other relevant areas. It begins by examining vocabulary itself, including the methods and difficulties involved in learning it. Then, it moves on to discussing the Brain-Based Approach, explaining where it came from, its principles, strategies, and the benefits it offers.

1.2. Vocabulary

Every language is composed of words, which serve as the basis for language development both historically and in one's individual learning of languages. Additionally, the lexicon of languages continues to expand .New words are constantly being acquired and new meanings for existing words are being one's individual learned in the native language. Vocabulary can be defined, roughly, as the words we teach in the foreign language. However, a new item of vocabulary may be more than just a single word. For example, post office, and mother-in-law, which are made up of two or three words but express a single idea. A useful convention is to cover all such cases by talking about vocabulary items rather than words (Gu, 2003).

In response to technological advancements and the demands of daily life, new words are constantly being created. For example, the verb "to Google" is now frequently used. Similarly, unfamiliar words may be encountered by individuals learning a second language, or familiar words may be used in unfamiliar or obscure ways. This experience can be frustrating, particularly if the learner's vocabulary is limited and the appropriate words to convey their intended meaning are difficult to find(Pribilová , 2006).

1.2.1. Vocabulary and Language Learning

Every effort to learn a language must include vocabulary as an integral component, and it is important for scholars to give it proper consideration. It is widely

acknowledged that building vocabulary is a crucial aspect of language learning, and this has been recognized in various language teaching methods throughout history. For instance, the silent method focuses the most adaptable and functional vocabulary, while Communicative Language Teaching involves using different techniques such as definitions, synonyms, and antonyms to teach vocabulary(Salem, 2017). Furthermore, Savignon (2002) emphasizes the importance of vocabulary in communicative language teaching, which focuses on the development of communicative competence in learners. In order to achieve this, she suggests that teachers should provide learners with ample opportunities to use new vocabulary in meaningful contexts, and should also incorporate activities that promote vocabulary acquisition and retention, such as vocabulary games and exercises.

Svignon's (2003) work highlights the critical role that vocabulary plays in language learning and emphasizes the need for learners to develop a robust vocabulary in order to communicate effectively in the target language. She argues that vocabulary is a critical component of language learning and that learners must acquire a large amount of vocabulary in order to use the language effectively. According to her, vocabulary knowledge is important for both receptive and productive language skills, as learners must be able to understand the words they encounter as well as use them themselves.

In the same line of thought, Torki (2011) argues that learners must focus on building a substantial vocabulary in order to achieve proficiency in the language. According to him vocabulary knowledge is a key component of communicative competence, which involves using language effectively in various social contexts. Torki spotlights that vocabulary acquisition is not simply a matter of memorizing words, but rather a process of understanding how words are used in different contexts and how they relate to one another. To achieve this, learners must engage in a range of activities, such as reading, listening, speaking, and writing, in order to encounter new words and practice their use. Moreover, this researcher highlights the teacher's role in promoting vocabulary acquisition in the classroom. Teachers should provide learners with a rich and varied.

1.2.2. Difficulties of Teaching Vocabulary to Young Learners

The term "young learner" encompasses a wide range of ages, spanning from three to eighteen years old. The abilities of a three-year-old child differ greatly from those of a fifteen-year-old, and it is essential to take their individual developmental rates into account. To effectively teach young learners, it is crucial to understand these developmental differences and utilize this knowledge to develop suitable teaching methods and systems. While it is not feasible to generalize what every six-year-old should know, every teacher should be aware of and familiar with certain characteristics that may apply to young learners in the class. In fact, Philips (1993) states that there are several factors influencing the maturity of children. These factors include their culture, sex, environment (city or rural), and parents.

Among the difficulties these pupils encounter are: limited exposure to new words. It means that children may not be exposed to a wide variety of words in their daily lives, which can make it difficult for them to learn new vocabulary. In addition to this, there is the lack of context which implies children's struggle to understand new words if they do not have sufficient context or background knowledge.According to Uhl-Chamot (1998), if learners come across new words without enough context, they may face difficulty in comprehending and remembering the meaning of those words. For example, a child may not understand the word "photosynthesis" without first learning about plants and their processes. Learning new vocabulary often requires memorization, which can be challenging for some children .Indeed,as stated by Tompkins (1998), the process of memorizing vocabulary lists can be monotonous and lacking in effectiveness, particularly when learners are unable to utilize the words in meaningful contexts.

In addition to the previously mentioned difficulties lie language barriers and differences in learning styles. The former specify the children who speak a language other than the one being taught may struggle to understand and learn new words. The latter indicate that children have different learning styles, and what works for one child, may not work for another. Some children may learn best through visual aids, while others may need hands-on activities or verbal explanations. Finally, there is

thelack of interest. It goes without saying that children may not be motivated to learn new vocabulary if they do not see its relevance or importance in their lives. To overcome these challenges, educators may use a variety of strategies, such as providing rich and varied language experiences, using context clues, using visual aids, repetition, and making learning fun and engaging.

1.3. Approaches to Teach Vocabulary

An approach can be defined as the fundamental beliefs regarding the nature of language and the process of learning a language. According to Richards and Rodgers (1986), it encompasses one's principles on language theory and learning theory. Essentially, an approach to teaching language outlines the characteristics of language, the methods of acquiring language proficiency, and the circumstances that enhance language acquisition. In other words, an approach refers to "theories about the nature of language and language learning that serve as the source of practices and principles in language teaching" (Richards & Rodgers, 1986, p.16).

Teaching and learning are difficult even with many different approaches available. From the stand point of Salem (2017), good teachers choose the best ways to involve and motivate their students, and this helps them learn more effectively. Effective teaching practices are essential to maximize students' learning and engagement. According to Spada and Lightbown (1999), learners have their own preferences for learning, and if teachers consider these individual characteristics and preferences, they can create better learning conditions that promote meaningful learning. Therefore, paying attention to learners' personal traits, learning styles and characteristics increases the chances of meaningful learning.

Traditional teaching strategies used to focus only on what the teacher could do in the classroom, with no regard for the learners' characteristics. Respress and Lutfi (2006) advocate that traditional teaching approaches lead to boredom, underachievement, and lack of enjoyment as they use a basic curriculum designed with homogenous learning styles, with no consideration of individual students' learning styles and preferences. In contrast, learner-centered approaches, such as BBLA, prioritize learners' personal traits, making it a holistic approach to learning as

it concentrates on what learners can do to maximize their learning rather than what their teachers can do. There are various approaches to teach vocabulary to pupils, and below are some of them.

1.3.1. Contextual Learning Approach

The contextual leaning approach teaches vocabulary in the context of real-life situations or texts where learners learn new words by reading and understanding them in context. It is a way of teaching and learning that seeks to make the learning experience more meaningful and relevant to learners by connecting what they are learning to their everyday lives. The origins of this approach can be traced back to the work of educational theorist John Dewey, who believed that education should be based on the experiences and needs of the learner. In the 1980s, the idea of authentic learning gained popularity, which emphasized the need for learners to engage in meaningful, real-world tasks that had relevance beyond the classroom. Today, contextual learning continues to be a popular approach in education, with many educators and researchers emphasizing the importance of connecting learning to the real world and helping learners to apply what they have learned in meaningful ways (Nagy & Anderson, 1985).

1.3.2. Repetition and Practice Approach

Repetition and practice are essential for vocabulary learning. Teachers can use flashcards, games, and quizzes to reinforce new vocabulary words. This approach has a long history, dating back to ancient times. The ancient Greek philosopher Aristotle believed that repetition and practice were essential for acquiring knowledge and skills. After that, in the early 20th century, behaviourist psychologists such as B.F. Skinner emphasized the importance of repetition and reinforcement in learning. Today, this approach remains an important aspect of many learning and training programs (Chukharev-Hudilainen, 2016).

1.3.3. Visual Aids Approach

Using visual aids such as pictures, videos, and diagrams can help pupils better understand and remember new vocabulary words. In ancient Greece, philosophers

such as Socrates and Plato used visual aids such as diagrams and models to illustrate their ideas and theories. In the 19th century, the development of printing technology made it easier to reproduce visual images and create visual aids for teaching. Today, visual aids continue to be an important aspect of teaching in a wide range of settings, from traditional classrooms to online learning environments. The use of visual aids can enhance learning, increase engagement, and make complex ideas and concepts more accessible and understandable to students (Allen & Marquez, 2011).

1.3.4. Word Maps Approach

Word maps are diagrams that show the relationships between words. They can be used to help pupils understand the meaning of new vocabulary words and how they relate to other words. One of the main benefits of the word map approach in education is that it encourages active learning and engagement with the material. Pupils are encouraged to think creatively and make connections between different ideas and concepts, which can help to deepen their understanding of the material (Rosenbaum, 2011).

1.3.5. Games and Activities Approach

Using games and activities can make vocabulary learning fun and engaging for students. Teachers can use crossword puzzles, word searches, and other games to help pupils practice and reinforce new vocabulary words. Halliwell (1992) contends that young learners possess a creative language skill, which requires teachers to establish a communicative environment that facilitates self-expression. Additionally, because the language utilized during activities is uncertain, teachers must prompt students to actively construct language themselves. Thus, games are essential and beneficial, not only for their entertainment value but also for promoting communication and predictability. Utilizing games as a tool for teaching vocabulary to young learners necessitates trained teachers who are adept at incorporating language learning into play. According to Rixon (1981), understanding games can aid teachers in identifying and creating games that facilitate learning through play.

1.3.6. Competency-Based Approach

For Nagy et al. (1985), the Competency-Based Approach (CBA) places emphasis on practical and measurable knowledge, skills, and abilities. This contemporary method of education and learning not only focuses on the learning process but also on the tangible results. The CBA is viewed as a model derived from human resource management principles, with the goal of improving job performance. This approach encourages enhanced training, skill development, job satisfaction, and various evaluation methods, ultimately leading to the implementation of more effective hiring policies.

The most effective teaching practices are those that cater to learners' thinking and feelings. By doing so, learners' motivation is boosted and their academic performances are improved(Nagy et al., 1985). Among those practices lies the BBA. As it is the main focus of the present research, the upcoming sections will offer in-depth analysis and detailed explanations of its fundamental principles.

1.4. The Brain-Based Approach

BBA is a teacher-facilitated approach that uses brain-based learning principles and learners' cognitive abilities to maximize learning. According to Jensen (1996), BBL favours the brain's natural operational principles to attain maximum attention, understanding, meaning, and memory, thus promoting meaningful learning. It is based on research from cognitive neuroscience, which studies how the brain processes, learns, and retains information. This approach emphasizes the importance of understanding how the brain works in order to create more effective and engaging learning experiences for pupils. It incorporates a variety of teaching strategies and practices that are designed to align with the way the brain learns best. Its ultimate goal to create a learning environment that is engaging, interactive, and meaningful for learners, and that is designed to support the brain's natural learning processes.

This approach states that emotions are given privileged treatment in the brain's memory system. Research done by Duman (2010) has shown that there is a high correlation between the strength of an emotional event and the likelihood of that event

being retrieved from memory. The hormone norepinephrine, which is released during emotional events, acts as a memory fixative and helps to solidify memories of exciting or traumatic events. People are more likely to remember moments that evoke strong emotions, such as receiving a standing ovation, receiving harsh criticism, or celebrating a project's completion.

1.4.1. Emergence of the Brain-Based Approach

The idea of BBA was first proposed by Hart (198.). However, the concept did not receive much attention at the time because there was still a lot of unknown information about the brain and the technology to study it in depth. It was not until Caine and Caine (1991) published their book that it began to gain more recognition. These two works led the groundwork for what we now know as brain-based learning today. Their research in 1994 showed that brain- based teaching methods lead to increased retention and comprehension of subject matter among students. As a result, brain-based learning has become a more common practice in schools since then.

Bruer (2006) authored a series of articles that were critical of brain-based education. In his writings, he contended that teachers ought to prioritize the established discoveries made by cognitive scientists and psychologists on teaching and learning, rather than relying on neuroscience. He opined that brain-based education was associated with sensationalized tabloid stories, and believed that it would take at least 25 years for practical classroom applications of brain research to surface. Perhaps some educators disregarded brain research, believing it to be too intricate or irrelevant to the learning process. Nevertheless, brain-based education has continued to develop, and novel neuroscience findings have affirmed its importance.

Brain-based education has demonstrated its practicality in school settings, and the intersection of biology, cognitive science, and education can lead to enhanced educational experiences. Over time, brain-based teaching has gained increasing recognition and acceptance in education, and numerous teachers and educators now use brain-based teaching methods and techniques to deliver more engaging and effective learning experiences to their students (Kappan, 2008).

1.4.2. The principles of the Brain Based Approach

Caine and Caine (1991) assert that the primary challenge for educators in brain research is not just to comprehend the complex anatomy of the brain, but to fully understand its vastness and potential for learning. The principles of the brain are presented as a universal theoretical basis for learning that is grounded in neuroscience. They are both scientifically valid and easy to understand. By incorporating them into education, it allows for a shift away from traditional teaching approaches and encourages educators to choose suitable programs and methods based on these principles (Jensen, 2005).

Connell (2005) highlights the essential principles for effective learning encompassed by the BBA. Firstly, the brain acts as a parallel processor, enabling it to perform multiple tasks concurrently. Secondly, learning is a process involving the whole physiology, including the brain and body. Thirdly, meaning-seeking is an innate process, and the brain instinctively searches for meaning in learned material. Fourthly, patterning is the process through which meaning is sought, and the brain is designed to perceive and generate patterns. Fifthly, patterning is influenced by emotions, which play a critical role, and decision-making is reliant upon them. Lastly, the brain processes both parts and wholes simultaneously, and successful learning necessitates focused attention and peripheral perception.

Conscious and unconscious processes both play a role in learning, and there exist at least two types of memory: spatial and rote learning. According to Caine and Caine (1994), the taxon, or rote memory, system is composed of knowledge and abilities that are retained through repetition and practice. On the contrary, they believe that spatial or autobiographical memory helps to establish relationships and connections between facts, events, and personal experiences. In summary, learning is a developmental process, and children can benefit from enriched environments. Challenges can enhance learning, while threats can inhibit it. It is important to consider that each brain is unique and organized differently. Thus, teaching methods should be tailored to meet the unique strengths and weaknesses of each individual student's brain.

1.4.3. Strategies of the Brain- Based Approach

To engage students in the learning process, educators use a variety of strategies such as multisensory learning, active engagement, and meaningful context that are designed to tap into the way the brain processes information. These strategies are based on the latest research about how the brain learns, and they help students make connections between what they already know and new information they encounter. Each strategy will be explained in the upcoming sections.

1.4.3.1. Multisensory Learning

Al SayyedObaid (2013) believes that the multisensory strategy is one of the important aspects of the BBA as far as teaching is concerned. It involves engaging multiple senses in the learning process, including sight, sound, touch, and movement, and aims at creating a learning environment that leverages these different modalities. Multisensory teaching involves using a variety of instructional materials, like visual aids, audio recordings, as well as manipulative and tactile objects. For example, a teacher might use visual aids like diagrams or charts to explain a concept, while also incorporating audio recordings or music to reinforce key ideas. By engaging multiple senses in the learning process, multisensory teaching can help reinforce new concepts and create stronger connections in the brain. This can be particularly effective for students with learning differences, as it provides multiple pathways for learning and can help to accommodate different learning styles.

1.4.3.2. Active Engagement

Jensen (2005) emphasizes the importance of active engagement as a way to promote deeper learning and retention of information. He suggests that teachers should use strategies that actively involve students in the learning process, rather than just passively listening to lectures or reading text books. For this sake, he proposes activities like inquiry-based learning, cooperative learning, role-playing and simulations, and project-based learning. The inquiry-based learning is an educational method that involves students exploring a topic by asking questions and conducting research. The teacher serves as a facilitator, guiding the process and providing

support. In the cooperative learning, the students work together in small groups to achieve a common goal or complete a task. Each member of the group has a specific role or responsibility, and they are expected to collaborate, communicate, and contribute to the group's success. This approach promotes active engagement, peer learning, and social interaction, as students learn from and with each other.

Role-playing and simulations deal with creating an interactive scenario or situation that allows students to explore and apply concepts and skills in a realistic or simulated environment. In role playing, students assume the roles of characters or personas and act out a scenario, often with the goal of solving a problem or resolving a conflict. Project-based learning involves students working on a complex and extended project that involves research, problem-solving, and collaboration. The project is interdisciplinary and focuses on real-world problems, helping students develop important skills like critical thinking and teamwork. He argues that this type of strategy helps to create a positive learning environment that is both challenging and supportive, and that can help students to develop important skills such as critical thinking, problem-solving, and collaboration (Jensen, 2005).

1.4.3.3. Meaningful Context

Jensen (2005) asserts that the meaningful context strategy is used in brain-based teaching and learning and focuses on providing a relevant and meaningful context for the material being taught. The idea behind this strategy is that when students can connect new information to their existing knowledge and experiences, they are more likely to understand and remember it. He emphasizes the importance of providing a meaningful context for learning, and suggests that teachers can use a variety of techniques to create a context that is relevant and engaging for students. Among these techniques, there are using real-world situations, activities that match students' interest or imply their experience, and multimedia. By providing a meaningful context for learning, teachers can help students make sense of new information, and see how it relates to their own lives and experiences. This enables them to increase motivation and engagement, and ultimately lead to deeper learning and retention of information (Jensen , 2005) .

1.4.4. The Benefits of the Brain based Approach

The BBA to teaching and learning has several benefits. Accordingly, Arun and Singaravelu (2005) shed light on some of them. First, it highlights the importance of creating a positive and supportive learning environment, which helps reduce stress and anxiety, and promotes optimal brain functioning. Second, it recognizes the role of emotions in learning, and incorporates strategies to help students regulate their emotions and stay motivated. Third, it emphasizes active engagement, which involves hands-on activities, group work, and real-world applications that help students make meaningful connections between new information and their prior knowledge.

It also focuses on the use of multisensory strategies, which engage multiple senses and enhance learning and memory. Additionally, it insists on the importance of contextual learning, which involves using real-world situations to make learning relevant and meaningful to students. Finally, it underlines the uniqueness of each student's brain, and encourages teachers to use a variety of instructional strategies that cater to different learning styles and preferences. Overall, the brain-based approach helps create a dynamic and engaging learning environment that fosters deep and meaningful learning (Arun & Singaravelu, 2005).

Bakhsh (2016) considers the brain-based approach as a highly effective method for teaching vocabulary. By utilizing the principles of brain-based learning, teachers can design lessons in a way that matches the brain's innate ability to process and store information effectively. With including movement, emotions, and social interactions into vocabulary lessons, students are more engaged and motivated, leading to better retention and long-term memory. This approach not only benefits students' academic performance but also helps them develop a love for learning and curiosity that will serve them well throughout their lives.

1.5. The Brain based approach in Education

The Brain-Based Learning (henceforth, BBL) revolves around the structure and function of the brain as noted by Ramakrishnan (2018). Learning occurs as long as the brain is functioning properly, and it is not just a matter of having the potential to

learn. Brain-Based Education (henceforth, BBE) involves using strategies that are in line with the brain's functioning and its role in the educational setting. This approach is a combination of practical knowledge and neuroscience. BBL tasks are developed to stimulate both the left and right hemispheres of the brain at the same time, which enhances learning and creates long-lasting neural connections that are easier to recall.

1.5.1. The Brain-Based Approach and Teaching

The process of teaching in a school setting is widely recognized as one of the most significant and fundamental contexts that the brain interacts with. Through sensory, cognitive, emotional, and social experiences, individuals can promote their learning . However, the school and social environments are complex and constantly changing which making it necessary to develop and optimize educational practices and programs to meet the learning needs of each student (Lagoudokis et al., 2022). In recent decades, many academic researchers, educators, and neuroscientists have supported the importance of incorporating neuro-scientific findings into school instruction. The BBA also emphasizes the need for a holistic and student-centred approach to education, where instruction is tailored to the individual needs and learning styles of each student (Lagoudakis et al., 2022).

According to Caine and Caine (1994), learning is not a passive process, but an active one where students actively participate in constructing their own knowledge in different learning situations and contexts. Teachers who utilize the BBA focus on creating engaging and meaningful learning experiences that activate multiple areas of the brain, promote active learning, and encourage critical thinking. This has led to ambitious and innovative projects, such as the Organization for Economic Co-operation and Development's initiative to encourage cooperation between the sciences of education and brain research.

The aim of this initiative is to bridge the gap between neuroscience and education by proposing research-based ways of applying contemporary knowledge about the brain's anatomy and physiology and learning processes to improve instructional practices (Lagoudakis et al., 2022).This effort has given rise to a new scientific field that proposes ways to integrate neuroscience, psychology, and

education, and has been referred to by various terms including brain-based learning, educational neuroscience, neuroeducation, and mind-brain and education. Diverse approaches have been developed to achieve a functional conflation of these disciplines.

1.5.2. The Brain based approach and Learning

Deve (2014) stipulates that continuous accumulation of information regarding the functioning of the brain is observed, and it is anticipated that there will be more discoveries as neurology continues to evolve. Consequently, adjustments to teaching techniques based on brain research are required by educators. One of the crucial findings is the high degree of brain plasticity, suggesting that experiences and learning shape the specialized functions of specific brain regions, and hence teaching and teachers play a pivotal role in brain development. Nevertheless, for favorable brain development, purposeful and meaningful experiences are indispensable. Significantly, meaningful learning is an essential element in Caine and Caine's (1994) principles of learning. They comprise:

- organizing individual differences,
- engaging prior knowledge,
- providing opportunities for hands-on learning,
- promoting active processing of information, creating a safe and supportive learning environment,
- encouraging exploration and creativity,
- involving both hemispheres of the brain,
- recognizing the interconnectedness of the brain and body,
- using multiple sensory pathways, promoting social interaction,
- promoting reflection and meta-cognition, and
- addressing learners' emotional states.

These principles aim at optimizing the learning process by leveraging how the brain naturally functions while searching for meaning, as well as its different responses to meaningful and meaningless information and situations. They emphasize

that the brain is always doing several things at once that learning is affected by physiological functioning. They advocate that the search for meaning is innate and occurs through patterning, and emotions are critical to patterning. Moreover, they believe that learning involves both conscious and unconscious processes, and that there are at least two different types of memory. Other insights relate to the importance of emotions in patterning and memory. Additionally, learning is enhanced by challenge and inhibited by threat, and each brain is unique, which means that educators need to provide choices to attract individual brains.

1.6. Previous Studies Related to the Brain based Approach and Vocabulary

The BBA offers a promising approach to optimizing vocabulary learning by taking into account the complex interplay between memory, attention, emotion, and language. By understanding how the brain processes and interprets information, makes connections, stores, and retrieves messages, educators can design more effective strategies for teaching and learning (Jensen,2005).Moghadam and Araghi (2013) emphasized that memory is not a single, uniform process and that different parts of the brain are responsible for different aspects of memory The study also highlighted that learning involves both conscious and unconscious processes, and it relies on a combination of spatial memory and other cognitive systems. For better understanding and retention, it is beneficial to connect facts and skills with natural and spatial memory.

Moghadam and Araghi's (2013) study also found that learning is improved when there are challenges, but hindered by threats or negative emotions. Lastly, the study emphasized that each person's brain is unique, and learning methods should be adapted to individual differences. Accordingly, BBLA seeks to engage multiple areas of the brain to promote more robust and lasting memory. In the same line, Pool (1997) also highlighted the importance of understanding how the brain works to increase learning when using BBLA, underscoring the significance of this approach in improving educational outcomes.

According to Sprenger (2010), creating a non-threatening learning environment that encourages collaboration, reflection, and creative thinking using various resources

can enhance the learning experience. The study emphasizes that stress hinders learning, and teachers who establish a relaxed environment tend to be more successful. Reducing stress levels involves finding comfort within the learning environment and developing positive relationships with others. Sprenger (2010) also highlights the significance of emotional engagement in teaching. By triggering emotions, multiple regions of the brain can be stimulated, and the use of stories can tap into the brain's natural inclination to identify patterns and derive meaning. Consequently, stories are considered effective tools for vocabulary learning.

On the reverse, Sun (2012) argues that BBLA is a teaching approach that takes advantage of the brain's natural tendency to recognize patterns. By using methods such as graphic organizers, BBLA provides a language-friendly way of teaching. This approach helps language learners absorb and remember new vocabulary more effectively by aligning with the brain's natural pattern recognition abilities.Willis (2006) explains that patterns serve as pathways for memories to navigate. To establish these pathways effectively, the study recommends utilizing graphic organizers and chunking information. According to Willis (2006), employing graphic organizers and chunking techniques is a valuable approach to create memory pathways, particularly for vocabulary learning.

Additionally, the study involved analyzing the brains of bilingual individuals using FMRI to identify the specific areas of the brain that are involved in language processing. These findings have implications for language learning and education, suggesting that the brain is capable of storing language knowledge even if it is not used frequently, and that bilingualism may confer cognitive advantages beyond just language ability. Kim , Reklinand Hirsch (1997) found that children who learn a second language store the knowledge alongside their native language in one area of the brain, while adult language learners store each new language learned in a separate area. This discovery highlights the importance of including foreign language education in elementary and middle school curriculums to ensure children have adequate time to develop proficiency in both languages. Therefore, a brain-based

approach can help language learners to effectively absorb and retain new vocabulary, and bilingualism can confer cognitive advantages beyond just language ability.

1.7 Conclusion

This theoretical chapter offers a general overview of the brain-based approach. It is an effective method for teaching vocabulary, utilizing the principles of brain-based learning to design lessons that align with the brain's natural ability to process and retain information. By integrating movement, emotions, and social interactions into vocabulary lessons, students can experience heightened engagement, motivation, and better retention of information.

By catering to students' unique learning styles, brain-based teaching approaches help to foster a love for learning and curiosity that can serve them well throughout their lives. Additionally, students can develop valuable skills such as critical thinking, problem-solving, and collaboration that can be applied in both academic and real-life situations. As such, educators should consider incorporating brain-based teaching strategies into their vocabulary instruction to maximize learning outcomes and promote lifelong learning among their students.

Chapter Two:

Methodological Framework

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2.1 Introduction

This chapter aims at identifying pupils' problems as far as vocabulary retention is concerned, testing the effect of the proposed approach for learning vocabulary, and exploring pupils' perceptions of it. At first, it provides a general description regarding the instruction of English for third-year pupils in the primary schools by describing the aim and content of the syllabus as well the way vocabulary is assessed. After that, it portrays the methodological framework. It points out the research design, the sample population and sampling design, the research instruments used to gather data. The chapter then proceeds to an analysis and interpretation of the collected data, drawing important insights from the research findings. At the end, it concludes by offering practical suggestions and recommendations based on the obtained outcomes; for future implementation of the new approach in vocabulary instruction.

2.2. The Description of the Teaching/Learning Situation

The teaching and learning of English in Algeria have been the subject of multiple educational reforms that have affected different institutional sectors. As far as the Ministry of Education is concerned, English was taught to learners for seven years, four in the middle school and three in high school. However, starting from 2022, it began to be introduced in primary schools for two 45-minute sessions per week, and a new textbook, entitled "My Book of English", was designed. Its syllabus is composed of six units:"Me, My Family and Friends", "My School", My Home", "My Playtime", "My Pets", and "My Fancy Birthday". These units aim at providing pupils with a well-rounded language learning experience that enhances their communication skills in different contexts in a funny and engaging way.

The first unit, "Me, My Family and my Friends", focuses on greeting people, introducing oneself, family, and friends, and asking basic questions. Unit two, "My School", helps pupils to identify school objects, ask about the school timetable, and name days of the week. The third unit, "My Home", focuses on distinguishing rooms in a house, locating people inside a house, and following instructions. In Unit four,

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"My Playtime", pupils get to know their favourite toys and describe them. The fifth unit, "My Pets", enables them to name, describe ask, and give information about pets. The final unit, "My Fancy Birthday", focuses on expressing and responding to offers, thanks, wishes, feelings, and emotions, as well as identifying objects and foods related to birthday celebrations and different parts of the face.

The syllabus emphasizes the importance of using diverse resources, including linguistic and cross-curricular resources, to enhance learners' communication skills. The syllabus is structured around four domains: oral comprehension, oral production, written comprehension, and written production. On the one hand, the oral comprehension focuses on learners' ability to recognize sounds and understand spoken language. On the other hand, the oral production concentrates on developing learners' speaking and communication skills. While the written comprehension helps pupils to understand written texts, the written production develops their writing skills.

Vocabulary is portrayed in this new textbook as the Ministry of Education is aware of its importance in enhancing pupils' communication. Pupils are asked to repeat several times the learned vocabulary until they can remember it. To reinforce their ability to understand the meaning of new words, fun activities and games are utilised. Among them, there are scrambling words where they have to rearrange words to form sentences or playing quick flash games. This approach to vocabulary instruction aims at engaging learners in a fun and interactive way and helping them develop their communication skills through the acquisition of new words.

At the end of the syllabus is the exit profile. The latter outlines the knowledge, skills, and attitudes that learners are expected to have acquired by the end of the year. It typically includes areas such as language proficiency, critical thinking, problem-solving, creativity, and social-emotional learning. It serves as a guide for teachers, and develop their teaching strategies and tailor their instruction to best meet their learners' needs and goals. By the end of the year, learners who have achieved theexit profile will have the necessary skills and knowledge to succeed in further education and in their future lives.

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2.3. Research design

A research design refers to the systematic approach employed to gather, examine, interpret, and present data in research studies. It entails the techniques used to collect and analyze data, as well as the process of making sense of the results and communicating them effectively (Creswell et al., 2007; Boru, 2018). According to Crowe et al. (2011), there are several types of research design, including: the case study, action research, and experimental design. The present research work embraced a mixed-research design that merged the quantitative (experimental design) and the qualitative research methods (the case study). Such a design is used to increase the validity and reliability of the findings of a study (Zohrabi, 2013). Both of them will be tackled in the following sections.

2.3.1. Case study

The use of case study research in examining past studies enables the investigation and comprehension of intricate matters. When a thorough and comprehensive examination is needed, case study research can be viewed as a strong research method. It has gained recognition as a valuable tool in many social science studies, particularly in areas like education, sociology, and community-based problems, such as poverty, unemployment, drug addiction, or illiteracy (Baxter & Jack ,2010).

There are various types of case study, among which are the explanatory and the intrinsic case studies. The exploratory case study is employed to investigate situations where the intervention being assessed does not have a distinct or singular set of outcomes. The intrinsic case study, on the reverse, is employed when investigators would like to gain a more profound comprehension of a given topic (Stake, 1995). It aims at clarifying the assumed cause-and-effect connections in practical situations that are too intricate to be studied through survey or experimental methods (Yin, 2003).

From the standpoint of Stake (1995), the intrinsic case study is not employed because the case represents the target population or exemplifies a particular

characteristic or issue. The only reason is that the case itself, with all its peculiarities and normal features, is intriguing. The present study used an intrinsic case study type because the main objective was to gain a detailed understanding of a specific teacher and pupils, as intrinsic case studies focus on examining the particular case in depth, rather than using it to represent other cases or to explore a general phenomenon.

2.3.2. Experimental Design

In statistics, the term "experimental design" is used to refer to the planning of an investigative study that involves the presence or absence of a variable, and it is carried out under the complete supervision of the researcher. It is often employed to describe experiments that are controlled, meaning they are conducted with a high degree of precision and oversight. In other words, it refers to the systematic and controlled approach to carrying out research, with the aim of achieving precision and drawing specific conclusions related to a hypothesis (Zubair, 2023).

The experimental design was chosen for this research due to its ability to produce precise and reliable results. The study involved manipulating an independent variable, which was the proposed approach, to observe its effect on a dependent variable, which was the pupils' achievement, motivation, engagement, or other learning outcomes. By carefully controlling these variables, the researcher can gain valuable insights into the effectiveness of different instructional interventions in education (Zubair, 2023).

The experimental design embodies the reliance on a treatment group. This term, according to Thomas (2020), refers to the independent variable that is manipulated or controlled by the researchers, and its specific nature can vary depending on the type of study being conducted. By carefully selecting and administering the treatment, researchers can observe its effect on the dependent variable, which is the outcome being measured in the study.

As far as the present research work is concerned, the researcher used a series of educational tools to teach vocabulary. First, she utilized an activity called "magic eyes". It involved using flashcards to help pupils memorize words and associate them

with visual images. The flashcards are gradually removed as the students gained confidence. She also employed a game called "lip reading" whereby pupils could identify and differentiate between sounds and words. In addition to that, there was the storytelling game which involved using two cards to create sentences or stories, promoting creativity and language usage (See Appendix A). It is worth highlighting that all activities proposed were inspired from conferences shared on YouTube from ELTed in 2015 (https://youtu.be/pzIv02E9vU8) and Carol in 2013 (https://youtu.be/X9KebTgfLJI)

To motivate pupils to participate actively in the classroom, "the candy game" was employed which consisted of giving a candy as a prize for good answers. At last there was the "clap word and balloon word games". In the balloon word game, students caught a balloon and answered a specific question posed by the teacher so as to encourage quick thinking and knowledge recall. The clap word game consisted of forming a circle, passing around a clap, and the one who received the clap must say a word related to a given category, thus encouraging vocabulary and word association skills.

Zubair (2023) advocates the existence of three primary types of experimental research design: the true-experimental, the quasi-experimental, and the pre-experimental. The true-experimental research design is seen as the most precise type of experimental design that utilizes statistical hypotheses to confirm or refute a hypothesis. It is widely adopted in the physical sciences and is the only one that can establish a cause-and-effect relationship among groups. To ensure accuracy, specific criteria such as random assignment, control group, experimental group(s), and manipulation of the independent variable must be met when using this method. Although the quasi-experimental design resembles the true experimental design, the two designs are not identical, thus the term "quasi". In this design, an independent variable is also manipulated; however, it lacks random assignment to groups. In other words, the researcher does not randomly assign participants to the groups being compared, but assigns them based on pre-existing characteristics such as their location or pre-existing conditions.

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The pre-experimental research design is considered as the most rudimentary form of experimental design. It involves monitoring one or more groups after identifying certain factors as the cause and effect. In other words, one or more dependent groups are scrutinized to determine the impact of an independent variable believed to cause a change. Its primary objective is to assess whether further research is warranted for the target population. As such, this approach is viewed as being cost-effective (Zubair, 2023). This design was used as the work depended on the only classroom that studied English at Bendjaloul Abdelkader Primary School, Meghnia. Therefore, the random assignment to a control group was not feasible.

The experimental design also includes pre-tests and post-tests. The pre-test is conducted before the treatment as a trial run to refine the survey questions and ensure accurate data collection during the actual study. Specifically, in this study, the researcher examined whether the BBA approach, which was the independent variable that will be applied after conducting a pre-test, would lead to a significant improvement in pupils' ability to learn new vocabulary. This improvement would be assessed through a post-test whose results would be compared with the pre-test.

2.4. Sampling

Tahderdoost (2016) defines a sampling frame as a list of real examples from which a sample will be chosen, and it should be a good representation of the overall population. Sampling methods can be broadly categorized into probability or random sampling and non-probability or non-random sampling. Probability sampling implies that every element in the population has an equivalent chance of being selected for the sample, and random sampling can be executed by generating random numbers to select a sample from the sampling frame (Zikmund, 2002). On the other hand, non-probability sampling is typically linked with qualitative research designs like the case study and aims to explore a real-life occurrence rather than make statistical conclusions regarding the broader population (Yin, 2003). There are various sampling methods like quota sampling, stratified and purposive.

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Since this research work was carried out in a unique classroom within the sole primary school class that was learning English at BendjaloulAbdelkader Primary School in Meghnia, a non-probability purposive sampling method was used to select the informants who participated in the study. This sampling method involves selecting participants based on certain characteristics or criteria determined by the researcher to meet the research objectives (Tahderdoost, 2016). Regarding the sample population, it consisted of one teacher and thirty-five pupils. The instructor, who was in her thirties, was a substitute teacher who never formally taught English to students. Regarding pupils, they comprised 17 boys and 18 girls, ranging from 7 to 9 years old.

2.5. Instrumentation

Instrumentation involves developing research tools that are suitable for collecting data in a study. The most frequently used methods for data collection are questionnaires, interviews, and observations (Naqvi, Al Aufi, Tuzlukova, & Asma. M 2022). As far as the present work is concerned, a classroom observation, a questionnaire, tests, and a post-experiment questionnaire were employed. A definition and a description of each instrument are supplied in the upcoming sub-sections.

2.5.1. Classroom Observation

Observation entails watching and recording the actions of a subject to gain insight or intuition, without any formal intervention or manipulation of the situation. This tool appears to be useful for observing the various behaviours of people in order to identify their strengths, weaknesses, and areas for improvement. Numerous types of observation techniques exist, including structured, systematic, and unstructured. However, the two most widely recognized methods are participant observation, where the observer becomes an active participant in the situation being observed, and non-participant observation, where the observer remains separate from the situation being observed (Kumar, 2022).

In the present study, non-participant observation was utilized as it allowed the researcher to maintain distance from the environment and observe freely all the movements and behaviours of both the pupils and their teacher. During observation, it

is important for the researcher to use an organized approach such as an observation grid which serves a similar purpose as the guide in helping the observer to remember important events and issues. However, the observation grid is different from the guide. Indeed, the grid is a sort of long spreadsheet which allows the observer to record and reflect on observable events in relation to the constructs being studied. It is organized with relevant constructs or research issues listed as column headings and specific observation focuses listed as rows. The observation grid is a useful tool for ensuring that observations are structured and focused, which can lead to more reliable and valid data (Roller &Lavrakas, 2015).

As to the present work, the researcher received permission from the director of Abdelkader Primary School and the Directorate of Education (See Appendix B) to sit at the back of the classroom and observe the lesson for a period of four weeks. By adopting a non-participant approach, the researcher was able to maintain objectivity and avoid any potential biases. During this time, the researcher recorded the behaviour and reactions of both pupils and teachers, as well as any contextual factors that may have influenced the observations, such as a lack of resources or difficulty with maintaining focus in the classroom.

It is common practice for researchers to adapt existing observation grids to suit their specific research needs. In this case, the observation grid used by the researcher was adopted from the example of Roller and Lavrakas, 2015 (SeeAppendix C) as it was deemed to be an appropriate fit for the research questions and objectives. The observation grid of this research included details such as the level of observation which refers to the depth of analysis and it determines the extent to which the observation can capture fine-grained detail. It also comprised the duration that specifies the length of time over which the observation will occur, ensuring that the observation period is long enough to capture a representative sample of behaviour. Moreover, it involved the type of observation, and aim.

Additionally, criteria were identified, which will be used to evaluate the observation, such as the behaviour of individuals and the context surrounding the

observation. Furthermore, it embodied other areas for evaluation, such as difficulties or benefits, which may arise during the observation period. In addition, it encompassed the focus of the observation, which helps to direct attention towards specific aspects of the observation. Finally, the observer may suggest strategies for improving the observed behaviour or outcomes.

2.5.2. Questionnaire to the Teacher

Bhandari (2023) explains that a questionnaire is a set of questions that are designed to collect information from informants about their beliefs, experiences, or thoughts for qualitative and quantitative research. As far as the present research work is concerned, the questionnaire was used to collect data about the teacher's teaching experience. It aimed at understanding the teaching methods employed by the teacher to maintain the attention and engagement of pupils in the classroom, and identifying the challenges and difficulties pupils face while learning new vocabulary. It was administered to the teacher online, on Google form, because it saves time as the teacher could complete the questionnaire at her convenience without having to schedule a specific time for an in-person interview. Additionally, it allows the researcher to collect data efficiently and securely, with automated data collection and storage.

The questionnaire began by seeking the teacher's consent agreement to participate in the study, and then, ten questions were given to her. They aimed at gathering information about her English teaching experience to primary school pupils (See Appendix D).

- **Question one** showed how vocabulary was taught in the Algerian third year primary schools.
- **Question two** aimed at gaining an understanding description of the syllabus content.
- **Question three** explored the teacher's prior experience in teaching the English language.

- **Question four** purposed of gather information about the level of focus and attention of the pupils during the entire 45-minute session and knowing the reasons behind it.

- **Question five** gathered information about the extent to which the pupils were able to memorize the vocabulary taught in the classroom and to understand whether or not the teaching methods and techniques employed by the teacher were successful in facilitating vocabulary acquisition and memorization.

- **Question six, seven, eight, and nine** explored if the teacher used songs, educational games, cards, storytelling or emotions in teaching vocabulary.

- **Question ten** aimed at knowing if the above cited tools were effective for pupils to learn vocabulary and the reasons behind it.

2.5.3. Tests

As highlighted by Adu (2018), a test is a tool used to evaluate the knowledge, aptitude, and competencies of students. Because of the experimental design used in this study, a pre-test and post-test were used. They were administered to the pupils after a four weeks classroom observation and were done after the vocabulary lessons. It is worth highlighting that all the words mentioned in the test were already done in the classroom with their teacher.

2.5.3.1. Pre-test

From the standpoint of Hashim et al. (2022), a pre-test is like a practice session that helps researchers to makes sure that they collect accurate data when they actually conduct the study. Concerning the present study, the pre-test was used to assess whether or not the pupils retained the vocabulary taught in the classroom before implementing the treatment. The pre-test consisted of two activities. Activity one included four different questions; each question implied ticking the right answer from the four choices by finding the correct meaning of each word or statement. Activity two was administered after the lesson of "next to / opposite" which is situated on page thirty one (activity number 4) in the text book. It comprised two pictures. While the

first one portrayed two siblings (a brother and his sister) sitting next to each other, the second one showed them sitting opposite to each other (See Appendix E). The pre-test lasted for twenty minutes so as not to impair the whole session in the middle of March.

2.5.3.2. Post – Test

Post-tests differ from pre-tests in that they are evaluated tests that determine if a student has acquired the necessary knowledge to complete the course with success. They also provide information on the extent to which a student's knowledge has expanded and the degree to which they have improved over the duration of the course (Dimitrov, 2003). In the present study, a post-test was conducted to determine whether the pupils were able to acquire and retain new vocabulary taught to them. The post-test consisted of two different activities. The first activity involved four questions. Each question required the students to choose the correct answer from four choices by identifying the appropriate meaning of the given word or statement. The second activity was conducted after the students had completed all the face-related lessons in their textbook, specifically activity 7 which is located on page 55 of the textbook (See appendix F). They were asked to identify the various features of the human face by name.

2.5.4. Post Experiment Questionnaire

The post-experiment questionnaire was used to gather pupils' opinions and reactions, level of engagement, motivation, and overall satisfaction about the new approach that was used in the experiment. It was employed to obtain feedback from them so as to identify areas for improvement in future implementations. Since the pupils were still not acquainted with the English language, the questionnaire was administered to them in Arabic. Two versions of the post-experiment questionnaire are highlighted in Appendix G, one in English and another one in Arabic. Moreover, the researcher was there to ensure that they understood each question and to clarify any confusing aspects. The investigator also made sure that the pupils had enough

time to answer the questions freely and without any pressure. In sum, it lasted for twenty minutes. The questionnaire comprised fifteen questions.

- **The first two** questions explored the respondents' gender and age.

- **Question three** aimed at establishing whether the respondents were beginners or had some prior experience in learning English.

- **Question four** is intended to gauge the respondents' general attitude towards learning English.

- **Question five** sought to obtain the respondents' opinion on the effectiveness of the teaching methods used by their teacher to teach English vocabulary.

- **Questions six and seven** intended to gather feedback on the respondents' learning ability, including how quickly they learned new vocabulary and how well they retained it.

- **Question eight** investigated the respondents' ability to concentrate during the English session.

- **Questions from nine to twelve** explored the respondents' opinion on the effectiveness of various tools and techniques used by the teacher to teach English vocabulary, such as cards, songs, stories, and educational games.

- **Questions thirteen and fourteen** examined the respondents' ability to concentrate and retain vocabulary when the teacher used the above cited tools.

- **Question fifteen** inspected the respondents' preference for their willingness to use those tools in the future.

2.6. Data analysis

The study employed four research instrumentations: classroom observation, teacher questionnaire, tests, and post-experiment questionnaire for pupils. The collected data were analyzed using both quantitative methods, which involve generating numerical data that can be converted into statistical information to measure the phenomenon, and qualitative methods, which aim to identify patterns within ideas

and perspectives (Abuhamada, 2021). While quantitative analysis was applied to tests and the post experiment questionnaire, qualitative analysis was utilized for the classroom observation and teacher questionnaire.

2.6.1. Observation grid Results

Below are the results following a four-week observation:

Table 2.1. The observation grid results:

The level	3 rd year primary school pupils
The duration	A session of 45 minutes , twice a week (Sunday 2 :30pm/ Tuesday 8 am), for four weeks
The type of observation	Non- participant
The aim (s)	Observing the attitude of the pupils during the lesson explained by their teacher Identifying the difficulties they faced while learning a new language.
The criteria relied on	*The reactions of the pupils and their teacher during the session *The tools used while teaching *The level of concentration in the classroom
Behaviour (what , by whom , where)	Observing the behaviour of the pupils during the session while their teacher explained the lesson in the classroom.

Context (what else is going on , what is the weather)	*The pupils were so energetic
	    *The teacher was doing her best, but there was always a lack of experience because it was her first time teaching
	  *The lack of tools in the school
	    *The teaching tools used were colourless and not attractive; thus, the pupils did not focus with her the whole session.

	*The lack of concentration during the class made the pupils get lost from the purpose of the lesson *The strategy used in the classroom was inadequate par rapport to pupils' age.
Other areas (difficulties, benefits, other remakes)	* The teacher was always doing her best to attract the pupils' attention, but the lack of experience and of training has an impact on this area. *The pupils were active in the classroom , but they always had a problem in remembering the vocabulary
Focus observation	* Focusing on the lacks of the group *The forgetfulness of the new vocabulary was always a problem and the lack of concentration during the session
MY Suggestions	* Trying to attract the pupils' attention by new method which fits their desires and capabilities *The BBA could solve such types of educational problems as it relies on songs , games , and storytelling.

2.6.2. Questionnaire to the teacher Results:

The study utilized an online questionnaire administered via Google Forms to gather insights on teaching methods and challenges in learning new vocabulary. The questionnaire, consisting of ten questions, focused on the English teaching experience of the primary school teacher. The results of the questionnaire are presented in the following section.

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Question one: Teaching Vocabulary in the Algerian Third Year Primary Schools

As it depicted in 2.2, in Algerian third-year primary schools, vocabulary is taught through a new textbook that emphasizes its significance in improving students' communication. Students are encouraged to repeat learned vocabulary multiple times until they can remember it. To enhance their understanding of new words, fun activities and games are used, such as word scrambles and quick flash games.

Question two: Description of the Syllabus Content

The syllabus consists of six sections: "Me, My Family, and Friends", "My School", "My Home", "My Playtime", "My Pets", and "My Fancy Birthday". These units have been designed to offer students a comprehensive language learning experience that improves their ability to communicate effectively in various situations as it is shown in 2.2.

Question three: The Teacher's Experience in Teaching

The answer showed that the teacher had a limited experience in teaching English language for young learners

Question four: The Pupils' Level of Concentration

It appears that the pupils had difficulties maintaining their attention throughout the entire 45-minute session as they became easily bored.

Question five: The Pupils' Memorisation of Vocabulary

The answer advocated that the pupils cannot memorise all the vocabulary taught in the classroom.

Question six: The Use of Songs in Teaching Vocabulary

The teacher did use the songs as a tool in teaching pupils according to her answer.

Question seven: The Use of Educational Games in Teaching Vocabulary

The answer indicated that the teacher occasionally employed these tools for teaching vocabulary.

Question eight: The Use of Cards in Teaching Vocabulary

The response suggested that the teacher sometimes utilized these methods for teaching vocabulary.

Question nine: The Use of Storytelling in Teaching Vocabulary

The feedback suggested that the teacher used this method infrequently to teach vocabulary to the students.

Question ten: The Effectiveness of the Tools (Songs, Educational Games, Cards and Storytelling)

The teacher agreed on the effectiveness of these tools in teaching vocabulary because they were able to capture pupils' attention easily, which kept them engaged in the session and facilitated their retention of the taught vocabulary.

2.6.3. Experiment Tests Results

In order to analyse the pre-test and post-test results and compare between them, the mean score was used. The latter, according to Hurly and Tenny (2022),refers to the average performance of a particular group of people on a given assessment. It gives an overall indication of how well the group performed collectively.

2.6.3.1. Pre-Test Results

In the current study, the pre-test was used to determine if the pupils remembered the vocabulary taught in class before the actual treatment was implemented. The results are shown in Table 2.2.:

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Table 2.2. The Pre- Test Results

Participants	Marks
1	6
2	7
3	10
4	5
5	10
6	7
7	5
8	6
9	5
10	7
11	10
12	8
13	6
14	5,5
15	7
16	6
17	5
18	10
19	6,5
20	10
21	5
22	5
23	6
24	10
25	6
26	10
27	6
28	5
29	5,5
30	6
31	10
32	5
33	10
34	7
35	5

The mean score= Total of the all the marks / number of the pupils

243,25 (t) /35 = 6,95

The final outcome revealed that the average score of the pre-test was 7, indicating the performance of the group before the treatment was applied.

2.6.3.2. Post-Test Results

Just like the pre-test, the mean score was also calculated. The results are illustrated in Table 2.3

Table 2.3. Post-Test Results

Participants	Marks
1	7
2	7
3	10
4	7
5	10
6	9
7	6
8	9
9	8
10	7
11	10
12	8
13	7
14	6
15	8
16	8
17	7
18	10
19	6,5
20	10
21	5
22	7
23	8
24	10
25	7
26	10
27	7
28	6
29	5,5
30	7
31	10
32	7
33	10
34	8
35	8

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The mean score= Total of the all the marks / number of the pupils

276 (t) / 35= 7.88

The results of the post-test indicated an increase in the pupils' marks, resulting in a mean score of 7.9. This demonstrated the effectiveness of the BBA.

2.6.4. Post-Experiment Questionnaire Results

The purpose of the post-experiment questionnaire was to gather feedback from the students about their thoughts, level of engagement, motivation, and overall satisfaction with the new approach used during the experiment. Since the students were not familiar with English, the questionnaire was provided to them in Arabic. Ample time was provided for the students to answer the questions without any pressure, and the questionnaire took around twenty minutes to complete. It contained a total of fifteen questions. The subsequent section presents the outcomes or findings derived from the questionnaire.

Question One: Pupils' Gender

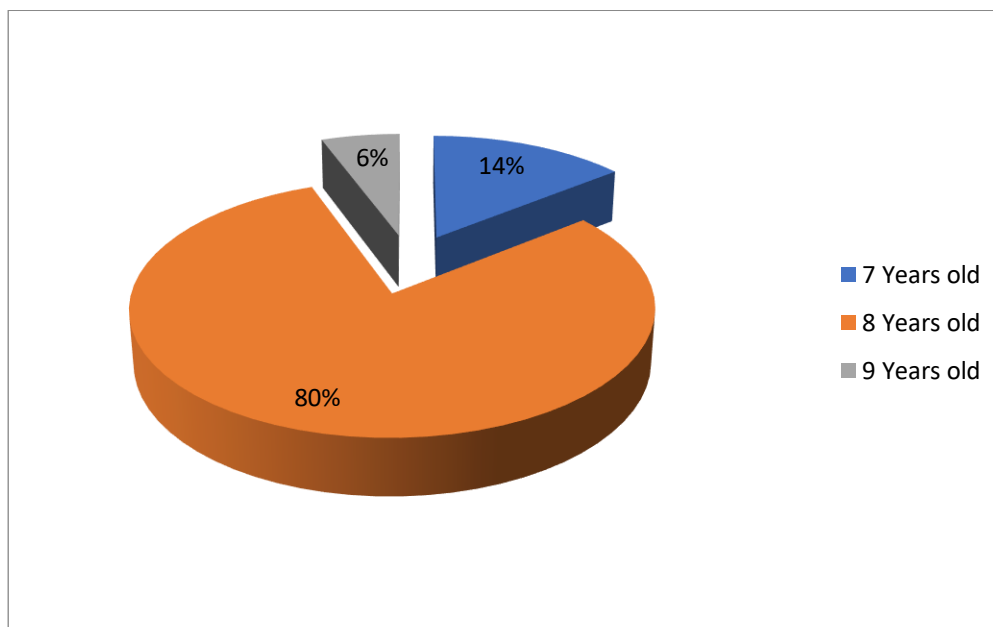51,4% (18) of the pupils were females and 49% of them (17) were males. The results are demonstrated in Figure 2.1:
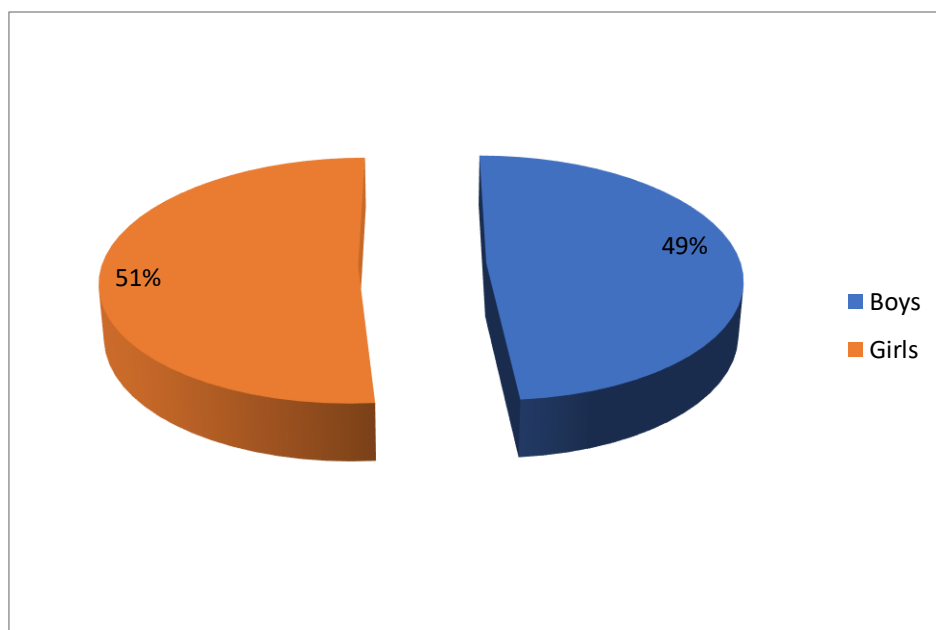
Figure 2.1: Pupils' Gender
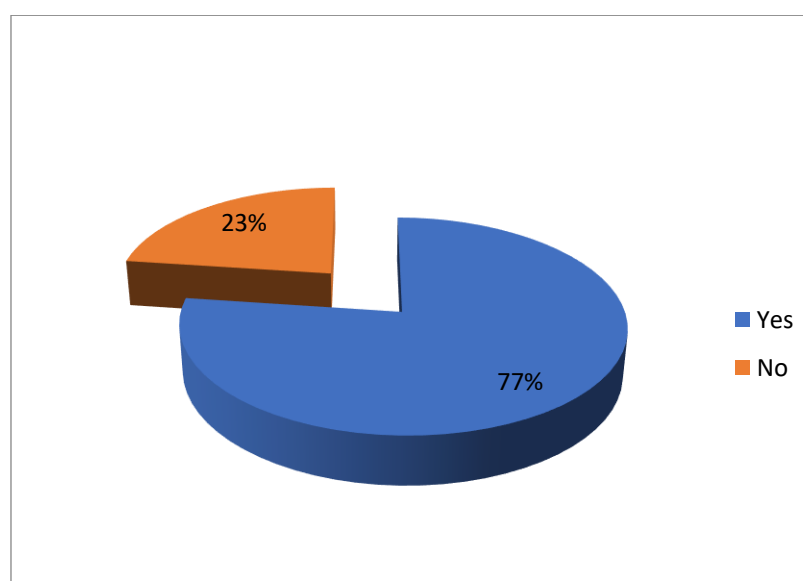
Question Two: Pupils' Age

As shown in Figure 2.2, 80% (28) of the pupils were eight years old, 14 % (5) were 7 years old , and 6% (2) were nine years old.

Figure 2.2 Pupils' Age

Question Three: Pupils' First Time Learning English

As depicted in Figure 2.3, 77% (27) of the pupils confessed that it was their first time learning English, and 23% (8) declared the reverse.
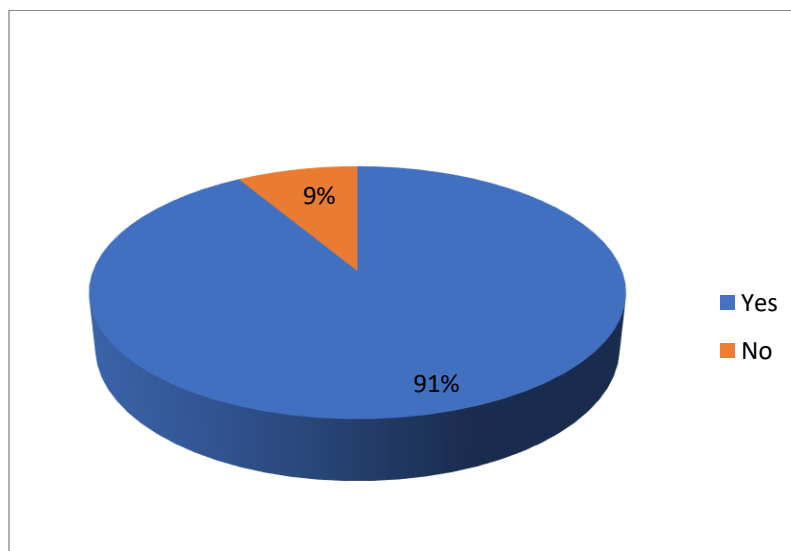

Figure 2.3 Pupils' First Time Learning English

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Question Four: Pupils' Interest in Learning English

While 91% (32) of the pupils were interested in learning English, only 9% were not. Their answers are summarised below:

Figure 2.4. Pupils' Interest in Learning English

Question Five: Pupils' Interest in their Teacher's Way of Teaching

77% (27) of the pupils confirmed liking their teacher way of teaching, 17 % (6) reported an occasional interest, and the remaining 6% (2) expressed their dislike.
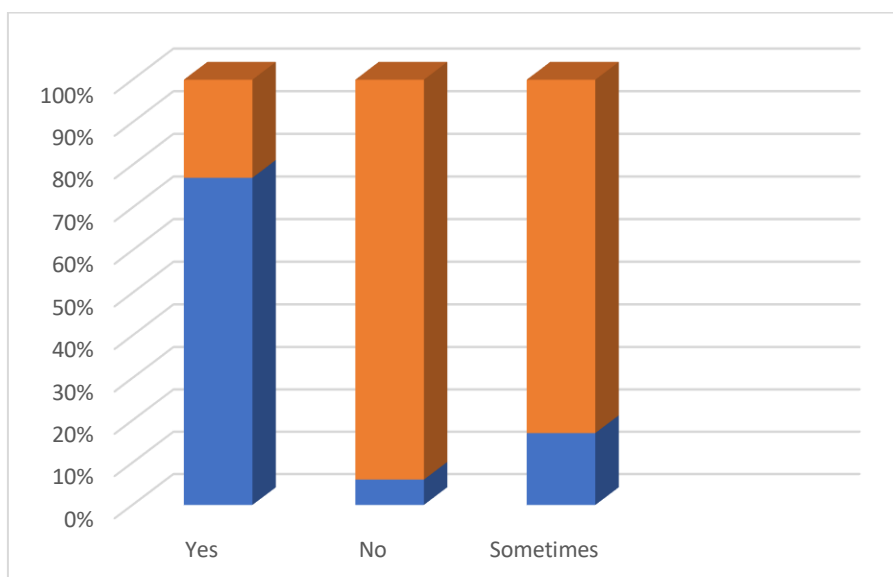
Figure 2.5. Pupils' Interest in their Teacher's Way of Teaching

Question Six: Pupils' Capacity of Learning New Vocabulary

49% of the respondents claimed that they sometimes had difficulties learning vocabulary; 43% (15) confirmed the difficulty in question, and only 6% (2) revealed its absence. . The results are designed in Figure 2.6:
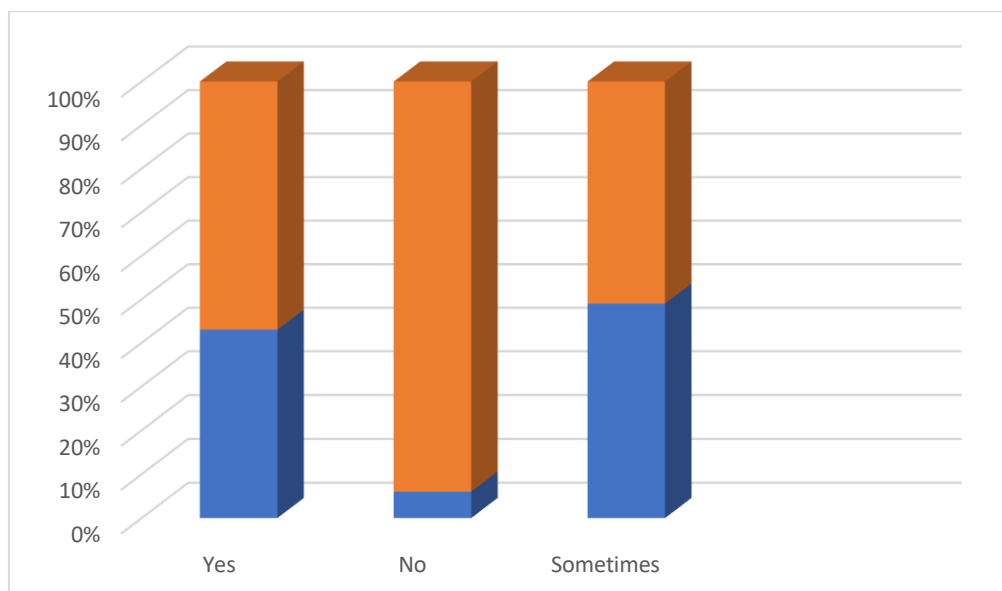
Figure 2.6. Pupils' Capacity of Learning New Vocabulary

Question Seven: Pupils' Retention of New Vocabulary

As depicted in Figure 2.7, the majority of the pupils (63%) reported their occasional problems as to the retention of the vocabulary taught in the classroom. 29% (10) of them confessed that they could not remember it, and only 9% (3) confirmed the opposite.
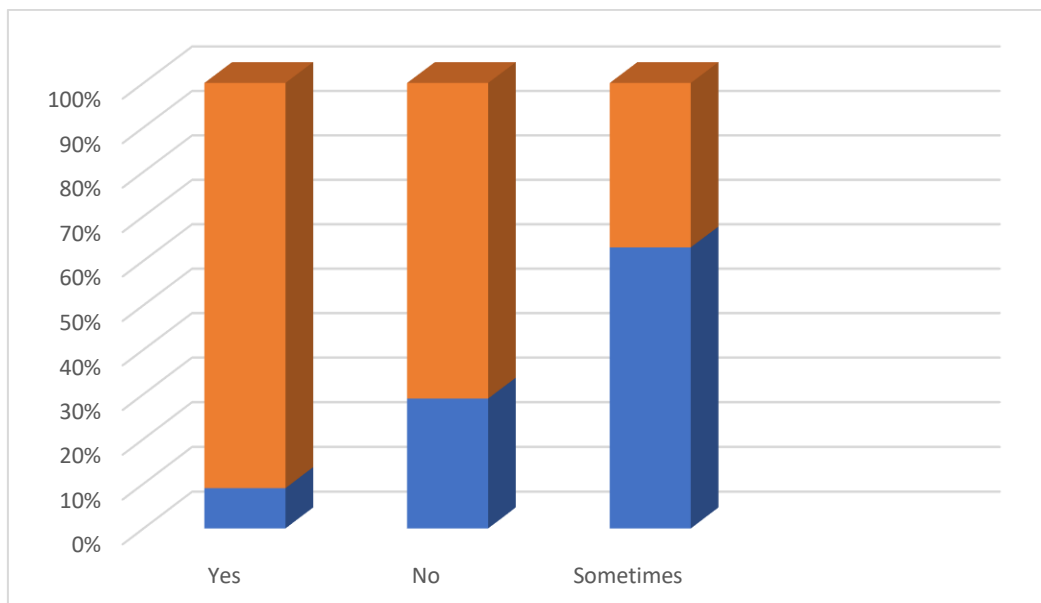
Figure 2.7: Pupils' Retention of New Vocabulary

Question Eight: Pupils' Concentration during the Classroom Session

When asked if they were able to concentrate with their teacher during the English session, the majority of pupils (57%) confessed their inability, 29% of them (10) reported the opposite, and the remaining 14% (5) pupils claimed occasional concentration. The findings are supported in Figure 2.8.
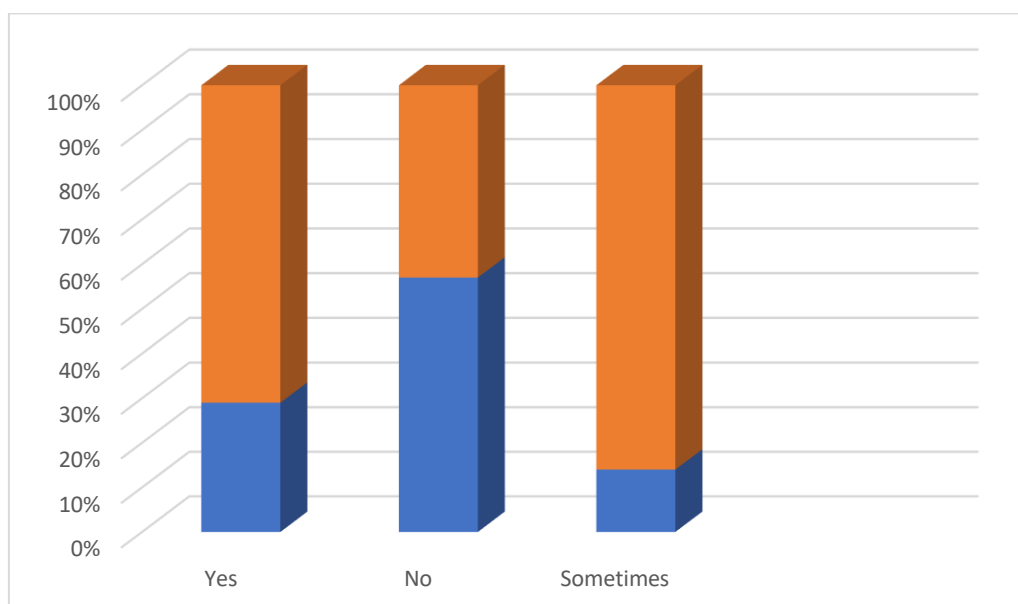
Figure 2.8.Pupils' Concentration during the Classroom Session

Chapter Two: Methodological Framework

Question Nine: Pupils' Interest in the Use of Cards to Learn Vocabulary

The majority of the pupils (86%) liked the use of cards to learn vocabulary. However, only 14% expressed a partial interest as it is shown in figure 2.9.
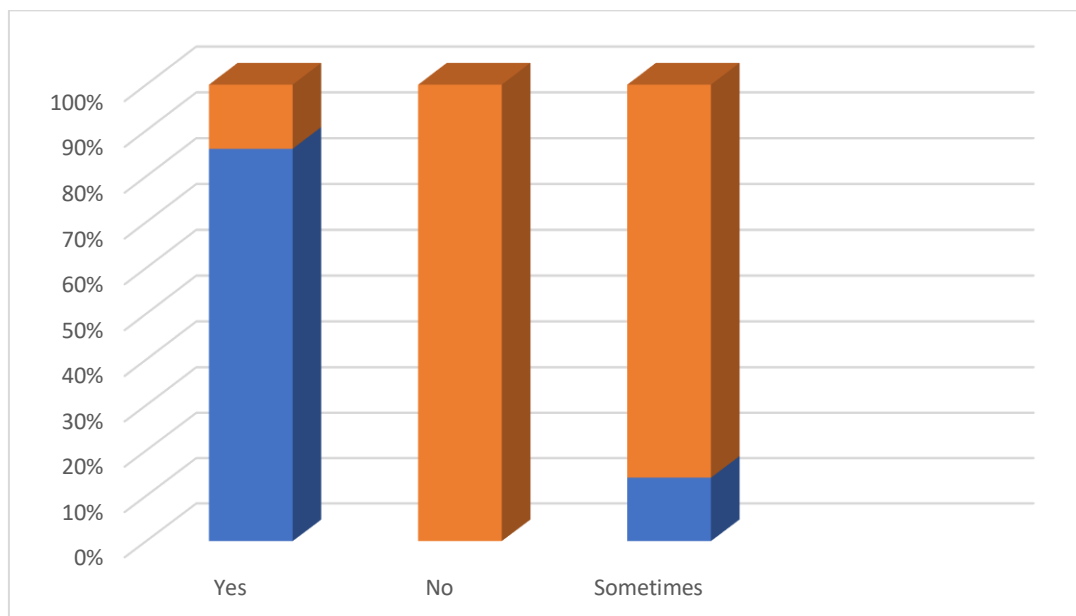
Figure 2.9. Pupils' Interest in Cards to Learn Vocabulary

Question Ten: Pupils' Interest in the Use of Songs to Learn Vocabulary

The totality of the pupils (35) expressed their interest in the use of songs to learn English vocabulary.

Question Eleven: Pupils' Interest in the Use of Stories to Learn Vocabulary

While the majority of the pupils 83% (29) loved to be taught with songs to learn English vocabulary, the remaining 17% (5) advocated occasional interest asshown in figure 2.10.
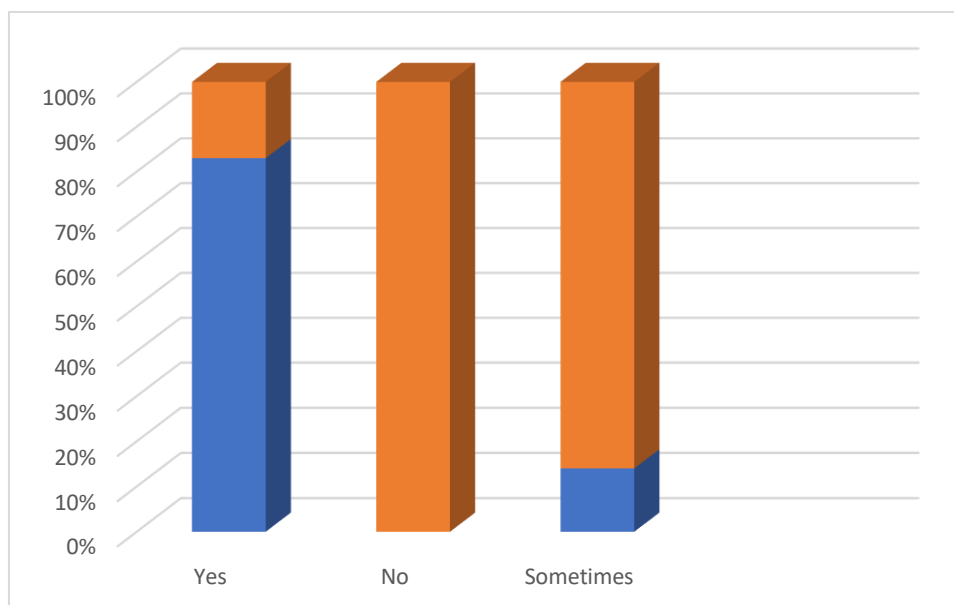
Figure 2.10. Pupils' Interest in the Use of Stories to Learn Vocabulary

Question twelve: Pupils' Interest in the Use of Educational Games to Learn Vocabulary

For this question, all the pupils (35) loved the use of educational games to learn vocabulary

Question thirteen: Pupils' Concentration with the Educational Tools Used

When asked if they felt that their concentration increased when their teacher started using educational tools to teach vocabulary, the majority agreed and the remaining answered sometimes. The figure 2.11 demonstrates the findings:
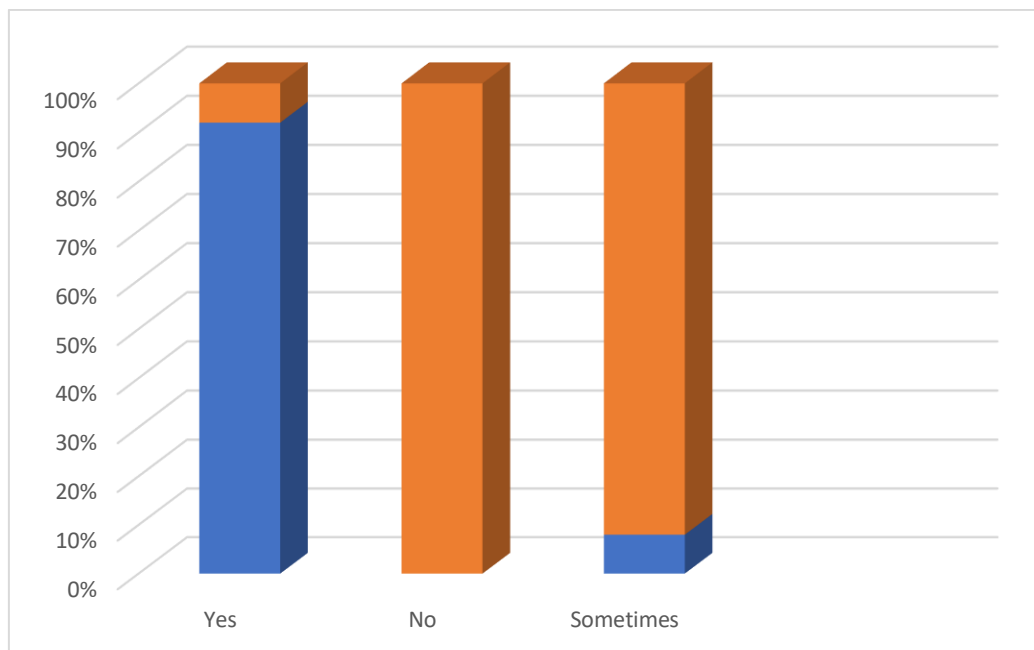
Figure 2.11: Pupils' Concentration with the Educational Tools Used

Question Fourteen: Pupils' Vocabulary Retention with the Educational Tools Used

As instanced in Figure 2.12., 32 participantsadvocated that their memory improved since their teacher started using those tools, and the remaining... asserted a partial retention ability.
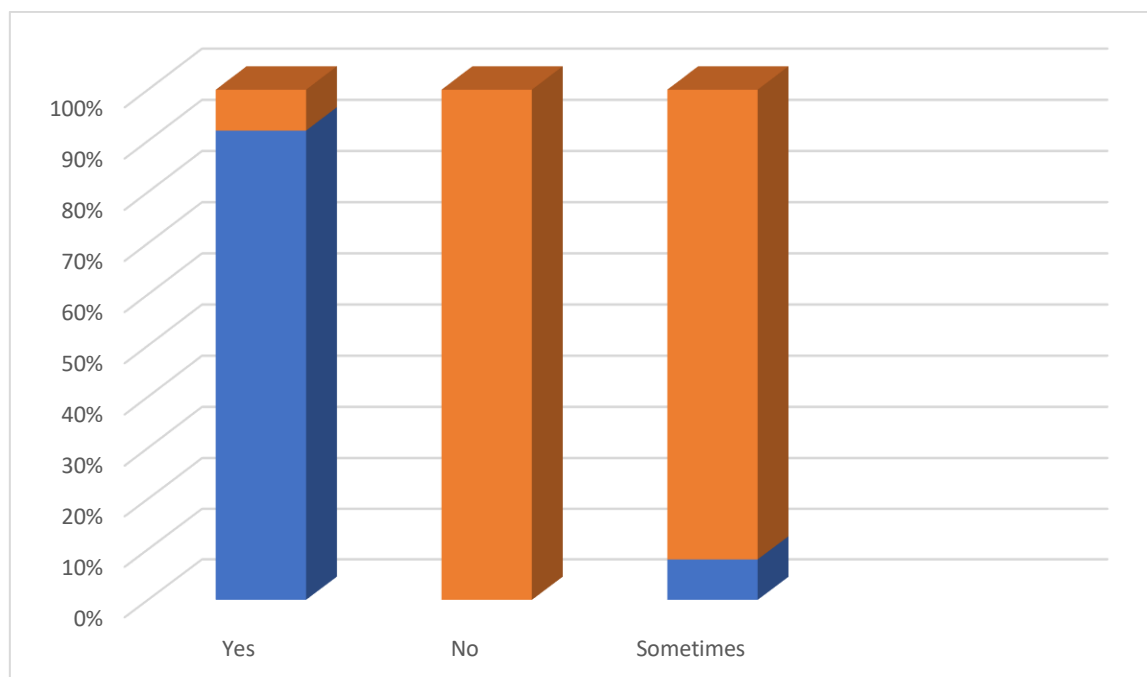
Figure 2.12 Pupils' Vocabulary Retention with the Educational Tools Used

Question fifteen: Pupils' Opinion on a Future Use of the Adopted Approach

The totality of the pupils (35) expressed their willingness for a future use of the above-cited tools.

2.7. Interpretation and Discussion of the Main Findings

This section discusses the interpretation of the main findings derived from the researcher's observation of the classroom, the questionnaire completed by the teacher, the tests conducted, and the feedback provided by the students after the experiment. The classroom observation was crucial in assessing the behavior of the students while the teacher employed traditional teaching methods to gauge their level of focus. It revealed that the students were energetic and curious, but the teacher's lack of experience and inadequate resources impacted their performance. The students struggled to concentrate, leading to zoning out and difficulty remembering the vocabulary taught. This prompted the researcher to search for a solution to capture the students' attention, and the BBL approach proved to be the optimal choice.

Chapter Two: Methodological Framework

The teacher's questionnaire corroborated the findings from the classroom observation, highlighting the students' lack of attention and subsequent difficulty in retaining vocabulary. The teacher's limited experience in teaching young learners, coupled with a lack of training, made it challenging to effectively teach English vocabulary. The questionnaire also provided information about the syllabus content and the teaching methods employed, such as the repetition method.

To evaluate the impact of the BBA, tests were used to assess pupils' knowledge before and after implementing the strategies. The pre-test, conducted using the teacher's usual instructional methods, resulted in relatively low scores (class mean score = 7). However, after implementing the BBA treatment, which involved activities like magic eye, lip reading, and balloon word, designed to enhance vocabulary acquisition, a post-test was administered, and notable improvements were observed (class mean score = 7.9). These significant advancements were achieved within a short period of two months, suggesting that the BBA strategies effectively improved the students' ability to remember English vocabulary.

The post-experiment questionnaire, completed by students aged seven to nine years old, indicated a positive attitude towards the BBA. They found visual aids and educational games helpful in keeping them focused and aiding their understanding and retention of the teacher's explanations. The combination of the BBA approach and the use of various tools played a significant role in the observed improvement in post-test scores. The rapid progress achieved during the intervention period highlights the effectiveness of the BBA approach in accelerating vocabulary acquisition among primary school students. These findings underscore the importance of implementing innovative instructional methods that prioritize emotional engagement, as they contribute to a more enjoyable and effective learning process, fostering long-term retention and cognitive development. In other words, students can develop a love for learning English from an early age.

While the teacher's limited experience may have influenced the results, it is crucial to emphasize the role of specific tools like cards, songs, and educational games

in stimulating the emotional aspect of children. By engaging their emotions, the BBA approach facilitated higher levels of concentration, leading to a deeper understanding and acquisition of new vocabulary. This approach created a learning environment that resonated with the students on a personal level, enhancing their overall learning experience and motivation, thus encouraging them to actively pursue further learning without feeling bored. It also nurtured the innate curiosity present in every child, making the learning process easier and more enjoyable. These findings align closely with the research conducted by Salem (2017) and Duman (2010), demonstrating that BBL techniques enhance academic achievement levels. Implementing this approach is a favorable choice for those aiming to achieve positive outcomes and feedback.

2.8. Suggestions and Recommendations for Future Research

The following recommendations and suggestions arise from the findings of this research study.

2.8.1..Teacher Training and Support

The provision of specific training and support to teachers in implementing the BBA aims to enhance their ability to effectively apply this approach in the classroom. These training programs focus on the principles and methodologies of the BBA, equipping teachers with the necessary knowledge, skills, and resources. By understanding how the brain learns and designing instruction accordingly, teachers can create a brain-friendly learning environment and engage different parts of the brain through instructional strategies. Furthermore, these programs aim to foster critical thinking, problem-solving, and active engagement in students. To assess the impact of such training, it is important to observe whether teachers successfully apply the BBA, including the creation of brain-friendly environments, utilization of effective instructional strategies, and the design of activities that promote optimal learning outcomes. It is recommended that training programs move away from traditional approaches and adapt to the current needs of teachers, providing practical and outcome-oriented sessions (Ahmed et al., 2021).

2.8.2. Parental Involvement

Parental involvement refers to the active participation and support of parents in their children's education. In the context of the BBA, involving parents in the learning process can have a positive impact on pupils' language acquisition and engagement. Parents can play a vital role in supporting the implementation of the BBA by reinforcing what children learn at school and extending it to the home environment. This can be achieved through various strategies, including effective communication, encouraging completion of homework assignments, and promoting collaborative projects. A study conducted by Penderi et al. (2017) revealed that parents actively engage in their children's efforts to learn English at school. However, the study also found that children may not perceive their parents' involvement in the same way for most of their practices. In summary, parental involvement is crucial in supporting the implementation of the BBA and its impact on pupils' language acquisition and engagement. Effective strategies such as communication, homework completion, and collaborative projects can help engage parents in the learning process and foster continuity between home and school environments.

2.8.3. Assessment Methods:

To measure the effectiveness of the BBA, it is important to consider alternative assessment methods that go beyond traditional tests. These methods can include the use of observational tools, interviews, and portfolios, which provide a more comprehensive understanding of pupils' progress and the impact of the approach on their language development.By incorporating these alternative assessment methods, a more nuanced evaluation of students' language skills, critical thinking abilities, creativity, and overall engagement with the BBA can be achieved. These methods offer a holistic view of students' growth and inform instructional decisions to further enhance their language development.

Unlike traditional tests, alternative assessments focus on higher-order thinking skills and provide students with the opportunity to demonstrate what they have learned. These assessments emphasize student growth and performance, allowing

learners to showcase their abilities at different times and in different situations. Authentic assessment tools, such as portfolios, independent projects, and journals, enable students to express their knowledge of the material in their own unique ways, utilizing various intelligences. This approach recognizes and values diverse forms of expression and understanding.

In summary, incorporating alternative assessment methods such as observational tools, interviews, and portfolios provides a more comprehensive and authentic way to measure the effectiveness of the BBA. These methods assess higher-order thinking skills and allow students to demonstrate their knowledge and abilities in diverse ways, promoting a more holistic understanding of their language development (Dikli, 2011).

2.8.4. Cultural Adaptation

In order to adapt the BBA to the Algerian educational and cultural context, it is crucial to engage in collaboration with Algerian educators, students, and families. This collaboration will provide valuable insights and feedback on the implementation of the approach, allowing for continuous assessment and reflection to identify any necessary adjustments or modifications.Cultural factors play a significant role in influencing the implementation and outcomes of the BBA in Algeria. By considering these factors, such as language interference from the mother tongue, cultural conflicts when introduced to a new culture through a foreign language, and individual differences in learning strategies, cognitive abilities, and attitudes towards the foreign language, necessary adaptations can be made to ensure the appropriateness and effectiveness of the approach.

Taking into account the specific needs of Algerian students and making cultural adjustments, the BBA can be tailored to create an environment that promotes engagement, language development, and overall academic success. By conducting error analysis and utilizing insights from cross-cultural psychology and psycholinguistics, a better understanding of the cultural influences on language learning can be achieved, enabling educators to make informed decisions and

modifications. Thus, adapting the BBA to the Algerian educational and cultural context requires collaboration with educators, students, and families. By considering cultural factors, making necessary adjustments, and utilizing insights from error analysis, cross-cultural psychology, and psycholinguistics, the BBA can be effectively tailored to meet the needs of Algerian students and enhance their language development and academic achievements (Regiz, 2011).

2.9. Conclusion

The current chapter has integrated both quantitative and qualitative analysis along with the discussion of data obtained from various research tools. The data from each sample group, including pupils and their teacher, was analyzed and discussed both quantitatively and qualitatively. It was found that the majority of learners exhibited a more favorable disposition towards the new teaching approach known as the BBA, particularly when it came to learning new vocabulary. However, the teacher required additional experience and reflection in order to reach a stage where pupils could learn vocabulary more easily without forgetting it.

General Conclusion

General Conclusion

The BBLA in education has gained widespread acceptance and recognition as a means to improve teaching and learning. It involves utilizing knowledge about how the brain functions to optimize instructional practices and enhance student outcomes. By integrating cognitive neuroscience research with educational strategies, effective techniques such as active learning, multisensory experiences, and meaningful context strategies have been developed. Advances in neuroscience research and technology have provided valuable insights into how the brain learns, despite initial skepticism.

This study is divided into two chapters. The first chapter reviewed previous research on the brain-based approach, its connection to vocabulary learning, and the proposed strategies in this context. The second chapter outlined the research design, methodology, data collection methods, and instruments used .The aim of this work was to foster a love for the English language among students by implementing suitable methods for learning English vocabulary. The collected data were analyzed and discussed to draw conclusions and address the research questions.

The research design employed a mixed-method approach, combining an intrinsic case study with a pre-experimental design involving a sample of thirty-five students and their teacher. The instruments included classroom observation, which identified weaknesses in vocabulary retention, and a teacher's questionnaire, which corroborated the findings and highlighted students' lack of attention and difficulty in retaining vocabulary. The questionnaire also provided information about the syllabus content and teaching methods used.

To evaluate the impact of the BBA, tests were administered to assess students' knowledge before and after implementing the strategies. The pre-test, conducted using the teacher's usual instructional methods, resulted in relatively low scores. However, after implementing the BBA treatment, which involved activities like magic eye, lip reading, and balloon word to enhance vocabulary acquisition, a post-test was administered and notable improvements were observed. These significant advancements were achieved within a short period of two months, suggesting that the BBA strategies effectively improved students' ability to remember English vocabulary.

General Conclusion

The post-experiment questionnaire completed by students aged seven to nine years old indicated a positive attitude towards the BBA. They found visual aids and educational games helpful in maintaining focus and aiding their understanding and retention of the teacher's explanations. The combination of the BBA approach and the use of various tools played a significant role in the observed improvement in post-test scores. The rapid progress achieved during the intervention period highlighted the effectiveness of the BBA approach in accelerating vocabulary acquisition among primary school students. Therefore, the first hypothesis was confirmed. These findings emphasize the importance of implementing innovative instructional methods that prioritize emotional engagement, as they contribute to a more enjoyable and effective learning process, fostering long-term retention and cognitive development. In other words, students can develop a love for learning English from an early age.

Although the teacher's limited experience may have influenced the results, it is crucial to emphasize the role of specific tools like cards, songs, and educational games in stimulating the emotional aspect of children. By engaging their emotions, the BBA approach facilitated higher levels of concentration, leading to a deeper understanding and acquisition of new vocabulary. This approach created a learning environment that resonated with the students on a personal level, enhancing their overall learning experience and motivation, thus encouraging them to actively pursue further learning without feeling bored. Thus, the second hypothesis was confirmed.

Based on the participants' responses, a set of recommendations and suggestions were presented to enhance the effectiveness of the BBA approach in teaching vocabulary. These recommendations include providing specific training and support to teachers in implementing the BBA, assessing the role of parental involvement in supporting the approach, exploring alternative assessment methods beyond traditional tests, and examining the adaptation of the BBA to the Algerian educational and cultural context. It is worth highlighting that a number of limitations came across the study. The small sample size limits the generalizability of the findings, and the limited time and energy restricted the scope of the study. To enhance generalizability, it is

recommended to include a larger sample in future studies, allowing for the application of the proposed approach in Algerian primary classrooms.

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_Design-types_process]

Appendices

Appendix A: Treatment
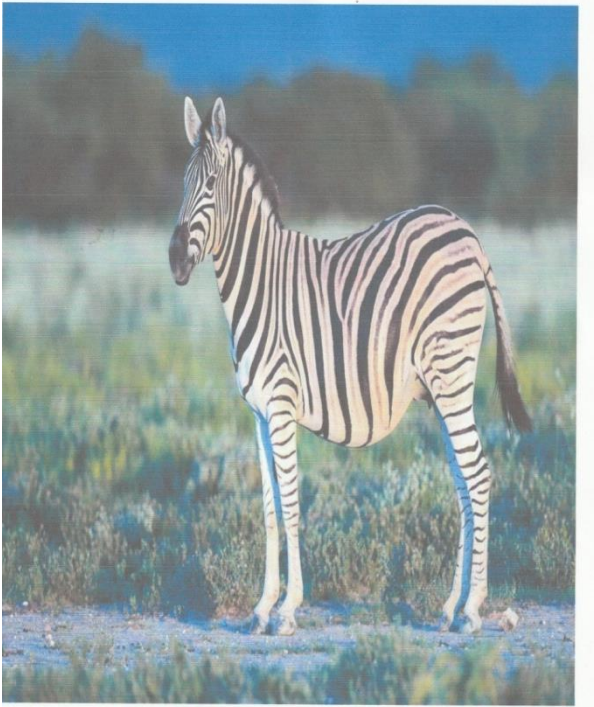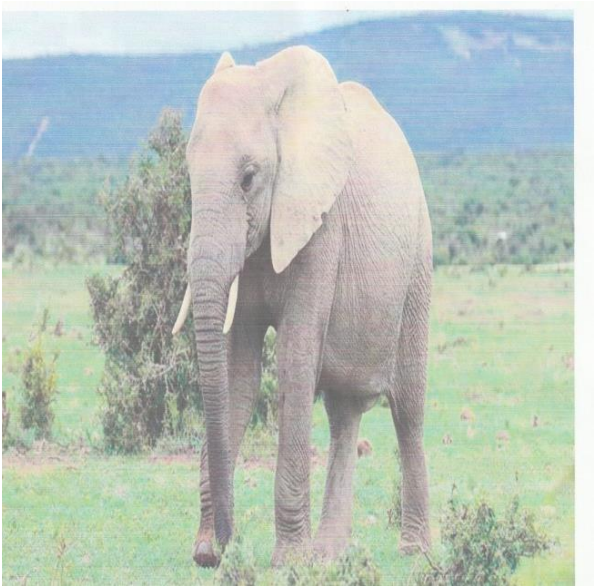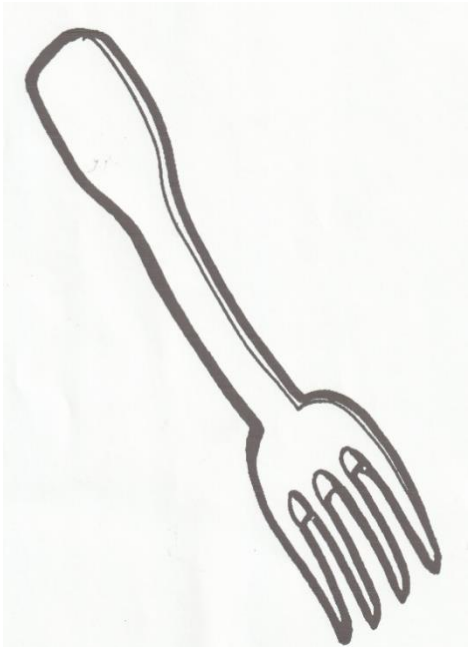
Appendix B: Permission

الجمهورية الجزائرية الديمقراطية الشعبية

وزارة التربية الوطنية

مديرية التربية لولاية تلمسان

مصلحة التكوين و التفتيش

الرقم:...49...م.ت/م.ت.ت/2023

تلمسان في:...1.9 ... 2023

مدير التربية

إلى

الطالب(ة): مستاري آمنة سارة

جامعة ابو بكر بلقايد تلمسان

كلية الأدب و اللغات

قسم اللغة الإنجليزية

الموضوع: ب/خ القيام بدراسة ميدانية.

المرجع   جامعة ابو بكر بلقايد تلمسان كلية الأداب و اللغات قسم اللغة الإنجليزية المؤرخة في 2023/01/18

بناء على الطلب المذكور في المرجع أعلاه، و في ظل احترام النظام الداخلي للمؤسسات التربوية ، نعلمكم بموافقتنا وبترخيصنا لكم للقيام بهذه الدراسة الميدانية على مستوى المؤسسة التالية :

- المدرسة الابتدائي بن جلول عبد القادر —مغنية

وذلك خلال الفترة التالية : 2023/02/01 إلى 2023/05/25 .

و عليه المطلوب منكم الاتصال بمدير(ة) المؤسسة المعنية و التنسيق معه(ها) لإجراء هذه الدراسة.

ملاحظة: تعتبر هذه المراسلة بمثابة ترخيص للدخول إلى المؤسسة المذكورة أعلاه .

مدير التربية

- نسخة للسيد مفتش التعليم الابتدائي

لإدارة الابتدائيات مقاطعة مغنية

Appendix C : Model of Observation Grid

Observation Grid: Train Travelers Example			
Site location:	Date:	Start time:	Stop time:
	Research Issue		
Area of Observation	Waiting	Delays	Boarding
Behavior (what, by whom, where)			
Conversation (what, by whom, where)			
Context (What else is going on? What is the weather? Is it a holiday?)			
Type of traveler (alone, families, business companions)			
General mood (what, how conveyed, by whom)			
Other areas of observation:			
Reflexive comments:			

Adapted from Roller & Lavrakas, 2015. *Applied Qualitative Research Design: A Total Quality Framework Approach.* New York: Guilford Press.

Appendices

Appendix D: Teacher's Questionnaire

The main aim of this questionnaire is to know the lacks and the difficulties of the pupils while learning new vocabulary and to gather information about the teaching methods and syllabus content used in third-year primary schools.

1. Explain how vocabulary is taught in the third year in Algerian primary schools.

2. Describe the content of the syllabus.

3. Is it your first time teaching English language?

Yes☐No☐

4. Are your pupils focused throughout the entire session (45 minutes)?

Yes☐No ☐

 If no, according to you, what are the reasons behind that?

5. Do your pupils memorize all the vocabulary you taught them in the classroom ?

Yes☐No ☐Sometimes ☐

6.Do you use songs in teaching English vocabulary ?

Yes ☐No ☐Sometimes ☐

7. Do you use educational games to attract the pupils' attention ?

Yes☐No ☐Sometimes ☐

8. Do you use cards while teaching new vocabulary ?

Yes☐No☐Sometimes ☐

9. Do you use storytelling as a tool to teach English vocabulary ?

Yes ☐No ☐Sometimes ☐

10. Do you think these tools (songs, games, stories, cards) will help your pupils remember English vocabulary?
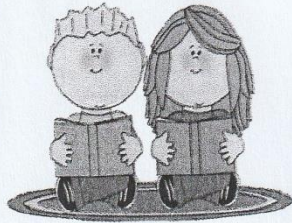
Yes☐No ☐Sometimes ☐

 Explain why

Appendix E: **Pre-test**

4. Listen, look at the pictures and tick the right box in your copybook.
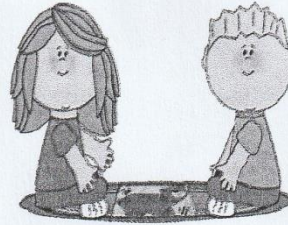
1
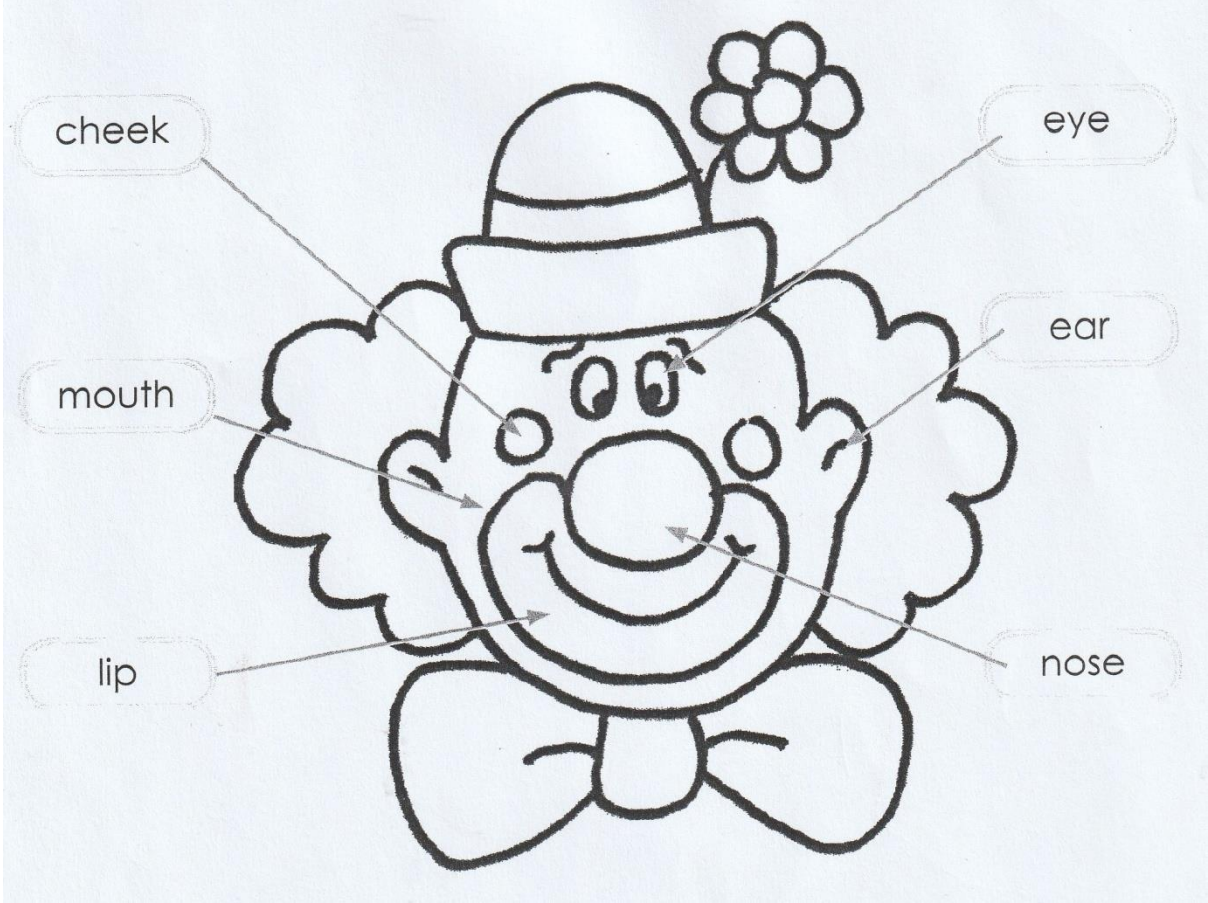a. He is sitting opposite his sister. [?]
b. He is sitting next to his sister. [?]

2
a. He is sitting next to his sister. [?]
b. He is sitting opposite his sister. [?]

Appendix F: Post Test Picture

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Appendix G: Questionnaire to the Pupils (English Version)

Dear pupils,

Your English teacher used a new method to teach you vocabulary, and we would like to know your opinion about it. Please answer the following questions by putting a ✔where there is a small box. Thank you

Q1: Are you :

A male? ☐ A Female? ☐

Q2 : How old are you?

....

Q3: Is it your first year learning English ?

Yes ☐No☐

Q4: Do you like learning English?

Yes ☐No☐

Q5:Do you like the way your teacher teaches you English vocabulary ?

Yes☐No☐ Sometimes ☐

Q6: Do you learn English vocabulary very fast?

Yes ☐ No ☐ Sometimes ☐

Q7: Do you forget the new vocabulary very quickly ?

Yes ☐ No ☐ Sometimes ☐

Q8: At the beginning of the year, were you able to focus during the whole 45 minutes of the English session ?

Yes ☐ No ☐ Sometimes ☐

Q9: Did you like when your teachers used cards as tools to learn new vocabulary ?

Yes ☐ No ☐ Sometimes ☐

Q10 : Did you like when your teachers used songs as tools to learn new vocabulary ?

Yes ☐ No ☐ Sometimes ☐

Q11: Did you like when your teachers used stories as tools to learn new vocabulary ?

Yes ☐ No ☐ Sometimes ☐

Q12 : Did you like when your teachers used educational games as tools to learn new vocabulary ?

Yes ☐ No ☐ Sometimes ☐

Q13 : When your teacher started using cards, songs, stories and educational games, were you able to focus with her during the session?

Yes ☐ No ☐ Sometimes ☐

Q14: Do you remember the vocabulary that your teacher taught you through the cards, songs, stories and educational games ?

Yes ☐ No ☐ Sometimes ☐

Q15:Would you like your teacher to use cards, songs, stories and educational games, to teach you English vocabulary next year?

Yes ☐ No ☐ Sometimes ☐

Appendices

استبيان للتلاميذ :

عزيزي التلميذ(ة) ، استخدم مدرّسك في مادة اللغة الإنجليزية طريقة جديدة لتعليمكم المفردات، ونود معرفة رأيكم بها. يُرجى الإجابة على الأسئلة التالية بوضع علامة☑ حيث يوجد مربع صغير. شكرًا لك.

السؤال 1: هل أنت: ذكر؟☐ أنثى؟☐

السؤال 2: كم عمرك؟ ....

السؤال 3: هل هذا هو العام الأول الذي تتعلم فيه اللغة الإنجليزية؟

نعم ☐ لا☐

السؤال 4: هل تحب تعلم اللغة الإنجليزية؟

نعم ☐ لا☐

السؤال 5: هل تحب طريقة تدريس مدرسك لكم المفردات الإنجليزية؟

نعم ☐ لا☐ أحيانًا☐

السؤال 6: هل تتعلم المفردات الإنجليزية بسرعة كبيرة؟

نعم ☐ لا☐ أحيانًا☐

السؤال 7: هل تنسى المفردات الجديدة بسرعة؟

نعم ☐ لا☐ أحيانًا☐

السؤال 8: في بداية العام، هل كنت تستطيع التركيز طوال 45 دقيقة من جلسة اللغة الإنجليزية؟ نعم ☐ لا☐ أحيانًا☐

السؤال 9: هل أعجبتك عندما استخدم مدرسك البطاقات كأدوات لتعلم المفردات الجديدة؟

نعم ☐ لا☐ أحيانًا☐

السؤال 10: هل أعجبتك عندما استخدم مدرسك القصص كأدوات لتعلم المفردات الجديدة؟

نعم ☐ لا☐ أحيانًا☐

سؤال 11: هل أعجبتك عندما استخدم مدرسك الألعاب التعليمية كأدوات لتعلم المفردات الجديدة؟

نعم ☐ لا☐ أحيانًا☐

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السؤال 12: هل تعتقد أن استخدام البطاقات والأغاني والقصص والألعاب التعليمية مفيد لتعلم المفردات؟

نعم ☐ لا☐ أحيانًا☐

السؤال 13: عندما بدأ مدرسك باستخدام البطاقات والأغاني والقصص والألعاب التعليمية، هل كنت قادرًا على التركيز معها خلال الجلسة؟

نعم ☐ لا☐ أحيانًا☐

السؤال 14: هل تتذكر المفردات التي علمك إياها مدرسك من خلال البطاقات والأغاني والقصص والألعاب التعليمية؟

نعم ☐ لا☐ أحيانًا☐

السؤال 15: هل تود أن يستخدم مدرسك البطاقات والأغاني والقصص والألعاب التعليمية لتعليمك مفردات اللغة الإنجليزية في العام المقبل؟

نعم ☐ لا☐ أحيانًا☐

ملخص:

هدف هذه الأطروحة هو تنمية حب تعلم اللغة الإنجليزية لدى التلاميذ منذ سنتهم الأولى من تعلمها، و لكن على الرغم من قدرتهم للتعلم بسرعة الا انهم ينسون بسرعة أيضًا. لذلك، تهدف هذه الدراسة إلى دراسة تأثير نهج قائم على الدماغ في تعزيز قدرة التلاميذ على تعلم مفردات اللغة الإنجليزية الجديدة. تبدأ الدراسة بتقديم تعريف واضح للنهج القائم على الدماغ ومجاله ذي الصلة، مع التركيز على ظهوره وأهميته. ثم تصف منهجية البحث، بما في ذلك الأدوات المستخدمة لجمع البيانات من ثلاثة وثلاثين طالبًا ومعلمتهم، مثل اخذ الملاحظات في الصف، استبيان للمعلم، الاختبارات، واستبيان ما بعد التجربة. يتم تحليل النتائج المحصل عليها بشكل دقيق ومناقشتها بشكل كمّي ونوعي. توضح النتائج الرئيسية فعالية البحث وتأثيره الإيجابي على أداء المتعلمين خلال فترة زمنية قصيرة. أخيرًا، تختتم الأطروحة بتقديم اقتراحات وتوصيات قيمة استنادًا إلى نتائج الدراسة.

كلمات مفتاحية: الجزائر ، تعلم اللغة الإنجليزية ، طلاب الصف الثالث الابتدائي ، نهج التعلم القائم على الدماغ

Résumé

L'objectif de cette étude était de cultiver l'amour du vocabulaire anglais chez les élèves de troisième année d'école primaire dès leur première année d'apprentissage de l'anglais, malgré leur tendance à apprendre rapidement et à oublier rapidement. En conséquence, cette recherche a examiné l'impact de l'approche basée sur le cerveau sur l'amélioration de la capacité des élèves à apprendre du nouveau vocabulaire anglais. L'étude commence par définir l'approche et son importance, puis décrit la méthodologie de recherche utilisée pour recueillir des données auprès de trente-cinq élèves et de leur enseignant. Après analyse et interprétation de l'observation en classe, du questionnaire de l'enseignant, des tests et du questionnaire post-expérimentation, les résultats démontrent l'efficacité de l'approche proposée et son impact positif sur les performances des élèves dans un court laps de temps. Enfin, des suggestions et des recommandations basées sur les résultats de l'étude sont proposées telles que l'implication des parents, l'adaptation culturelle et la formation des enseignants.

Mots clés : Algérie, apprentissage de l'anglais, élèves de troisième année d'école primaire, approche d'apprentissage basée sur le cerveau

Summary

The aim of this study was to cultivate third-year primary schools pupils' love of English vocabulary from their first year of learning English, despite their tendency to learn quickly and forget quickly. Accordingly, this research examined the impact of the Brain-Based Approach on improving pupils' ability to learn new English vocabulary. The study begins by defining the approach and its importance, and then describes the research methodology used to collect data from thirty-five students and their teacher. After analysing and interpreting the classroom observation, the teacher's questionnaire, tests, and the post-experiment questionnaire, the results demonstrated the effectiveness of the proposed approach and its positive impact on pupils' performance in a short space of time. At the end, suggestions and recommendations based on the study's findings are proposed such as parental involvement, cultural adaptation, and teachers' training.

Key words: Algeria, English leaning, Brain-Based Approach, third-year primary pupils.